

**MBA Dissertation**

**THE MANAGEMENT OF  
WORKING CAPITAL IN  
NON-PROFIT ORGANIZATIONS**

By

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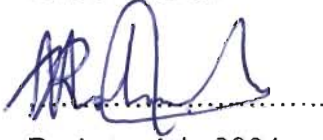
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## DECLARATION

I, R. M Mohanlal, declare that his research report is my own work and that all sources I have used or quoted have been indicated and acknowledged by means of complete reference.

R.M Mohanlal

A handwritten signature in blue ink, appearing to be 'R.M Mohanlal', written over a horizontal dotted line.

Durban, July 2004

## **ACKNOWLEDGEMENTS**

This dissertation is dedicated to my late parents Mr. & Mrs. Mohanlal for the strength and determination instilled in me to pursue and achieve dream which lay ahead. I also thank my wife for the understanding and help provided during this endeavor and the inspiration derived by my baby daughter Simran. A special note of thanks goes out to Prof. J Miller and Mr. R. Jethalal for the hours spend with me to complete and perfect this document.

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## **EXECUTIVE SUMMARY**

This report aims primarily at analyzing working capital management in non-profit organizations. Since most non-profit organizations experience financial difficulty in the short-term, an evaluation is conducted with regard to the components that make up working capital. Five organizations were analyzed, in order to identify if these problems are uniform, cyclical or unrelated occurrences. To prevent inconsistencies the organizations that were analyzed operate in similar environments and provide similar services.

This study was prompted by the ever-changing economic conditions in the country and the effect that they have on non-profit organizations' survival. Based on this, a short-term financial perspective was undertaken and the effects of working capital management were analyzed. This was further elaborated by the fact that non-profit organizations are finding it difficult to bridge the discrepancies between revenue and expenditure, which was substantiated by Braswel et. al. (1984).

A case study methodology approach was adopted which identified financial theory as a base; thereafter, an analysis was conducted of the organizations' financial statements. Once this was completed, a survey was undertaken with all financial decision-makers. Thereafter, an interview was conducted with financial managers to establish the effective management of working capital. Based on these methods, conclusions were drawn and recommendations made, so that corrective action could be taken to eliminate or reduce the recurrence of these problems.

The aim of this study is to provide non-profit organizations with greater understanding of financial planning models and techniques, which would aid them in their management of working capital.

## **CHAPTER 1: OVERVIEW OF THE STUDY**

### **1.1 Introduction**

Research has various meanings for different researchers and provides different techniques and methods, which can be applied to achieve the results desired. However, initially the purpose and reasoning for undertaking the actual research must be considered. Hakel et. al. (1982, p. 15) provides a provocative summation on research, which is that some researchers aim to test theories while others seek promotion, tenure, fame, and fortune. Some do it for its intrinsic interest. Others do it to solve practical problems. At the outset, the aim of this research should be outlined. The sole aim is to solve a community problem that will persist if initiative and commitment are not taken. To address this practical yet neglected problem a theoretical approach should be adopted.

Non-profit organizations' (NPO's) purpose is to provide essential services to the community at large. Their core function is to facilitate the basic needs of the community, for which funding is required. Most services provided by these organizations are on a "free of charge" basis. These services are most of the time provided by professional service providers who require compensation. Other monetary requirements are for the organizations' operations management and its infrastructure. This critical requirement is for financial mechanisms that need to be facilitated by the organization. Funding in some respects is provided by the state, and other sources need to be obtained through lucrative methods (like fundraising drives, donations, etc.).

## 1.2 Research Problem

The critical problem faced by non-profit organizations is ineffective working capital management, which leads to the organizations experiencing financial liquidity. Since there is scant financial literature, which places emphasis on working capital management, most organizations follow self-developed techniques, which may not always be appropriate. This is substantiated in Smith's (1979) article "An overview of working capital management" where he states, "working capital management appears to have been relatively neglected in the literature on finance" (Smith 1979, p.3). He adds, "this neglect exists in spite of the fact that a high proportion of business failures are due to poor decisions concerning the working capital of organizations" (Smith 1979, p.3).

The research problem that the five non-profit organizations face is of an unstructured nature and therefore a case approach will be adopted. This case analysis evaluates and addresses these underlying problems, which are of relevance to the five non-profit organizations:

- 1- What are the working capital management problems, which these five non-profit organizations face?
- 2- Why are there working capital problems in these organizations?
- 3- How can these non-profit organizations combat the working capital problems and what can be done to eradicate them?

Corporate problems of this nature are looked at from a corporate theoretical model perspective in order to identify differences in the practical application of financial theory. The aim is to solve the liquidity problem, for which we need to look at all the components that can create a liquidity problem. The individual components that need to be assessed are inventory, creditors, short-term liabilities, debtors and cash (overdrafts/surplus). Having identified which component creates the relevant liquidity problem; substantive theoretical models and policies need to be analyzed for a relevant solution.

### 1.3 Research Objectives

The objective undertaken is an exploratory study, which identifies key areas causing working capital problems in non-profit organizations. This entailed the exploration of working capital policies, which academic theories have developed. A redevelopment of recommended effective working capital techniques and combinations needs to be implemented to counteract the liquidity effect on non-profit organizations.

The objectives of this study are as follows:

- To determine the ineffective working capital management that is experienced at the chosen sample of organizations.
- To evaluate the relevant causes of problems at these organizations, so that theoretical models can be used in their evaluation.
- To establish solutions of the working capital management problem so that these organizations are able to function efficiently and maintain sustainable growth.

The benefits of this are to provide these non-profit organizations with alternatives to financing possibilities. Since these NPO's lack financial resources to pursue research in financial aspects, they would rather use their scarce financial resources on sustainability and growth. This report attempts to assist them to incorporate financial aspects that could benefit the use of their scarce financial resources. Most organization have constantly experienced liquidity problems and this case study attempts to examine the causes of and possible solutions to these problems.

## **1.4 Research Methodology**

### **1.4.1 Research Design**

Throughout this case study, data will be analyzed and a concise summary of the recommended findings of the research will be formulated to describe and advise management of the organizations accordingly. This study entails an exploratory research design since it would be involved in the analysis of the financial reports (secondary data) of the organizations. It will also entail the use of primary research, which will be obtained by the use of a research survey questionnaire that will be administered to decision-makers. Thereafter, a semi-structured interview will be conducted with each organization's financial manager.

This method of research design is suggested by Bennett (1983, p. 94) who writes: "Intensive investigation of a single manager or group of people or organizations may be carried out solely to increase our knowledge of management, often it is done to make practical improvements".

The case study approach adopts a four-stepped process, which is as follows:

#### Step1: (Theory)

It entails a detailed account of theoretical models which relate to the efficient working capital operations, which entails the models of cash management and inventory management. It also entails the correct management of debtors, short-term liabilities and creditors by modern approaches. The theory provides a base for practical application by way of models and policies.

#### Step2: (Analysis)

The next step encompasses the analysis of the five non-profit organizations and the manner in which they actually operate. This entails a detailed analysis of each component of working capital management over the last five financial periods. By the use of historical financial data, we are able to assess the relevant problems that have emanated over a period of time and establish if these

problems are recurring (cyclic in nature) or nonrecurring. By going through each component of the categories of working capital, problems are identified and simultaneously evaluated. Concentration is focused on factors that also could have a direct effect on these problems.

### Step 3: (Inquiry)

After the analysis has taken place and the problems are established, there is a need to return to the theory and determine if there are reasons for the deviation away from the normal theoretical framework. This is achieved and addressed in the survey questionnaire, which aims at understanding the deviation away from contemporary models and policies. When this is addressed we critique the deviation away from the theoretical model and establish corrective action.

### Step 4: (Recommendations)

This section rounds up the entire problem and recommends possible alternatives that these organizations could implement to correct their working capital management problem.

## **1.4.2 Methods of Data Collection**

In order to address the problem at hand sufficient data needs to be analyzed to get to the core of the problem. The data that addresses this problem would be financial data, which are compiled by the organizations (secondary data).

Interviews with the relevant financial officers of the organization will also be undertaken. This would require the co-operation of the identified organizations.

The appropriate method of data collection would be the obtaining of audited financial statements from the organizations, which can be used to analyze and establish the relevant root of the problems. This would be reliable, since an independent and qualified professional has audited the data. The optimal data collection method is the formal collection approach, which would entail the

accumulation of the financial statements. Since accounting legislation obligates organizations compulsorily to retain five-years of financial data, it would be most appropriate to obtain this data.

Due to the extensive quantity of financial data required (five-years), the process that was followed to acquire this data entailed the following:

- Written confirmation by the University of Natal was submitted to confirm that the relevant research conducted was for the purpose of study.
- Written request to the organization was submitted stating the purpose of the study, requirements of co-operation and the relevant financial data.
- Confirmation by the financial committee of the organization was requested which permitted that the relevant documentation and the organization's staff and members be accessible for research purposes.

The above procedure aimed at addressing the relevance of confidentiality, co-operation and access to the organizations. Since most of these financial statements were retained in archives, assistance from the financial team of the organizations had to be obtained in order to retrieve these documents. This ensured that obtaining of all the relevant data required to pursue the research collection stage of the problem-solving endeavor would be a success.

After all the financial data had been analyzed, the next step had to be pursued, which is the survey process. The core sample population was identified as the financial decision makers of the organization. Due to the availability and time constraints the optimal manner of obtaining information (data) from the target group was the use of a research questionnaire. The questionnaires primarily aimed at addressing the research problem and objective. The process of questionnaire distribution was co-ordinated and managed by the respective organizations' financial controllers. This was specifically due to the fact that the questionnaires were aimed at being distributed during the financial committee

meeting so the relevant aspects of the questionnaire could be explained to the sample groups.

In order to obtain a better understanding of the organizations' control and implementation methods of working capital management policies, interviews were conducted with each organization's financial co-ordinator. This was conducted telephonically due to availability and location circumstances. Appointments were set up so this process could be pursued. The interviews were semi-structured and contained standardized open-end questions that were documented by the interviewer. This method was chosen due to the sensitive nature of the topic. This approach assisted in making the respondent feel confident that his/her responses would be strictly confidential. The method aims at developing a trusting relationship between the interviewer and the respondent. The questions that were asked were related to the analysis of the financial statements, which were collected and scrutinized, as well as the background information of the organization.

### 1.4.3 Sampling Design

The characteristics of the organizations chosen in the sample are as follows:

<b>Category:</b>	Welfare organizations
<b>Size:</b>	Annual revenue of over R500 000
<b>Period of operation:</b>	Operating for more than 5 years
<b>Area of operation:</b>	Durban South Area - Chatsworth

Table 1.1: Sample of organizations characteristics

This entailed a better identification of the problem within a sub-strata. By the use of a multi-case approach, comparative treatment and result verification could be established. The core sample area lay with the financial staff of the organizations since the financial decision-making comes from within.



The five organizations, which form part of this case study, are:

1. Association for Persons with Physical Disabilities
2. Aryan Benevolent Home Council
3. Chatsworth Child and Family Welfare Society
4. Cheshire Homes Chatsworth
5. Chatsworth Regional Hospice Association

From these organizations the financial members have been identified as the target sample. Based on preliminary contact with these organizations it was established that there are between five to ten individuals involved with the financial affairs of each organization. Among the five organizations there would be a cumulative total of between 35–40 financial officers. It is with these members that the research will be conducted since the operation of working capital depends on their decision-making skills.

#### **1.4.4 Data Analysis**

The collection and analysis of the secondary data provide a realistic perspective of the organizations' working capital problem. The accumulation of five-years' financial statements of these organizations entails a total of twenty-five financial statements, which are made up of the Income Statements, Balance Sheet and notes and the Cash Flow Statements. These statements encompass an analysis of seventy-five financial documents. Analysis of these have to be further broken down into sub-categories of five components that make up working capital. These sub-categories are inventory, creditors, debtors, cash and short-term liabilities. This further entails three hundred and seventy-five different and independent financial components that have to be analyzed.

The method that would be used to analyze the financial data entails relationship establishment of correlations, computer spreadsheet models which develop graphical representation of the financial data and the use of financial ratio

analysis. By analyzing this data with the theoretical knowledge trends would be established. Comparisons and contrast methods would be used to identify differences, while correlation will be used to identify differences and similarities within the organizations.

The data obtained from the interviews will be edited as soon as the interviews are completed in order to prevent errors and omissions from accumulating. When all the interviews are completed the case study will be compiled. This is a better way of establishing patterns with regard to the problem question, and from this trends of the problem can be established. With this the researcher is able to address the problem statement and contrast the theoretical models that were built initially. Feedbacks, obtained from the questionnaires are immediately coded, edited and input into the computer software package (S.P.S.S.). This software package would produce the data graphically.

### **1.5 Ethical Issues**

The emphasis of this research is to provide a financial applicable knowledge to the organization with regard to the problems that it faces. Based on trust and reliability, the organizations provided their data. Therefore, interpretation and analysis has to be conducted in a highly ethical manner. Recommendations which will be provided can be used by the organization, and if for any reason there are flaws in the recommendation due to the incorrect information or data manipulation, it could have a significant negative impact on the organization. This could subsequently have a detrimental impact on the community at large. The utmost care and diligence has to be taken in the analysis and presentation of the data to the organization. The problem has to be undertaken realistically and realistic recommendations need to be provided.

## **1.6 Anticipated Benefits**

Based on addressing and solving the organizations' problem of working capital management, the organization would be able to operate more effectively. Other organizations in the respective fields or those which mirror similar problems can apply these meritorious recommendations, which could provide them with better financial management practices. This would indirectly benefit the upliftment of the community at large and enable these organizations to maintain sustainable financial development and growth. Gill and Johnson (1991, p. 4) elaborate on the research process as advancing knowledge and as a disciplined and systematic procedure to help solve managerial problems.

## **1.7 Limitations**

These were factors which were beyond the control of the researcher and the research subjects:

- Focusing on only a few organizations.
- Reluctance of full co-operation by some financial members of the organizations.
- Time limitation with regard to going through all the financial data.
- Smaller organizations were excluded due to the lack of availability of information.
- The report only covers a period of five-years from 1998 to 2003 during which the economy fluctuated.
- The community within which the organizations operate has a larger unemployment rate than other communities.
- The Durban south area of Chatsworth is classified as an area with a majority population of middle to low income class.

## **1.8 Approach to the Study**

Chapter 2 of the study reviews literature. This section provides a conceptual and theoretical framework of the study. Different perspectives of working capital management policies are introduced as well as individual components. These individual components are introduced as models and policies, which are explored from a theoretical aspect.

Chapter 3 explains how the study was designed and conducted. The research design and methodology are explained as well as a detail of the instrument and the method of sampling, which were used. This section is summed up by the methods that were used to analyze the data collected and the relevance of reliability and validity of the research is also explained.

Chapter 4 addresses the problem that each organization faces with regard to the management of working capital. It details each organizations' financial position as well as provides a background understanding of each organization's purpose and benefit.

Chapter 5 provides the details of the survey, which was conducted with the five organizations' decision-makers. The results are provided through descriptive statistics and graphic displays. This section provides critical feedback from decision-makers as to the area of the research problem.

Chapter 6 provides the results which were obtained from the interview respondents on the working capital implementation of the five organizations.

Chapter 7 summarizes the survey questionnaire results, interview results and the analysis of the financial statements. This entails the variation between the practically applied components of working capital against the theoretical models.

Finally, the topic of working capital management in non-profit organizations is summed up with a combination of recommendations which could be used individually or in combination to address the working capital problem.

## **CHAPTER 2: LITERATURE REVIEW**

### **2.1 Introduction**

All organizations that function in a capitalistic environment require financial resources so that the organizations are able to function optimally. Financial resources can be considered the lubricant of the organizations' functioning. Without this lubricator the organization can cease to operate and it would be unable to provide its core service or goods that it is founded to provide. These organizations' financial resources can be classified into short-term, medium-term and long-term requirements. The main aim of any organization is to sustain its viability for the short-term and medium-term, so as to have the ability to achieve its long-term goals and strategic outlook.

An organization has various components in its financial structure. These are broken down into categories of current assets, fixed assets, current liabilities, long-term liabilities and capital (employment of funds). These categories impact on short-term and long-term decision-making. Working capital affects the components of current assets and current liabilities. These components dictate the short-term running of the organization and the proposed short-term decision making strategy that would affect the long-term prospects of the organization.

Working capital can be formally defined as follows:

**Working Capital** refers to current assets nominally consisting of inventory, accounts receivable (debtors) and cash and current liabilities in the form of accounts payable (creditors) and short-term liabilities. This can be effectively reduced to a net effect, which is formally defined as:

**Net working capital**, which refers to current assets less current liabilities.

Working capital includes assets that form part of the operating cycle, namely inventory and accounts receivable. Net working capital should reflect a positive

amount. If it becomes negative it would indicate that an organization is facing severe liquidity problems.

Working capital management consists of planning, organizing, administering and controlling the liquid resources of the organization, which are its current assets and current liabilities. The aim of such management is to minimize the risk of insolvency while maximizing the resources of the organization. Working capital management entails the planning of the relative proportions of each individual component.

Working capital policy is a function of two broadly outlined decisions, which are:

- a) the appropriate level of investment in current assets and the mix of current assets for a set level of the organizations' activities and
- b) the chosen method for financing the investment.

As stated by Smith (1980, p. 13), many surveys indicate that a large proportion of a financial manager's time is spent on a daily basis with the internal control of working capital management.

Since working capital of the organization is the "life blood", it needs to be appropriately managed and controlled. This has a bearing on the survival of the organization and if not appropriately managed it could lead to the organization experiencing devastating results such as closure, or constantly experiencing liquidity problems. There are no textbook models for the management of working capital but rather techniques that can be applied in perfect harmony, so as to achieve a complete working capital model that would be able to achieve the organization's short-term objectives. By the organization having the ability to achieve these short-term objectives with its strategy and financial engineering mechanisms like working capital management, it is able to pursue its long-term goal, which becomes much easier to achieve.

The theories of working capital management as formulated by Lovemore and Brümmer (2003, p.111-115) are as follows:

- The first theory states if the ratio between short-term capital and long-term capital changes, profitability and risk will also change.
- The second theory states that the type of capital used to finance working capital will have a direct effect on income.
- The third theory states that the risk of non-payment of financial obligations and consequently the danger of liquidation increase in accordance with the time difference between an organization's expected cash inflow and its loan maturity.

Evaluation of theory is the foundation of practical application. One important aspect of "theory dependent" character relates to the way in which the various practical activities, in which we routinely engage, might be seen as involving regular attempts to create, apply and evaluate theory as stated by Gill and Johnson (1991, p.23).

Literature which affects working capital management is sub-divided into its respective fields which are inventory, cash models, creditors' policies, debtors' policies and, short-term liabilities. By the use of the appropriate combination of models and policies an effective working capital policy can be proposed based on any organization's needs. According to theoretical study a broad overview follows and each respective category is presented. Since working capital has not been considered a critical focal point of study under finance, most financial models are presented by their originators. The literature review spans a broad period from 1960 to 2000. This is due to scant research on internal management mechanisms.



## **2.2 Components of working capital**

All the components of working capital unify to enable the business to function efficiently, and the organization is able to achieve its objectives. Each component of working capital has its own relevant policies and views in which it should be managed. These are identified below according to the relevant categories.

They are:

- Inventory
- Cash
- Creditors
- Debtors
- Short-term liabilities

The level of working capital requirements is determined by operational factors, which are: size of the organization, nature / activity of the organization, availability of credit (finance availability), attitude to risk and the motive for growth. But strong consideration needs to be given to every component when realizing other categories of working capital components.

### **2.2.1 Inventory**

Inventory models assist financial managers in the use of effective procedures for minimizing inventory investment. The management of inventory is one of the oldest concerns of management science. As such, there is substantial literature on the management of this asset in various situations. This study presents only a brief and modern account of models which are used frequently in organizations today. There are many complex and advanced methods, which entail the use of advanced mathematics and calculus. These systems and models are highly complex and need a full understanding of relevant statistical techniques and applications. This study aims to present basic models, which are not complex and can be applied routinely by an organization.

Scherr (1989, p. 269) states investment in any other asset like inventory should be carefully considered in light of the alternative approaches to the problem at hand. Each of these problems can be addressed through alternative strategies in holding inventory, and that in some cases, these alternative strategies may result in lower costs.

Magee (1956), in an article published in the Harvard Business Review, introduced alternative inventory ordering policies, which are fixed ordering systems, and periodic re-ordering systems, which need to be assessed based on judgment and simple arithmetic. The decision for the acquisition of inventory needs to be compared against cost and uncertainty.

### a) Economic Order Quantity

Austin (1977) established the inventory theory that was developed by the United States Air Force Academy in 1952 named 'Economic Ordering Quantity' (EOQ) that aims at preventing over inventory in organizations, which in turn would alleviate cash resources. This provides organizations with larger working capital resources and is one of the components that can prevent liquidity. The theory revolves around two fundamental components of holding costs and ordering costs which, when combined, determine the optimal economic re-order point.

This is determined with the aid of the following formula:

$$EOQ = \sqrt{\frac{2(F)(S)}{(C)(P)}}$$

*EOQ* = Economic Ordering Quantity

*F* = Fixed Costs of placing and receiving an order

*S* = Annual Revenue

*C* = Annual Carrying cost expressed as a percentage of average inventory price

*P* = Purchase Price

Gallinger and Healey (1987, p. 403 - 410) provide an excellent conceptual framework for analyzing more complex models and considerations. The EOQ model shows that as an organization increases its inventory, an inventory level is reached where the additional costs of carrying inventory equal the additional costs of obtaining inventory. This inventory position represents the optimum point for minimizing costs. The criterion to be minimized is the total cost associated with inventory.

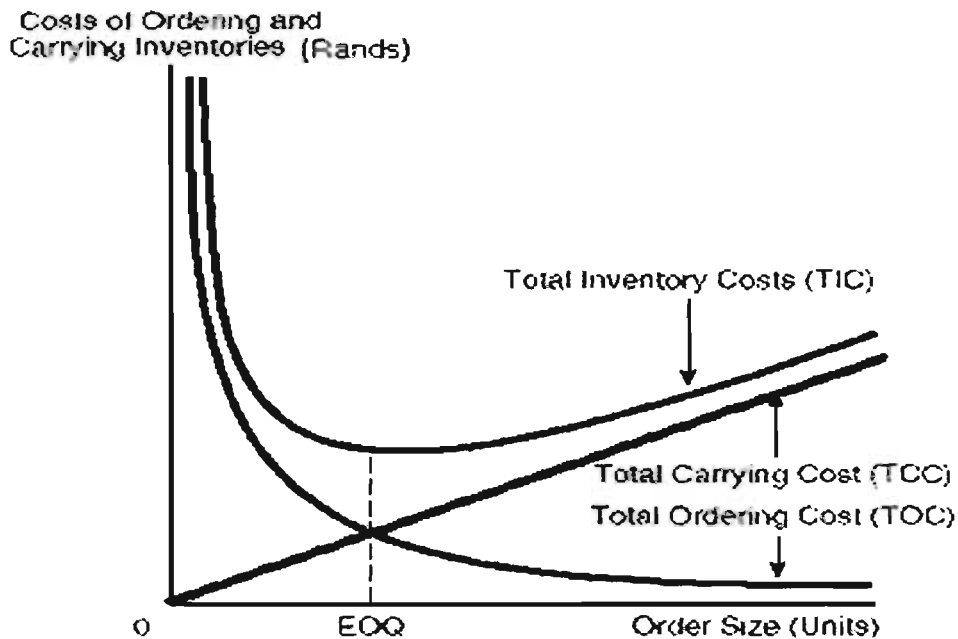


Figure 2.1: Determination of the Optimal Order Quantity

(Adapted: Brigham and Ehrhardt: 2002, p. 28-4)

This cost consists of purchase costs, ordering costs, carrying (holding) costs, and shortage costs. Since one order is placed per cycle, the ordering cost is consistent with the number of orders per financial period.

**Annual Ordering cost = Ordering cost x number of orders per period**

Annual carrying cost is computed as (average number of units in inventory) multiplied by the (annual holding cost per unit of item). Observation indicates that the average number of units in inventory during any inventory cycle equals the total quantity divided by two.

$$\text{Holding Cost} = \frac{\text{Holding Cost}}{\text{Number of Units}} \times \text{Average Inventory}$$

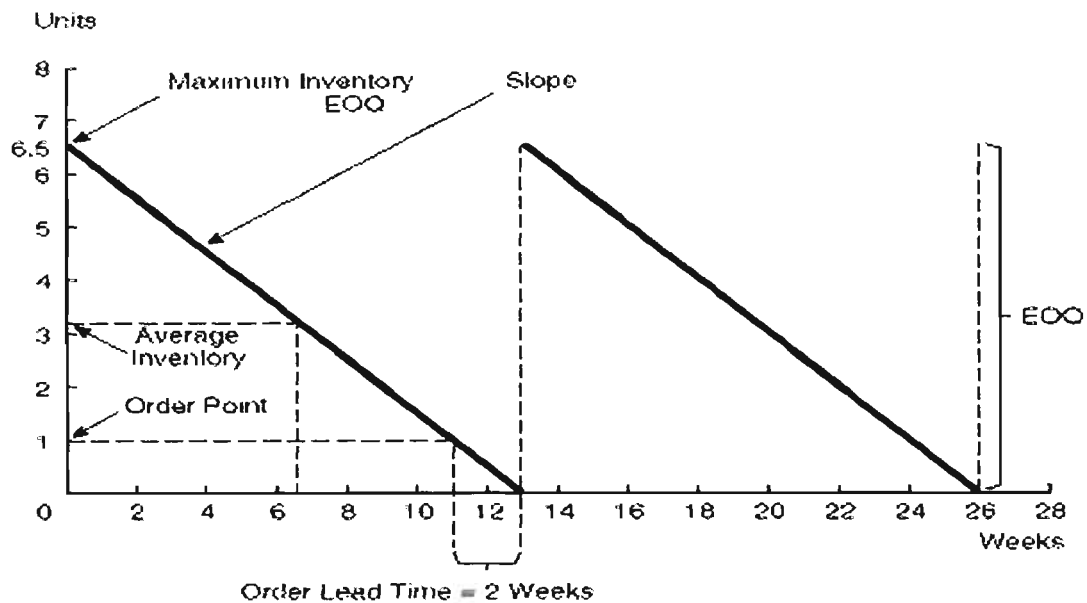


Figure 2.2: Inventory Position of Safety Inventory

(Adapted: Brigham and Ehrhardt: 2002, p. 28-13)

Gallinger and Healey (1987, p. 403 – 410) explain the method of determining the optimal order quantity for an item under the EOQ model. It is one of the simplest inventory models and is based on the concepts of cost trade-offs. The EOQ model is based on nine fundamental assumptions. These assumptions lead to inventories being replenished in the amount of the EOQ and depleted at a uniform rate over time until exhausted. Then inventories are restored and the pattern continues as described in Figure 2.2. The demand and lead-time allows for the placement of orders in such a way that the new supply arrives the instant the old inventory is used up. Each saw tooth (slope) portion represents the behavior of inventory during an inventory cycle.

These act as safety inventory levels to accommodate uncertainty about the behavior and the rate of inventory replenishment. The safety inventory is based on knowledge of the demand distribution during lead-time together with a decision regarding the risk of inventory that management is willing to accept.

Since non-profit organizations are involved in the provision of goods and services they have the capacity to hold and maintain inventory in order to conduct their core performance function. The inventory held needs to be at an acceptable level, which would prevent substantial amounts of cash being invested in inventory. The EOQ model can assist an organization maintain this acceptable inventory level provided it is applied appropriately for the various inventory categories which these organization maintain like linen, toiletries and stationery. The provision of services also requires a substantial amount of inventory like medical consumables and accessories which need to be controlled effectively due to there being substantial amounts of cash tied in these inventory categories.

#### **b) Just in Time System**

The EOQ type model can be expanded to consider buffer inventory that is aimed at avoiding running out of inventory. Pycraft et. al. (2000, p. 532) state that one of the newest and most interesting alternatives to holding inventory is to use the Just in Time System (J.I.T) developed by Japanese firms. In this system holding inventory or buffer inventory is considered to be an uneconomical solution to the various problems facing the organization. Inventories are minimized. J.I.T substitutes demand-based systems based on flexibility, small lot size orders, and efficient uses of consumables.

In order to reduce inventory, goods are purchased and delivery received only as they are needed. When organizations require linen, instead of stock piling them they should be bought as and when required. The J.I.T systems reduce the inefficient use of large amounts of working capital within the organization. This also reduces the holding costs of inventory and allows for minimal cash to be tied up in inventory. These unutilized resources can be used more effectively in other parts of the organization. An effective use of these resources decreases interest bearing debt obligations, which result in efficient financial management.

### c) A-B-C Inventory Control Method

Pycraft et. al. (2000, p. 443) describes the A-B-C inventory method of control, which enables inventory managers or inventory controllers to classify the inventory into various sub-classifications for the purpose of inventory control. The inventory items are sub-classified in a step-by-step fashion, which are by itemizing total annual volume of each item needed, and then by grouping in descending order of annual costs. This method of inventory valuation or inventory control is referred to as the A-B-C method, and is based on the Pareto principle.

The classification is generally fitted into these sectors:

- *Class A*: are 20 per cent or high value items, which account for about 80 percent of the total inventory value.
- *Class B*: are those items with medium value and usually are the next 30 percent of the items and accounts for about 10 percent of the total inventory value.
- *Class C*: items are low inventory items, which comprise about 50 percent of the quantity and are relatively 10 percent of the inventory value.

The management of this method entails strict control of the ordering and use of class A and B inventory categories. The placing of orders for these categorized inventories is approved by senior management due to the high value of inventory items. Generally there is a motivation document attached to the order requisition for a particular inventory item. The aim of this system is to prevent large amounts of cash being retained in high value inventory items. It also entails efficient use of the items and effective use of working capital resources. The above methods of inventory maintenance should be used independently or could be adopted for various categories of inventory. If used independently the procedures and models need to be maintained effectively to achieve the model's desired results.

### 2.2.2 Cash

Cash under current assets with a positive balance represents available funds for covering operating cost and the ability to fulfill the growth objectives of the organization. Negative cash balances in the bank account represent a short-term liability granted by the bank. Cash management of an organization needs to be monitored since just enough cash is required when needed and too much of cash can be unproductive. It is management's responsibility to minimize cash on hand and should be in a position to respond to the changing requirements of cash demands to satisfy these fluctuating needs.

Gallinger and Healey elaborates on the critical problem that management face in a cash management system (1987, p.194) which are as follows:

- a) Accounting procedures misstate the cash balances.
- b) Management has little understanding of cash process.
- c) Corporate policy hinders imaginative cash management.

These can be addressed by implementing corrective procedures for each one of the relevant problem areas.

Mohr (2002, p. 58) refers to the basic needs of cash requirements that were formulated by John Maynard Keynes where he was classified as the father of the "liquidity preference approach". Since then there has been no modification to this approach. Mohr (2002, p.413) classifies Keynes cash requirements into four motives, which are the transaction balances, precautionary balances and speculative balances. Keynes later added the finance motive. According to Gitman (1997, p. 567) working capital management approach relies on the first three motives for holding cash, since it emphasizes the everyday running of the organization. These can be classified as firstly the day to day running of the organization, secondly the anticipated cash requirements for unforeseen expenses and lastly the cash requirement as a safety mechanism.



These motives for cash management classify the requirements into different classes and according to their respective uses. Organizations should follow this as a possible cash management policy and define their appropriate proportionate requirements. Models of cash management that can be applied are the Baumol model, which aims at predicting the demand for cash with certainty and determine the economic conversion quantity (ECQ). The Miller-Orr model assumes uncertain future cash inflows and outflows but aims to determine the upper limit and return point of cash balances.

Effective cash management can be achieved by the use of traditional cash management techniques or the application of recent mathematical models of cash management. There are two large segmented areas of study, which encompass the traditional method, entailing the ratio approach, the adjusted earnings method and the modern mathematical approaches, which are the Baumol Model, the Miller-Orr Model and the Stone Model.

The objective of cash management is to have enough cash when it is needed but to have as little excess cash as possible. Financial managers' key responsibility lay in the management of cash since it is the most liquid of all current assets. Interest is the main factor, which determines the proper level of cash reserves that lay idle, which is associated with the opportunity cost factor. To minimize cash balances management needs consistently to forecast the organization's needs. These forecasts can be planned annually or at quarterly, monthly or even weekly intervals. The primary goals of cash managers are to provide reasonable estimates of future and current requirements. A good monitoring system should entail direct analysis of the organization's operations and its financial variances.

The major determination of cash forecasting depends on methods, policies and model development. As identified in Gallinger and Healey (1987, p.216 – 233), it has been historically identified that there are four different methods for forecasting cash balances for growth:

1. Balance sheet or ratio projection method
2. Adjusted-earnings method
3. Cash receipt and disbursement method, that is cash budgeting and
4. Baumol ECQ model

The first three methods above depend on budgeted balance sheet and income statement information while the last which is the Baumol model relies on the trade-off between holding and ordering costs.

The ratio approach depends on the principle of keeping many days' worth of payables or a certain percentage of income generation in its cash account. Normally standard averages are used. The adjusted-earnings method depends on the income generation forecast. The cash forecast is developed from the latter, with all relevant foreseeable expenditures.

Problems with accounting procedures can be reduced by a proper understanding of the cash management procedures. This also entails an understanding of the cheque process since this would allow efficient movement and circulation of cash within the organization. Organizational policy needs to be well defined in order for employees to understand this process and being efficient in performing their functions.

### a) Baumol Model

Cash was simply considered a commodity in the early years. As outlined by Gallinger and Healey (1987, p.219), the Baumol model incorporates both the cost of holding idle cash balances and the cost of ordering cash. This is one of the earliest systematic approaches to managing cash and was developed by William Baumol in 1952. The model aims at finding an optimal or average cash balance. The similarity of this model is reliant on the EOQ model, which is used in the management of inventory, as discussed above. The model entails the following components:

- A known demand for cash for a period, which is used at a constant rate.
- Those requirements for the demand for payments from cash balances are filled immediately.
- The cost of assets transferred into cash.
- The annual opportunity cost, which is the forgone interest rate on savings.

The model aims at reducing holding large cash balances, which forgo interest. By using simple calculus an optimal cash balance is derived, which is as follows:

$$C = \sqrt{\frac{2(F)(T)}{k}}$$

$C$  = Optimal Amount of Cash

$F$  = Fixed Cost of Selling Securities

$T$  = Total Transaction Cost

$k$  = Opportunity Cost of Holding Cash

The  $C$  represents the optimal cash balance, which should be held. By taking  $C$  and dividing it by two we are able to obtain the re-order point. This would actually determine the average cash balance to be held.

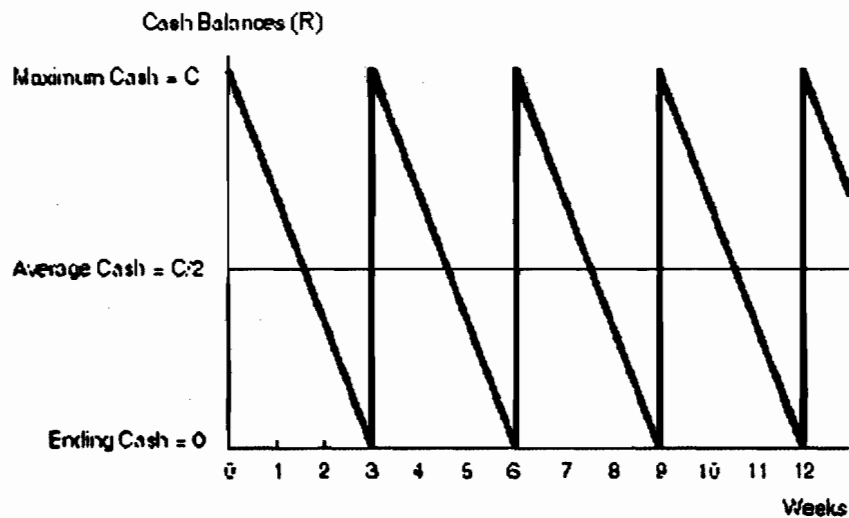


Figure 2.3: Cash Balances under the Baumol Model

(Adapted: Brigham and Ehrhardt: 2002, p. 28-3)

Brigham and Ehrhardt (2002, p. 28-5/21) identify the task of cash management as holding some level of cash over a number of time periods. The model uses a saw tooth pattern of cash disbursements. The organization begins at some maximum cash level and disburses funds steadily over time. When it reaches a zero balance or some safety level, it sells marketable securities and replenishes its cash position to the original amount. The amount of replenishment is equal to EOQ. On average the organization will maintain a cash balance equal to one-half of the maximum amount, which is also one-half of the EOQ amount.

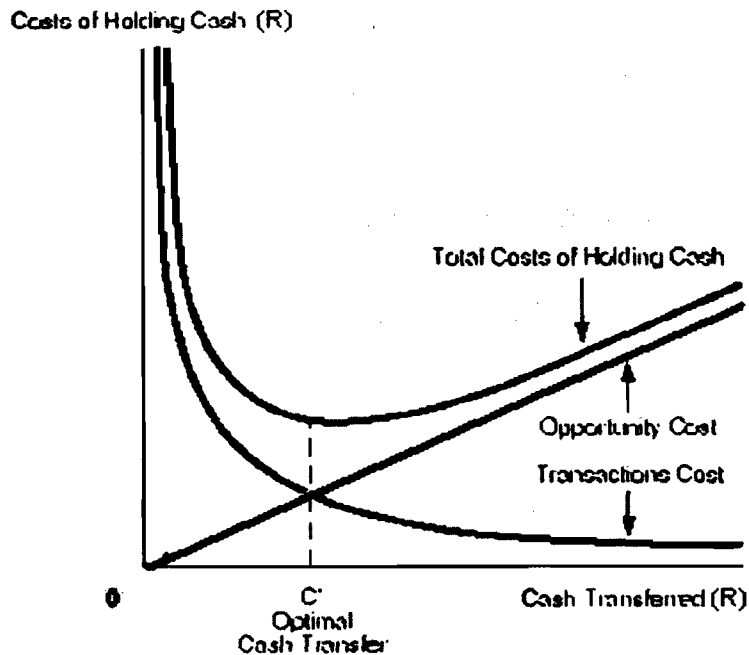


Figure 2.4: Determination of the Target Cash Balance

(Adapted: Brigham and Ehrhardt: 2002, p. 28-11)

Figure 2.4 describes the Baumol model development mechanism, which minimizes the total cost of cash disbursements. The first component deals with transaction cost and the second is the cost of managing cash. The lost opportunity cost of idle cash will depend on the amount of cash held on average and the rate of return that could have been earned by investing the cash. The annual expected return is based on the marketable securities rate.

The above dealt with monthly cash balances, but organizations have daily cash requirements. These are dealt with under specific models, which modify the Baumol cash model. The three other models deal with the Miller-Orr Model, Stone Model and the Beranek Model.

## b) Miller-Orr Model

The Miller-Orr Model developed by Merton H. Miller and Daniel Orr aims at incorporating irregular cash patterns. A workable cash management model should recognize the fluctuating pattern of cash. During certain periods the organization experiences excessive cash strains, which cause a liquidity effect on the treasury, while during other periods excessive funds accumulate unused or unallocated. Managers use the Miller-Orr Model to monitor and control cash balances. This is done by the use of an upper and a lower control limit.

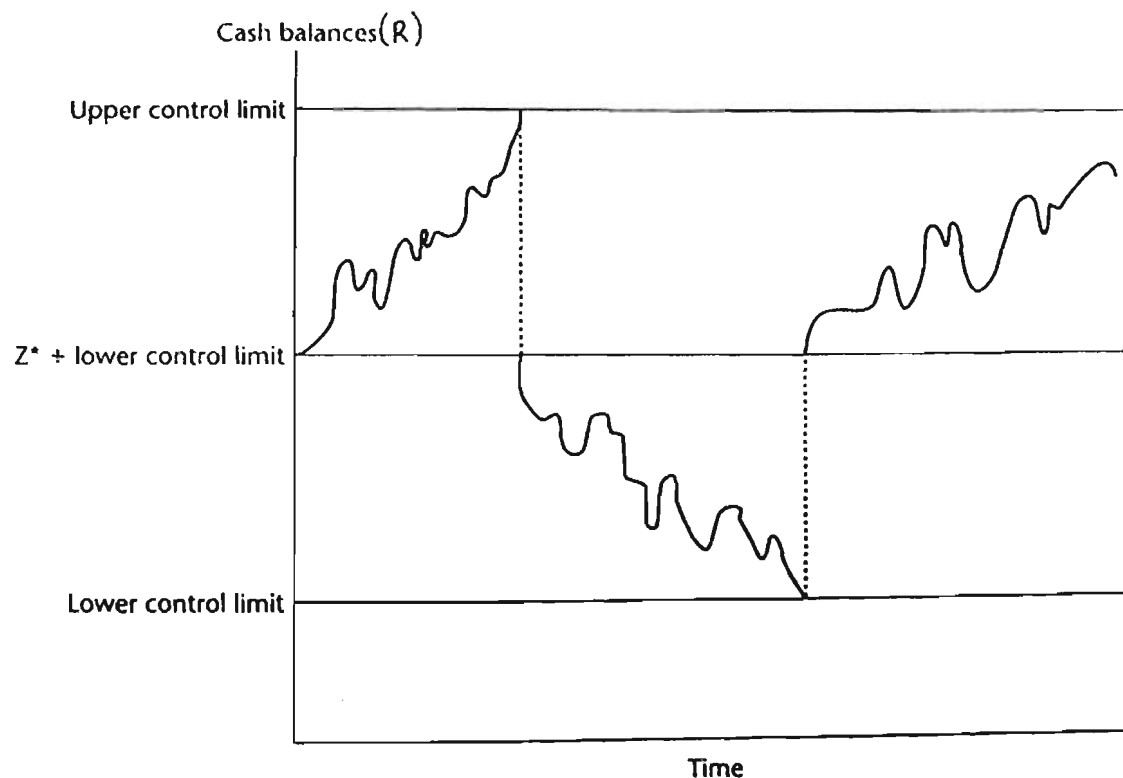


Figure 2.5: Cash Movements in the Miller-Orr Model

(Adapted: Manes and Zietlow: 1998, p. 501)

Figure 2.5 describes the use of the upper and the lower limits as established in the Miller-Orr Model. At the upper level, the organization invests its excess cash, thus returning the cheque account to the optimal position. At the lower level, the

organization would replenish its cheque account by selling marketable securities or borrowing. The total aim of cash management is to stay within the boundaries. As long as the cash balance drifts along within the two control limits, no securities are traded. This means that the cash receipts and disbursements have been at least moderately synchronized. The formula for the Miller- Orr model is:

$$Z = \sqrt[3]{\frac{3F\sigma^2}{4i}}$$

$Z$  = Optimal Transfer Amount

$F$  = Fixed Transaction Cost

$\sigma^2$  = Variance of Daily Net Cash Flows

$i$  = Daily Interest Rate

Maness and Zietlow (1998, p. 501/2) state that to achieve the optimal cash level, consideration is given to three variables, which are: (1) transactions costs, (2) lost opportunity costs; and (3) variation in cash flows. Sufficient liquidity should be maintained to cover operational needs that fluctuate daily. Excess cash should be invested in less liquid securities to achieve higher yields. The optimal cash balance is the level of cash and near cash that meets the needs of liquidity while minimizing lost short-term opportunity costs. The model results in fewer transactions while allowing it to keep a lower average balance.

### **c) Stone Model**

The Stone model is a so-called "look ahead" model, which promises larger cost savings. There are times when financial managers will see a large receipt of cash coming in and would not have to sell securities. Stone's formulation permits cash managers to look ahead (generally three to twelve days). Like the Miller-Orr model, the Stone model takes a control-limit approach. In the Stone model, when cash balances fall outside the control limits, the signal does not automatically

result in an investment or disinvestment decision. The recommended action depends on management's estimates of future cash flows or requirements.

The model signals an evaluation by management rather than an action to be taken. Under the Stone model, a strategy process is followed whereby the organization performs no evaluation until its cash balance falls outside the outer control limits. When this occurs, the organization looks ahead by adding the expected cash flows for the next few days to the current balance. If the sum of the current balance and these expected future cash flows fall outside the inner control limits, a transaction similar to the Miller-Orr model is performed. The Stone model reduces the number of investment and disinvestment transactions made.

Maness and Zietlow (1998, p. 503), describe the Stone model as very flexible because it does not assume a flat yield curve. The parameters of the model may be changed over time to accommodate an organization's needs. The control limits may be tightened during periods when cash control is critical, or the "look-ahead" period may be lengthened when the organization has better information about future cash flows. Financial managers should set the parameters by trying various strategies on past data and observing the results through the use of the sensitivity analysis approach. The Stone method might be more appropriately regarded as an approach to the daily management of cash and temporary investments.



#### d) Beranek Model

The Beranek model is based on an organization's cash inflows being steady, while the outflows are periodic. This is the mirror image of the time pattern of cash flows within the Baumol model, where inflows were periodic and outflows were steady.

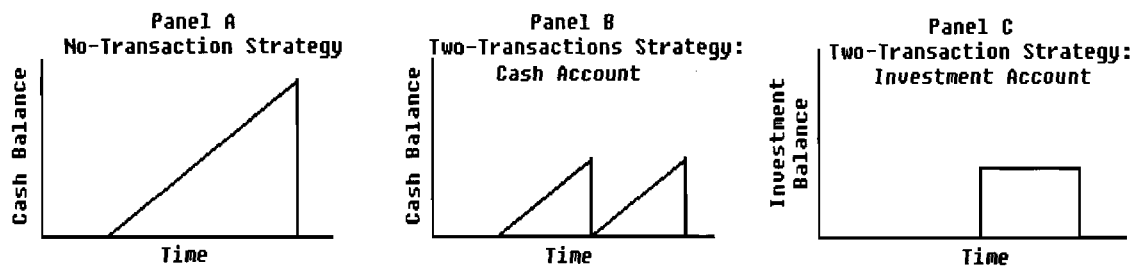


Figure 2.6: Time Pattern of Cash Balances for the Beranek Model

(Adapted: Scherr: 1989, p.131)

The time pattern of cash balances in the Beranek model is described in Figure 2.6. Balances built over time are disbursed all at once. This time pattern represents the situation faced by many organizations. An organization, which provides its services throughout the month receives its income proportionally over the month but will only write cheques a few times within that month. Cash would be collected continuously at a uniform rate, but would be disbursed over a shorter time period.

In this pattern of cash flows, the challenge is to invest the funds profitably between the time of their receipt and the time when a group of cheques is presented to the bank for payment. Scherr (1989, p. 131) explains that the trade-off between interest income, transactions expense and the strategies employed are parallel to those of the Baumol model. In the Beranek model, however, the cash is accumulated gradually, so the transactions pattern would involve a series of investments followed by single disinvestments at the end of the period.

### 2.2.3 Debtors

Debtors' ratio that needs to be evaluated and maintained are accounts receivable periods and debt ratios. Since this affects the income of the organization, short periods need to be aimed at so that organizations are able to maintain adequate financial resources. Levy (1988) elaborates that debtors also form a critical part of the cash conversion cycle and need to be evaluated with the strictest criteria.

Jose (1996) defines the cash conversion cycle "as the relationship between accounts payable, accounts receivable and inventory management" (Jose 1996, p.34). He proposes a method of aggressive liquidity management as a way of achieving a higher liquidity position and bases this on the size of the organization and the relationship which the organization maintains with its suppliers and donors. This position can be achieved only through an in-depth analysis of relationships between stakeholders and management in order to determine if such a cycle can be implemented.

Factors which effect a change in debtor payment habits as cited by Gallinger and Healey (1987, p. 206), may be the result of any of the following three conditions:

- Internal changes in the consumer's financial position.
- Change in the mix of purchases by the customer.
- Some exogenous change in economic conditions.

Internal changes are as follows:

- The payment procedure of the customer faults through some administrative error.
- The customer experiences cash flow problems.
- The opportunity cost of discounts lost is less than the opportunity cost of funds invested in the customer's organization.

In the case of debtors it is necessary to have a strong debt control system, which clearly defines the level of authority for the establishment of debt levels. It is

important, however, that the controls are not so tight that the ability of the organization to obtain support is severely inhibited. In this respect, every advantage provided economically should be taken through credit insurance and commercial insurers. Control of debtors should include a periodical ageing analysis of debts to expose those debts which could become doubtful or bad.

#### **a) Markov Chain Analysis**

The Markov chain analysis is an elaborate means of identifying changes in the collection process. It is related to the uncollected balance percentage, which is actually a simple application of the Markov chain. This technique as stated by Maness and Zietlow (1998, pg. 185), is applied as follows:

- (1) identifying each possible payment stage at which an account might be namely: paid, current, one month past due, two months past due, three months past due, or written off as bad debts;
- (2) specifying the "transition probabilities" for the average account which is the probability that it will move from one of the stages to any of the other stages;
- (3) using the results from 2 to estimate what the day income outstanding, collection amount, and receivables amount should be; and
- (4) noting whether the actual experience mirrors what was expected from 3.

An in-depth understanding of the Markov chain analysis depends on an understanding of matrix algebra. However, on a conceptual level the technique models the flow of receivable balances through an ageing process. The dynamics of the flow process models the transition from one steady state to another.

#### **b) Joint Probability Analysis**

A less elegant technique than the Markov chain process for analyzing receipts payment patterns is the joint probability analysis. Each debtor of an organization

that is currently outstanding with respect to his or her receivables has three options, which are: keep the accounts current by paying regularly and making additional purchases, pay off the debt completely, or defer payment to another period. Analysis of each outstanding debt payment pattern allows the debt manager to make projections of payment. If the manager assumes that customer categories are independent of each other, then the joint probability of payment can be calculated.

Management formulates terms-of-sale and debt-granting policies based on the NPV rule. Gallinger and Healey (1987, p. 293) explain that to calculate the NPV, management must estimate the effect of these policies on bad debt, revenue, and other relevant variables. In deciding whether to change its terms of receivables, the organization will make estimates of the new revenue of receivables, bad debt levels, and income effects. If there are deviations from these expectations, the policies need to be reconsidered and re-evaluated. Therefore, organizations need to compare the outcomes of policy with what was estimated in their formulation.

### **c) Linear Discriminant model**

The Linear Discriminant models have been used on credit selection decisions for several years. These models attempt to discriminate among customers on the basis of a profile of several variables. The Linear Discriminant function is expressed as a score based on the linear relationship between these variables. The basis of the score is usually the use of past financial data. The basic strength of Linear Discriminant models is that the evaluations of customers are also based on the debt manager's proposed requirements.

The theory of Discriminant analysis implies that if the debt manager can compare the past financial data of customers with the individual success or failure of these customers over time, then applicants in the future should behave in a similar

fashion. It is not unreasonable since it bases its data of success or failure on customers over time relative to their behavior of honoring their debt contract. In the past the debt managers extended debt to these customers to determine which ones would prove to be good customers and which not. Discriminant models can be sensitive to changing economic conditions. A prudent procedure is for the debt manager to evaluate the model periodically to ensure that it has not significantly changed with the passage of time.

#### **d) Decomposition Method**

The decomposition method, which was developed by Gentry and De La Garza, involves segregating receivables into three effects, the collection effect, the revenue effect, and the interaction effect. The interaction effect refers to the joint influence of revenue and collection. The idea behind this method is very similar to that used in management accounting, in which budget variances are divided into price, volume, and mix categories. A noteworthy difference is that we are comparing a recent experience with a last period's experience or budgeted amounts. The debt manager uses the collection effect and part of the interaction effect to determine the change in the controllable variable. Deterioration in the collection pattern signals corrective action. Although it takes time to construct the analysis schedule, this approach does help the debt manager to determine when and how substantially the collection pattern has changed.

#### **e) The 5 C's Credit Model**

A number of sources supply debt information, but for some accounts, especially small ones, the cost of collection may outweigh the potential profitability of the account. The organization extending debt may have to be satisfied with a limited amount of information on which to base a decision. In addition to cost, the organization must consider the time it takes to investigate a debt application.

Thus, the amount of information collected needs to be considered in relation to the time and expense entailed.

Depending on these considerations, the debt manager may use the following sources of information concurrently. The five C's credit model, which was elaborated by Maness and Zietlow (1998, pg. 115), is as follows:

- **Character:** the character of debt applicant refers to the probability that the applicant will make every effort to honor the contract that it pays for the purchases. This is a moral issue.
- **Capacity:** the capacity of an applicant is the subjective evaluation made by the debt manager about the customer's ability to pay.
- **Capital:** the capital of an applicant is presented in the balance sheet.
- **Collateral:** the supplier of trade debt normally extends debt based on a collateral position.
- **Conditions:** this refers to the current and expected general economic situation as they affect a customer's contract.

## 2.2.4 Creditors

Levy (1998) suggests that the most beneficial policy to adopt to assess credit and debt policies is effective ratio analysis, which should be undertaken by value creators. Credit ratios which should be evaluated and maintained are the accounts payable period ratio, which evaluates the organization's effective credit worthiness and liquidity position. The inability to maintain this ratio results reflects a deterioration of credit worthiness and ineffective cash management. Policies which should be adopted in this regard should be maintained and controlled, since this has an effect on the cash conversion cycle.

A financial manager purchasing goods or services on credit will gain an advantage by being able to use these goods or services to earn revenue without having to pay for them. The time period between receipt of the goods and services and the date on which cash payment is made constitutes what is termed positive float or short-term finance. The longer the payment delay, the better off the organization is as long as payment is not delayed past the credit period. If payment is not made within the prescribed credit period, suppliers will often impose a penalty, until payment is made. In addition, when a delinquent purchaser places another order, the order will not be sent until overdue balances are paid. In general, financial managers should delay payment as long as possible but still satisfy the credit agreement.

There are several options available for credit payments, which are emphasized by Maness and Zietlow (1998, p. 192), which are:

1. Payment could be made on the date of purchase.
2. Payment could be made on or before the cash discount period.
3. Payment could be made on or before the end of the credit period but after the cash discount period.
4. Payment could be made after the credit period has expired.

The first alternative for an organization would be to pay for the goods and services on delivery by paying the invoice price or the invoice price less the cash discount. But this would represent cash on delivery sale and would eliminate the establishment of a credit agreement. The latter three payment decisions are assessed by financial managers, who weigh each alternative by means of the Net Present Value (NPV) method, which has varying payment periods as stated above.

#### **a) Payment before Discount Period**

The first of the three-payment options entails the calculation of the NPV, assuming payment is made before the end of the discount period. Here, the NPV is equal to the present value of the discounted invoice price, assuming payment is made by the end of the discount period. The discount rate needs to be more favorable than the current interest rates for this option to be chosen. This would provide the organization with a greater financial benefit.

#### **b) Payment after discount period**

The second NPV model assumes that payment is made after the discount period but no later than the end of the credit period. Here, the NPV is equal to the present value of the full invoice price assuming payment is made after the discount period, but no later than the end of the credit period.

If payment is made at the end of the credit period then the NPV is equal to the present value of the invoice price ignoring any discount. Whether this NPV is less than the NPV taking the discount depends on the relative size of the cash discount rate and the organization's investment opportunity rate.



### c) Payment after credit period

Finally, suppose that payment is made after the credit period. In this case, NPV is equal to the present value of the invoice price and a late payment penalty. Although ethical business practice dictates that payment should be made no later than the end of the credit period, an organization may be in such an illiquid position that payment cannot be made. In such a circumstance, it is important for the financial manager to estimate the cost of making late payment. These are a late payment fee, which is an explicit cost, another cost is the loss of goodwill that the organization will incur if stretching payments becomes a typical behaviour. Good business practice dictates that if payments are to be stretched, the financial manager of the organization should contact the credit manager at the supplying firm to work out a payment schedule. Here, the NPV calculation determines the present value of the invoice price plus the late payment fee. The financial manager should only stretch the payment of an invoice when the organization's financial situation prevents payment from occurring within the credit period.

### d) General credit model

The generalized formulation of this credit model is based on the payment options discussed above.

$$NPV = \frac{-\sum_{T=0}^M I_T + \sum_{T=0}^M F_T(1-t)}{(1+k)^T} \geq 0$$

$I_T$  = incremental investment in time period T as a result of credit decision,

$F_T$  = marginal net cash flow occurring at time period T

$t$  = marginal tax rate,

$k$  = appropriate risk-adjustment discount rate for evaluating decision,

$M$  = number of periods policy is expected to remain in effect.

Gallinger and Healey (1987, p. 263) state that the decision rule is to accept the credit policy if NPV is greater than or equal to zero. If two mutually exclusive credit policies are compared, the decision is to accept the policy with the higher NPV, assuming it is positive. Since positive NPV's accrue to the organizations' financial performance, this results in improved financial wealth for the organization. If investments are only made initially and cash flows are constant, then the existing NPV perpetuity becomes:

$$NPV = -I_0 + \frac{F(1-t)}{k} \geq 0$$

Where  $I_0$  is the incremental investment at the start of the new credit policy. It represents the point of income maximization, that is, where marginal income equals marginal cost. By using the NPV model, financial managers should continue to delay payment for as long as the credit period exists and the NPV falls to a zero level. The objective is to pay on the day that minimizes the present value cost of the invoice.

### **2.2.5 Short-term liabilities**

The basic principles of selecting sources of short-term funds as elaborated by Adams et. al. (1972, p. 40) for an organization would be the following tactical objectives, some of which are likely to conflict with one another:

- Cost of finance which could be a minimum rate of interest
- Flexibility, to give room for future maneuverability in such events as unexpected shortages or extra requirements and changes in the interest rate structure
- Avoidance of risks
- Bridging the correct time-gap until funding or until the next seasonal inflow of funds.

In any cost comparisons it is, of course, the opportunity cost that must be compared. In many situations, overdrafts are the cheapest source of cash. They are also the most convenient and most readily available source. The conflict is sometimes between short-term and long-term credit. Before raising short-term funds from any source it is worth identifying objectives and needs. The criteria for selecting between sources are opportunity cost, flexibility, risk and length of time.

#### **a) Revolving Credit**

A revolving credit agreement is a formal line of credit. As a general rule, the interest rate on a revolving account is pegged to the prime lending rate, the bond rate, or some other market rate, so the cost of the loan varies over time as interest rates change. A revolving credit agreement is very similar to an informal line of credit, but with an important difference. The bank has a legal obligation to honor a revolving credit agreement, and it receives a commitment fee. Neither the legal obligation nor the fee exists under the informal line of credit. Often a line of credit will have a clean-up clause that requires the borrower to reduce the loan balance to zero at least once a year unlike a revolving credit account. A revolving

credit account typically is designed to help finance negative operating cash flows that are incurred as a natural part of an organization's operating cycle.

A revolving credit agreement requires the borrower to pay a commitment fee on the unused portion of funds. A revolving credit agreement is frequently made for periods up to three to five years. Revolving credit agreement contains a financial pledge relating to minimum net worth, minimum interest coverage ratios, and ceiling ratios of debt to capitalization. Calculating the annual financing costs has a bearing on interest rate, commitment fee, compensating balance, and the organization's normal account balance. The annual financing cost of funds borrowed under a revolving credit loan also depends on the amount borrowed on the credit limit agreement. The annual financing cost is determined as follows:

$$\text{Annual Financing Cost} = \frac{\text{Interest Cost} + \text{Commitment Fee}}{\text{Usable Funds}} \times \frac{365}{\text{Maturity (days)}}$$

Thus, the annual financing cost of the revolving credit agreement is higher than the stated interest rate. Many financially sound organizations view revolving credit agreement as a form of financial insurance that should be used in fluctuating situations.

#### **b) Secured Lending Arrangements**

Other types of loans can be secured if they are deemed necessary or desirable. It is better to borrow on an unsecured basis, since the bookkeeping costs of secured loans are often high. An organization may find that it can borrow only if it puts up some type of collateral to protect the lender, or that by using security it can borrow at a much lower rate. Several different kinds of collaterals can be employed, including marketable securities or bonds, land or buildings, equipment, inventory, and accounts receivable. Marketable securities often make excellent collaterals. Similarly, real property like land and buildings and equipment are good forms of collateral, but they are generally used as security

for long-term loans rather than for working capital loans. Therefore, most secured short-term organizational borrowing involves the use of accounts receivable and inventories as collateral.

Secured lending arrangements are more costly to administer than unsecured loans. Moreover, the incremental cost is passed on to the borrower in the form of fees and higher interest costs. With secured loans, an organization's cash flows are segregated with respect to payments to creditors. Stulz and Johnson (1988) portray the use of secured debt as an option to segregate the cash flows emanating from a new investment project to those arising from old projects. As a result, the under investment problem can be reduced.

### **c) Bank Overdraft Facilities**

The long-established system of incorporating the interest rate on overdrafts to Bank Rate has changed. Interest rates are now geared to Base Rate, which can vary from one commercial bank to another. Nevertheless, the overdraft is still usually the cheapest and always the most flexible and convenient source of short-term finance. The convenience is in its instant availability plus the fact that interest is payable on outstanding balances only. The comparative inconvenience of a bank loan is that during its term it carries interest irrespective of whether the borrower has a useful employment for the whole amount or has some of it idle as a credit balance on his current account. In a well-conducted organization, the object of cash management should be to have a cushion against unexpected and peak requirements.

A bank overdraft is an arrangement between a bank and its customer, specifying the maximum amount of unsecured credit the bank will permit the organization to owe at any one time. Usually, overdraft facilities are established for yearly periods and are subject to renewals. Frequently, overdrafts are set for renewal after the bank receives the audited annual report and has had a chance to review

the progress of the borrower. If the borrower's year-end statement date is December 31, a bank may set its facility to expire some time in March. At that time, the bank and the organization meet to discuss the credit needs for the organization's coming year, in light of its past year's performance. The amount of the facility is based on the bank's assessment of the creditworthiness and credit needs of the borrower. Depending on changes in these conditions, an overdraft facility may be adjusted at the renewal date or before, if conditions necessitate a change.

### **2.3 Manner in which working capital is managed**

Working capital management as noted by Stancill (1971, p.2), can be considered “an art of finance” in finding the right combination of policies and models based on situations and circumstances. Choices depend mutually on the environment in which organizations operate and the correct option can lead to success and growth. According to Arnold (2002), establishing the correct balance of short-term financing requires consideration of cost and risk needs to be weighed in order to determine the optimal combination. Adoption of the correct financing policies of aggressive, moderate and conservative needs to be implemented and controlled by management appropriately. These policy formulations are developed and applied by the use of correct financing policies and models of finance.

A working capital policy which requires high levels of inventory, debtors and cash, is considered a conservative policy. This type of policy can be applied when there is high risk and lack of stability in the organization’s environment. If there is low risk environment, then an aggressive policy of working capital can be adopted which requires minimum levels of inventory, debtors and cash to be implemented.

The determination of working capital levels depends on three major factors:

- The economic environment in which the organization operates.
- The level of stability in acquiring the organization’s revenue.
- The appropriate management skill in the handling of internal finance.

Working capital policies directly affect investment policies. Working capital investment policies aim at achieving an optimal level of working capital which ensures that there is no strain on liquid resources and at the same time there is no idle cash. The intersection of the two extremes is somewhere between the conservative and aggressive policies, which produces a moderate policy.

### 2.3.1 Aggressive

#### Aggressive Approach

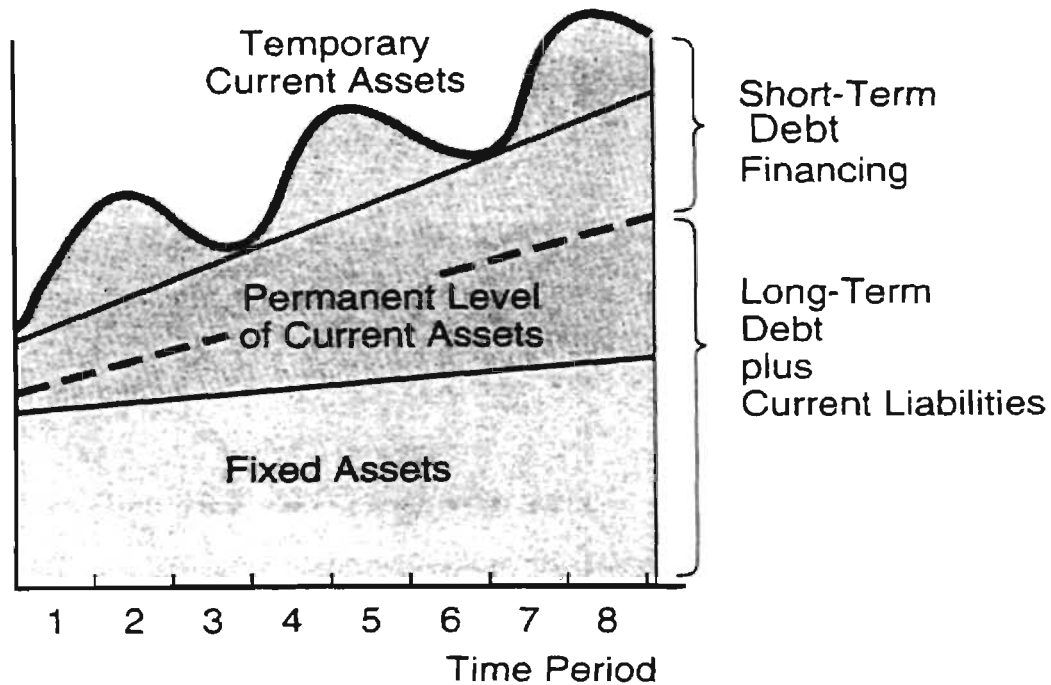


Figure 2.7: Aggressive Working Capital Policy

(Adapted: Brigham and Ehrhardt 10 ed: 2002, p. 885)

An aggressive financing policy uses short-term funds to finance all fluctuating current assets and some of the permanent current assets. This policy is most risky in terms of liquidity, but offers the highest returns. Long-term funds are used to finance all the fixed assets.

According to Lovemore and Brümmer (2003, p. 110), when current assets are financed almost entirely from short-term funds, for example, a current ratio of 1:1, the kind of working capital management involved is referred to as the aggressive approach.



### 2.3.2 Conservative

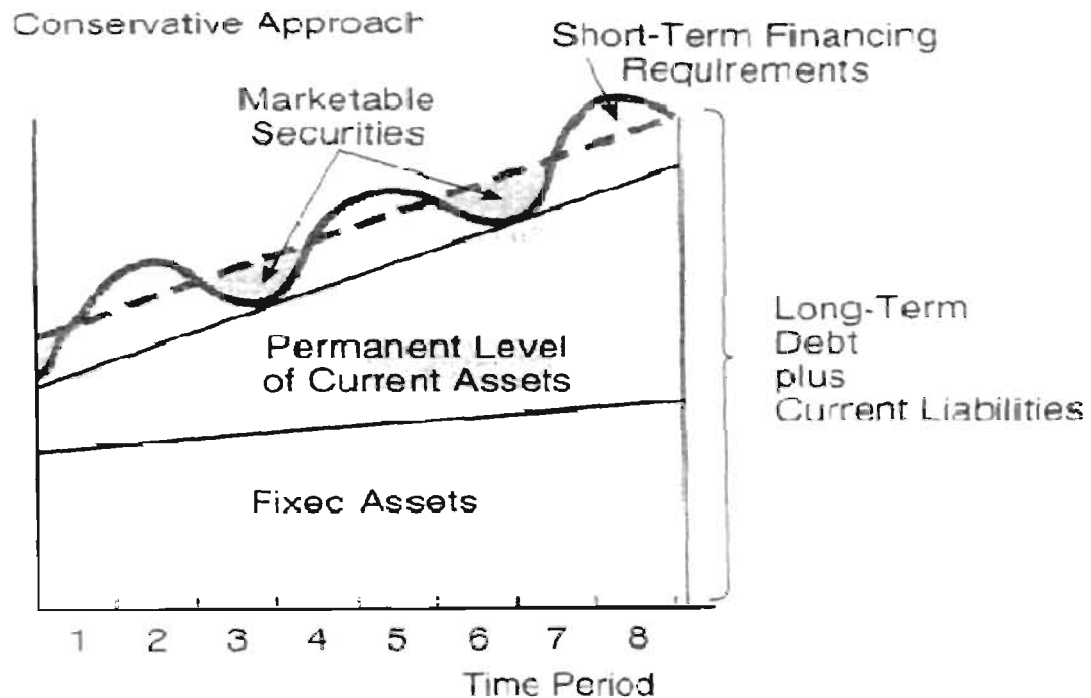


Figure 2.8: Conservative Working Capital Policy

(Adapted: Brigham and Ehrhardt 10 ed: 2002, p. 885)

A conservative financing policy uses long-term funds to finance all fixed and all permanent current assets, as well as some fluctuating current assets. This policy is least risky, but offers the lowest returns because the cost of long-term finance is generally higher than the cost of short-term finance. Under a conservative policy, there will be periods when the level of fluctuating current assets drops below the level of long-term financing.

These conditions result in short-term deposits, which in turn lead to an increased minimum investment in working capital. Short-term funds are used to finance only part of the fluctuating current assets. According to Lovemore and Brümmer (2003, p. 110), the degree of conservatism would be moderate, as the degree of risk decreases and less long-term funds would be used to finance working capital. This would mean a lower current ratio of say, 2,5:1, or even 2:1 instead of 3:1 is applied.

### 2.3.3 Moderate

#### Moderate Approach (Maturity Matching)

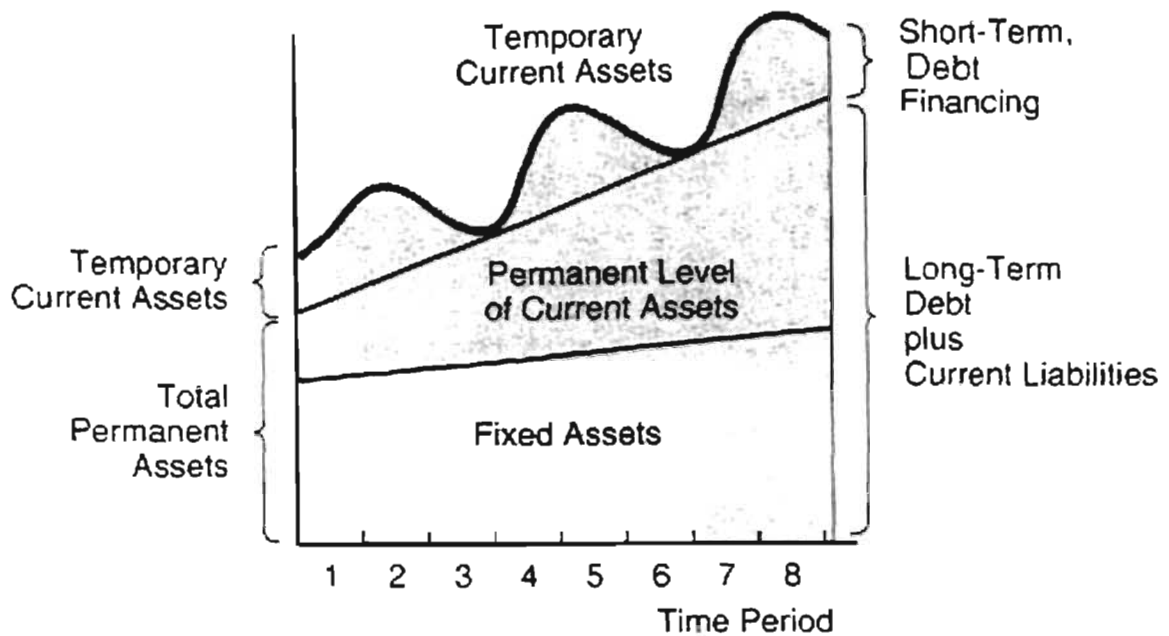


Figure 2.9: Matching Working Capital Policy

(Adapted: Brigham and Ehrhardt 10 ed: 2002, p. 885)

A moderate policy attempts to match asset and liability maturities based on expected life of the assets (fixed and current) being financed. This policy uses long-term funds to finance all fixed assets and all permanent current assets. Short-term funds are used to finance fluctuating current assets. It is difficult in practice to match the financing exactly, but the moderate policy offers a balanced method of financing.

The best-balanced method would fund most of the permanent current assets and all fixed assets from long-term financing. The remainder of permanent current assets and all the fluctuating current assets would be financed from short-term loans.

## 2.4 Policy Formulation Techniques for Working Capital Management

Merville and Tavis (1973, p. 58) proposed the “division of working capital into permanent and temporary components”. This determined the required financing for each component and the optimal method that should be used. Considerations that were taken into account in their study were factors of cost, risk, availability and constraints.

Sagan’s (1955) article on the “Theory of Working Capital Management “ provides assessment criteria on working capital management that are suggested to be used in order to achieve an optimal working capital management policy. The following are Sagan’s assessment criteria:

- Why are certain inventory levels maintained?
- Why are certain bank accounts kept or why are certain balances maintained in these accounts?
- Why are certain types of investments purchased?
- Why is borrowing done in a certain way?
- How is cash flow being channeled?
- What advantages are gained by discounts given on receivables or taken on payables?” (Sagan, 1955, p. 129).

The aim of working capital management is to support the long-term financial goal of the organization. This entails the assessment of the risk-return relationship. The elements, which require analysis between the trade of risk and return that needs to be considered are insolvency, level of assets usability and the cost of financing operations and assets. If current assets of cash, accounts receivables and inventory can be maintained at a low level then the level of risk or insolvency will be low. As the quantity of working capital increases so too does the risk of liquidity.

#### **2.4.1 Combination of policies and models**

Long-term debt or short-term debt can finance working capital. The latter is considered more flexible but entails a greater risk because it could fall due immediately or could possibly not be renewed.

Working capital management aims at devising and implementing a strategy that reduces risk. This can be achieved by implementing strategies which minimize current liabilities, minimize financing cost and ultimately aim at maximizing the value of the organization.

#### **2.4.2 Approaches that can be adopted**

The costs of these approaches as stated by Lovemore and Brümmer (2003, p. 111) are the conservative approach, which might provide appropriate protection against risk. It is more costly than the aggressive approach because of the interest that must be paid on the relatively large proportion of long-term borrowings used in financing working capital. Thus, we see that the interest payments arising in the conservative approach tends to lower operating revenue. By contrast, the aggressive approach promotes greater revenue because of the relatively small amount of interest involved in financing working capital. Thus, there is a direct ratio between the expected income and the risk involved. This conclusion supports the concept of risk aversion; that is, when risk is undertaken, there must be adequate compensation for undertaking it.

Finally, the trade-off on risks and stability depends largely on a decision maker's attitude towards risk as elaborated by Gitman L.J (1997, p. 92).

### **2.4.3 Key object of Working Capital Management**

**Cash management:** As in the management of cash the organization has to maximize the net present value by collecting cash as quickly as possible, distributing it as slowly as possible, and investing temporary surpluses as profitably as possible.

**Debtors Management:** The financial managers' basic duties are to make and monitor decisions regarding terms of sale and debt granting. Several of these complications revolve around different levels of information that are available.

**Creditors Management:** As a credit controller, accounts need to be paid as slow as possible without harming or hurting the name of the organization as well as preventing the organizations' credit worthiness from being damaged.

**Inventory Management:** There are several different inventory models to choose from. The key objective is to limit the amount of cash or funds in inventory storage. This creates no value for the organization.

**Short-term Financing:** The availability of finance is based on the financial culture and business climate within which the organization operates. There are various sources of short-term financing available depending on the organization's credibility and needs.

## **CHAPTER 3: RESEARCH METHODOLOGY**

### **3.1 Introduction**

In this chapter the methodology and data collection techniques used are explained in detail. This chapter provides an account of how the study was designed and conducted. A motivation of each alternative of research methodology and choice has been elaborated. These choices were made in order to achieve the study's objectives. While the research design is elaborated on, emphasis also falls on the method of investigation chosen, the research instrument that was used and the reasons for choosing that particular instrument. The size of the sample, the sampling procedure and the methods of data collection and data analysis are also discussed. This will provide a better understanding and explanation of the research. Research issues of validity and reliability are also explained.

According to Johnson and Duberley (2000, p. 39) the observer is independent of what is being observed. Therefore, the observer can stand and observe the world objectively. Johnson and Duberley add that the choice of what is to be studied, and how to study it, can be determined by objective criteria rather than by human beliefs and interests. Theory can be tested against irreducible statements of observation and the 'facts' of the situation. Research is concerned with producing accounts that correspond to an independent reality. The primary objective of this research account is to compare theoretical models to actual practical occurrences. Johnson and Duberley provide a perfect summation of the intention of research projects.

Pugh (1983, p.50) discusses the following five assumptions with regard to conducting a general research strategy:

- 1) The need for comparative studies to distinguish problems specific to particular organizations from those common to all organizations.

- 2) Meaningful comparisons require common standards for measurement.
- 3) Its objectives and environments will influence the nature of an organization, so these must be taken into account.
- 4) Study of the work behavior of individuals or groups should be related to the study of the characteristics of organizations in which the behavior occurs.
- 5) Studies of organizations' processes of stability and change should be undertaken in relation to a framework of significant variables and relationships established through comparative study.

This research intends to adopt the strategy that Pugh had described as well as research strategy of triangulation. This is a combination of qualitative and quantitative research methods, which would result in an effective research strategy. Triangulation as defined by Denzin (1978) is "the combination of methodologies in the study of the same phenomenon". The effectiveness of triangulation rests on the premise that the weakness inherent in one method will be compensated for by the counter-balancing strength of the other.

### **3.2 Research Method**

There are various methodological techniques available to conduct a research project. Each needs to be considered and evaluated based on the research purposes and proposed outcome desired. When the final method is chosen it still would need to overcome its weakness in order for the method to supersede the research expectations and purpose. A case study method has been chosen to conduct the research on the effective management of working capital in the five non-profit organizations. A critique of this method of study was elaborated on by Ghauri et. al. (1995) who stated that 'case study method' is extremely weak, since it does not allow for any comparison. But this study attempted to overcome this critical weakness by using comparisons between organizations in similar environments in order to determine if they use optimal and effective working

capital models within these organizations. This aimed at overcoming the weakness, which Ghauri et. al. emphasized.

An excellent way of looking at a case study method would be as Johnson and Duberley (2000, p.64) defined it: "An enquiry, which uses multiple sources of evidence. It investigates a contemporary phenomenon within its real life context when the boundaries between phenomenon and context are not clearly evident." To identify the phenomenon requires some primary and secondary data, which would be obtainable from the organizations. The secondary data, which was identified as being the financial statements of these organizations, would be used to identify the phenomenon under study. A questionnaire and an interview would be used to obtain the primary data for the research.

The method chosen in this research was briefly motivated as to the advantages and disadvantages of case study method, which White (2000, p. 196) has elaborated on:

#### Advantages:

- It can be carried out by a single researcher.
- It is relatively cheap to conduct.
- A case study will generate empirical data and information. You will not be solely dependent on already published work. The data may not be present in vast amounts, but it will always be interesting and specific to the case under scrutiny.
- It takes place in a natural setting within an actual organization.

#### Disadvantages:

- With a single typical case study it is often difficult to separate what is unique to the organization involved and what is common to similar organizations.



- The whole issue of generalization needs to be handled with caution. The degree to which one can relate to the general position is often limited.
- Case studies can generate a lot of information, since different methods used produce their own findings. The analysis and interpretation need to be handled carefully, logically and systematically. Again, when done effectively, this strengthens the academic argument being presented.

The researcher's endeavor would be to take White's disadvantages into consideration and aim at overcoming these shortcomings during the research process.

There are four types of case studies highlighted by White (2000, p. 284):

Type 1: Is a single case design that is treated as one whole unit of analysis, example a supermarket, or a manufacturing company.

Type 2: Is a multiple case design where each unit is treated as one whole unit of analysis.

Type 3: Is a single case design that analyses several units within the same case.

Type 4: Is a multiple case design that analyses several units within a number of separate cases.

A type 2 case study approach is adopted which uses a multiple case study designed with several independent organizations. The aim is to map similarities among them and define an optimal working capital management model with respect to the management of working capital. If this can be established, then these organizations could be used as a benchmark among other organizations operating in similar environments.

Judd, Smith and Elliot (1991, p.58), stated that "survey research is appropriate in situations where the researcher is not interested in causal relationships, but in knowing what people think about an issue". Taylor and Steven (1984, p. 46) also pointed out that "surveys are useful in gathering data aimed at describing the

nature of existing conditions”. Therefore, survey research was considered appropriate for obtaining managerial perceptions of the effects of managing working capital.

The self-administered questionnaire was designed using the literature review conducted. Some of the questions came directly from the research conducted by other authors. However, the scales were changed to ensure that there was conformity throughout the questionnaires. Rating scales that were used in the questionnaire were a combination of simple category scales, multiple choice single-response scales and the Likert scale. The scale asked the respondent to rate his perception of the statement or question at hand. There were five options provided, which ranged from a favorable to an unfavorable response. The questionnaire’s content was rated as being valid since the questionnaire had been used for a study of a similar nature, but had been modified according to changes in recent literature. The multiple choice single response scale aimed at obtaining a direct response, and established certain financial decision-making motives. The simple category scale was specifically aimed at obtaining general information about the respondent. The motivation for the use of a variation on rating scales was specifically used to eradicate monotony within the respondent questionnaire. This key mechanism had been the counter check mechanism to monitor the respondents’ awareness to changes within the questionnaire.

### **3.3 Sampling**

The sample frames used in this study are the financial board of management in the organizations, which was chosen through convenience sampling. The reason for this choice is that the researcher wanted a sample that would be best able to evaluate the research question at hand. Levy (1998, p.204) defines convenience sampling as “a non – probability sampling method that takes units as they present themselves to the researcher”. Using this convenience sampling

technique, the questionnaire was distributed to the finance committee member through the organization's financial co-ordinator.

<u>Organizations</u>	<u>Number of respondents</u>
Association for persons with Physical Disabilities (A.P.D.)	8
Aryan Benevolent Home Council (A.B.H.)	11
Chatsworth Child and Family Welfare Society (C.C.F.W.S)	10
Cheshire Homes Durban – Chatsworth	4
Chatsworth Regional Hospice Association	6

Table 3.1: Sample Frame per Organization

Based on the sample of organization chosen, the financial committee members were established as being the sample frame to be chosen, since it was these specific individuals who are responsible for the determination of financial decision making for the organization they represented. Confirmations of the relevant financial committee members were established by the organizations' financial co-ordinator. This was primarily aimed at establishing the size of the total sample frame. The table above gives a representation of the numbers of samples per sample organization chosen. The sample frame chosen was based on each organization due to the specific affiliation to that particular organization during the time of research. Most members over a time period move from one organization to another after serving the time in the respective organizations. Therefore when the data is analyzed segregation between organizations is eliminated.

### **3.3.1 Sample selection Bias**

Sample selection bias needs to be considered in order for a study to represent a true reflection of a desired outcome. The sample that was selected entailed the full complement of the sample population and the respondents were given the opportunity on questionnaires to remain anonymous. This allowed the respondent to provide honest and dependable information for the research. Most

individuals that belong to the finance committee provide their services on a voluntary basis and believe that their services provide full benefit to the organization. Based on these facts the elimination or the reduction of sample bias by the respondent would have been minimal.

### **3.4 Data Collection Methods**

The aim of data collection is to achieve the desired objectives of the research. According to Gill and Johnson (1991, p. 85), to achieve those objectives it is important to consider five interrelated issues in the questionnaire design, which are: questionnaire focus, question phraseology, the form of response, question sequencing and overall presentation.

Taylor and Steven (1984, p.50) state that “whether the survey is large scale or small scale, it involves one or more of the following data collection techniques: structured or semi-structured interviews, self – completion or postal questionnaires, standard tests or attitude scales”. Themes that emerged from the literature review were used to generate the questionnaire. Judd, Smith and Elliot (1991, p.53) pointed out that “each form of data collection technique had advantages and disadvantages and that the researcher needs to consider the factors in relation to the suitability of each technique to the research question, the specific population targeted for research as well as relative costs”. Simon (1996, p.75) suggests that “postal and self-administered questionnaires are less costly, put less pressure for an immediate response and give respondents a greater feeling of anonymity”.

A self-administered questionnaire was considered appropriate on the grounds that it is less costly than interviews and would be convenient for the financial decision makers because of the time factor. The self-administered questionnaire would allow respondents to respond in their own time and also guarantee anonymity, which is essential for encouraging respondents to respond freely to

“sensitive” questions. Simon (1996, p.80) suggests a number of ways which can be used to secure a good response rate in postal questionnaires, such as the appearance of the questionnaire with reference to clarity of wording and simplicity. The piloting of the questionnaire is considered crucial in determining whether respondents understood the instructions provided and also determining the amount of time it took to fill the questionnaire. The questionnaire for this particular study was piloted among peers of similar financial understanding.

The questionnaire contained twenty-five statements, where respondents had to choose using the Likert scale to measure the importance of financial information when decision-making was taken into consideration. The single response multiple-choice rating was aimed at obtaining a fixed answer to a decision-making aspect of working capital management. The questionnaire was scored in such a way that the Likert scale used a high rating for positive responses and a lower numerical rating for negative responses. The single multiple response rating used a numerical rating and rated all responses based on respondents’ preference, which was aimed at obtaining cumulative preferences among respondents.

The financial managers of the organizations were contacted either telephonically or by email to request permission to drop off questionnaires that had to be forwarded to the targeted sample group. Once permission was obtained in respect of these managers co-ordinating the distribution and collection of the questionnaires, it was personally handed over to them with written instructions.

A cover letter (copy attached in appendix II), which provides a brief summary of the study’s aims and objectives was prepared. This cover letter was attached to each questionnaire, which assured the respondents of the confidentiality of their responses. The respondents were asked to return the completed questionnaires to the organization’s financial co-ordinator. Once the co-ordinator had obtained a

significant proportion of the questionnaires the researcher was notified to collect them.

The questionnaire seeks demographic details about the respondents' position, age, sex, current job and experience. The other questions aimed at specifically addressing the research problem. It aimed at acquiring significant information on the decision-making process with regard to working capital management of the organization.

### **3.4.1 Quantitative Methods**

Questionnaires are used in the study to establish the aims and obtain the desired information to address the research problem. A pilot group was used to test the research questionnaire. The most objective and critical of groups were established, as being the master of business administration (MBA) colleges, which specialized in the financial specialty of the MBA. Due to their wide and recently acquired knowledge as well as the specific requirements of having the relevant work experience in the respective field of study, they were considered the best for the pilot questionnaire assessment and test. Due to location of group members, the method used to check and assess the questionnaires was by means of e-mail. The questionnaire after being prepared was e-mailed to a total of seven group members, which was a direct representation of the proportion of the sample to be tested. After a period of a week and a half, the questionnaires were returned with comments and amendments made. Every consideration was taken into account before the final questionnaire was printed and distributed.

The respondents to the questionnaires were required to answer in a multiple-choice format. The aim of this was that most of the sample chosen were individuals who were volunteers in these organizations and were constantly busy and provided their time and services to these organizations without compensation. Therefore, a quick and easy method of data collection needed to

be applied. This is a further reason for the use of a master of business administration financial specialist group as a pilot study since they were able to provide guidance on the relevant questions posed.

The questionnaire accompanied a cover letter, which aimed at explaining to the respondent the purpose of the study and the role they played in participating in the study, as well as a detail of the effect of this study on other organizations that operate in similar situations.

The questionnaire that was used by Smith K.V and Sell S.B (1978) was adapted for the purpose of this study. The questionnaire was found to be most suitable due to the similarity of the research, which was conducted among a thousand firms on the management of working capital in practice. The only difference was that the organizations were different in terms of profitability motives.

The questionnaire was administered during the financial committee meeting since all the financial decision makers were present at these meetings. Schedules of these meetings were obtained in order to have the questionnaires ready for the organizations' meetings. The organizations' co-ordinator was told that time should be allocated in the agenda of the meeting for these questionnaires to be completed.

Johnson and Duberley (2000, p. 44) state that while there is an increased acceptance of qualitative methods, the popularity of quantitative approaches in management research should not be underestimated. Blau and Scott (1963) represented the views of many more recent academics when they argued that in order for knowledge of organizational phenomena to be expanded, researchers should collect quantitative data from large-scale studies rather than individual cases. This is further substantiated by Draft's (1980) research, which found that there was an almost two-fold increase in the number of quantitative papers handed in at the Administrative Science Quarterly.

Johnson and Duberley (2000, p. 47), states that surveys place emphasis upon cross-sectional analyses using standardized measures to compare across situations. They entail the collection of data on a number of respondents or units, usually at a single juncture in time. The aim is generally to collect systematically a body of quantifiable data in respect of a number of variables, which can then be examined to discern patterns of association Bryman (1992, p.104). Therefore the statistical analyses that can be used would be descriptive statistics of frequencies and percentages. Simple frequency distributions will also be performed to see how the sample is divided along biographical lines. Such frequency distributions have also been diagrammatically depicted using tables and bar charts.

#### **3.4.2 Qualitative Methods**

As substantiated, the quantitative method of obtaining information from the target sample group was the use of a questionnaire. This specifically concentrated on areas of working capital management and the actual policies. The qualitative aspect of inquiry was aimed at obtaining a better understanding of the working capital management problem within the organization of the sample area. This entailed the compilation of an interview questionnaire. The primary aim of this was to obtain information from the financial implementers on the actual nature of the problem at hand.

Since there were five organizations chosen in the sample frame, the five financial controllers were chosen for the interview. They were regarded as individuals of primary importance due to the strategic position they held in the organization as well as their first-hand experience in financial matters of the organization. Due to time limits and availability of these individuals (some members were voluntary members), a telephonic interview method was used. The interview was first scheduled due to availability of these individual and was assigned a time limit of



ten minutes. This method also proved cost effective for the research due to the various locations of the sample frame chosen. Attached in appendix III is a copy of the interview questionnaire.

### **3.5 Validity and Reliability**

“Validity aims at its ability to measure what it intended to measure and reliability aims at obtaining stability of the measure”, stated by Johnson and Duberley (2000, p. 43-44) who added, “In order to have validity, any theory of management has to take account of the context in which management is practiced. Hence we have seen a move towards more interpretative methods of inquiry.” With reliability if the test is conducted by another researcher the results obtained would be similar as conducted by this study provided that the methodology is followed as stated earlier. The concept of reliability thus impacts upon the extent to which we can be sure that what we have identified as ‘cause’ actually impacts upon ‘effect’ because reliability essentially enables us to be sure about the efficiency of our measures. (Schriesheim et. al., 1993)

Johnson and Duberley (2000, p.46) define:

Internal validity: Whether or not what has been identified as the cause actually produces the effect.

External validity: the extent to which the research findings can be extrapolated beyond the immediate research sample.

Reliability: The consistency of results obtained in research. Whether another researcher could replicate the original research or the same researcher could replicate the original research at a different time.

According to Yin (1989, p.217) there are the following four tests that can be used to judge the quality of case studies:

- Construct validity: Establishing correct operational measures for the concepts being studied,

- Internal validity for explanatory or causal studies only and not for descriptive or exploratory studies which aim at establishing a casual relationship whereby certain conditions are shown to lead to other conditions, as distinguished from spurious relationships,
- External validity: Aim at establishing the domain in which study findings can be generalized,
- Reliability: Focuses on the operations of the study such as data collection procedures, which can be repeated, and the same results can be obtained.

Surveys usually entail the careful random selection of samples that enable results to be generalized to a wider population with a high degree of confidence. Concurrently, by using highly structured questionnaires to gather data in a form that is quantitatively analysable, survey-based research is usually regarded as easily replicable and hence reliable Gill and Johnson (1991, p. 123).

Finally, it is important to note that questionnaire designers need to be aware that although they may have a highly reliable measure, it may not necessarily be measuring what it is intended to measure: reliability does not necessarily imply validity, whereas if the measure is valid it will be reliable Gill and Johnson (1991, p.88).

### **3.6 Interpretation**

The questionnaire was collected and reviewed. The S.P.S.S program was used to assist in analysis of the data. The data was then summarized to determine the various levels of agreement on statements. Frequency tables were constructed using the data from the questionnaires. Frequency distributions were determined using bar charts.

The financial co-ordinators were contacted telephonically and thanked for their courtesy and co-operation in distributing and collecting the questionnaires.

This chapter has dealt with the choice, design and the administration of the research instruments. The following chapter focuses on the data obtained and the analyses of these data. Methods of analysis are described in context.

Finally, the methods used to obtain the data were as follows: Financial statements which formed part of the secondary data, Survey questionnaire which aimed at obtaining primary information on working capital management policies and the use of interview survey managed to obtain a first-hand account of the research problem. The aim of the use of this triangulated method of data collection was to eliminate irregularities in the research process.

## **CHAPTER 4: CASE STUDY**

### **4.1 Introduction**

The literature review conducted in chapter two outlines how working capital management should be handled. This is provided on a conceptual (theoretical) level. The conceptual level represents the factors, which are present in an ideal situation, while on the other hand the empirical level projects the actual outcome. The case study approach aims at describing the actual world compared to the perfect world. A variance is conceived which explains the deviation away from the perfect world. This situation is what is addressed and explained and recommendations are made which aim at closing the gap between both worlds. Alternatively, patterns may emerge which identify possible reasoning for the fluctuation of results, which are then compared and evaluated. The case study approach aims at addressing issues or problems being studied, the methods used, the findings from the data collected, analysis of the data and a conclusion.

Henke (1988,p.5-6) describes the operative objective of such non-profit organizations as the provision of socially desirable service without the intention of realizing a profit. Non-profit organizations have no ownership shares that can be sold or traded by individuals, and any excess of revenues over expenses or expenditures is used to enlarge the service capability of the organization. They are financed at least partially by taxes and/or contributions based on some measure of ability to pay, and some or all of their services are distributed on the basis of need rather than an effective demand for them. Private non-profit enterprise units are created by groups of people who are interested in seeing particular services, such as education or health care provided on a non-profit basis within the community. Governmental legislation generally charters them but they have no power to levy taxes as a source of support.

Henke (1988,p.16) therefore describes the basic accounting equation for such a system as follows:

$$\text{Assets} + \text{expenditures} = \text{liabilities} + \text{fund balance} + \text{revenue}$$

As you examine this equation you will observe that the term expenditures has been substituted for expenses in the profit entity equation. Expenditure is used to describe all outflows that are spent on resources regardless of whether they are for expenses, the acquisition of assets or in some instances the retirement of debt. The term revenue in this equation is used to reflect all inflows that are spent on resources regardless of whether they have been earned in the current period. Inflows spent on resources should be recognized as revenue in the accounting period in which they become available and are measurable. The amounts accumulated in all revenue and expenditure type accounts during the reporting period are reflected in an operating statement called a statement of revenue and expenditure. The term fund balance is substituted for owner's equity and may be visualized as the basic equity account of pure non-profit entities. The balances in all fund balance accounts are reflected in the balance sheet. These often include reserved and unreserved elements.

The analyses performed on all the organizations are identical so as to prevent inconsistency among the organizations under study. The presentation may seem monotonous by the results interpreted and depicted that vary from organization to organization due to the level of operation, as well as the size and range of organizations' cover over the relevant geographic area. Information for the case study was obtained from the organizations' records, information brochures and the web-sites, which were published. Information was obtained on the history, purpose and aims of the organization in order to establish a correlation of service provision.

## **4.2 Organization A (Association for Persons with Physical Disabilities – A.P.D.)**

The A.P.D. has been in operation for over 30 years and provides preventative, educational, supportive, rehabilitative, and re-constructive services to persons with physical disabilities of all races, ages and ethnic groups (Financial Statement 2003, p.6). More than just providing for the physically disabled and community upliftment, the A.P.D. forms a home away from home for the physically challenged. They try to enable the physically challenged to operate in a productive environment through the provision of services and goods. In order for the A.P.D. to operate successfully and provide these services it requires continual funding. The requirement for the operations also entails provision of raw material to the workshop, which is used to generate income for the organization. But primarily income is generated or obtained through subsidies, donations, workshop income and other projects. Based on this the expenses need to be covered in order for the organization to be able to operate efficiently.

### **4.2.1 Analysis of financial statements**

By evaluating the financial statements of the A.P.D. for a five-year period, the financial position and the financial policies, which are adopted, are determined. At the outset it is observed that the current liabilities have been constantly greater than the current assets. This has resulted in the A.P.D. having a negative net working capital for the entire review period. What has also become evident over the period is that for the last two financial periods, the A.P.D. has recognized its shortcoming and has begun to show signs of recovery by implementing recovery policies to decrease the negative working capital situation. They have begun to decrease the current liabilities of the

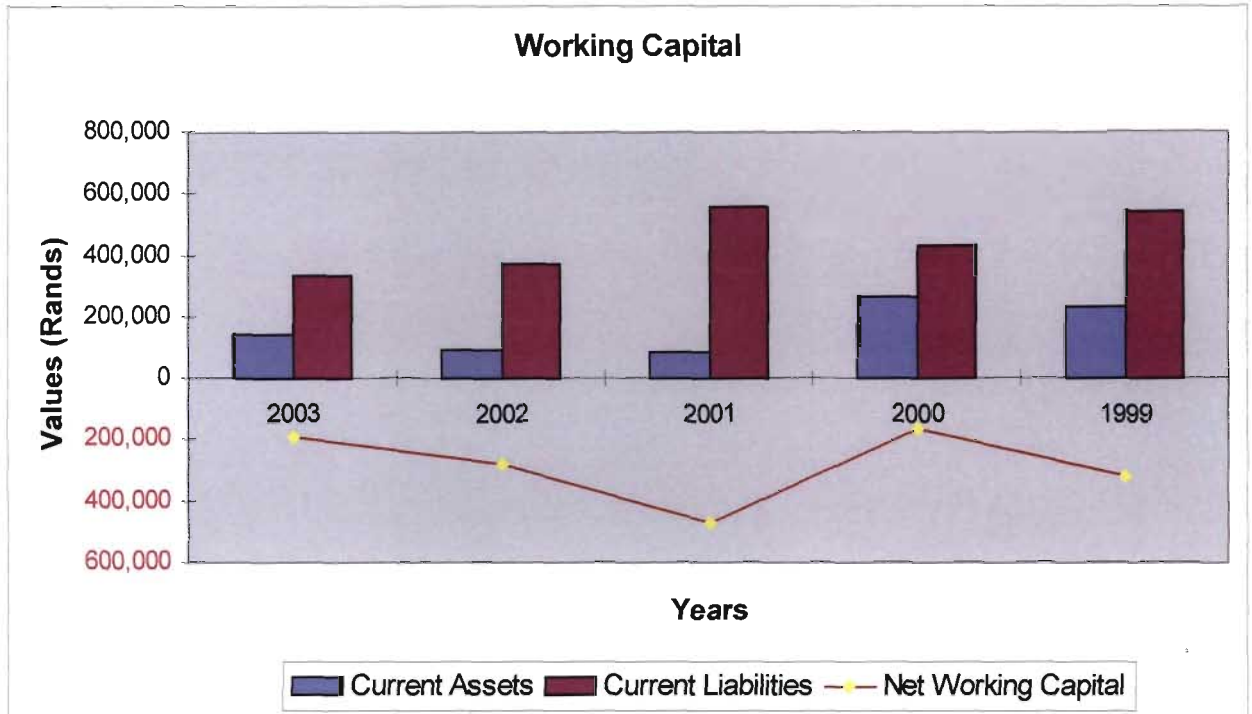


Figure 4.1: Working Capital Proportions for A.P.D.

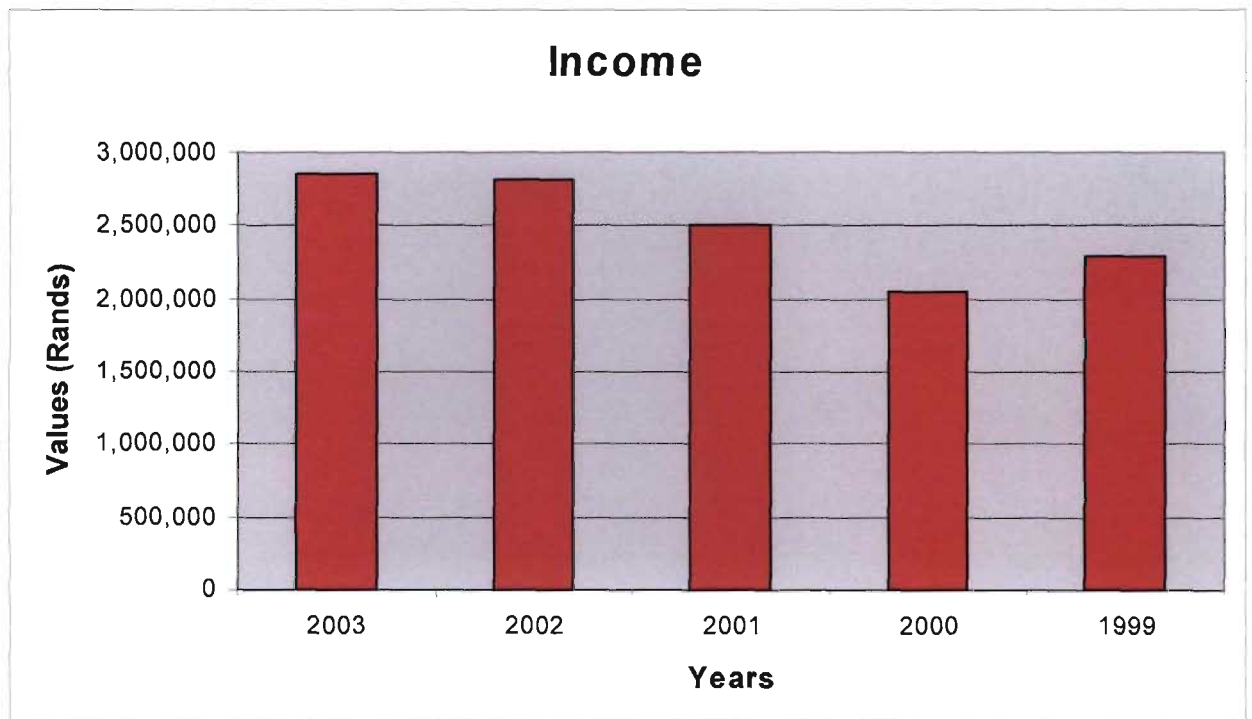


Figure 4.2: Income generated by A.P.D.

organization by way of reducing their creditors, short terms loans payable and eliminating the bank overdraft facilities (as depicted in Appendix IV). This has significantly improved the net working capital of the organization. The current assets of the organization have also shown improvement by way of increases in the bank balances. The reduction of debtors has also had a significant impact on the current assets of the organization. Based on the short-term financial position of the A.P.D. it seems that improvement could be attributed to the increase in income (Figure 4.2) over the period. Income for the A.P.D. has increased consistently over the period, which could also be one of the contributing factors for the improvement of the short-term financial situation of the organization. The poor state of net working capital of the organization has put significant pressure on short-term borrowings to maintain the operations of the organization.

#### **4.2.2 Policy identification**

This presents an aggressive approach of working capital management since most of the operations are financed by short-term borrowings. The positive aspect of the A.P.D. is the revenue growth as well as the decreasing of the negative net working capital. As depicted in Figure 4.1, the net working capital of the organization has increased over the period. The decrease in current liabilities is what has produced this improvement in results. If the organization continues with this financial policy and results, then the financial situation of the organization would improve to a much more acceptable level.



### **4.3 Organization B – (Aryan Benevolent Home Council - A.B.H.)**

The organization has been providing its key services to the community for over eighty-three years. The primary services provided by this organization are preventative and institutional services for the benefit of the aged, disabled and children in need of social, therapeutic and developmental care. These services are achieved with the hard and dedicated enthusiasm of the workforce employed to perform the services required by the community and the country at large. Like all organizations the A.B.H. has had to grow in order for it to keep pace with the growth of the community and other areas, to which it provides its services. This organization like all others finds it difficult competing in a community for resources and funding. Primarily an average of 50% of the income of the organization is obtained from government subsidies. This leaves the balance of the funding to be obtained by the organization's fundraising activities and donations, which are collected, from the community and industry. This puts the organization in an unpredictable financial situation.

#### **4.3.1 Analysis of financial statements**

The analysis of the organization's financial position depicts the situations that it has faced over the last five years, and from this the organization's policies and decisions adopted over this period are determined. What is significantly apparent is that the organization has had a considerable increase in current liabilities over the period 1999 to 2003 (figure 4.3). The current assets over the same period have remained relatively static. With a combination of the above it has put a tremendous negative impact on working capital of the organization. Consequently, from the period 2001 there has been a constant decline in net working capital. The resulting effect of this on a detailed analysis reveals that current liabilities have shown considerable increases in creditors and bank overdraft.

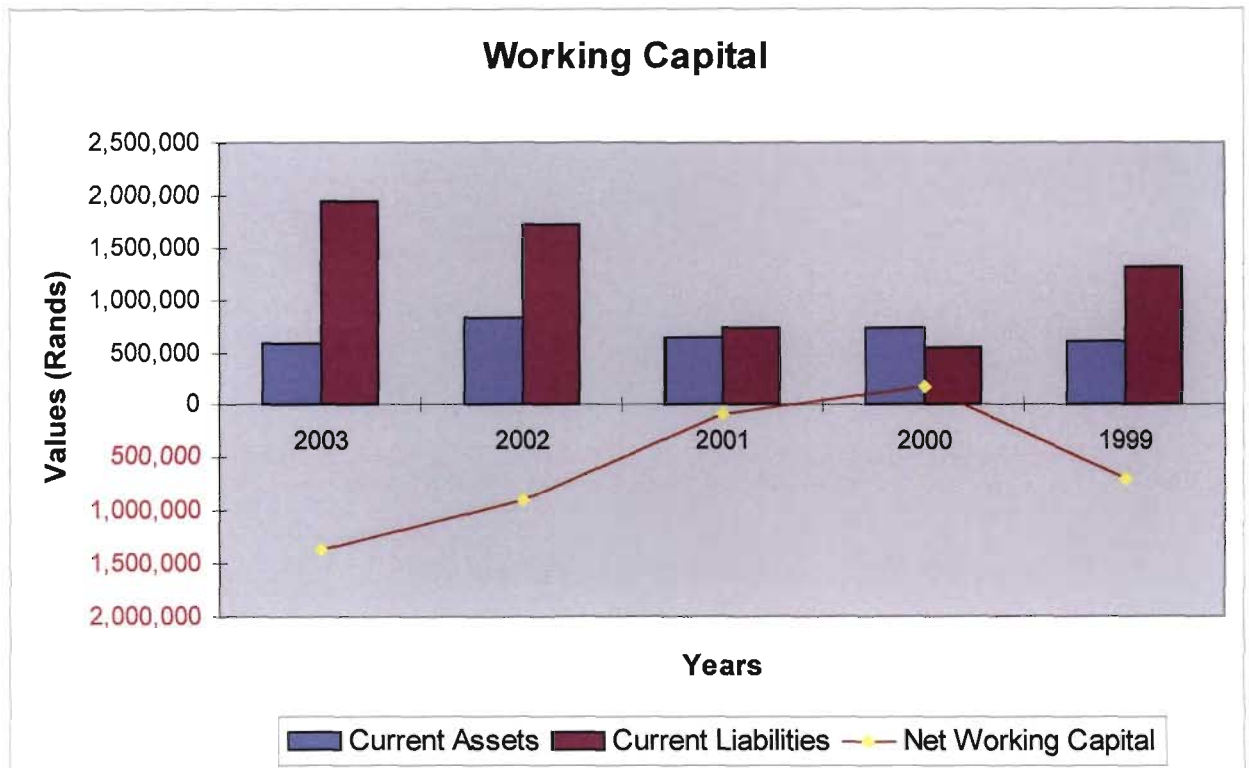


Figure 4.3: Working Capital Proportions for A.B.H. Council

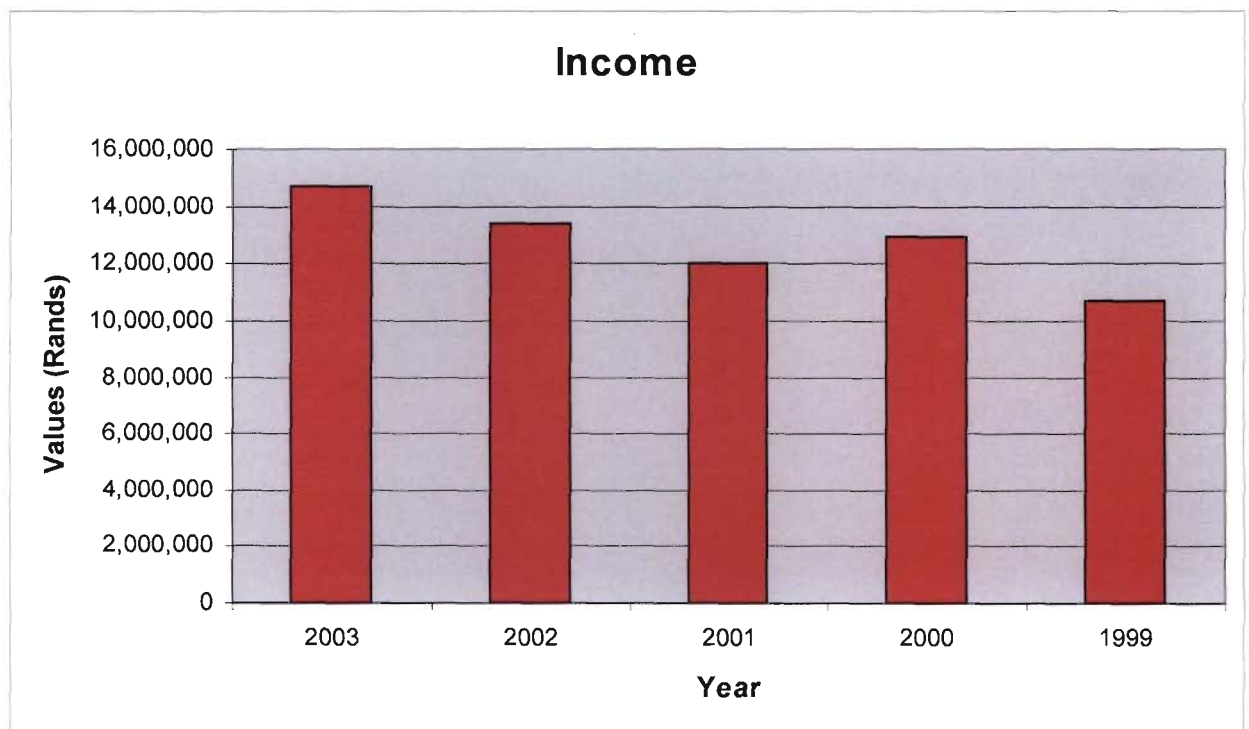


Figure 4.4: Income generated by A.B.H. Council

The organization's creditors have increased at a relatively high proportion and the bank overdraft has also increased but shows a visible reduction strategy now. To worsen the situation of current liabilities, the long-term proportion of liabilities has also increased, which has created further pressure for repayment under the current liabilities portion. The result of this dual pressure of long-term and short-term (bank overdrafts) falling unilaterally has caused excessive pressure on the current liabilities of the organization.

To observe the opposite end of working capital perspective, the current assets over the period of five years has shown no signs of growth. Inventories have reduced over the period, which should have resulted in a decrease in net working capital. But this was not possible due to the enormous increase in debtors, which has reached extremely high proportions. To affect the situation even further, cash balances (bank), which were positive, have diminished and resulted in bank overdrafts.

Based on the last three years the organization's net working capital has been decreasing at a relatively constant and alarming rate. Signs of recovery seem minimal. This is even though the income generated by the organization has increased over the period of review as depicted in Figure 4.4. The revenue growth of the organization can be attributed to its ability to keep pace with inflationary and constant growth rate of development. Based on this assessment, the organization's expenditure and policies are not in line with its revenue and growth potential.

#### **4.3.2 Policy identification**

Based on the organization's five-year review it is apparent that the A.B.H. Council had shown recovery in 2000 where its current assets were greater than its current liabilities. After 2000 the current liabilities of the organization had out

grown the current assets. Figure 4.3 shows graphically the proportional rate at which the current assets and liabilities have grown over the last five years. When comparing the last two financial periods it is observed that the current assets have decreased, with the resulting effect of an increase in current liabilities. We are able to conclude firmly that the working capital policy that the A.B.H. Council adopts is an aggressive approach. In order for the liquidity of the organization to improve, the reverse situation should have taken place whereby the current liabilities should have decreased and the current assets increased.

#### **4.4 Organization C – (Chatsworth Child and Family Welfare Society- C.C.F.W.S.)**

The Chatsworth Child and Family Welfare Society (C.C.F.W.S.) has been serving the local community for a period of over twenty five-years. The core services that the organization provides are:

- child care (child protection, youth empowerment, early childhood development and care programs),
- family care (domestic violence prevention, marriage enrichment, parenting skills empowerment and women empowerment),
- AIDS/HIV (education, training and holistic care development) and
- poverty alleviation (skills development, job creation programs and social relief programs).

These services are an extension of the services provided by the Department of Social Welfare, which the local and provincial government provides. But due to the lack of effective provision of these services the local community has been empowered to provide these developmental services to the Chatsworth community. The organization aims at primarily uplifting local community development. The organization's core control mechanism is made up of local community members who collectively provide their services on a non-compensatory level. The workforce of the organization comprises of dedicated and well-trained individuals, who provide the necessary services to the community.

##### **4.4.1 Analysis of financial statements**

In order for the organization to achieve its objectives and operationally perform its desired goals, funding is required. The main contributing revenue sources for the organization are governmental subsidies, donations and fundraising drives.

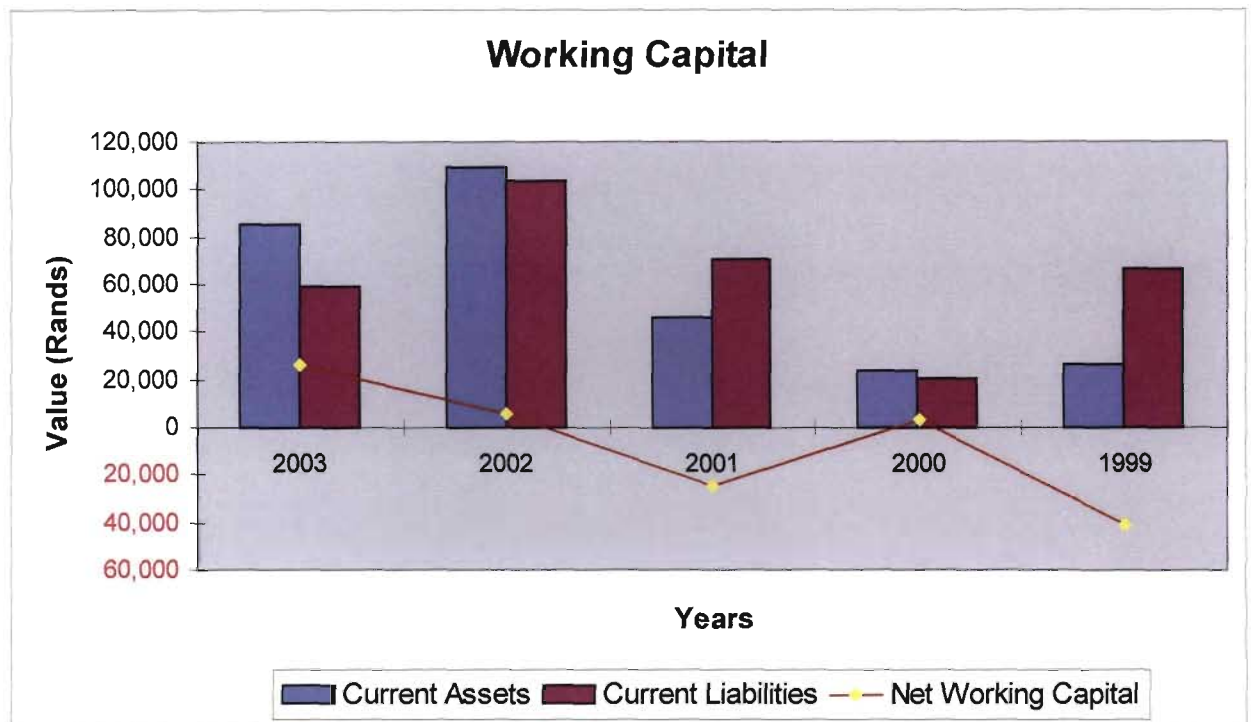


Figure 4.5: Working Capital Proportions for Chats. Child & Family Welfare

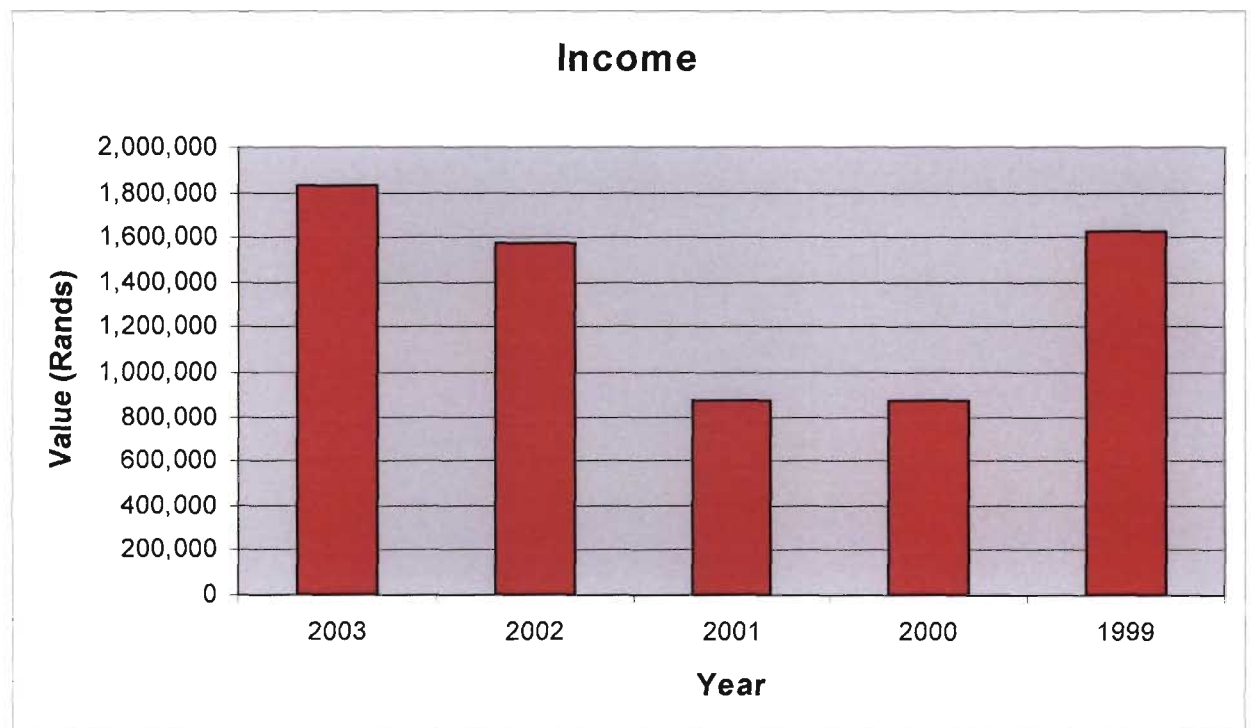


Figure 4.6: Income generated by Chats. Child & Family Welfare

Of these sources of income the only constant and fixed of all revenue sources are government subsidies, but this is insufficient to cover all expenses. This creates income instability. Therefore the organization faces constant financial liquidity problems, but this can be counteracted by intelligent and strategic planning of all short-term income sources and expenses. The organization has been financially analyzed over a five-year period in order to identify and evaluate its short-term financial situation.

It is apparent from the analysis performed (Figure 4.5), which assesses the working capital of C.C.F.W.S. for the period 1999 to 2003 that the current liabilities of the organization have decreased substantially. This has resulted in a significant improvement of the net current assets. Thus, the working capital of the organization has improved from 1999 to 2001. It is identifiable that for the last two consecutive years the working capital has improved. This can be firmly attributed to the decrease in current liabilities and a firm improvement of the current assets. An in-depth analysis (Appendix IV) of the current assets improvement revealed that inventory for the period under review has remained constant. Debtors and cash have increased consistently over the period, which has been the direct result of the strengthening of the current assets.

The effect on the current liabilities for the period was significantly due to the decrease in creditors. The short-term liabilities increased for the initial four-year period and in 2003 were brought to a nil balance. It can be established that the only impact, which has an effect on working capital, was creditors. The substantial impact on the improvement of working capital can be also attributed to the significant increase in cash/ bank balance.

When looking at income (Figure 4.6) for the period under review it can be observed that the income generated over the period has increased. This likely explains the strengthening of the working capital performance of the organization.

#### **4.4.2 Policy identification**

The analysis of the organization reveals it has an aggressive working capital policy. This is due to the significant financial burden. But over the 2002 and 2003 periods the organization underwent significant financial revitalization and change. Policies adopted were aimed at increasing income, which in turn strengthened the financial position of the organization. The reduction of creditors and the significant increase in cash reserves has provided the organization with much financial strength. Based on these adaptive policies the organization would have to sustain this potential to prevent a recurring situation.

The working capital proportion of the organization is presented in Figure 4.5, which reveals that the current assets have been improving during periods 1999 to 2002. The current liabilities for the periods 1999 to 2000 and 2002 to 2003 have shown a decrease. This firmly establishes that the organization is moving from an aggressive to a moderate operating policy. This proves to be very effective for the organization and needs to be maintained for the organization's future.



#### **4.5 Organization D – (Cheshire Homes – Chatsworth)**

This organization has been in the community for over 30 years and provides residential care to the physically disabled and the mentally retarded. The Cheshire Villages were established to provide independent living to the physically and mentally challenged who are self-supportive in a community development arena. The organization runs a daycare program, a workshop and a nursery, which produces goods and services, aimed at accumulating income for running expenses. They have been an interracial part of the community due to their service provisions. This is an area which requires specialized service provision by the organization. This is provided mostly by a group of voluntary service providers who manage and control the organization. The daily functions are preformed by dedicated, well-trained and highly motivated individuals who pride themselves on the services they perform to our less fortunate community members. The income, which is used to maintain the organization's activities is primarily from state subsidies, fundraising drives and donations by the community.

##### **4.5.1 Analysis of financial statements**

By assessing the organization's financial statements over the last five years we are able to determine the financial performance of Cheshire Homes. The financial documents reveal that the organization is financially secure and implements a very cautious financial policy. This is further elaborated in Figure 4.7 where we observe that the organization tends to keep its current liabilities to a minimum. The current assets of the organization have also remained proportionally higher than the current liabilities and this has resulted in Cheshire Home consistently having net working capital, which is positively above the required minimum.

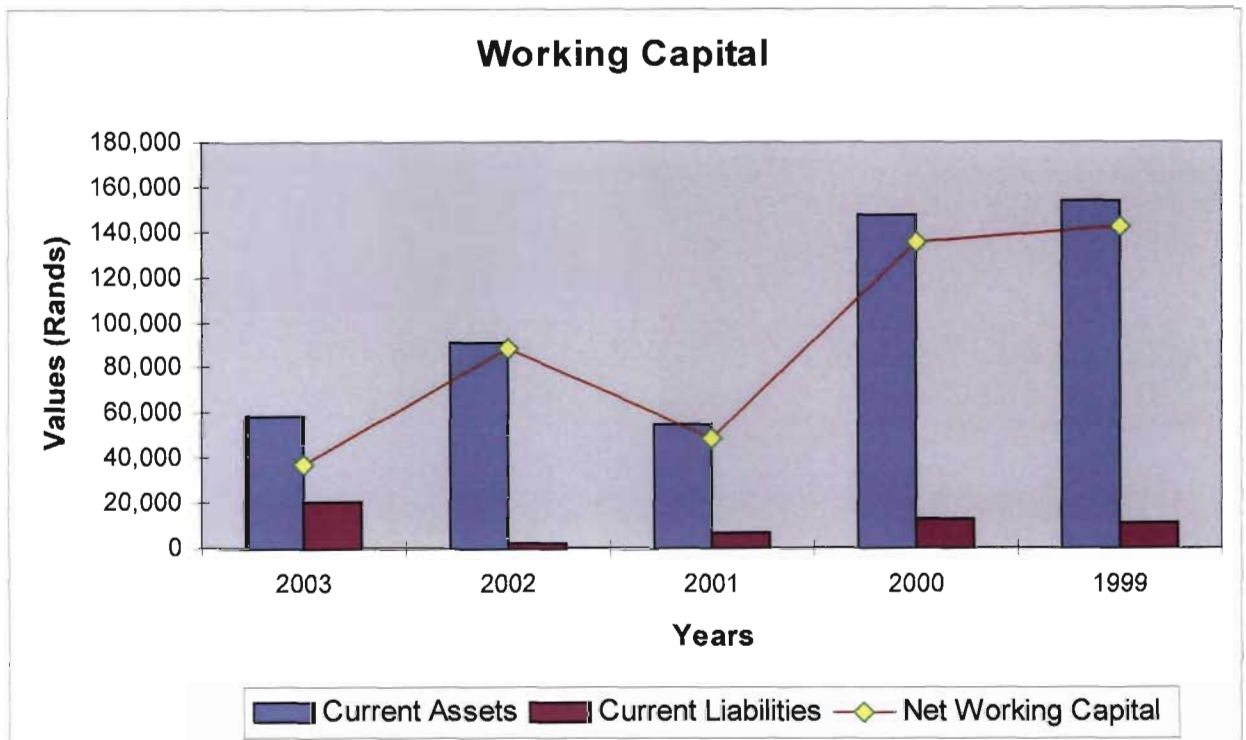


Figure 4.7: Working Capital Proportions for Cheshire Homes – Chatsworth

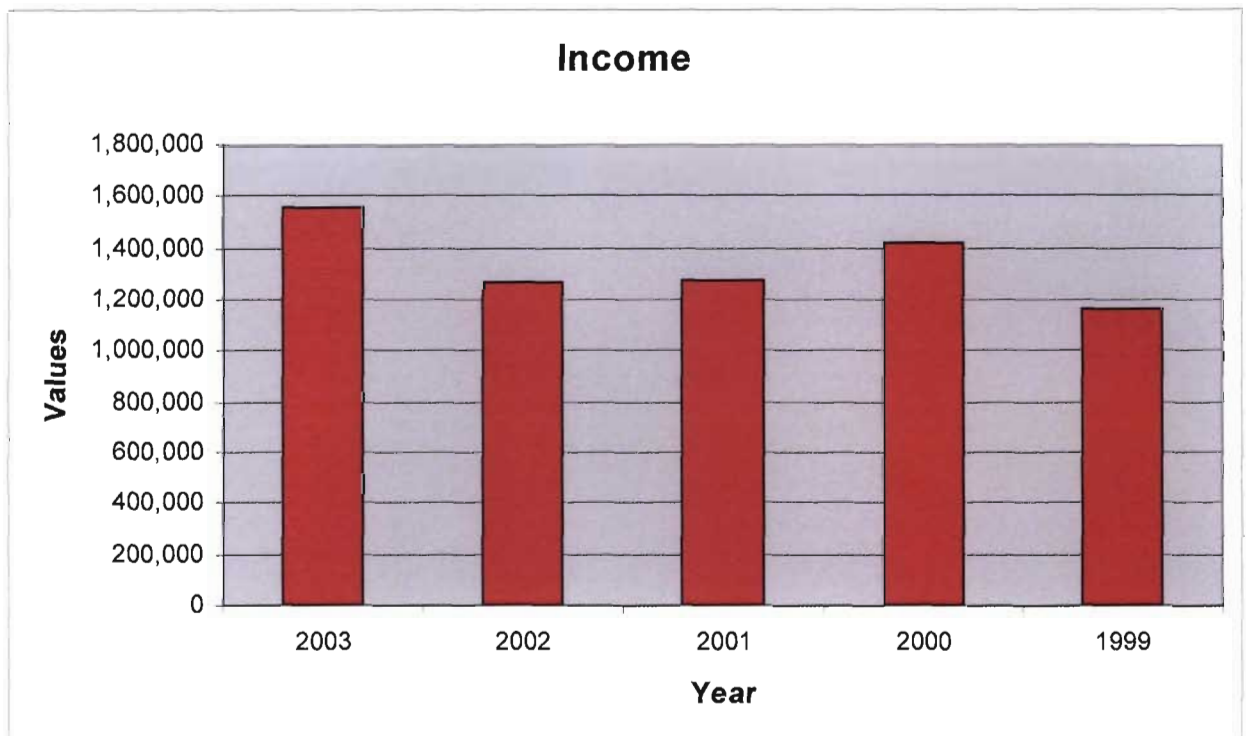


Figure 4.8: Income generated by Cheshire Homes – Chatsworth

Current liabilities over the period have been very low, but the past financial period has shown a drastic increase.

This was the direct result of an increase in creditors. Bank overdrafts and short-term liabilities have not been used, which is a positive aspect of the organization. From the current assets side the organization has decreased its debtors and cash accounts considerably over the period under review. Income generation (Figure 4.8) for the period has been relatively unstable, but the organization has maintained considerable control over its working capital. It can be firmly concluded that the organization adopts a conservative working capital approach.

#### **4.5.2 Policy identification**

The organization presents strong financial management principles. It also adopts policies that are favorable to the income generation ability of the organization. The organization needs to maintain its current control over its finances, which should prove to be very rewarding for the organization and the community.

#### **4.6 Organization E – (Chatsworth Regional Hospice Association)**

The organization has been in operation for the last 12 years and provides key services and goods to the community in order to generate an income. One of the critical differences with the Hospice Association and the other non-profit organizations is that the government does not provide assistance via subsidies. Self-generating income programs, fundraising drives and donations maintain the organization's operation, which is provided by the community. The core services provided by Hospice are patient care of terminally ill in areas of cancer and HIV/AIDS. This is done through domiciliary care or home-based care, in-patient care and daycare. The organization also provides various perishable goods to the community to generate funds for the organization. This is produced in their hydro-phonic garden, which is situated on the premises of the organization.

##### **4.6.1 Analysis of financial statements**

The organization has shown considerable deterioration in net working capital performance over the last five years. Although it has shown this deterioration of financial performance, it is within an acceptable rate as shown in Figure 4.9. In 2003 the organization reached a net working capital ratio with equivalent rate of current assets and current liabilities. This is due to the drastic reduction in current assets pursuant to the significant decrease of debtors and cash. This has considerably reduced the net working capital over the period. The current liabilities of the organization have always been low but there has been a drastic increase of this over the 2003 financial period. The organization has also shown considerable increase in income over the period, which could signify considerable growth for the organization.

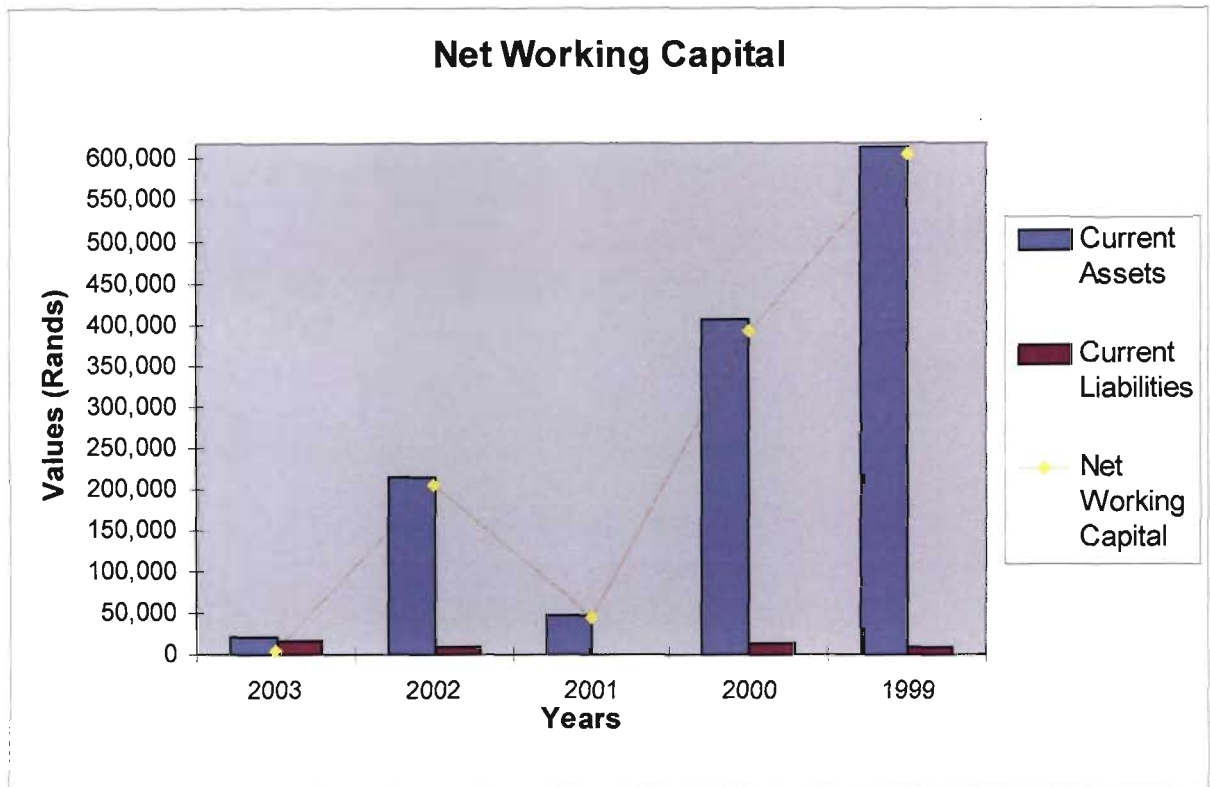


Figure 4.9: Working Capital Proportions for Hospice - Chatsworth

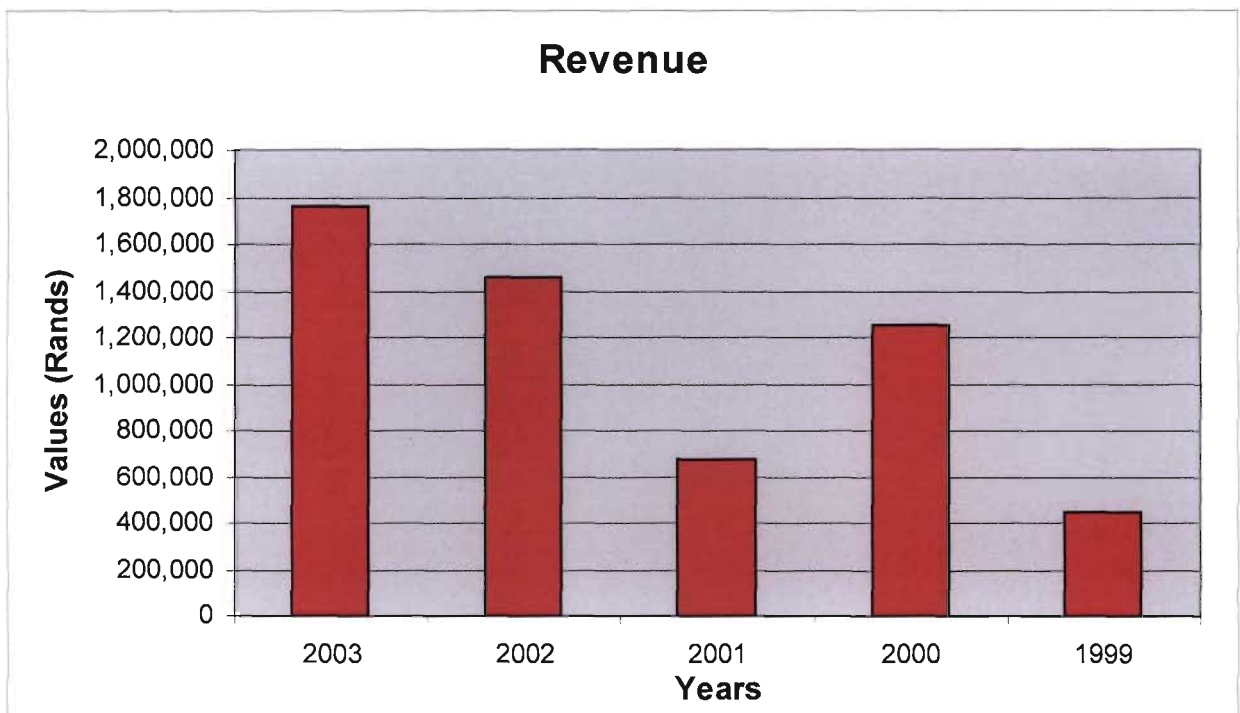


Figure 4.10: Income generated by Hospice - Chatsworth

This is depicted in Figure 4.10, which provides us with an account of the income generated by the organization over the period. Performance has been relatively consistent over the period.

#### **4.6.2 Policy identification**

The organization shows signs of adopting a conservative working capital approach. This would prove effective but over the latter period changes are noted, which could prove detrimental if continued. The policy of the organization needs assessment. Consideration needs to be given to improve the current assets and decrease the current liabilities in proportion to each other.

#### 4.7 Summary of Organizations' Current Situation

The analysis, which was conducted, provided us with an understanding of the financial situation of all the organizations under review. It provides us with a good understanding of working capital policies adopted as well as changes, which have taken place. This would provide us with a comprehensive understanding of the survey results, which are to be analyzed in the next chapter. All the organizations' working capital policies are summarized below based on the five-year performance and data, which were analyzed.

	<b>Organizations</b>	<b>Working Capital Policies</b>
1	Association for Persons with Physical Disabilities	Aggressive
2	Aryan Benevolent Home Council	Aggressive
3	Chatsworth Child and Family Welfare Society	Aggressive to moderate
4	Cheshire Home – Chatsworth	Conservative
5	Chatsworth Regional Hospice Association	Conservative

Table 4.1 Summary of Organization Working Capital Policies

Based on this we are able to determine if the policies that these organizations followed are in line with normal theoretically formulated models. This would be the initial analysis background for the survey as well as the bases for the analysis and interpretation for the results of the research survey.

## **CHAPTER 5: QUESTIONNAIRE RESULTS**

### **5.1 Introduction**

This chapter summarizes the results obtained from the survey questionnaire that was conducted. The general information gathered on the sample was also analyzed in order to understand the sample's characteristics. Descriptive statistical analysis was performed in order to analyze the research problem's solution.

### **5.2 Response Rate**

A total of 39 respondents' questionnaires were sent out and 37 were returned completed which resulted in a 95% return rate. This result was based on effective planning and execution. The research survey was completed successfully therefore, it achieved such a high return rate. The questionnaire presented to the sample group (Appendix II) was divided into the various sections of working capital components, which enabled it to elicit the relevant feedback on the procedures or policy used to manage these components of working capital.

The introductory part of the questionnaire (section A) aimed at obtaining a description of the sample. This is analyzed below with the aid of descriptive analysis and thereafter an enquiry into the management of working capital was addressed in section B. Thereafter, section C, which concentrated on each component of working capital, aimed at obtaining the policy or model which each respondent proposed as being used in their organization. The discussion of the response is presented in chapter seven with the interview responses.



### 5.3 Sample Characteristics

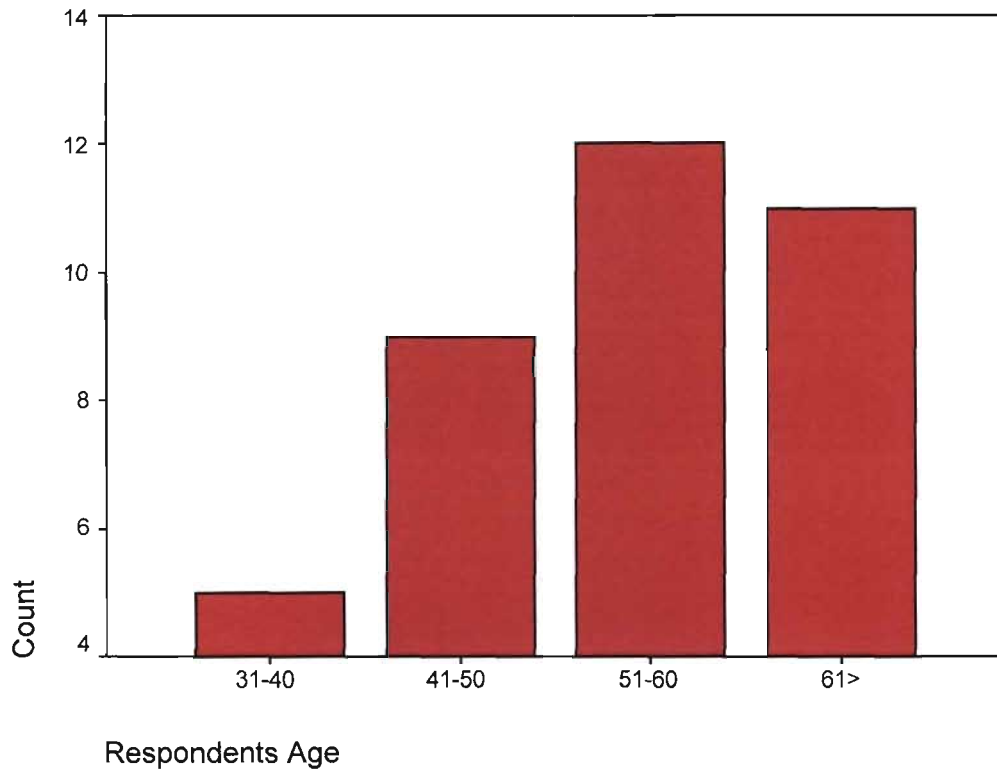


Figure 5.1: Age Distributions of Respondents

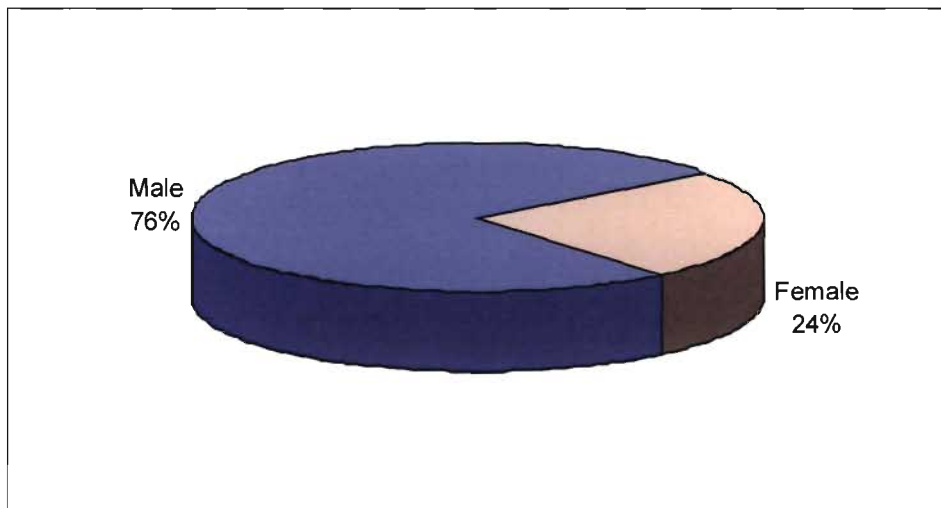


Figure 5.2: Genders of Respondents

By analyzing Figure 5.1 of the respondents' age categories, it is observed that a majority of the organizations' decision makers are over 50. This could purely be

because of the excess time that these individuals have available due to retirement or minimal family and business responsibilities. A majority of the respondents are males while only 24% of the sample group are female. This could be the result of community and cultural barriers. In Figure 5.3 we are able to assess the respondents' field of expertise based on the sector of employment. From this it is observed that a majority of the sample respondents come from an educational and commercial background. The other sectors show diminishing numbers.

It can also be judged from figure 5.4 that respondents have been involved in non-profit organizations for a significant period of 21 to 30 years, 11 to 20 years and 6 to 10 years. Based on the number of years that the sample of respondents has been involved in non-profit organizations, it is established that they have significant experience and commitment to this sector.

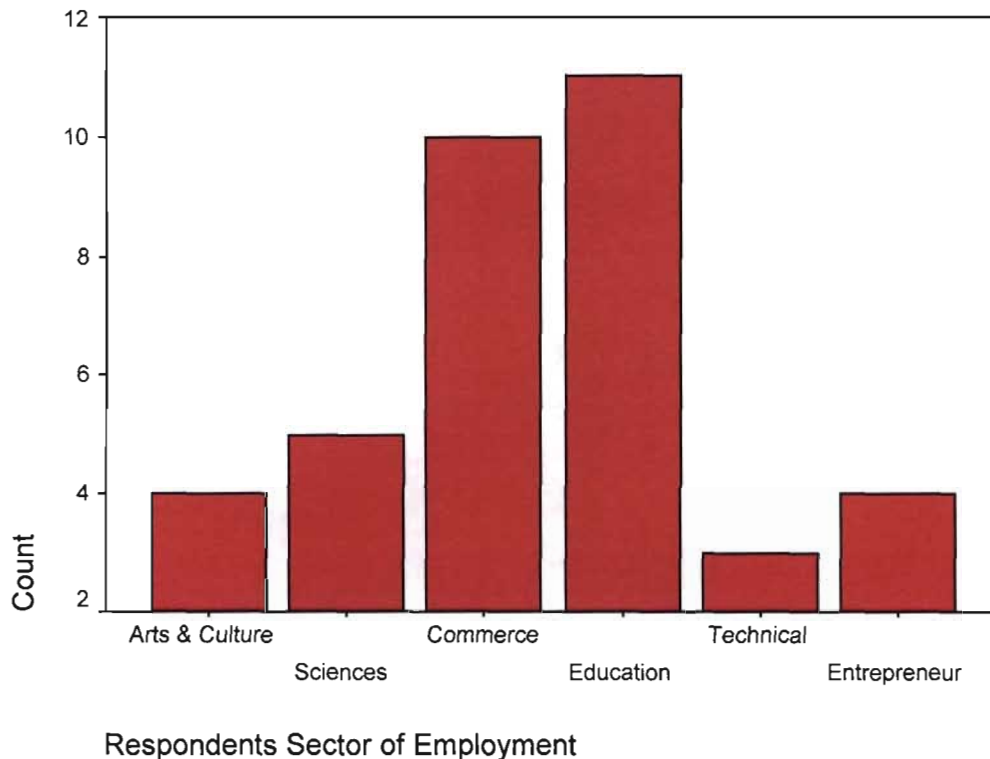


Figure 5.3: Respondents' Sector of Employment

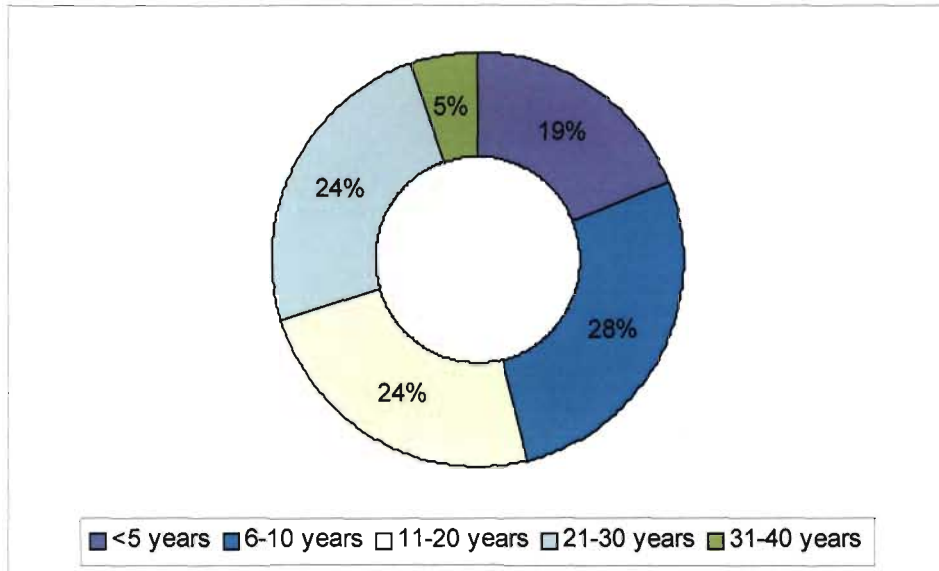


Figure 5.4: Respondents' involvement in Organization

#### 5.4 Results on Working Capital Policies

This section focuses on section B of the questionnaire, which aimed at obtaining the respondents' response on working capital management policy, implementation process and procedure. This section contained five questions, which constituted twenty percent of the questionnaire. This was due to the considerable importance of obtaining the motivating factors which constitute the relevant working capital policy or methods preferred by the respondent with regard to the management of the organization. The results of the five questions are now presented.

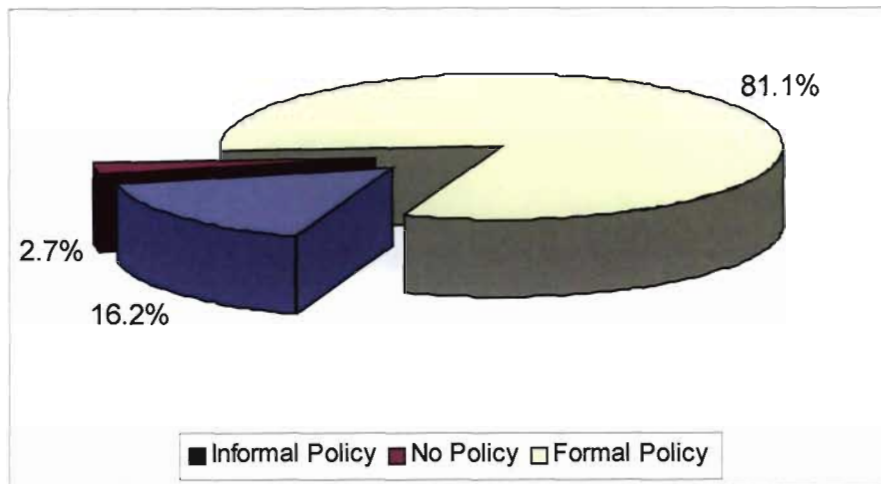


Figure 5.5: Organization Policy

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Formal Policy	30	81.1	81.1	81.1
	No Policy	1	2.7	2.7	83.8
	Informal Policy	6	16.2	16.2	100.0
	Total	37	100.0	100.0	

Table 5.1: Organization Policy

Figure 5.5 and Table 5.1 show that 81.1% of the respondents indicated that their organizations follow a formal policy of working capital management while 16.2% of policy makers maintained that their organization follows an informal policy approach. There was only one respondent who maintained that non-profit organizations should have no policy on working capital management. From the above response it is stated that non-profit organizations' decision makers prefer the organization to be run with formal policies, while only a small portion of the respondents prefer organizations to have an informal policy, which indicates a preference for flexibility.

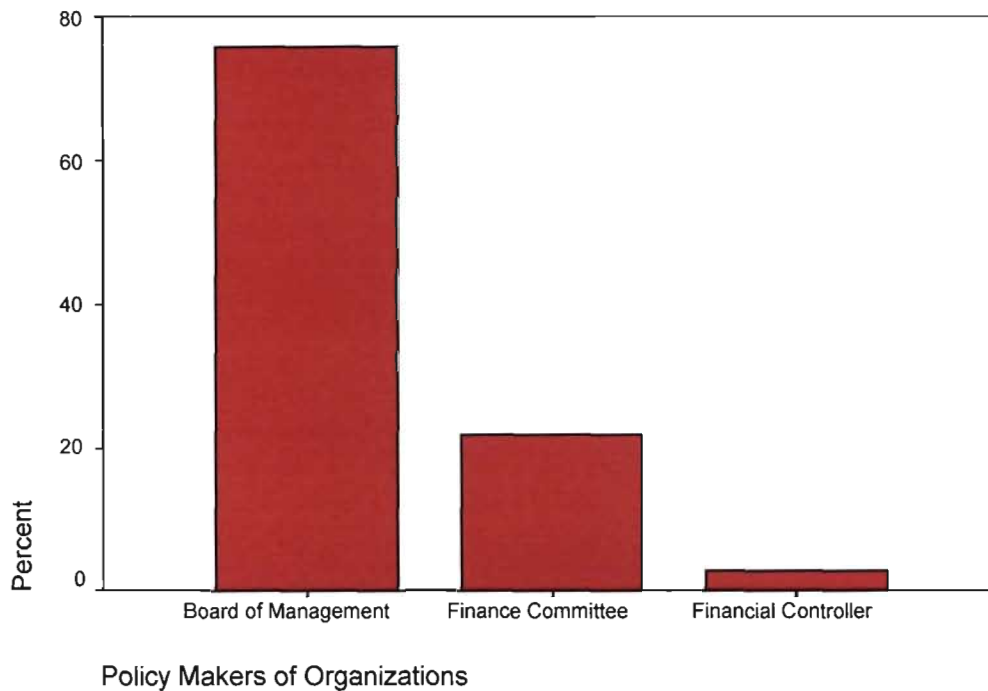


Figure 5.6: Policy Makers of the Organization

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Board of Management	28	75.7	75.7	75.7
	Finance Committee	8	21.6	21.6	97.3
	Financial Controller	1	2.7	2.7	100.0
	Total	37	100.0	100.0	

Table 5.2: Policy Makers of Organizations

The Board of Management (figure 5.6) has been preferred as the pivot for the formulation of working capital policies. This is indicated by the respondents 75.7% (table 5.2) response in regard to this question. The finance committee is the next most frequently mentioned working capital policy maker with a 21.6% response. There is only one respondent who prefers the working capital policy to be established by the financial controller. This independent respondent could present an uncustomary response characteristic.

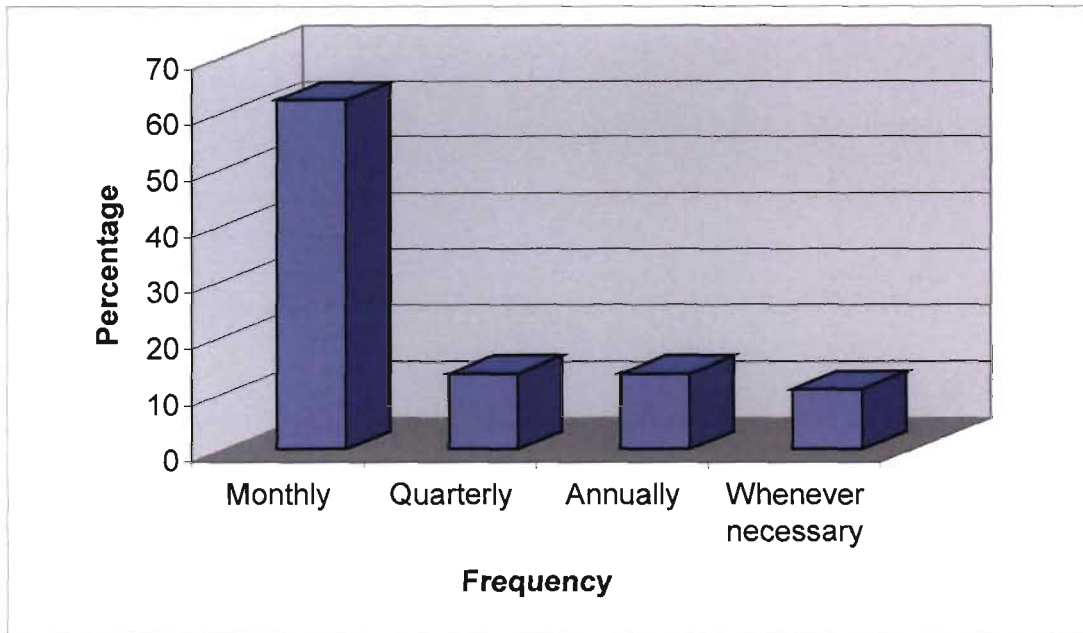


Figure 5.7: Policy Review Period

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Monthly	23	62.2	62.2	62.2
	Quarterly	5	13.5	13.5	75.7
	Annually	5	13.5	13.5	89.2
	Whenever necessary	4	10.8	10.8	100.0
Total		37	100.0	100.0	

Table 5.3: Policy Review Period

There was a considerable variation in the frequency review of the organizations' working capital policy as depicted in Figure 5.7. A large number of respondents 62.2% preferred a monthly review of working capital policy. An equal quantity of 13.5% respondents preferred a quarterly and an annual review of working capital policies while only 10.8% or four respondents preferred a "whenever necessary" approach of working capital review. This indicated that only a very small portion of the respondents prefer flexibility with regard to working capital review. A majority of the respondents prefer scheduled working capital review policies.

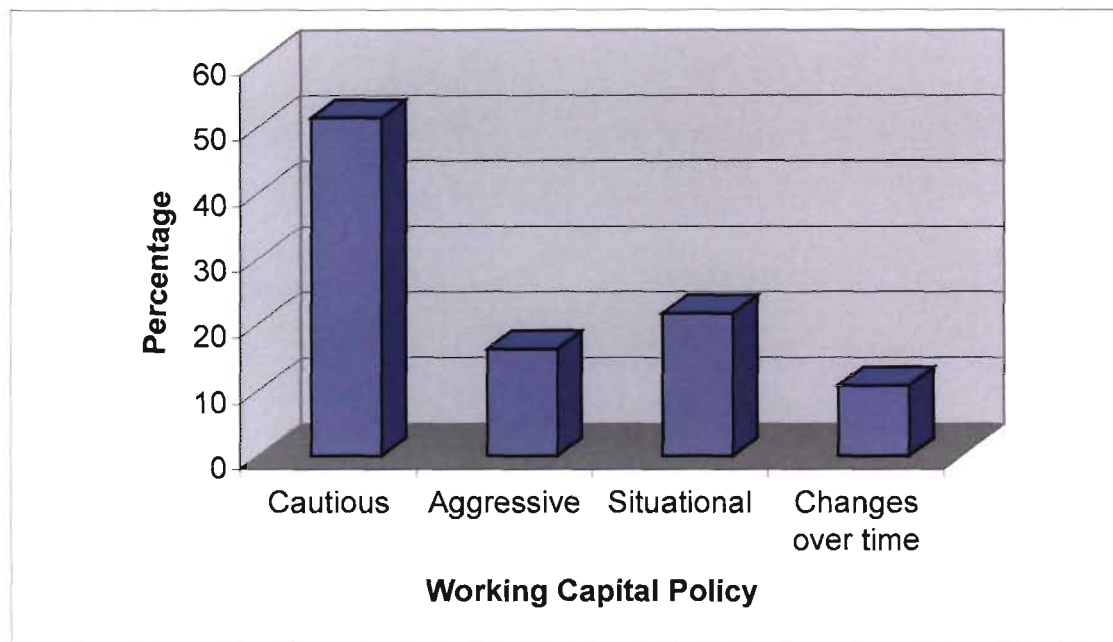


Figure 5.8 Working Capital Policy

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Cautious	19	51.4	51.4	51.4
	Aggressive	6	16.2	16.2	67.6
	Situational	8	21.6	21.6	89.2
	Changes over time	4	10.8	10.8	100.0
	Total	37	100.0	100.0	

Table 5.4: Description of Policy

As indicated in Figure 5.8, 51.4% of the respondents indicated a “cautious” working capital policy, 21.6% of the respondents indicated a “situational” policy, 16.2% of respondents indicated an “aggressive” policy preference while the remaining respondents indicated a preference for a change over time policy. Again it is evident that only a small portion of the respondents prefers flexibility while the majority would adopt a particular approach of working capital management policy.

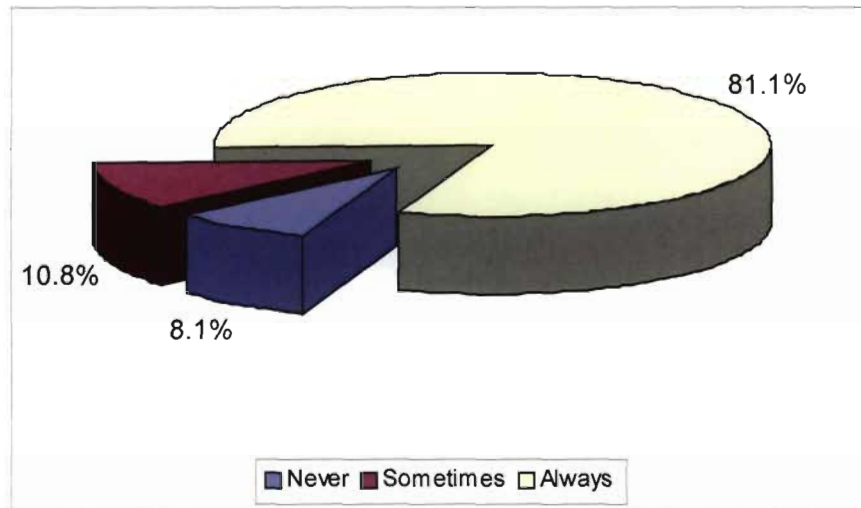


Figure 5.9: Consideration of Working Capital when Projects are taken

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Never	3	8.1	8.1	8.1
	Sometimes	4	10.8	10.8	18.9
	Always	30	81.1	81.1	100.0
Total		37	100.0	100.0	

Table 5.5: Consideration of Working Capital when Projects are under taken

The above question was aimed at addressing the extent to which working capital is evaluated as part of the overall capital budgeting process for projects. As indicated in Figure 5.9, there has been an 81.1% response that working capital is considered when capital budgeting projects are undertaken. Only a relatively small number of respondents indicated a “sometimes” and a “never” response to working capital consideration as indicated in Table 5.5 when undertaking capital projects. This emphasizes the relative importance of working capital to the organizations’ functioning and capital budgeting process.



### 5.5 Results on Working Capital Components

		Board of Management	President/ Chairman	Finance Committee	Treasurer	Financial Controller	Other	Total
<b>Cash</b>	Frequency	5		18	11	2	1	37
	Percent	13.5		48.6	29.7	5.4	2.7	100
	Valid Percent	13.5		48.6	29.7	5.4	2.7	100
	Cumulative Percent	13.5		62.2	91.9	97.3		100
<b>Accounts Receivable</b>	Frequency	1		12	8	15	1	37
	Percent	2.7		32.4	21.6	40.5	2.7	100
	Valid Percent	2.7		32.4	21.6	40.5	2.7	100
	Cumulative Percent	2.7		35.1	56.8	97.3		100
<b>Inventory</b>	Frequency	1		11	8	15	2	37
	Percent	2.7		29.7	21.6	40.5	5.4	100
	Valid Percent	2.7		29.7	21.6	40.5	5.4	100
	Cumulative Percent	2.7		32.4	54.1	94.6		100
<b>Accounts Payable</b>	Frequency	1		10	12	14		37
	Percent	2.7		27	32.4	37.8		100
	Valid Percent	2.7		27	32.4	37.8		100
	Cumulative Percent	2.7		29.7	62.2			100
<b>Short-term Loans</b>	Frequency	15	2	12	8			37
	Percent	40.5	5.4	32.4	21.6			100
	Valid Percent	40.5	5.4	32.4	21.6			100
	Cumulative Percent	40.5	45.9	78.4				100

Table 5.6: Responsibility of Working Capital Components

The organizations' decision makers were asked to indicate who is responsible for the various working capital accounts and the responses are summarized in Table 5.6. As indicated, the cash responsibility lay with the finance committee 48.6% and the treasury (29.7%). Accounts Receivable and inventory management is 40.5% the responsibility of the finance controller. The finance committee for both these components is second choice with 32.4% and 29.7% respectively.

Accounts payable has been indicated as 37.8% the responsibility of the finance controller and 32.4% the treasury's responsibility. As for short-term liabilities the responsibility of 40.5% depends on the board of management and 32.4% with the finance committee.

### 5.5.1 Inventory

There were two questions in the questionnaire which focused on the techniques of inventory management and the identification of the appropriate inventory model being used and implemented by the organizations' decision makers.

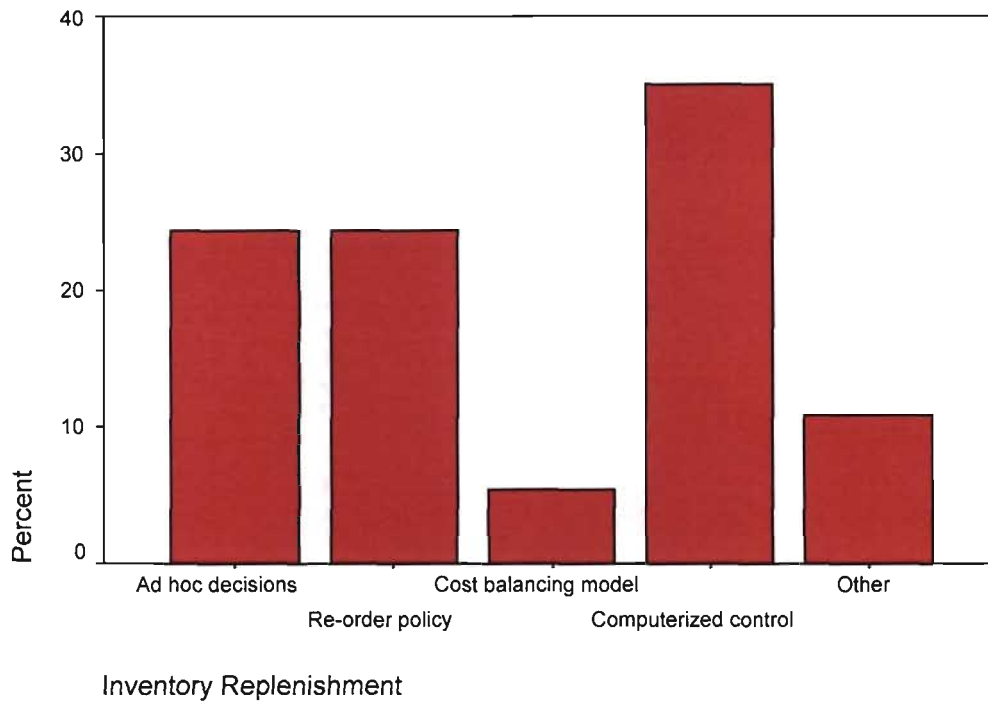


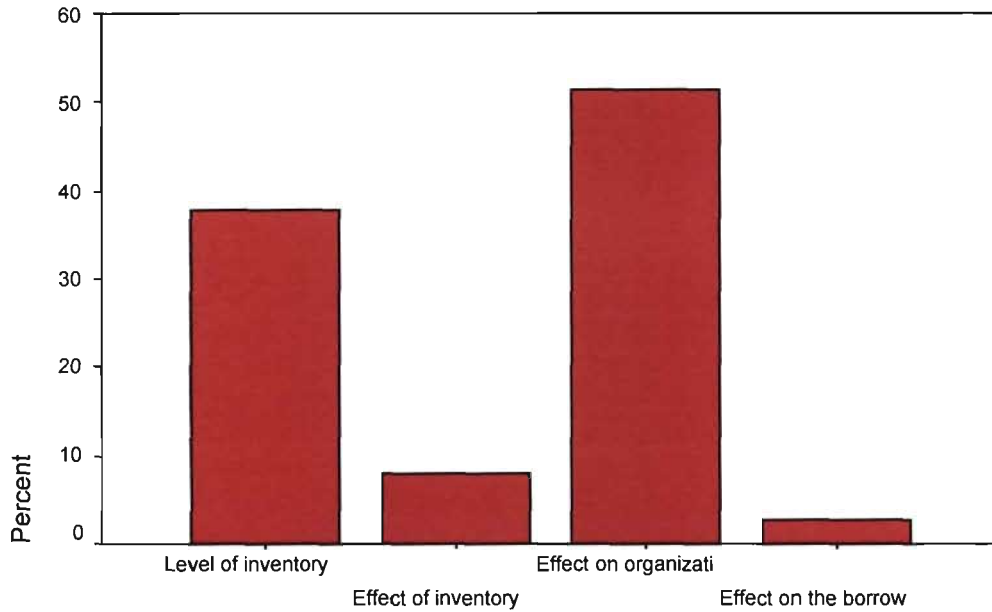
Figure 5.10: Inventory Replenishment Policy

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Ad hoc decisions	9	24.3	24.3	24.3
Re-order policy	9	24.3	24.3	48.6
Cost balancing models	2	5.4	5.4	54.1
Computerized controlled system	13	35.1	35.1	89.2
Other	4	10.8	10.8	100.0
Total	37	100.0	100.0	

Table 5.7: Inventory Replenishment

As indicated in Figure 5.10 the most predominant of inventory replenishment systems are the use of computerized control systems, which was 35.1%, favored. Alternatively the ad hoc decisions and re-order policies were rated

24.3% favorable. This indicates a significant influence of technological advancement in inventory management but the alternatives of manual re-order points are also of significance.



Changes in Inventory Policy

Figure 5.11: Changes In Inventory Policy

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Level of inventory	14	37.8	37.8	37.8
Effect of inventory costs	3	8.1	8.1	45.9
Effect on organizations income	19	51.4	51.4	97.3
Effect on the borrowing of the organization	1	2.7	2.7	100.0
Total	37	100.0	100.0	

Table 5.8: Changes in Inventory Policy

Income has a significant impact on inventory re-ordering policies by a 51.4% response as indicated in Figure 5.11. The level of inventory is also significantly important with regards to re-ordering and organizational policies, which is indicated by a 37.8% response.

### 5.5.2 Cash

Three questions probed the use of various techniques for the management of the organizations' cash.

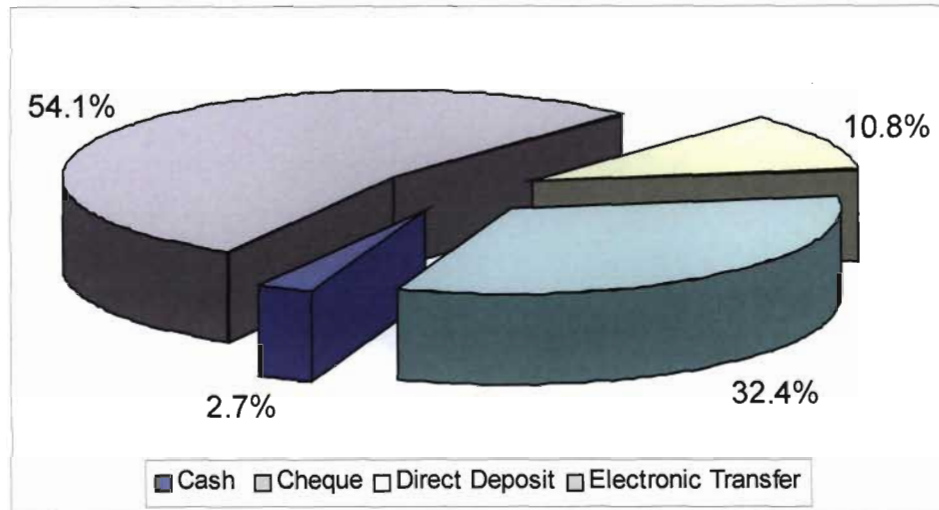


Figure 5.12: Convenience of Payment Mechanism

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Cash	1	2.7	2.7	2.7
	Cheque	20	54.1	54.1	56.8
	Direct Deposit	4	10.8	10.8	67.6
	Electronic Transfer	12	32.4	32.4	100.0
	Total	37	100.0	100.0	

Table 5.9: Convenience of Payment Mechanism

The technique used for payment was cheques, which were 54.1%, favored followed by the use of electronic transfers, which was 32.4%, favored. From this we are able to establish that the method of cheque payment as a mechanism is used as a slowing down payment technique, due to the length of time cheques take to clear. But this alternative is more costly than the wire transfer, which is faster and more effective. Decision makers rated direct deposits by only 10.8%, which is probably due to the high risk factor.

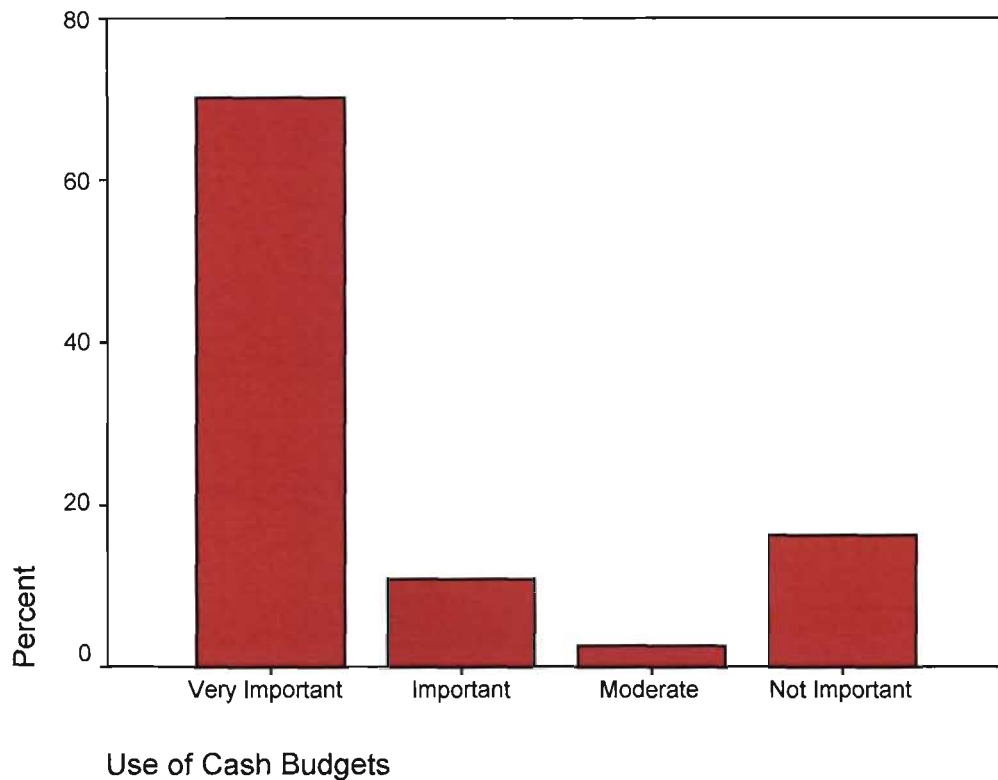


Figure 5.13: Use of Cash Budgets

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Very Important	26	70.3	70.3	70.3
	Important	4	10.8	10.8	81.1
	Moderate	1	2.7	2.7	83.8
	Not Important	6	16.2	16.2	100.0
	Total	37	100.0	100.0	

Table 5.10: Use of Cash Budgets

Cash budgeting has been rated very important in the management of shortages and surplus of cash, with a 70.3% of the response. There was also a 10.8% response on the importance of cash budgets for the forecasting of income. Only 16.2% of the respondents consider cash budgets as not significantly important in cash management, income forecasting and inventory control but preferred it to be used for other purposes.

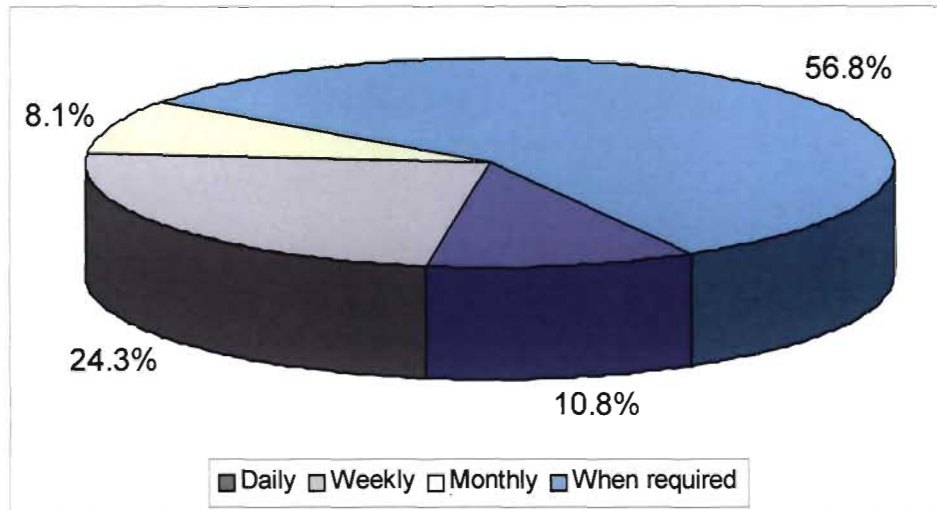


Figure 5.14: Convenience of Bank Accessibility

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Daily	4	10.8	10.8	10.8
	Weekly	9	24.3	24.3	35.1
	Monthly	3	8.1	8.1	43.2
	When required	21	56.8	56.8	100.0
	Total	37	100.0	100.0	

Table 5.11: Convenience of Bank Accessibility

This question related to the frequency of cash management intervals in order to place the preferred approach into the respective models of cash management. As indicated in Figure 5.14 the most appropriate alternative was going to the bank “when required” (56.8%). The decision makers also preferred a 24.3% rating of visiting the bank “weekly”. Consideration of cost and risk are taken into account when determining the most appropriate intervals in visiting the bank.

### 5.5.3 Creditors

Three questions were devoted to the management of creditors, which aimed at ascertaining the credit policies which non-profit organizations implement.

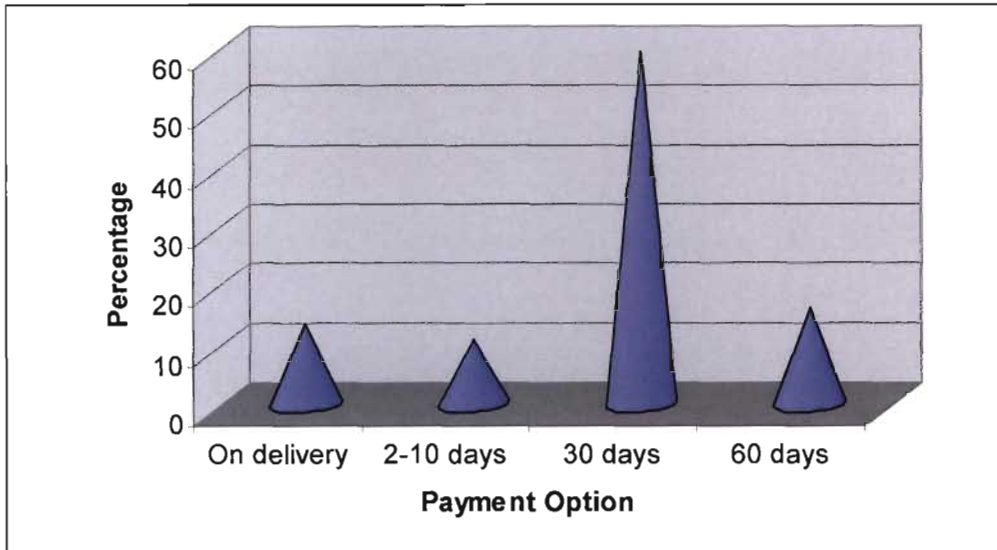


Figure 5.15: Payment of Suppliers

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	On delivery	5	13.5	13.5	13.5
	2-10 days	4	10.8	10.8	24.3
	30 days	22	59.5	59.5	83.8
	60 days	6	16.2	16.2	100.0
	Total	37	100.0	100.0	

Table 5.12: Payment of Suppliers

Figure 5.15 graphically displays the most favorable option of payment chosen by the organizations' decision makers. Table 5.12 quantifies this option by establishing that 83.8% of decision makers prefer non-profit organizations to pay creditors within the 30-day terms while only 16.2% prefer the organization to opt for 60-day terms. This establishes that decision makers prefer the organization to maintain good credit relations with their suppliers. The next question builds to the prompt payment option of the organizations and the redeeming of discounts due to the speedy payments.

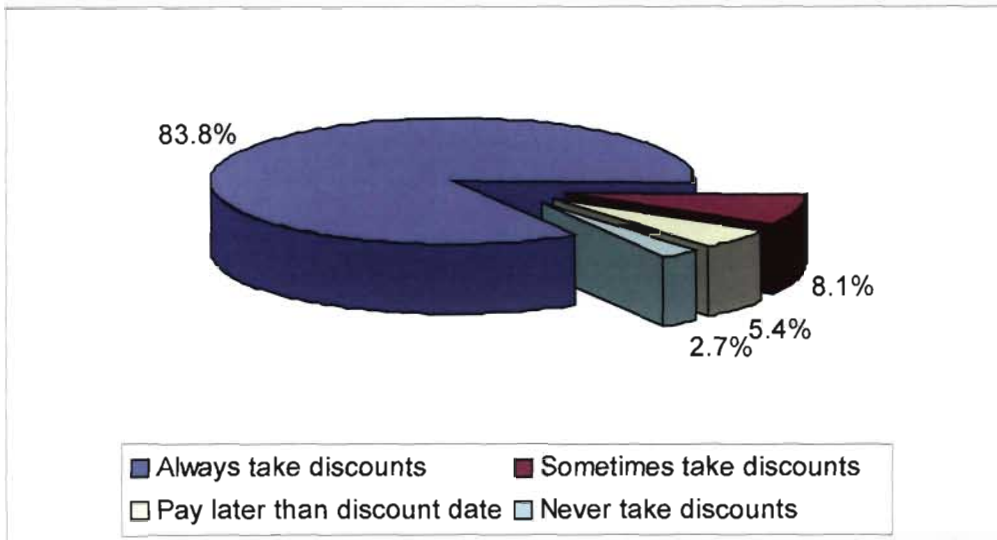


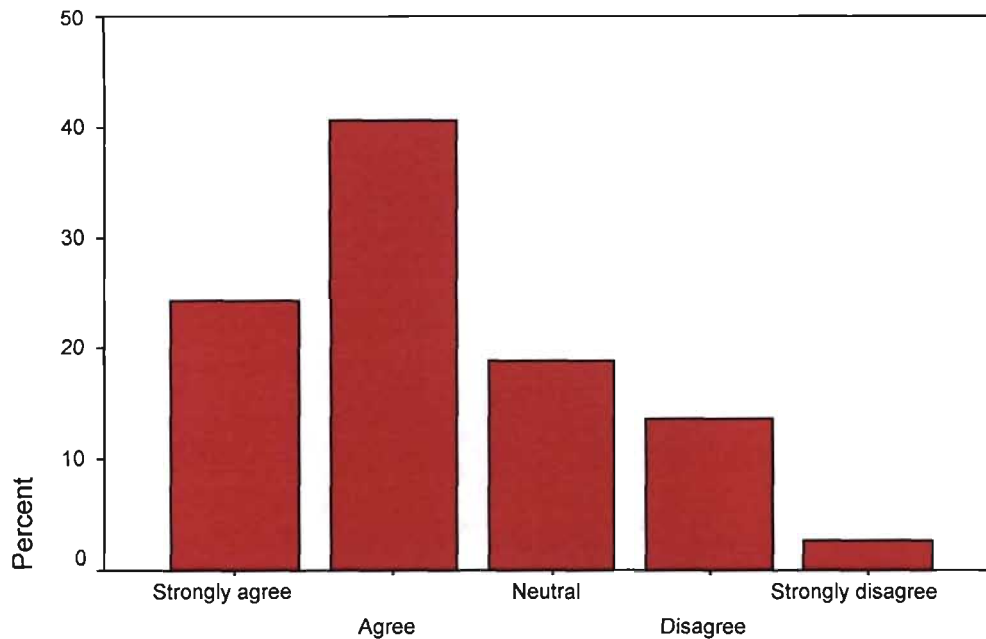
Figure 5.16: Policy on Cash Discounts

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Always take discounts	31	83.8	83.8	83.8
	Sometimes take discounts	3	8.1	8.1	91.9
	Pay later than discount date	2	5.4	5.4	97.3
	Never take discounts	1	2.7	2.7	100.0
	Total	37	100.0	100.0	

Table 5.13: Policy on Cash Discounts

As graphically defined in Figure 5.16, the majority of 83.8% response on the “always taking of discounts” from creditors was favored, which was further elaborated by the previous question, which established that organizations are prompt payers. There are very few respondents who opted for late payment 5.4% and 8.1% preferred the option of sometimes taking discounts. Only one respondent preferred not taking discounts.





Negotiation of Terms of Payment

Figure 5.17: Negotiation of Terms of Payment

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly agree	9	24.3	24.3	24.3
	Agree	15	40.5	40.5	64.9
	Neutral	7	18.9	18.9	83.8
	Disagree	5	13.5	13.5	97.3
	Strongly disagree	1	2.7	2.7	100.0
Total		37	100.0	100.0	

Table 5.14: Negotiation of Terms of Payment

Because non-profit organizations in the community provide for the needy and less fortunate, more favorable payment terms with suppliers are negotiable. This option is based on the previous two questions, whereby a cumulative 64.9% of the respondents believe that suppliers would provide longer and extended payment periods to them. However, the organizations do not utilize this benefit instead, they prefer the prompt payment plan.

### 5.5.4 Debtors

Three questions were used to explore the management of debtors. They aimed at acquiring and understanding the organizations' policy on debt management.

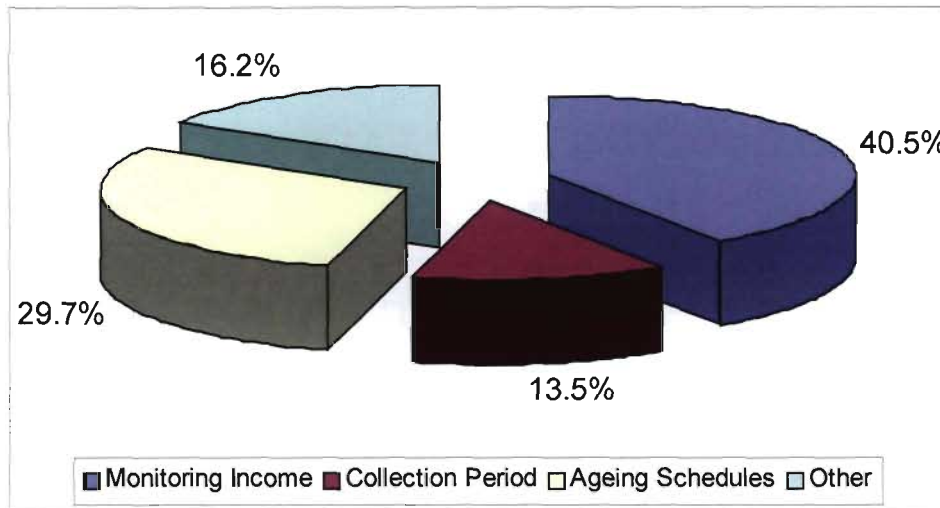


Figure 5.18: Accounts Receivable Behaviour

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Monitoring Income	15	40.5	40.5	40.5
	Collection Period	5	13.5	13.5	54.1
	Ageing Schedules	11	29.7	29.7	83.8
	Other	6	16.2	16.2	100.0
	Total	37	100.0	100.0	

Table 5.15: Accounts Receivable Behaviour

With respect to the above question the responses received were very mixed on the monitoring of debtors. 40.5 % of the respondents considered that debtors should be monitored by income received while 29.7% of the respondents opt for the use of aging schedules. 13.5% of the respondents stated that collection periods should be monitored. There are also 16.2 % responses on other methods that should be used.

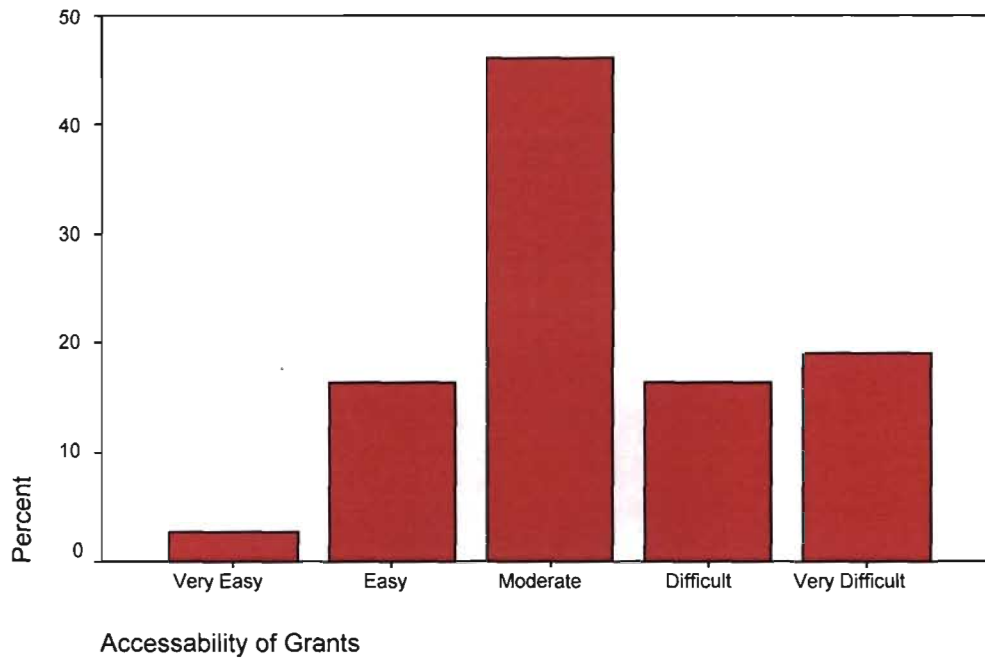


Figure 5.19: Accessibility of Grants

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Very Easy	1	2.7	2.7	2.7
	Easy	6	16.2	16.2	18.9
	Moderate	17	45.9	45.9	64.9
	Difficult	6	16.2	16.2	81.1
	Very Difficult	7	18.9	18.9	100.0
	Total	37	100.0	100.0	

Table 5.16: Accessibility of Grants

Although the government could not be considered a debtor of an organization the aim of this question was try to establish the ease of obtaining funds from governmental organizations, since more than 50% of the organizations' revenue is obtained from state subsidies and grants. There was a 64.9% response on it being very easy to moderately easy in obtaining these funds, while 35.1% of the respondents indicated that obtaining these funds was difficult to very difficult. The methods of debt management would be followed when the income from the state is expected but not received.

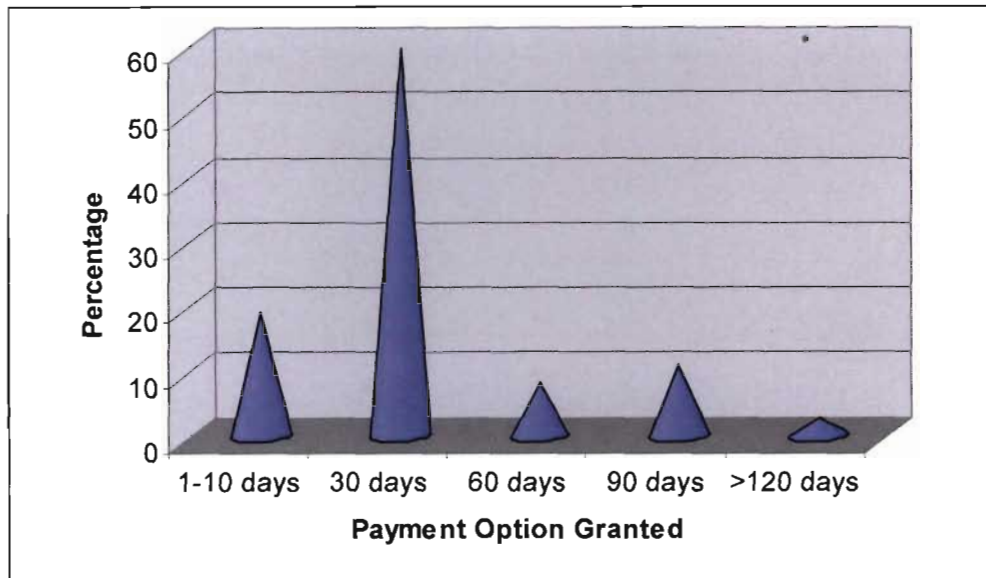


Figure 5.20: Debtors' Terms of Payment

		Frequency	Percent	Valid Percent	Cumulative Percent .
Valid	1-10 days	7	18.9	18.9	18.9
	30 days	22	59.5	59.5	78.4
	60 days	3	8.1	8.1	86.5
	90 days	4	10.8	10.8	97.3
	>120 days	1	2.7	2.7	100.0
	Total	37	100.0	100.0	

Table 5.17: Debtors' Terms of Payment

The final question under debt management aimed at obtaining the debt management policy of the organization. As graphically depicted in Figure 5.20, the policy which is favored was the 30-day payment option. This has a 59.5% favorable response, while 18.9% would opt for a 1-10 day payment option. Other decision makers allow for the longer payment option of a 60-day payment plan of 8.1% and a 90-day payment plan has a 10.8% preference. The debt models, which were discussed earlier, aimed at a speedy debt collection process. This would prevent organizations experiencing liquidity problems. But by these results it is observed that organizations have very relaxed debt policies.

### 5.5.5 Short-term Liabilities

The last three questions deal with short-term loans, which are obtainable from commercial banks.

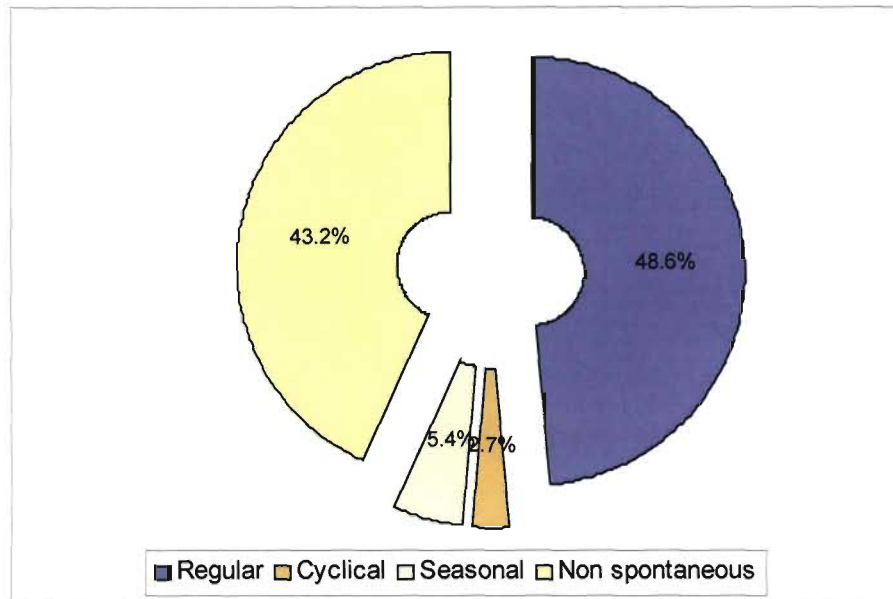
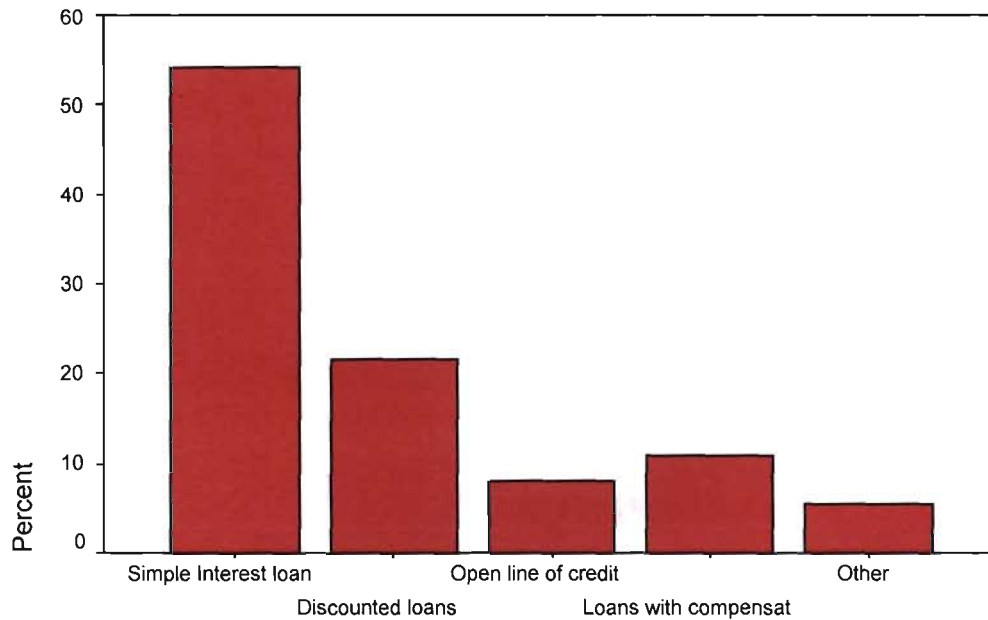


Figure 5.21: Managing Short-Term Loans

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Regular	18	48.6	48.6	48.6
	Cyclical	1	2.7	2.7	51.4
	Seasonal	2	5.4	5.4	56.8
	Non spontaneous	16	43.2	43.2	100.0
	Total	37	100.0	100.0	

Table 5.18: Managing Short-Term Loans

In Figure 5.21 it is observed that 48.6% favored short-term loans for the regular financing of the organization, while 43.2% favored the non-spontaneous short-term liabilities option. Thus, a majority of the organizations prefer operating on term loans. When organizations experience sudden shortfalls in income they opt for the use of short-term loans.



Description of Short-Term Loans Rec.

Figure 5.22: Description of Short-Term Loans

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Simple Interest loans	20	54.1	54.1	54.1
	Discounted loans	8	21.6	21.6	75.7
	Open line of credit	3	8.1	8.1	83.8
	Loans with compensating balances	4	10.8	10.8	94.6
	Other	2	5.4	5.4	100.0
	Total	37	100.0	100.0	

Table 5.19: Description of Short-Term Loans

This question aims at determining the most widely opted short-term loan option. Short-term loans with simple interest are preferred by 54.1 % of the respondents while 21.6% of the respondents indicated that discounted short-term loans would be a better option for the organization. As described earlier in the policies of short-term loans, loans with the lowest cost and smallest risk factor should be considered as the best alternative.

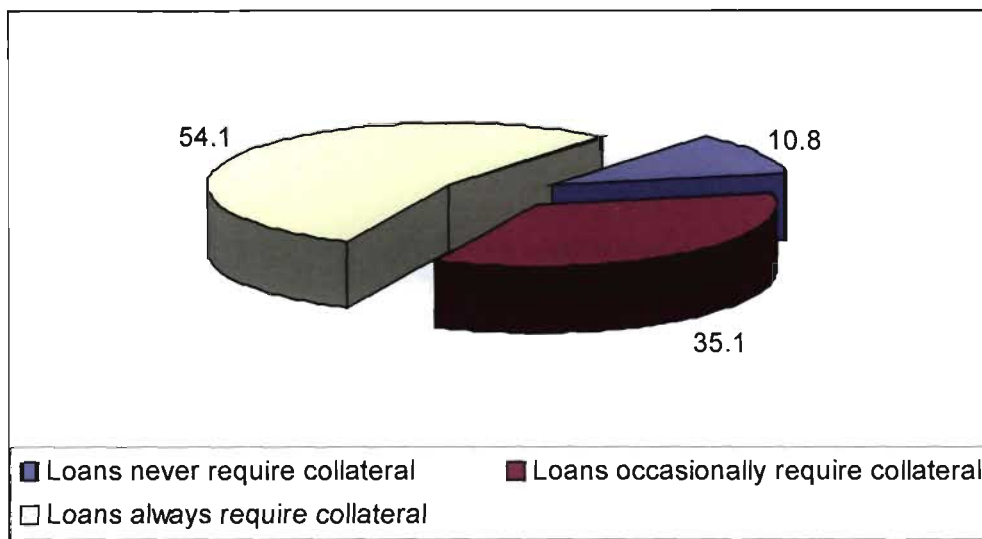


Figure 5.23: Collateral for Short-Term Loans

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Loans never require collateral	4	10.8	10.8	10.8
	Loans occasionally require collateral	13	35.1	35.1	45.9
	Loans always require collateral	20	54.1	54.1	100.0
	Total	37	100.0	100.0	

Table 5.20: Collateral for Short-Term Loans

The final question on short-term loans aimed at enquiring about the security required by banks for short-term loans provided to non-profit organizations. As Figure 5.23 shows 54.1% of commercial banks require collateral from non-profit organizations, because of the risks associated with these organizations. 35.1% of the respondents say that banks occasionally require collateral from the organization and only 10.8% of the respondents stated that banks do not require collaterals for loans. Banks not requiring collateral on some loans is due to the nature and size of the loans requested.

## **CHAPTER 6: INTERVIEW RESULTS**

### **6.1 Introduction**

This chapter provides the responses received from the semi-structured interviews conducted. The interviews that were conducted with the five organizations' financial managers focused on obtaining information on the working capital policies, as well as the implementation of these policies within the organization. The purpose of the interviews was to understand the respondents and their involvement within the organization. Four questions addressed this aspect. The other five of the total of ten questions were specifically aimed at working capital management while the last open-ended question invited the respondent to comment on the organization in general.

### **6.2 Response Rate**

The semi-structured interviews were all scheduled interviews, which were conducted in the allocated time period, which resulted in a 100% response rate. The interviews were conducted telephonically due to the interviewees' time constraints, location and availability. All the selected respondents participated and provided the utmost co-operation. The questionnaire used as the basis for the interview is attached in appendix III. A commentary on the interviews is presented, which was obtained from the five organizations' financial managers.



### 6.3 Responses

The general response section asked these five financial managers how long they have been involved in the organization. The answers varied between 10 to 25 years. The respondents were senior people in the organization and have held their respective positions for a considerable amount of time. Most of the financial managers' educational training in commerce was limited to matric, diplomas and commercial certificates. The organizations' financial departments also vary in size from two to six staff members. This leaves most of the tasks to the financial managers to implement and control. The staff are generally untrained financial individuals who are trained in their tasks by the financial managers.

- Organization A

The interview conducted with organization A's respondent provided greater understanding of the financial statements analyzed. This organization is relatively large with an extensive infrastructure, but there is only one individual that is involved in the financial management of the organization. The financial statements of this organization have shown weak results for the entire period under review. The financial manager responded that the organization has recognized this and is in the process of revising the negative position.

The financial manager of the organization also stated that his involvement in the organization's planning has been limited in previous years, but now he plays a more active role in the planning of the organization's financial policies. This actually reveals an active management policy in which the organization is involved. The respondent also stated that working capital problems experienced within the organization are solved at board of management level. Alternative input from other sources like financial consultants and advisers is not considered. This shows little promise of implementing modern working capital mechanisms within the organization.

The organization's financial manager also showed little signs of understanding the financial management models, thereby showing reluctance to practice these defined models. It was also accepted by the respondent that the organization's financial statements revealed a poor financial position. The response also accepted that working capital components are ineffectively managed. Thus, the financial manager was fully aware of the problems faced by the organization. The question that followed aimed to obtain assistance from financial experts; however, this was rejected by the financial manager. This established his reluctance to seek professional help. Due to the interviewee's unfamiliarity with the working capital models, the interview provided little feedback.

- Organization B

This organization is also relatively large but has a deteriorating working capital position. The organization has a formal and well set up finance department with a comprehensive financial structure. The financial manager has been in the organization for the greater part of the organization's existence. With this organization planning is also determined by the board of management which is thereafter passed on to the financial manager for implementation. The financial manager states that there is very little input from the finance department; just the reporting function is their responsibility. All working capital problems are solved at board level and the organization presents a centralized decision making policy. Day-to-day management is the responsibility of the financial manager based on a financial policy which is planned by the board of management.

The financial manager shows no signs of understanding working capital models and applying them in the organization. The manager stated that the working capital component of the organization is constantly problematic due to shortages of cash. The board determines alternative finance options. Advice on correcting working capital components is obtained from the board of management since some of the members have been financial advisors in their respective capacities. The general comment of the manager was that there has been a high

expectation of additional income from government sources to alleviate the liquidity problem of the organization. This interview also provided little in respect of the models and policies of working capital management.

- Organization C

This organization's respondent is a volunteer financial manager. The organization is centrally controlled by the board of management and the administration of finance which is conducted by two individuals on an ad hoc basis. Therefore, all decisions taken are the responsibility of the board of management. The organization's finances have been in a negative position but have improved considerably over the last two financial periods, due to the implementation of more advanced and modern financial control mechanisms. The financial manager also commented on the fact that advice was sought from independent advisors to alleviate financial problems. The financial manager maintained that once a problem is identified in a working capital component significant resources are channeled to improve and eradicate the relevant problem.

- Organization D

The organization has a very secure financial working capital base and has produced satisfactory results. The financial manager maintains that the finance team, treasury and the board of management, manages the organization unilaterally. All planning decisions are taken collectively and implemented with the assistance of every member of the finance team. Planned policies are evaluated after a period of time to determine the effect on the organization and the achievement sustained. Advice from other individuals in the finance community and consultants is requested when problems are experienced. It was also stated that the organization adopts a firm but very flexible approach on financial policies. The organization's manager's final comments were, that the organization needs to maintain the control and decision making skills for there to be growth within the organization.

- Organization E

This organization's financial manager is also a volunteer. The administration of financial matters, decisions and planning are conducted centrally and managed unilaterally among the finance, treasury and board of management. The financial manager understands some of the financial models and the benefits of using them but adopts the organization's self-generated mechanisms. The organization also obtains advice and recommendations from financial consultants and advisors. When the organization experiences working capital problems, its decision makers unilaterally decide on the most effective solution. From the financial statements it is observed that the financial position of the organization has been very effective. This is based on the above planning and implementation policies adopted by the management team. The comment by the financial manager with regard to the organization's finances was that should a problem arise corrective action is taken.

#### **6.4 Summary of Responses**

The first of the four questions on working capital policy dealt with planning and implementation of working capital policies. A majority of the respondents displayed lack of involvement in planning of the policies of working capital, since this was determined at board of management level. They were instead responsible for implementation of the working capital policies chosen by the board of management.

The next question dealt with solving working capital problems and the methods that are used by the financial managers. This aspect was also reportedly referred to the board of management for decisions to be taken on policies and problems. Financial managers were accountable to the board of managers for changes and new implementations; therefore, they needed approval and acceptance by the board.

The next question aimed at emphasizing the use of theoretical working capital models in the organization. Respondents showed little understanding of models in finance due to the lack of knowledge in finance. Some commented that advice was sought from consultants when financial dilemmas on choice presented themselves; others believed that the problem could be solved internally. Apparently, systems that were developed from inception by founding members were used and adapted as times changed.

The question that followed enquired about the ineffective components of working capital and the action which financial managers took to rectify the problem. The responses mainly focused on cash management and more modern methods like electronic payment method and computerized simulations of policy development models. This would assist in making financial management easier.

The next question aimed at obtaining a response on the acquiring of advice from consultants on the management of working capital. The responses received were that decisions needed to be determined by the board of management.

The last question aimed at obtaining general comments, which were as follows: "we have run this organization for many years and always managed to survive", others were "we are financially secure" and "government needs to provide more assistance – we do a lot for the community". These were some of the final remarks provided by the respondents.

## **CHAPTER 7: DISCUSSION OF RESULTS**

### **7.1 Introduction**

This chapter evaluates the results obtained from the survey questionnaire, the interview questionnaire and the financial statements. It also incorporates the literature on working capital management's components.

### **7.2 Working Capital Policies**

The results of the questionnaires revealed that a majority of the decision makers in the five non-profit organizations prefers the organization to adopt a formal policy. The interviews conducted with the respective non-profit organizations also substantiate that a majority of the organizations under study adopts a formal policy. This describes a lack of flexibility in policy measures due to organizations adopting a hierarchical and controlled approach. This was further substantiated by the interview. Analysis of the financial statements of the organizations established that policies were also formal with the exception of one which was moving from one working capital policy to another.

This was substantiated in the next question in the questionnaire, which addressed the component responsible for decision-making within these organizations. Over 75% responded that the board of management was responsible for policy planning and control. When this was addressed in the interview, financial managers confirmed that the organization's policies were always set at board of management level. The time interval for working capital policy reviews was monthly. This established that the organizations' financial viability and performance were monitored at continuous intervals. In the financial statements it was established that the organizations' working capital policies varied from an aggressive to a conservative approach. Decision makers surveyed preferred a conservative to a situational working capital policy. This

evidences a disparity between the planned policy and the implemented results. In the interview the financial manager stated that a majority of them was not involved in the planning of working capital policies. Lovemore and Brümmer (2003, p.93) stated that there should be various factors considered when adopting working capital approaches.

### **7.3 Working Capital Components**

From Table 5.6 of the survey results it is established which components of working capital correspond with which sector of decision makers. From this it is observed that the board of management is responsible for the short-term loans. This is due to the unanimous approval and responsibility of applying for a loan with commercial banks. Also the policies of the organization could dictate that the board of management signs off the loan agreement; therefore, responsibility is bestowed upon them. The next important component that is stated in Table 5.6 is cash, which is the responsibility of the finance committee. At the outset, it is established that this is the committee which fulfills the cash resource management role. The finance committee is generally responsible for the allocation of funds within the organization. The financial controller is responsible for the components of accounts receivable, inventory and accounts payable. It is therefore obvious that the financial controller's responsibility is on the inflow of funds, outflow of funds and utilization of funds. It is also apparent from Table 5.6 that the treasurer has the concurrent function of the working capital components. The interview addresses the financial managers' responsibility for working capital management in response to which the respondents confirmed that responsibility of the components lies with the board of management, finance committee and financial controller.

### **7.3.1 Inventory Management**

Since a substantial amount of cash can be tied up in this component of working capital, effective decision-making is required to eliminate the wastage of cash resources. There are models which take this into account and aim to achieve the minimization of the committed cash resources. From the survey it was established that the organizations' decision makers prefer the use of computerized control systems, while others prefer ad hoc and re-ordering policies. All of these systems should consider the cost of carrying and the cost of ordering. From the case analysis it can be concluded that most of the organizations have maintained a relatively constant rate of stock based on its growth. The second inventory question in the questionnaire aimed at obtaining the method used to assess inventory balances. The majority of the decision makers maintained that income of the organization is used to evaluate inventory levels or alternatively the level of inventory used. From the income generating graphs in chapter four an assessment can be made whereby most of the organizations experience growth in income and this should not be an inventory-deciding factor. Income is a poor deciding factor due to its shortcoming in times of inflation and the time value of money. The financial statements of the organizations reflect only a proportional investment in stock in comparison to total working capital. The interview revealed that the financial managers are responsible for the day-to-day management of inventory and implement the inventory control policy that the board of management proposes. This provided little in the way of feedback from the interview due to managers not being integrally involved in inventory decisions.

### **7.3.2 Cash Management**

Due to cash being the "lifeblood" of every organization it is very important that it is controlled efficiently and that excess amounts are used productively. With this in mind there are various models which propose the use of cash in respect of



eliminating inefficient use. The questionnaire that was administered tried to obtain results on the efficient use of cash by cash budgeting and the control of cash through banking regularly. The questionnaires also tried to find out which method of cash payment mechanisms was used. With the use of the proper cash payment mechanisms, the elimination of excess transaction cost of controlling cash and the correct mechanisms would reduce the opportunity cost of cash. When analyzing the financial statements of the organizations it was established that most organizations had substantial amounts of cash in bank accounts while other organizations' bank accounts operated on overdraft facilities. It was indicated that cash budgeting for shortages and surplus was rated very favorably. But this response is contradictory since some organizations' financial statements reveal excess cash balances in bank accounts. This could be likely due to an ineffective cash budgeting process followed by the organization's treasurer.

One observation that was made from the responses to the questionnaires was that most of the individuals were seniors (elderly). Therefore, a most likely scenario could be that the members are not familiar with modern banking practices and advanced investment opportunities which are available to organizations with excess cash. A further revelation was that more than 50% of the respondents preferred cheques as a method of payment. In modern banking systems electronic banking is the preferred method due to reduction in cost and risk, but only 34% preferred this option. All the models which are discussed in chapter two relate to the reduction of cost and risk which need to be adapted to the most likely situation the organization faces.

There has also been a 56% response on flexibility of banking. There has been no pattern established which identifies the use of cash models. This could possibly explain why some organizations have too much cash in accounts while others have to resort to huge overdraft facilities. Correct cash management procedures need to be incorporated by the implementation of models which will assist in policy development. During the interview financial managers could not provide

feedback due to their being involved only in the administration of cash and not in cash decision making. Therefore, the interview provided little in respect to the components of working capital management.

### **7.3.3 Creditor Management**

The questionnaire aimed at obtaining an understanding of the policies which non-profit organizations implement in the management of creditors. The policies that are suggested are the use of NPV to the optimal time when creditors should be paid. Based on this there is a need to weigh the cost of discount if taken and the benefit that is gained financially by the organization. When the five organizations were analyzed it was established that creditors have grown substantially and when the questionnaire addressed the payment policy, it was discovered that a majority of the organizations adopted a 30-day and earlier payment option. With this response we can conclude that the evaluation on NPV is not conducted, since discount benefit is weighed against payment period and the effect of longer payment options. One of the questions also addressed the possibility of non-profit organizations gaining more favorable credit payment options a majority responded affirmatively. When referring to the question that addresses the supplier paying option and comparing it to this response it was established that organizations do not use this benefit. By their lengthening the payment period, they may be able to maintain large balances in marketable securities and use these funds to earn additional investment income. Alternatively, instead of maintaining the 30-day payment agreement and using their overdrafts to meet this obligation, lengthened payment options granted would alleviate overdraft obligations. Based on these factors alternative options are available to the organizations, but the best has to be considered.

#### **7.3.4 Debtor Management**

What was very apparent with debtors' management in the questionnaire was the uncertainty of the debt management policy mechanism, which the organizations follow. There were very mixed responses on which policy is most applicable. Monitoring income and aging schedule were the most favorable options and the others were also strongly considered. Policy measures were discussed in chapter two which can be adopted in the management of debtors. These mechanisms are alternatives which the organization can adopt. Due to the mixed response gained by the questionnaires it was firmly stated that policies suggested in chapter two are not followed as stipulated. The alarming factor was that respondents actually considered that debtors should be granted 60-days, 90-days, and longer than 120 days. Decision makers need to be fully aware that with respect to debtors, income needs to be obtained in the shortest available period; even non-profit organizations need income to pay their creditors. This could be one of the strong reasons for the organizations experiencing liquidity problems. The time between the collection of income and the payment of debts is extended and the organizations need to use other sources to cover the gap between receipts and payments.

#### **7.3.5 Short-term Liabilities Management**

When short-term liabilities were discussed as policy measures in chapter two it was stated that this method of finance should be used occasionally to bridge the gap between income receipts and expenditure. It was also stated that the characteristic that should be employed when choosing the most appropriate methods of short-term loans, are costs and flexibility. When analyzing the organizations' financial statements it was found that rather than this being an alternative source of finance, these non-profit organizations re-use this as a permanent source of the organizations' financing. The questionnaire obtained a 48% response to this being a regular source of finance while 43% believed it

should be used non-spontaneously. The organizations adopt formal policies which plan their requirements; therefore, short-term finance should be used as an alternative financing mechanism. It was also established that cash budgeting is considered very important. What was also evident was that this component is the responsibility of the board of management and that these loans required collateral as security. They were also granted to them on a simple interest rate, which is excellent but they have become highly dependent on this finance mechanism. Strong consideration needs to be given to the various modern methods available as well as the cost and flexibility factors. The interview provided no feedback due to manager not been involved in the short-term liabilities of the organizations.

#### **7.4 Limitations of the study**

Research is rarely conducted without constraints and possible limitations. This study is no exception to the rule. The design of the study could have been flawed by the use of an incorrect approach. The data collection was a difficult task, due to time constraints, availability of members and the researcher's schedule.

The measuring instrument possibly could be unacceptable, which is another possible limitation. The sample size could have been considered as being too small. Another possible error could have been that the questionnaire was too difficult to answer and that the questions were phrased at an unacceptable level of understanding among the sample area. This is specifically due to the fact that individuals have different levels of understanding. The respondents could have perceived the study negatively, believing it probed into privileged areas. The interview questionnaire lacked in obtaining the perspective from each financial manager on working capital components. This entailed a further limitation when triangulating the three data instruments.

However, despite these possible flaws, the findings of this study are useful for the management of working capital in these five non-profit organizations. The study concentrates only on the short-term aspects of the organizations' financial statements; the long-term strategy plans were ignored and could have distorted the short-term conditions of the organizations' finances. Further research can take all factors into account.

## **CHAPTER 8: CONCLUSION AND RECOMMENDATIONS**

### **8.1 Introduction**

It has become clear that there are many factors to working capital management which require the attention of the financial managers. Care must be taken when managing cash. Like time and water, cash has the attribute of flowing away if it is not properly monitored. This is the focal point of working capital management since it involves the day-to-day operations of the organization. A selected sample was analyzed based on the primary and the secondary data collected. All the results were presented which is followed by possible recommendations.

### **8.2 Conclusion**

In this concluding section, suggestions are made to the financial management of the five organizations. It has been concluded that the five organizations function under a formal policy object, which gives the organization guidance and a path to follow. These were developed at board level and left to the financial managers of the organization to implement. It has been found that these financial managers are not adequately trained and financially astute in implementing the organizations' policies effectively. This is substantiated by the fact that decision makers expect the organization to follow a specific policy while practically financial managers implement another. This needs to be addressed and for this reason financial models developed are not followed due to the lack of understanding by the financial controllers. From the response rating it was established that the average age of the board of management was over fifty which is inclined to explain disparity between modern mechanisms and existing working capital mechanisms used. Each component of working capital was presented from a theoretical model perspective in chapter two and very few similarities were found in the results of the each organization.

### 8.3 Recommendations

Based on the study conducted several general recommendations are made to the five organizations. These need to be applied based on situational circumstances. This is purely due to the changes experienced in the every day business environment. Recommendations that could be suggested are as follows:

#### Policy Recommendations

- A strong governing board with an active interest in seeing that the organization functions efficiently and effectively. The board of management should consist of a varying age group.
- Formal policies adopted should be flexible to cater for the changing business environment.
- All management groups should be involved in working capital management.
- Provide training and development on financial aspects to management.
- Provide well-compensated income to financial managers so as to obtain highly qualified individuals.
- Develop internal reports structures so that they are consistent with budgeted data.
- One of the more widely adopted approaches is the use of benefit/cost analysis, where it is practical to do so.
- Use of variance analysis in evaluating effectiveness of financial managers and policy implementations.

#### Cash Recommendations

- Excess cash should be invested to earn an income.
- The cash payment mechanism chosen should be risk free and cost effective.
- Cash control should be flexible to meet the organizations' needs.

#### Debtors Recommendations

- Debtors' policy period should be the shortest.
- The most appropriate debt management system should be implemented and maintained.
- Bad debts should be minimized.

#### Inventory Recommendations

- Excessive inventory should not be held.
- Inventory should always be insured so as to cover loss and risk.

#### Creditors Recommendations

- Accounts payable should never be paid until the last day of the discount period or at the end of the credit period and should never be paid earlier.
- A discount should be taken only when the effective interest rate implied by the discount rate and payable terms exceeds the opportunity cost of short-term funds over the same time period.
- Accounts payable should not be stretched past the credit period.

#### Short term Liability Recommendations

- Used only as a bridging between receipts and payments and not as a permanent organizational funding alternative.
- The most inexpensive and flexible alternatives should be chosen.



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# APPENDIX

Appendix I: Cover Letter



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Graduate School of Business

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Facsimile +27 (0)31 260 123

e-mail: gsb@nu.ac.za

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August 18, 2003

To Whom It May Concern:

MBA RESEARCH DISSERTATION: FINAL YEAR STUDENT

SPECIALITY: ADVANCE STRATEGIC FINANCIAL MANAGEMENT

R M Mohanlal Student No 202522385

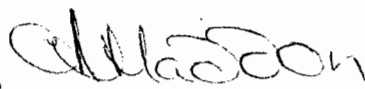
It is a requirement of our Master of Business Administration Degree that all students undertake a practical research project, in their third year of study.

Typically this project will be a "practical problem solving" exercise, and necessitate visits to, and discussions with, personnel at organizations in commerce or industry.

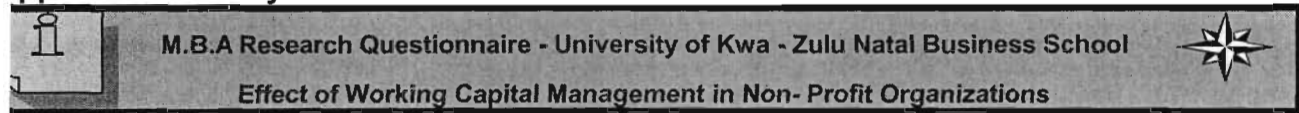
Your assistance in permitting access to your organization for purposes of this research is most appreciated. Please be assured that all information gained from the research will be treated with the utmost circumspection. Further, should you wish the result from the thesis "to be embargoed" for an agreed period of time, this can be arranged. Under no circumstances will information that is confidential to your organization be revealed to anybody other than the student concerned, and the examiners.

Many thanks for your assistance in this regard.

Yours sincerely

PP  


W T HARRISON  
Acting Director



**Cover Letter**

20 January 2004

**Dear Respondent,**

would first like to take this opportunity in thanking you for taking your time in helping our research endeavour. There have been 25 question set out, of which 5 are general enquiry questions which aim at obtaining information about the respondent, the other 20 questions deal strategically at the research problem.

**The aim of the research:**

is to obtain modified approaches at managing working capital in non-profit organizations.

**The purpose is aimed at:**

keeping pace with modern management improvements as well as technological advancements in modern finance.

**The benefit is aimed at:**

surviving in a dynamic environment, in which we live and operate.

All information is of a confidential nature and strictly between the researcher, University and the organization. A copy of the outlined research confirmation from the University has been handed to the organization's administrator.

All questions are aimed at acquiring a better understanding of the organization's working capital management and should be addressed as precisely as possible, so as to eliminate any irregularities.

Kindly bear in mind that the aim of the research is to uplift non-profit organizations, and in no way address direct problems to your organization.

Your assistance is appreciated for the benefit of your organization as well as the researcher.

A copy of the final research would be made available to the organization should it be requested.

thank you.

Kind Regards

R.M Mohanlal  
M.B.A Researcher



Name: .....(Respondent may remain anonymous)

**T A: General Section (Mark with an X the appropriated block)**

Age:  20-25  26-30  31-40  41-50  51-60  61>

Gender:  Female  Male

Current Occupation:  Unemployed  Full-time Employed  Part-time Employed  Homemaker  Student  Retired/ Pensioner

Sector of employment?  Arts & Culture  Sciences  Commerce  Education  Technical  Entrepreneur

Number of years involved with the organization ?  <5  6-10  11-20  21-30  31-40  41>

**T B: Working Capital Enquiry**

Does your organization have an overall policy for the management of its working capital?  
 Formal policy  No policy  Informal policy **Choose one only**

Who sets the management policy for working capital for your organisation?  
 Board of Management  President/ Chairman  Finance Committee  Treasurer  Financial Controller  Other **Choose one only**

How often is the management policy for working capital reviewed?  
 Monthly  Quarterly  Semi-annually  Annually  Whenever necessary **Choose one only**

How would you describe your policy for the management of working capital?  
 Cautious  Aggressive  Situational  Changes over time **Choose one only**

What is the implication of working capital considered when evaluating capital budgeting for each project of the organization?  
 Never  Sometimes  Always **Choose one only**

**T C: Managing Working Capital Components**

Please indicate who has the primary responsibility for managing the following components of your organisation's working capital ? **Choose one only**

	Board of Management	President/ Chairman	Finance Committee	Treasurer	Financial Controller	Other
Accounts Receivable	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Inventory/ Stock	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Accounts Payable	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Term Loans	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>





**h Management**

Which method of convenience would your organization use as a payment mechanism?

                   
 Cash              Cheque              Direct Deposit              Electronic Transfer

**Choose one only**

Which of the following describes the most appropriate use of cash budgeting ? (*Rank according to importance by the use of numbers e.g. 1,2,3,4,5*)

To plan for shortages and surpluses of cash ..... ( )  
 To explore the implications of alternative income forecasting ..... ( )  
 To explore the implications of alternative credit terms ..... ( )  
 To explore the implications of alternative inventory policies ..... ( )  
 Other ..... ( )

Does your organization find it convenient going to the bank for cash, (if so) in which respective intervals?

                   
 Daily              Weekly              Monthly              When required

**Choose one only**

**Accounts Receivable (Debtors)**

In monitoring the accounts receivable (debtors) behavior, which of the following measures do you find most useful?

                   
 Monitoring Income      Collection period      Ageing schedules      Other

**Choose one only**

Does your organization find the receipt of grants/subsidies from government organization easily assessable (please mark the appropriate one)?

Very Easy	Easy	Moderate	Difficult	Very Difficult
-----------	------	----------	-----------	----------------

Should you grant a debtor terms of payment, which would be your most applicable term ?

                         
 1-10 days      30 days      60 days      90 days      >120 days

**Choose one only**

**Inventory/ Stock**

With respect to managing inventory/stock, what method is used for replenishment?

                         
 Ad hoc decisions      Re-order policy      Cost balancing models      Computerized controlled system      Other

**Choose one only**

What criteria do you utilize in evaluating proposed changes in the inventory/ stock policy of your organisation?

                   
 Level of inventory      Effect of inventory costs      Effect on organizations income      Effect on the borrowing of the organization

**Choose one only**

**Accounts Payable (Creditors)**

When do you prefer paying your suppliers (in days)?

                         
 On delivery      2-10 days      30 days      60 days      90 - 120 days

**Choose one only**

What is your policy/ practice with respect to cash discounts offered by your suppliers?

Always take the discount by paying on the discount date .....  
 Sometimes take the discount by paying on the discount date.....  
 Pay later than the discount date, but still take the discount .....  
 Never take the discount.....

**Choose one only**



Do you believe that your organization is able to negotiate more favourable terms of payment with your supplier, since you are involved in the non-profit sector (Please mark the appropriate **one**)?

Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
-------------------	-------	---------	----------	----------------------

**Short term Loans**

With respect to managing short term loan (overdrafts, etc) from commercial banks, what is your primary use for those funds?

Regular and constant part of total organizations financing .....	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<b>Choose one only</b>
Cyclical part of total organization financing .....		
Seasonal part of total organization financing .....		
Non-spontaneous needs as it arises .....		

Which of the following best describes overall the short- term loans which you obtain from commercial banks?

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<b>Choose one only</b>
Simple interest loans	Discounted loans	Open line of credit	Loans with compensating balances	Other	

To what extent is collateral a part of your short-term loans?

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<b>Choose one only</b>
Loans never require collateral	Loans occasionally require collateral	Loans always require collateral	

Adapted from: K.V Smit and S.B Sell study on Working Capital Management in Practice

**THANK YOU FOR TAKING THE TIME  
 TO PARTICIPATE IN THIS SURVEY..**



Name: .....

How long have you been working/ volunteering at the organization?

.....

What is your current position?

.....

Your educational qualification?

.....

How big (in terms of staff) is your finance department?

.....

Do you play an active role in the planning and implementation of financial policy at this organization or who is responsible for this planning?

.....  
.....  
.....

When you experience a working capital problem how do you go about gaining advice or solving the problem?

.....  
.....  
.....

Do you follow well established theoretical model and policies established by recognized academics in the management of working capital. How and When?

.....  
.....  
.....

Do you believe that every component of working capital is managed effectively? If not, which of it not and what action would you take to rectify it?

.....  
.....  
.....  
.....

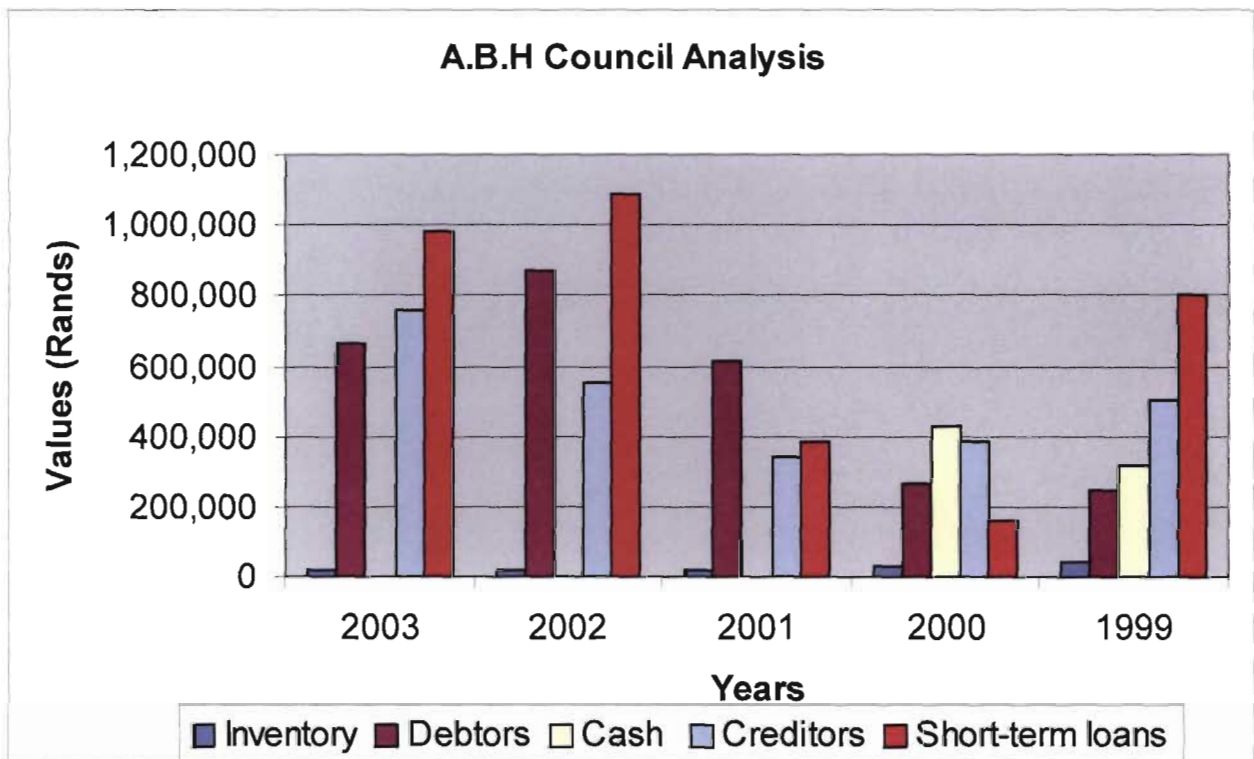
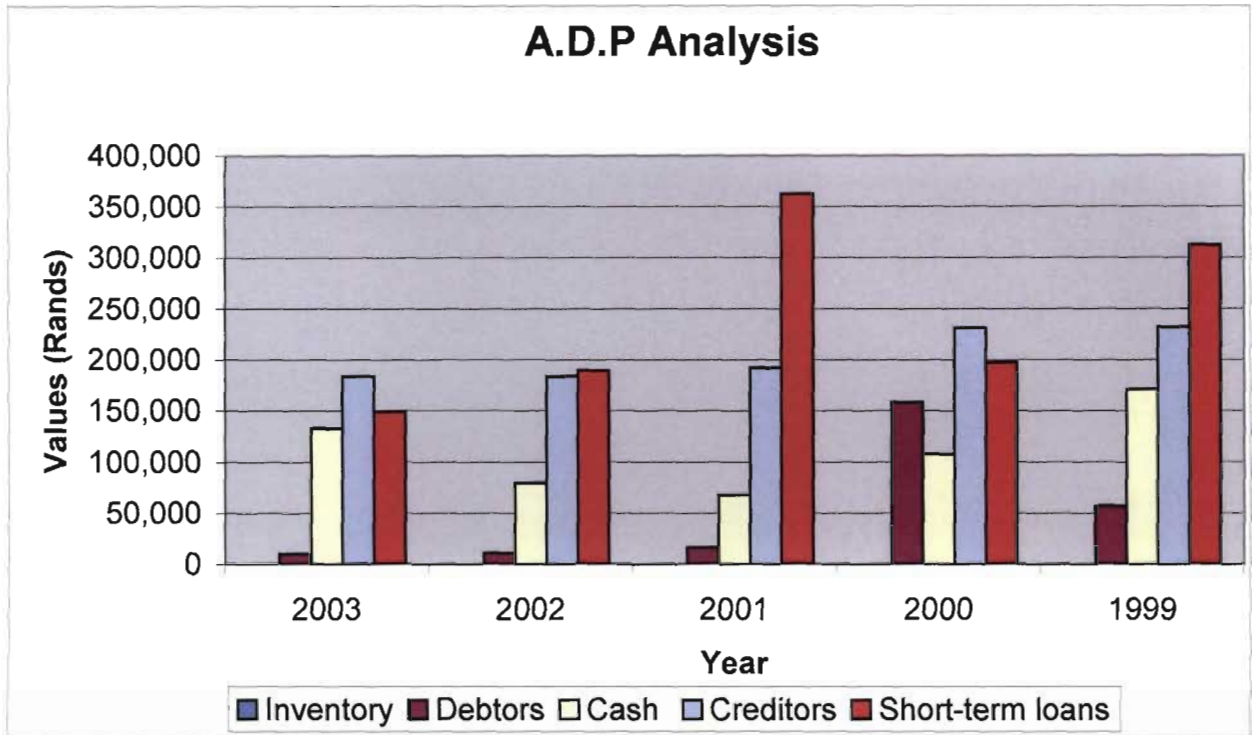
Do you think that the organization needs financial advice from financial consultant to assist in working capital management?

.....  
.....  
.....

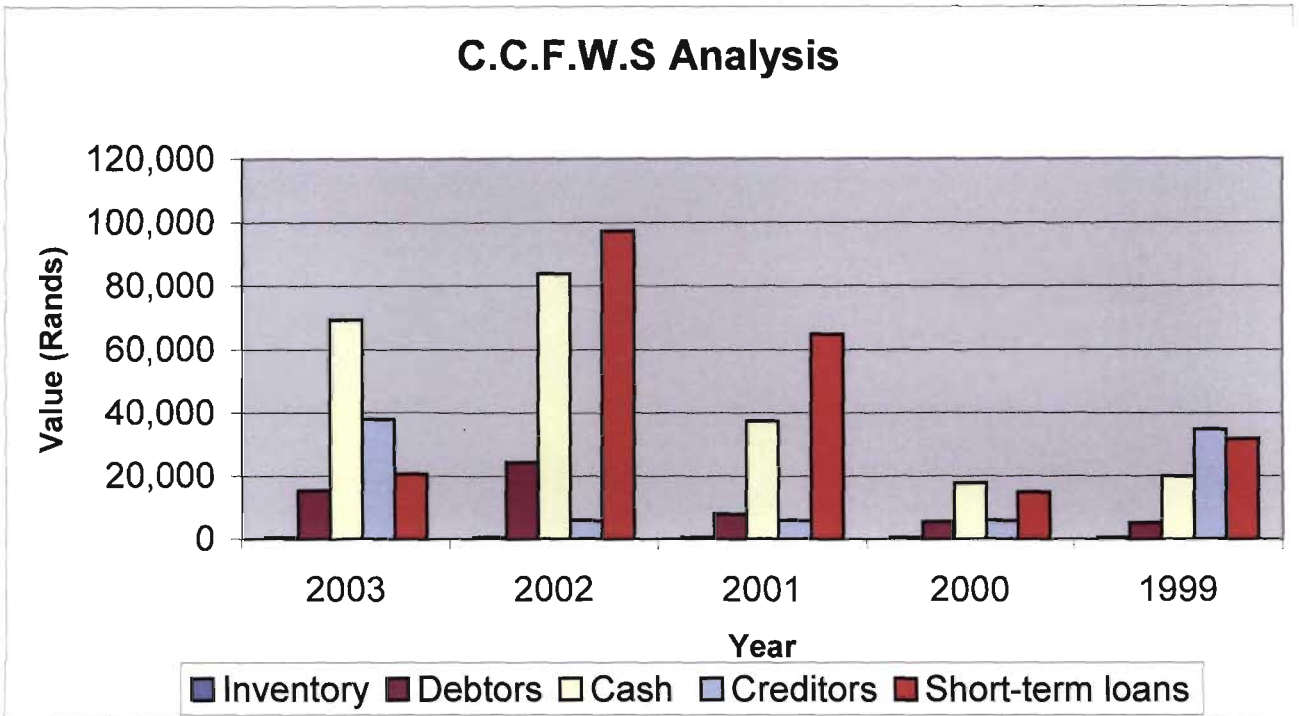
Do you have any other comments on working capital management that would assist in this study?

.....  
.....  
.....

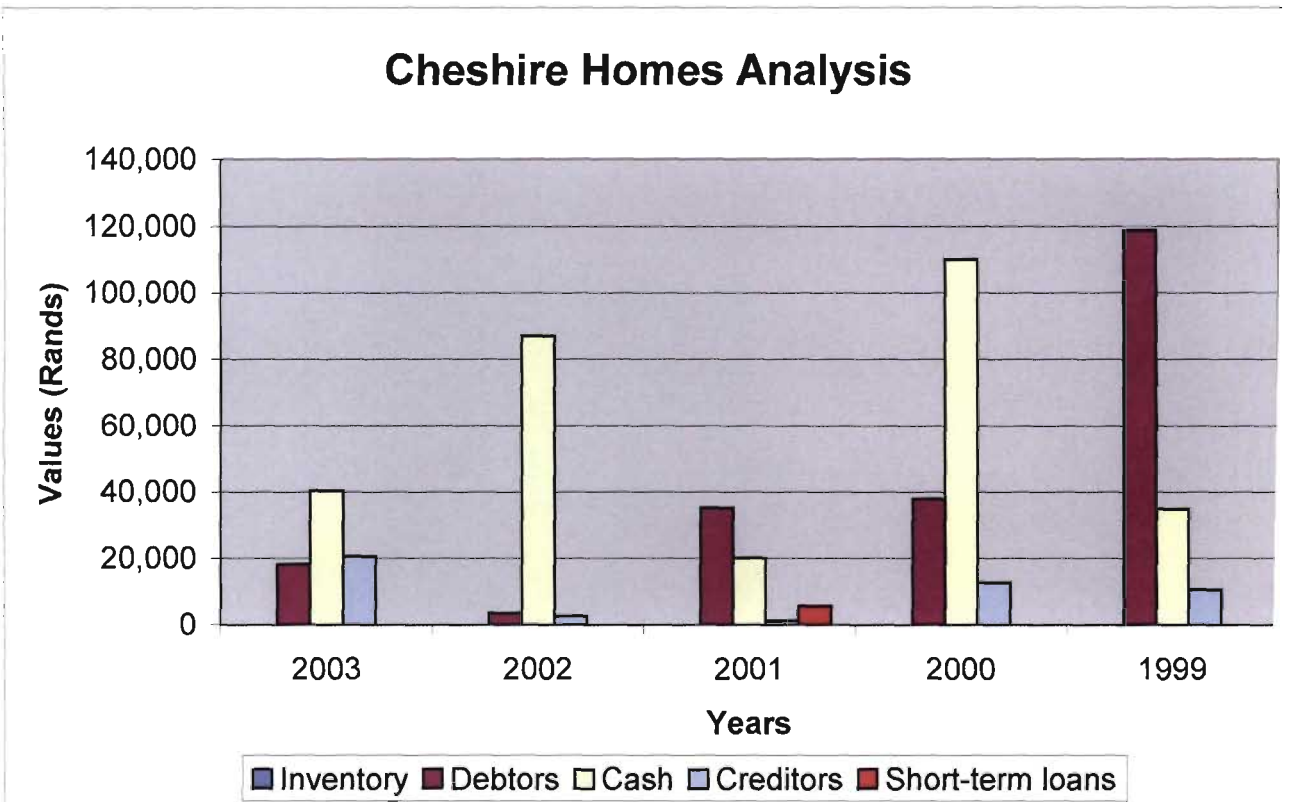
**Appendix IV: Detail Description of Working Capital in all Organizations**



### C.C.F.W.S Analysis



### Cheshire Homes Analysis



### Hospice - Chatsworth Analysis

