Evaluating how the management of working capital policies affects liquidity in non-profit welfare organisations in South Africa

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DECLARATION OF ORIGINALITY

I, Rakeshlall Manilall Mohanlal, declare that I am the author of the research report under consideration and that I have provided comprehensive citations for all sources referenced or quoted, clearly indicating and acknowledging them.

R.M Mohanlal

Pretoria, 17 October 2023

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ABSTRACT

South Africa has over 250 000 registered non-profit organisations, with over 60% facing financial liquidity challenges. This study examines the impact of working capital policies on liquidity within the countrys welfare organisations. A strata sampling design model was used to survey the sample population from all nine provinces of South Africa. The survey focused on working capital policies, liquidity status and management of the various components of working capital. Quantitative analysis, including descriptive statistics and correlation of working capital components, was used to analyse the survey results, revealing a poor relationship between liquidity, and working capital policy. The study was made up of two hypotheses and three research questions which were evaluated with chi-square, phi and Cramer's V statistical tests which were complemented by crosstabulations.

The study explored the impact of different working capital approaches, including aggressive, moderate and conservative, on liquidity levels. The majority of the sample population followed a conservative approach with low policy review frequency, resulting in a liquidity level of less than or equal to one. Future analysis suggests that organisations following an aggressive to moderate working capital approach achieve a liquidity level greater than one and adopt a higher policy frequency review management approach. The study conclusion on the need for accounts receivable, inventory management and accounts payable improvements, including speedy collection, early payment incentives, debtor follow-up, better planning tools, better payment terms and settlement incentives. It also provides a working capital framework welfare NPOs should use in applying the correct working capital approach based on internal and external factors. Finally, policy recommendation are provided for each component of working capital. Further research should look at the whole NPO environment and working capital policy application within Soth Africa.

Keywords: Working capital management, liquidity, working capital approaches, finance policies, South Africa.

LIST OF ABBREVIATIONS AND ACRONYMS

AP	Accounts Payable
AR	Accounts Receivable
CCC	Cash Conversion Cycle
CSI	Corporate Social Investment
CSO	Civil Society Organisation
DSD	Department of Social Development
EOQ	Economic Order Quantity
ERP	Enterprise Resource Planning
IFRS	International Financial Reporting Standard
JIT	Just-in-time
JSE	Johannesburg Stock Exchange
NLC	National Lotteries Commission
NPOs	Non-profit Organisations
POPIA	Protection of Personal Information Act
SA	South Africa
SMEs	Small, Medium Enterprises
SPSS	Statistical Package for the Social Sciences
WCFP	Working Capital Finance Policy
WCM	Working Capital Management
WCIP	Working Capital Investment Policy
WCP	Working Capital Policy
ZAR	South African Rands

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CHAPTER 1: INTRODUCTION

1.1 Introduction

According to the Department of Social Development (DSD, 2022), South Africa had over 257 000 registered non-profit organisations (NPOs) as of May 2022. NPOs provide various services to the community, such as services for welfare, sports, animal cruelty, domestic violence, disabled people and orphanages. NPOs are funded by the national government. In 2019, R164 million was provided to the NPOs and, R158 million in 2020 (DSD, 2022). This funding did not take inflation costs and population increase into consideration but there was only a 3% reduction. Many of these organisations cannot sustain themselves on government subsidies and have to rely on corporates and donor campaigns initiated by themselves to acquire more funds (Trialogue, 2021b:227).

With an unemployment rate of 35.3% (an increase of 6.53% from 2021) reported by Statistics South Africa in Q1 2022 (StatsSA, 2022), most of these organisations were overwhelmed by the additional people requiring assistance. With the demand increasing and the supply of cash diminishing, the law of economics took over. With a reduction in economic growth due to a slowdown of the economy, the secondary subsidisers of these NPOs had reduced funding (Trialogue, 2021b:226-227). The communities which get involved in donation sponsorship had also reduced funding to NPOs due to economic constraints, higher unemployment, and slowdown in economic growth. The result of all these reductions led to the closure of many NPOs in the country according to the 2020 civil society organisation sustainability index for South Africa (USAID, 2021).

NPOs do not have control over these external factors but they do have control over the internal financial mechanisms which they manage. Finance has many veins within an organisation, including financial accounting, treasury, financial reporting, cost control, risk management and management accounting (Gitman & Zutter, 2012:16). However, working capital is the underlying foundation for any organisation.

The management of working capital is considered a critical pillar in finance (Mazanec, 2022:1). According to Morshed (2020:257), most of the time and attention expended by finance managers is spent on the management of working capital as this is an important component of an organisation. Companies that strive to make a profit have many other metrics – profit/earnings ratio, equity debt, profit/book ratio, return on earning and earning per share – to measure their performance. NPOs can only measure their survival on their net working capital. This allows organisations to determine their length of survival in the short term (Tuffour & Boateng, 2017:7).

Over the last century, a strong focus was placed on corporate and medium-sized businesses due to high-profit objectives and growth (Panda & Nanda, 2018). This was compounded by shareholder pressure on the performance of these businesses. However, the focus placed on NPO research is minimal compared to for-profit organisations (Choto *et al.*, 2020:589).

According to Ahangar (2020), organisational performance is tied to profitability. Studies by Maboya and McKay (2019), Rasyid *et al*. (2018) and, more recently, Tharian (2020) show that working capital management has a direct relationship with profitability and sustainability. To the best of the author's knowledge studies have not been conducted within welfare NPOs in South Africa to establish this very relationship – the gap that this study addresses. Much focus is placed on for-profit organisations where the motive for shareholder value and incentive-based performance is the reward (Manzoor *et al.*, 2021:3), unlike on NPOs whose prime motive for operation is survival despite economic turmoil.

As early as the 18th century, Adam Smith defined working capital as 'circulating capital' and, later, Karl Marx refined the definition as 'variable capital'; there key fundamentals were based on the organisation needing cash/resources to operate, survive and grow (Opeoluwa, 2021). Working capital management has evolved through different stages over the years – mainly control, optimisation and value creation (Wang *et al*., 2020). Initially, it was described as an organised way of

controlling current assets such as cash balances, receivables and inventories. According to Morshed (2020:257-258), efficient management of working capital has emerged as a critical concern in today's organisations. Numerous financial executives are grappling with the challenge of pinpointing the fundamental factors influencing working capital and determining the optimal level of working capital.

Working capital is made up of two broad categories – current assets (inventory, accounts receivable and cash) and current liabilities (accounts payable and short-term debts). The net of the two broad categories is net working capital which is the amount of liquidity cash an organisation can generate in the short term; if this amount is negative, illiquidity is the result. An organisation’s survival and growth are based on a positive liquidity ratio (Poojitha, 2019:403). As liquidity has a bearing on working capital management, one needs to understand how working capital is managed. This management is directed by either aggressive, moderate, or conservative policies.

Organisations manage their working capital policies differently. These policies have been explored in several studies including ones on listed companies on the Tehran Stock Exchange by Sefideh and Asgari (2016:364). Another study on working capital management was done on the Amman stock exchange by Albandag and Elbendak (2018), followed by working capital on the profitability of Croatian software companies by Korent and Orsag (2018) and, closer to home, the working capital management practices of Johannesburg Stock Exchange (JSE) listed companies by Ngwenya (2010). Based on the literature review conducted by the researcher, all of these studies focus on for-profit organisations; none focus on NPOs in South Africa.

As these policies are the catalysts of the management of working capital management, one needs to understand how these policies are decided in NPOs and what level of importance is placed on them. Njiru and Githinji-Muriithi (2018:783) state: “financial management policies are used by organisations as tools for ensuring that their finances are managed properly”. These relationships

have a bearing on how organisations manage their working capital and escape illiquidity issues. As this is prime to organisations, an in-depth look at this within NPOs will enable a better understanding of the thought process and the decision-making drive to evaluate and control liquidity within South African NPOs. Based on the authors knowledge no other study to date enables such an understanding.

In 2008, Hendrickse undertook the first published study on the governance and financial sustainability of non-governmental organisations (NGOs) in South Africa. She recommended that NGO boards “should assist in the formulation of clear, effective and efficient financial management policies” (Hendrickse, 2008:239). Follow-ups on this study have been limited and not direct.

Michalski (2012) studied 3000 Polish NPOs and 6000 profit companies between 2009 and 2010 to establish whether a reduction in accounts receivable has an impact on liquidity management. The outcome was that the cost of capital has an impact on accounts receivable and that NPOs have short accounts receivable days compared to for-profit organisations. He also established that levels of cash tied up in accounts receivable, inventory, early settlement of payables and operational cash balances impact net working capital. An organisation’s financial efficiency has an impact on liquidity management as per his model on Polish NPOs (Michalski, 2012:906).

1.2 Research problem

Funding to NPOs between 2019 and 2020 has remained stable as in 2019 it was R164 million, and in 2020 it was R158 million (DSD, 2022). But according to a study conducted by Trialogue between May and July 2021 in South Africa, over 53% of NPOs do not have cash reserves and a further 6% have less than three months of operating cost reserves (Trialogue, 2021b:228). This means that more than half of the NPOs in South Africa are in a critical financial situation despite no decrease in funding which adversely impacts their delivery of social services to the vulnerable in the country.

Most of NPOs in South Africa experience financial distress and close operations due to a lack of proper financial management which is a fact revealed by 50% of the respondents in a study by Maboya and McKay (2019:6). The aim was to look at this challenge and evaluate it. Financial management practices studies are conducted with focus been placed on corporate and profit-run businesses as described in Ahangar, 2020 study. Academic studies on NPOs (Mikeladze, 2021) indicate a fragmented which indicates a gap in comparison to for-profit organisations.

The problem faced by NPOs in South Africa is financial liquidity and in 2018 over 30 000 organisations (15.8%) were deregistered by the DSD (SANGONet, 2018). In 2019, Maboya and McKay undertook a qualitative study on the financial sustainability challenges facing the South African non-profit sector and found only 20% of the respondents understood financial sustainability. The problem is that working capital needs to be evaluated in NPOs against the working capital policy framework in which theoretical models have been developed. This gives an understanding of how, with the aid of financial ratios, decision-makers can take decisions on working capital and evaluate the outcome of these on their financial performance.

Working capital must be properly managed to ensure the survival of an organisation (Ibrahim *et al*., 2021:4). Tharian (2020:130-157) states that effective working capital management holds significance in terms of liquidity (risk), profitability and organisational value. Mismanagement of working capital leads to either excessive investment in unproductive assets or insufficient investment in current assets. Unnecessary investment in current assets will tie up idle funds and, hence, reduce an organisation’s ability to invest in productive assets. In contrast, inadequate investment in current assets reduces an organisation’s liquidity position causing insolvency and, ultimately, resulting in bankruptcy or closure. This forms the basis of the research question.

1.3 Research question

How does the management of working capital and utilisation of its policies affect liquidity within NPOs in South Africa?

1.4 Research objectives

The broad objective is to understand the impact of working capital policies on liquidity in NPO's in South Africa. The study breaks the focus into four specific objectives which cover working capital management and a final recommendation for the overall scope. Figure 1.1 provides a graphic description of the study and its objectives.

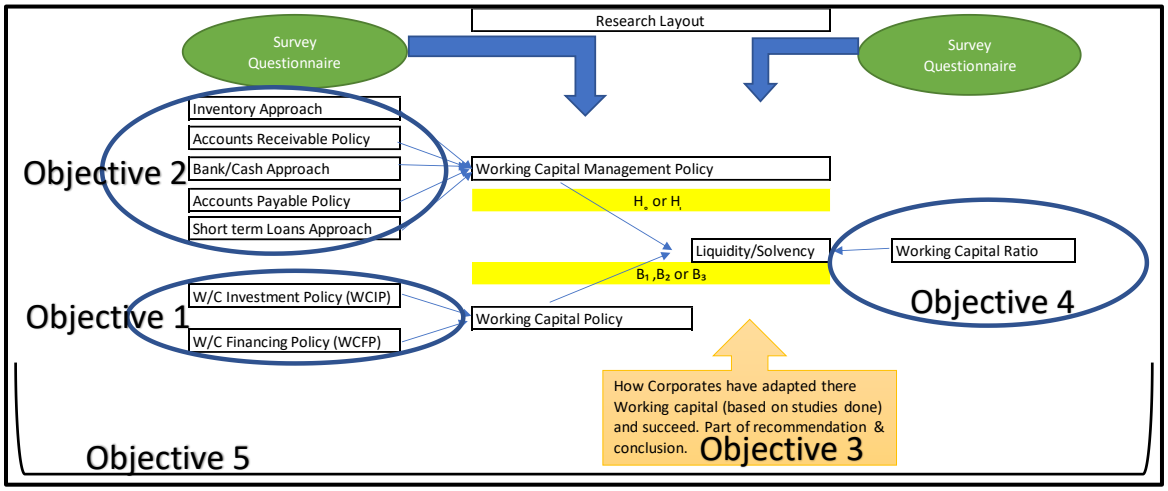

Figure 1.1: Descriptor of the study and its objectives

The specific objectives of this study are outlined as follows:

1. To understand the type of working capital investment and financing policies used by NPOs and the impact these policies have on liquidity. This is done by the type of policy applied and the level of liquidity achieved.

2. To evaluate the components of working capital to understand which theoretical model/approach/policy is used and its impact on liquidity.

3. To evaluate the relevant causes of liquidity problems so that theoretical models and corporate applications can be used to make corrective improvements.

4. To determine ineffective working capital policies, working capital management components, ratios and liquidity by employing a survey questionnaire instrument to collect data to probe how the working capital management approaches used by NPOs creates liquidity problems.

5. To make recommendations on how management can improve liquidity within NPOs so that they can function efficiently and maintain sustainable growth for the country.

In 2006, Abraham completed a comprehensive study of the non-profit sector in Australia to analyse financial performance (Abraham, 2006). Ratio analysis that identified anomalies and addressed areas of concern within this sector was used. The study was able to identify strengths and weaknesses within an organisation and revive the organisation's financial profile. Abraham's (2006:2) study strengthens the assertations of Durrah *et al*. (2016), McLaren and Struwig (2019) and Srividhya *et al*. (2020) who believe ratio analysis to be a well-established tool to evaluate an organisation's profitability, liquidity and financial stability. Therefore, this study's main objective is to understand how the use of working capital policies can improve the liquidity position of NPOs. The following hypotheses were framed:

Hypothesis A (aligned to research objective 1)

H_1: Working capital management policies have an impact on liquidity status.

H_0: Working capital management policies have no impact on liquidity status.

Hypothesis B (aligned to research objective 2)

H_1: Working capital approaches have an impact on liquidity status.

H_0: Working capital approaches have no impact on liquidity status.

To establish which approach is used and its impact on liquidity, the following research questions were framed which are aligned to research objective 3 and 4:

Research question B1:
Does the aggressive working capital management approach achieve a liquidity status of >1 or;

Does the aggressive working capital management approach achieve a liquidity status of <1?

Research question B2:
Does the moderate working capital management approach achieve a liquidity status of >1 or;

Does the moderate working capital management approach achieve a liquidity status of <1?

Research question B3:
Does the conservative capital management approach achieve a liquidity status of >1 or;

Does the conservative working capital management approach achieve a liquidity status of <1?

1.5 Scope of the study

Working capital is made up of two broad sections – assets and liabilities (Gitman & Zutter, 2012:601). Assets are made up of inventory, accounts receivable and cash management, each with many different management methods/philosophies. Current liabilities include account payables and short-term liabilities; each has different management philosophies to ensure current liabilities are within the range of sustainability (Poojitha, 2019:404-407). The creditors' and debtors' policies were reviewed in line with management decisions and the impact they have on working

capital. This study aimed to focus on the working capital policy used and the impact it has on liquidity within the non-profit sector.

In finance management, decision-makers take calculated decisions on the management of each of the components of working capital to achieve a net result which is classified into a conservative, moderate or aggressive approach based on the financing policy which determines the direction in which an organisation is heading financially (Gitman & Zutter, 2012:690-703). The working capital policy is determined by two components – the investment policy and the financing policy. Based on these policies, the working capital policy is initiated.

In the conservative approach, long-term finance, including a proportion of the fluctuating current assets, is used for most current assets. This approach is considered an expensive option but very safe. In the aggressive approach, financing most of the current assets, including the permanent ones, is done with short-term finance. This is considered risky but highly profitable. Lastly, the matching approach establishes a direct relationship between finance and investment (Zimon, 2021). This approach is balanced and is considered equalisation.

Many studies have been undertaken on these three approaches and the outcomes are varied because the studies are based on different industries, economies, countries, sizes of businesses and management. Sunardia *et al.* (2021:5636) find that a conservative working capital policy leads to increased profitability and growth. Rasyid *et al*. (2018:16) reveal that an aggressive investment approach has an impact on profitability.

With an explanation of the direction or approach adopted by an organisation and by establishing the working capital, current and acid test ratios, one is better able to understand how the outcome of these policies has been achieved. A ratio greater than one is considered positive; a ratio equal to one is break-even; and a ratio lower than one is considered poor (Poojitha, 2019:406). The scope was to find the relationship between the policy applied and the ratio achieved. Based on

this, a researcher can establish whether an organisation has good liquidity, poor liquidity or is at break-even.

1.6 Significance

NPOs in South Africa bridge the gap between the government and community sectors. These NPOs provide services to the most vulnerable of communities and people (disabled people, orphanages, individuals who are physically and emotionally scarred, as well as animal care). When an organisation closes, these are the people who suffer the most as the livelihood the NPOs provide is taken away. It is therefore important to ensure that NPOs can sustain good financial health as they provide the common good in society (Choto *et al.*, 2020).

According to Gitman and Zutter (2013:600), based on a study by Fortune of 1000 firms, one-third of a financial manager's time is spent on current assets and one-fourth of their time is spent on current liabilities. In the study by Maboya and McKay (2019), only 20% of the finance team in non-profits understands the importance of financial sustainability in South Africa. As for-profit organisations spend much time and effort on working capital management and liquidity, the need is to understand why NPOs do not prevail.

Profit organisations have large budgets to address working capital management and liquidity and banking institutions are ever willing to assist their large-balance clients. As for NPOs, their bank balances are not that large and every cent they have is devoted to or ploughed back into service provision. They do not have the resources to hire consultancy experts to assist in the analysis and investigation of the root cause of their problems.

According to Schatteman and Waymire (2017:129), the literature on NPOs studied has increased rapidly and globally over the last three decades. Within the subject area of NPOs in South Africa, the search results are not as prolific. The researcher aims to give direction to NPOs on their policy framework decisions and the bearing

these have on their organisation's liquidity. Thus, the significance of this study is that it will provide better financial management direction to NPOs.

1.7 Research philosophy and approach

Saunders *et al.* (2019:131) define research philosophy as the important assumptions of the way one views the world and how these become the assumptions of the research strategy and, finally, determine the method chosen for the research study. The research philosophy that one chooses becomes the direction one selects within a research study. It is therefore, important that one chooses the correct philosophy upfront so that the correct direction is taken.

Creswell and Creswell (2018:44) consider paradigms to be composite worldviews and identify four – postpositivist worldview, social constructive worldview, advocacy or participatory worldview and pragmatic worldview. Saunders (2020) explains that the research philosophy that one uses needs to be justifiable and defendable against others. Based on the 'research onion' concept (Saunders *et al*., 2019:130), a researcher will review each one of the philosophies against the research question to establish which is the best fit for the study at hand. The philosophy used also includes the assumptions of the researcher and his view of the world (Saunders *et al.,* 2019:131). The three major research philosophies are epistemology, ontology and axiology (Creswell & Creswell 2018:60; Saunders *et al.*, 2019:133-134).

Epistemology describes the means of how knowledge, or what is considered knowledge in the world, is acquired and how truth or reality is obtained (Cooksey & McDonald, 2019:247). Saunders *et al.* (2019:144) divide this view into a positivist philosophy which is knowledge developed using tables and statistical data and an interpretive philosophy which is more a researcher using feelings and attitudes.

Ontology refers to a viewpoint concerned with the presuppositions that are made when considering whether something makes sense, is real or is the very nature or principle of the social phenomenon that is being investigated (Scotland, 2012:9).

Further elaboration on ontology includes subjectivism and objectivism (Saunders *et al.*, 2019:144). Subjectivism means that the research subject will cast their personal view on the research topic; the objective research subject prescribes and adheres to a view into which they have been locked (Saunders *et al.*, 2019:145).

Axiology involves the ethical concerns on which one needs to reflect before one does research; it is the understanding of the acceptable behaviour concerning research (Kivunja & Kuyini, 2017:28). Researchers have their own set of beliefs and views which need to be disassociated from the research at hand to not contaminate the outcome. A researcher's judgement should neither impact the flow or direction of the study nor the conclusions of the study. These aspects need to be independent of each other.

The various views of philosophy give researchers the best direction they need to follow for a study. As this study endeavoured to obtain financial information from various organisations and the views of their respective decision-makers, the view this study took on ontological assumptions was that of objectivism. Epistemologically, a realist view was adopted as the research was aimed at obtaining data from the actual operating organisation and its decision-makers. Axiologically, the view is independent as the research has no pragmatic benefit to the sector and is merely trying to add value to an area of the sector that has been neglected. Based on the research question and the views of various academics, this route was the most logical choice.

Furthermore, based on the research question, the research philosophy that was used was positivism as the aim of the study was to obtain facts on the problem; thus, compared to all the other philosophies, positivism was the best fit. In Saunders' (2020) webinar, he says that research at this level is considered 'grey'; each research decision the researcher takes needs to be evaluated based on options and a motivation as to why the specific option was chosen compared to the alternatives must be provided.

Leedy and Ormrod (2016:26) establish that the research philosophy should not be considered an ‘either this or that’ option but researchers should acknowledge the full spectrum because qualitative research can be approached in a postpositive manner as well. This confirms that the research questions are the best take-off point for a researcher's position relative to each philosophy in research (Creswell & Creswell, 2018; Saunders *et al*., 2019). Based on the view that not all decisions are cast in stone, the researcher evaluated each view before deciding to choose the selected options.

Cooper and Schindler (2014:124-128) provide an overview of good, quality research. Such research needs to be systemic from a structural and sequential viewpoint, have a logical process flow with good empirical data and, finally, be replicable. In the approach phase, the extremes between which a researcher decides to build a theory or test existing theory are induction and deduction, respectively. Based on these two extremes, a hybrid approach – abduction – emerges. A researcher needs to understand the differences comprehensively and review them in terms of the research question to establish which best fits the study.

The research question aimed to test the literary theory of working capital management within South African NPOs. This decision-making process and understanding of the financial impact that this has on NPOs were examined. Based on this, the most appropriate option was the deduction approach because the researcher needed quantifiable data which needed to be tested on pre-existing theories in finance literature. The motivation for this choice was based on the prerequisites cited in Saunders *et al*. (2019:153-154) and which were originally laid down by Blaikie as the six sequential steps that need to be tested.

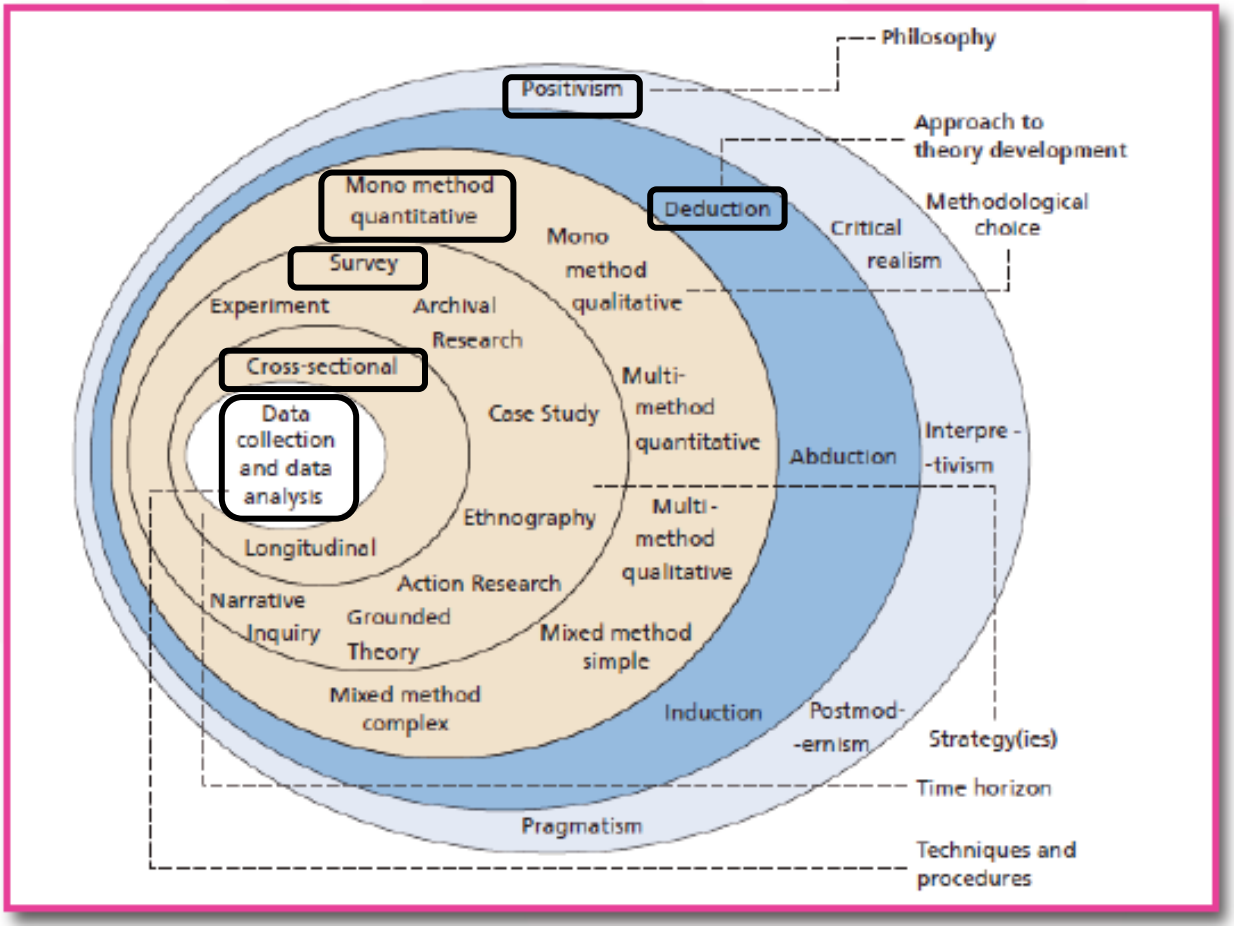

Figure 1.2: The “research onion” is the bases of the study

Source: Saunders *et al.* (2019:174)

1.7.1 Research methodology and design

This study was based on a set of working capital approaches that have long been established. These approaches have been researched in corporate entities to understand the impact of the decisions behind instituting them and their impact on profitability (Altaf & Ahmad, 2019; Kayani *et al*., 2019; Louw *et al.,* 2016). This study examined pre-existing approaches and identified which are used in NPOs and the reasons behind. Based on this, the researcher considered which approach produced the highest level of liquidity and which produced the lowest. This rationalised the correct hypothesis between the working capital approaches adopted by NPOs to ensure liquidity.

According to Cooper and Schindler (2014:136), researchers use a causal explanatory study to identify how one variable produces a change in another. Cooper and Schindler (2014:136-139) further go on to explain that, by using a causal study research option, testing the causal hypotheses establishes relationships. The outcome of these relationships could be symmetrical, reciprocal or asymmetrical.

The focus of this study was the over 250 000 NPOs spread over a large geographical area in South Africa. The most practical research option to understand the approaches NPOs apply to handle working capital within their organisations was a research survey.

According to Creswell and Creswell (2018:49), a research design is based on the nature of the research problem, the researcher's personal experience and the audience to whom the study is aimed. Zikmund *et al.* (2013:62-65) define a research design as "a master plan that lays down the approaches and processes for gathering and examining the required information".

Leedy and Ormrod (2016:196) describe the research design as a cause-and-effect relationship with a dependent and independent variable. The objective of this research study was to obtain information from the decision-makers of welfare NPOs in South Africa. The organisations are spread throughout South Africa and vary in size and type throughout the nine provinces. Creswell and Creswell (2018:43) define research design as the culmination of three components: a philosophical worldview, a strategy worldview and the specific method or approach to the study.

Research design outlines the type of data required, the methods applied in the collection and analysis of the data and how the data answers the research question. It serves as a blueprint for linking conceptual research issues with relevant empirical research (Sekaran & Bougie, 2016). According to Fasola *et al*. (2018:233), a research study comprises three parts: design, running the study and

presenting the results. Yin (2013) proposes that the research design addresses a logical problem and not a logistical problem.

As per Saunders *et al.* (2019:178), strategy is viewed as the approach by which a researcher addresses the research inquiries of a study. It is deemed a methodological link between the research philosophy and the selection of techniques employed for gathering and analysing data. Thus, the selection of the research strategy is influenced by the research questions, aims and the research philosophy adopted for the study.

Accordingly, this study adopted a mono-quantitative research method – a survey. The quantitative phase of this study comprised the collection and analysis of survey data. A quantitative method entails the collection of data where the variables are interrogated but not manipulated by the researcher – generally called a descriptive research design. More specifically, it is survey research which entails data collection in a non-experimental environment.

Survey research elicits information from the participants, summarises their responses – through percentages, frequency counts or sophisticated statistics indexes – and then draws inferences about a particular population from the responses of the sample (Leedy & Ormrod, 2016). Surveys regularly utilise questionnaires to facilitate the gathering of a large amount of data from a sizeable population in the most cost-effective manner.

The survey sample is drawn from a known population and a structured questionnaire is utilised (Cooper & Schindler, 2014; Saunders *et al*., 2019). The survey strategy is used to gather quantitative data to answer the ‘what’, ‘who’, ‘when’, ‘where’ and ‘how’ questions and is mainly used in descriptive and exploratory research.

Structured questionnaires are employed in conducting surveys, indicating that data are collected in a uniform format. Thus, the survey strategy tests the theory of a study. In this study, the survey strategy was used in conjunction with stratified

sampling and the design of the questionnaire and sampling procedures were carefully planned to yield reliable and valid data (Leedy & Ormrod, 2016; Saunders *et al.*, 2019).

When a study uses one case (implying one sector of the economy) – the non-profit sector – as in this study, the emphasis is on a cross-sectional design. The reasons for utilising the survey strategy in this study included the duration and cost of the survey, the time value of the information and the coverage of a wide range of topics (Saunders *et al*., 2019). The survey strategy of this study comprised developing the questionnaire, pilot testing the questionnaire, designing a sample plan, collecting the data and, finally, analysing the data.

1.7.2 Approach adopted by this study

Based on the limited studies on NPOs globally and within South Africa particularly, this study took a triangulated approach to study the topic and resolve the research problem. The study followed a three-step approach as depicted in Figure 1.3.

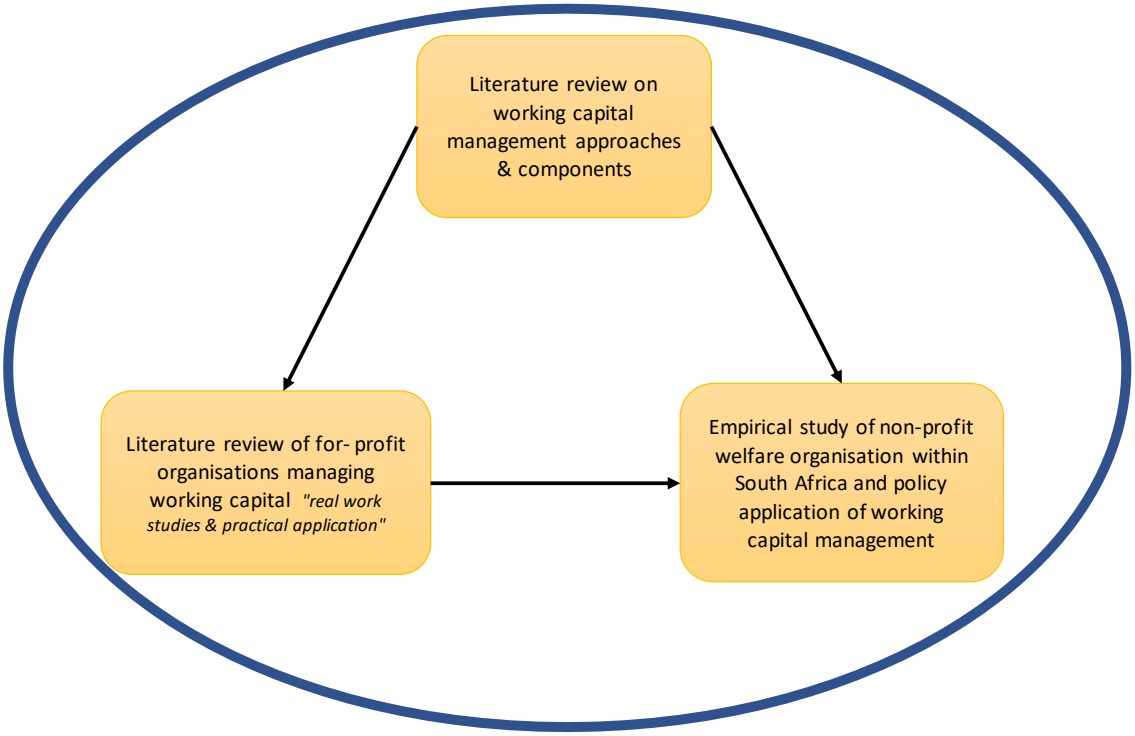

Figure 1.3: Triangulation approach of study

The first step proposed was a general literature review of working capital and its components. An overview of the purposes of NPOs and their ability to function within society and the studies within the NPO sector over the last 10 years were addressed. Part of this first step was also a general overview of how corporates apply the components of working capital.

The second step of the approach looked at literature applicable to for-profit organisations over the last 5 to 10 years to understand how they applied working capital components and policies. This gave the research a firm foundation on real-world applications and the experiences of for-profit organisations from various parts of the world.

The third step was empirical research on NPOs in South Africa to understand how welfare NPOs managed their working capital and the liquidity outcomes they achieved. This step entailed a sample section, survey, review and analysis. The outcome presented in Chapter 6 confirms this triangulation. To date, the researcher is unaware of the performance of a similar study and considers this study unique and a contribution to the sector as well as the finance fraternity.

1.7.3 Sampling population

The DSD in South Africa, the legislative body that is the ultimate custodian of NPOs, has 257 587 registered NPOs (DSD, 2022). South Africa is divided into nine provinces and each province has its respective legislature but when it comes to the registration of NPOs, this takes place at the national level which is in Pretoria and is handled by the Ministry of Social Development as per the NPO Act 71 of 1997. These registered organisations represent different sub-sectors – environment, gender, health care, human rights, older persons/senior citizens, poverty alleviation, trade, youth, orphanages and vulnerable children – as classified by the National Development Agency (NDA) (2022).

Based on these facts, the researcher used the number of registered NPOs as of 5 May 2022 as the base of the population of NPOs in South Africa. Under ‘NPOs’ on

the www.dsd.gov.za website, the full listing of the 257 578 organisations was downloaded to Microsoft Excel (DSD, 2022). The information supplied was each NPO's registration number, the name of the organisation, the province in which it operates, the date of registration, its registration status and the date of cancellation of its registration (if applicable). The researcher sorted the database according to the provincial location of the NPOs and established these as the total population of active NPOs in South Africa.

1.7.4 Sampling design

To establish a sample of the population and one that is representative of the population, a researcher can choose probability or non-probability sampling (Leedy & Ormrod, 2016:177). The total population according to the NDA (NDAR 2021:26), which was originally cited by Camay and Gordan in 1997, is made up of the following sectors which are humanitarian relief, welfare services, service organisations, technical innovation groups, traditional community groups, co-operatives, religious organisations, economic interest associations, professional associations, human rights groups and community development and advocacy associations. Of these sectors, the welfare sector received the largest funding from the National Lotteries Commission (NLC) in 2021 due to the impact it has on communities which the NDA estimates to be over 18 million people in 2020 (NDAR, 2021).

By using probability sampling, researchers could direct their sampling to cover stratified sampling (Cooper & Schindler, 2014:347-354) which would enable all nine provinces of South Africa to be covered. The option chosen in this study was probability sampling because the researcher wanted the research to have a full representation of the target population which is representative of the total population. In this way, the researcher directed the study to stratified random sampling based on the nine provinces of South Africa. Saunders *et al.* (2019:312) support dividing the sampling frame into sectors or departments and using either simple random or systematic random sampling.

Once the sample frame was established, the sample frame was found to have categories that needed to be evaluated as most specific to the research question. Based on this, it was established that studying only welfare organisations per strata would provide a fair representation of the liquidity and working capital policy comparisons of the welfare organisations of the entire country. This gave a sample of 626 from the nine different provinces of South Africa. This was a representative sample of the target population and provided meaningful data to address the research question.

The sample reflected 43% of the target sample. According to Cooper and Schindler (2014:354), the decision on the total sample based on the strata could be proportional or disproportionate. Based on the calculation done to determine the sample size, the proportional option was chosen; therefore, the different provinces have a proportional allocation of test samples. The purpose of this was to make the inferential statistical comparison more compatible and provide just reasoning. As the sample contained all welfare organisations within the target sample, they were homogenous. As they were sampled from various provinces, they are considered heterogeneous according to Cooper and Schindler (2014:351).

The NLC publishes its list of NPOs to which donor awards have been made in its annual financial statements (NLCAFS, 2022). The researcher used the 2020 NLC annual financial statement list as the sample population (NLCAFS, 2022). The list comprised 2749 awardees – sports clubs, arts and culture organisations and welfare organisations. As the researcher was only examining NPOs involved in welfare work, the sample included only 1470 organisations from the nine strata.

The process followed for sample choice is described in Saunders *et al.* (2019:316). The questions in Table 1.1 must be addressed.

Table 1.1: Sample decision tree (Saunders *et al.*, 2019:316)

Sequence of questions to follow to understand the sampling type	Researcher's Answers	Justification
Can data be collected from the entire target population?	No	
Is a sampling frame available?	Yes	
Must the sample proportionally represent the population?	Yes	
Does the research require face-to-face contact?	No	
Does the sampling frame contain relevant strata or clusters?	Yes	
Does the sampling frame contain certain perodic patterns?	Yes	Provinces
Sample choice?	**Stratified random sampling**	

The sample covers all nine provinces; the breakdown of the 626 organisations over the nine strata is displayed in Figure 1.4.

Province/Stratas	Total Sample per Strata
Eastern Cape	55
Free State	62
Gauteng	104
KwaZulu-Natal	95
Limpopo	124
Mpumalanga	44
Northern Cape	47
North West	39
Western Cape	55
Total	**626**

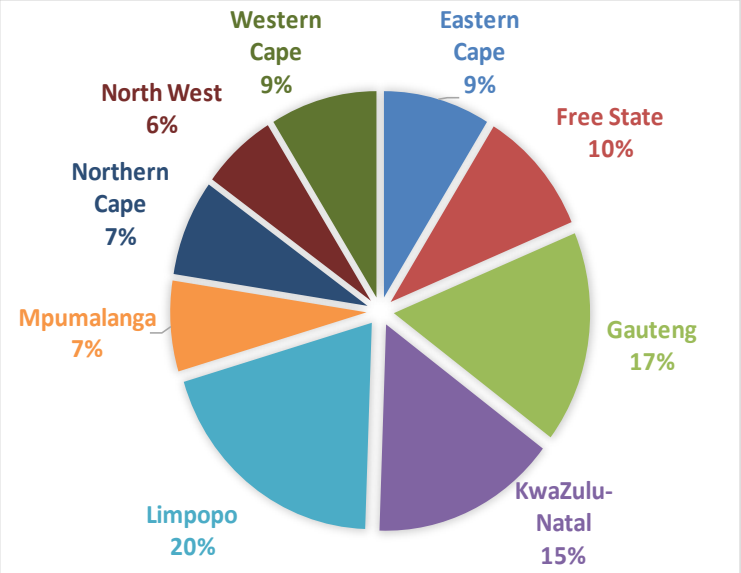

Figure 1.4: Sample of population within country split by province

Source: NLCAFS (2022)

1.7.5 Methods of data collection

The research was conducted as a quantitative study, therefore, the data that were accumulated were primary data from the sampled finance decision-makers. The

data were collected through a questionnaire, a survey that the sample respondents needed to complete and send back (Cooksey & McDonald, 2019:362). The communication method that was used was electronic mail and the instrument used was Google Forms (Google, 2022).

The questionnaire was designed using Google Forms and sent to the sample group. As the sample group covered a wide area of South Africa, all nine provinces, the most effective way of communication was electronic mail. Additionally, in some NPOs, decision-makers were volunteers who only spent a specific amount of time at the NPO. Therefore, a questionnaire gave them the time and convenience of completing it in their available time (Cooksey & McDonald, 2019:361).

The questionnaire included questions that addressed working capital management within their organisation and the financial health of their organisations. The data collection instrument obtained nominal, interval and ordinal data from the respondents. The aim here was to test the theory of working capital approaches in each of the organisations and understand the financial liquidity position of their financial statements. The questionnaire probed these topics so the researcher could understand the decision-making processes within the NPOs better (Cooper & Schindler, 2014:82).

Once the questionnaire was designed using various scales, multiple-choice and rating questions, a test was conducted to evaluate whether the questionnaire had been designed effectively (Saunders *et al.*, 2019:518). Five of the 30 questions format came from working capital studies conducted in Pakistan, Australia, the United States and Canada by Nazir *et al*., (2012), Khoury *et al.* (1999), Belt and Smith (1991) and Smith and Sell (1980), respectively as cited in Nazir *et al*. study. The balance of the questions emanated from the literature reviews, gaps and the research question being addressed. The sample test of the questionnaire was piloted by current-year doctoral students who were also working on research projects.

An evaluation form accompanied the questionnaire to obtain feedback on improvements, the effectiveness of the questions and whether the questions were understandable. This process validated the instrument before it was disseminated (Cooper & Schindler, 2014:383; Leedy & Ormrod, 2016:311).

Once the instrument was confirmed to be effective for use, a copy was sent to each respondent in the sample. The time frame given for completion was one-month whereafter it was returned via electronic mail. The survey was aimed at the finance community so the questionnaire was addressed to the finance officer or finance manager of each organisation based on the contact details in the beneficiary list. A week before the end of the designated month, a reminder was sent to all respondents via electronic mail. At the end of the month, an assessment of the response rate was undertaken.

Once all the forms were collected, they were coded based on the tests and set up for analysis as according to (Cooper & Schindler 2014:379). Statistical testing is aimed at comparison, association and correlation to look for relationships or patterns based on the responses.

1.7.6 Data analysis

Once the data were collected, the Excel file from Google Forms was extracted for statistical analysis. Responses were coded based on a rating scale and ratio analysis was used for the financial data. The statistical software package that was used was SPSS statistics. The completed questionnaires from the respondents were also checked for validity, such as missing data. In SPSS, data missing completely at random (MCAR) could be used (Cooper & Schindler, 2014:391); other options such as missing at random (MAR) or missing not at random (MNAR) could also be used.

The data were to test the hypotheses of the study and establish whether there was a direct relationship, correlation or regression between the variables. The normal statistical testing of the sample would take place on the responses' mean. The

mode, standard deviation and skewness of responses were also tested. Data were presented in frequency tables, bars or pie charts with histograms and box plots to describe the data outcomes (Cooper & Schindler, 2014:407-410). Crosstabulation was also used to compare the theory with the financial management of working capital in the organisations under study (Cooper & Schindler, 2014:421, Leedy & Ormrod, 2016:255). Tests included parametric and non-parametric tests (z-test, t-test and chi-square test) to establish data normality. Error tests were also conducted on the data. The test of significance used parametric testing. The survey strategy was analysed quantitatively using descriptive and inferential statistics (Saunders *et al.*, 2019:193).

1.8 Anticipated benefits

Over the years, many studies on working capital in corporates and medium and small businesses have been undertaken. As the aim of business is profit, growth and survival, many companies were willing to spend money and fund studies in this area because they experience the direct benefit of the results. With NPOs, their limited resources are used to fund projects based on their core objectives (Choto *et al.*, 2020:589-591). The chance of an NPO going to a funder and soliciting the funder to provide funds so it can hire a consultancy company to find out if it is using the right working capital approach is improbable. Such an NPO will probably be rejected with disdain.

When the researcher looked at the body of knowledge on finance in NPOs, very little on this topic was available. Over the last three decades, an increase of finance-related published articles from two articles between 1980 and 1989 to 14 between 2010 and 2014 was noted by Schatteman and Waymire (2017:129); this shows that the extent of the interest in this sector has grown.

With this study opening a door into the NPO arena and philanthropy growing throughout the world, NPOs are destined to become a large part of the global economy in terms of job creation, organisational growth and being able to provide critical services to the most vulnerable of society (Murisa & Murat-Prater, 2020).

Many corporates that can draw a relationship between the profit motive and the management of working capital can adjust their management style and decision-making process to drive success (Louw *et al*., 2016). Likewise, if this study can guide the financial decision-makers of NPOs, the researcher can steer them to the survival and growth of their organisations.

Despite this study focusing on South Africa, it will become a benchmark for other students to pursue similar research in their own countries and extend the body of knowledge to various economic types throughout the world. NPOs exist in every country and this will become the study that provides direction and example.

If NPOs run their finances effectively, donors are more confident about providing funds to them. As donors see the focus being placed on managing the finances of NPOs like corporates for growth and survival, their confidence in the sector will be boosted.

1.9 Approach to the study

Chapter 1 of the study outlined the proposal that was followed by the research on the study topic. It highlighted the research problem and objectives and provided an outline of the research method and design. Lastly, it included the benefits and limitations of the study.

Chapter 2 is the first step of the triangulation which focuses on the general literature review. The review looks at different working capital management approaches. Other areas of working capital management such as inventory, debtor management, cash, accounts payable and short-term liabilities are examined. The chapter also identifies gaps in this area where NPOs are not covered. Based on the limited literature available on the finance management of NPOs, the researcher shows the few areas that have received focus thus far. The final part of the literature review looks at the success that working capital management has had in corporates.

In Chapter 3, which is the second step of the triangulation, an overview in which the literature is compared to the idealistic situation in which for-profit organisations manage working capital and improve their liquidity position is expounded. This is then idealised for NPOs as the research questionnaire can address the shortcomings when data are being collected.

Chapter 4 of the study explains how the study was designed and conducted. The design approach that was adopted and the reason why a specific philosophy was chosen is explained. The motivation as to why the preferred approach was adopted is provided. The outline of how the sample was identified from the population of South African NPOs is outlined. The researcher looks at the instrument design and its piloting as well as the questions in the questionnaire and their aim. The data collection method and the way the data were analysed from coding to statistical analysis is highlighted. Finally, an overview of how the data are to be presented is included.

Chapter 5 provides the details of the survey, which is the third part of the triangulation and the results of the analysis that was undertaken. Once all the quantitative data were collected from the sample respondents, a detailed statistical review was executed on the SPSS statistics software where testing for standard deviation, z-test, chi-square and t-test was undertaken to understand the association, correlation or regression of the data.

Chapter 6 addresses the problem and triangulates the study. Based on the literature review and the gaps identified, the various hypotheses are tested. The chapter forms the bridge between the theoretical and practical aspects of the situation. Once the researcher establishes the hypotheses that will be accepted, he can best formulate solutions to the problem and compare them to what actual corporates have adopted. This will give the study exposure to complete triangulation.

Chapter 7 provides a summation of the survey questionnaire results. The aim is to establish whether what works for corporate organisations when it comes to the

approaches that can be used to manage working capital also works for NPOs. It also provides an understanding of the challenges with which NPOs are faced, thus, rationalising the results of the survey conducted. The view is to expand the knowledge of financial management within NPOs and show how working capital management can be used optimally.

CHAPTER 2: LITERATURE REVIEW

2.1 Introduction

Over the years, many NPOs in developing countries have had to overcome struggles involving their financial resources due to budgetary constraints imposed by governments, reduced community involvement in social donor programmes and the poor performance of economics in developing countries (Choto *et al.*, 2020:589). Factors, such as donor funding and public participation by donors, lead to these constraints. The ultimate result of these struggles is that NPOs downsize their operations, cancel projects, retrench staff or close (Maboya & McKay, 2019). The communities that the NPOs serve must bear the brunt of this.

This research examines the internal mechanisms, namely their internal financial controls and decision-making processes, over which NPOs have control. The area concentrated on in this study – working capital – is the lifeblood of any organisation. This analogy is pertinent in that just as a human needs blood to flow within its body to survive, any organisation needs the right quantity of working capital to circulate within its organisation for survival (Hung & Hager, 2019). Once the working capital circulation stops, insufficient funds are available to pay for goods, services, employees, rentals and maintenance and the operation of the organisation comes to a grinding halt.

The first step of the triangulation approach to this study is reviewing the literature that is available on the various components of working capital. Working capital is made up of inventory, accounts receivable, cash, accounts payable and short-term liabilities. These five components are further classified into two subcategories: current assets and current liabilities. Current assets consist of inventory, accounts receivable and cash (Gitman & Zutter, 2012:600; Ismail, 2017). Accounts payable and short-term liabilities are part of current liabilities. The reason why the first three components are classified as current assets is that, within the short term, they can pay for the organisation's running costs, generate revenue and provide facilities for the purchase of goods and services for the organisation. Current liabilities

enable an organisation to purchase goods and services on credit and allow it to borrow short-term funds from financing institutions to bridge payment or financial requirement gaps (Gitman & Zutter, 2012:605).

When an organisation's current assets are higher than its current liabilities, the organisation can meet its financial obligations and is in a high gearing ratio position (Cashwell *et al.*, 2019; Lancksweerdt *et al.*, 2021; Srividhya *et al.*, 2020). The ratio used to determine this assessment is the working capital ratio – current assets divided by current liabilities. A result of 1 means that the obligations of the organisation are covered on an equal basis. For every rand of expense, there will be a rand of revenue to cover this – generally referred to as the break-even point. In the study by Srividhya *et al.* (2020), a ratio result of greater than 1 is where there are sufficient current assets to cover the organisation's liabilities and the organisation has a high gearing ratio. This is considered an ideal position in an organisation as there is a buffer and the organisation is highly liquid.

The opposite scenario is when the current liabilities are higher than the current assets. This means that the organisation's borrowing and payables (current liabilities) are higher than the amount of revenue generated and current assets owned. This situation is where the working capital ratio is less than 1 and the organisation is considered illiquid (Cashwell *et al*., 2019; Lancksweerdt *et al.,* 2021; Srividhya *et al*., 2020). When an organisation is in this situation, rapid intervention is needed as continuing to operate in this situation is considered negligent from a business ethics point of view (Cowton & San-Jose, 2017).

The two outcomes described emanate from decisions taken by the management team on the five main components of working capital described at the outset. Each component of working capital is managed and controlled in a certain way (Iqbal & Wang, 2018). There are various methodologies, theories and principles that have been developed over time and have evolved based on changes in businesses, economies and political landscapes. The researcher undertook a literature search of journal articles and books on each component, established the underlying theory

and reviewed the latest application of these theories. In the sections that follow, an outline of the original theories, the latest applications of the components within modern businesses and the results that they have achieved are presented. At the outset, it is fitting to state that these five main building blocks (components) need to be of the right size and to change according to organisational circumstances to be the correct foundation for an organisation (Iqbal & Wang, 2018).

Determining the right size for these blocks culminates in three working capital approaches: aggressive, conservative and moderate. In recent literature studies, it has been revealed that, based on these three original fundamentals, hybrid versions – moderate-aggressive and moderate-conservative – have emerged (Zimon, 2020a). Each of these approaches and their composition for an organisation are discussed in this chapter.

All the approaches are based on the decisions taken by organisational decision-makers to achieve the desired results in their organisations. Based on the approach used, the impact of the decision taken leads to success or failure. The economic climate in which the organisation prevails and management's ability to control the reigns of the business are factors that must be considered. Furthermore, the types in the industrial sector and business operation must be studied.

An overview of the literature that is available on these approaches and how organisations perform based on the decisions is available to for-profit organisations (Ahangar, 2020; Prasad *et al.,* 2018). Based on the researcher's knowledge and search of the literature thus far, it must be noted that there is no study on the working capital approaches in NPOs. This research will be the first to explore this aspect within South Africa. In corporations, small and medium enterprises (SMEs) and in various other sectors, there have been many studies which the researcher can use as a comparative baseline and learning platform to overlay into the NPO sector (Figure 2.1).

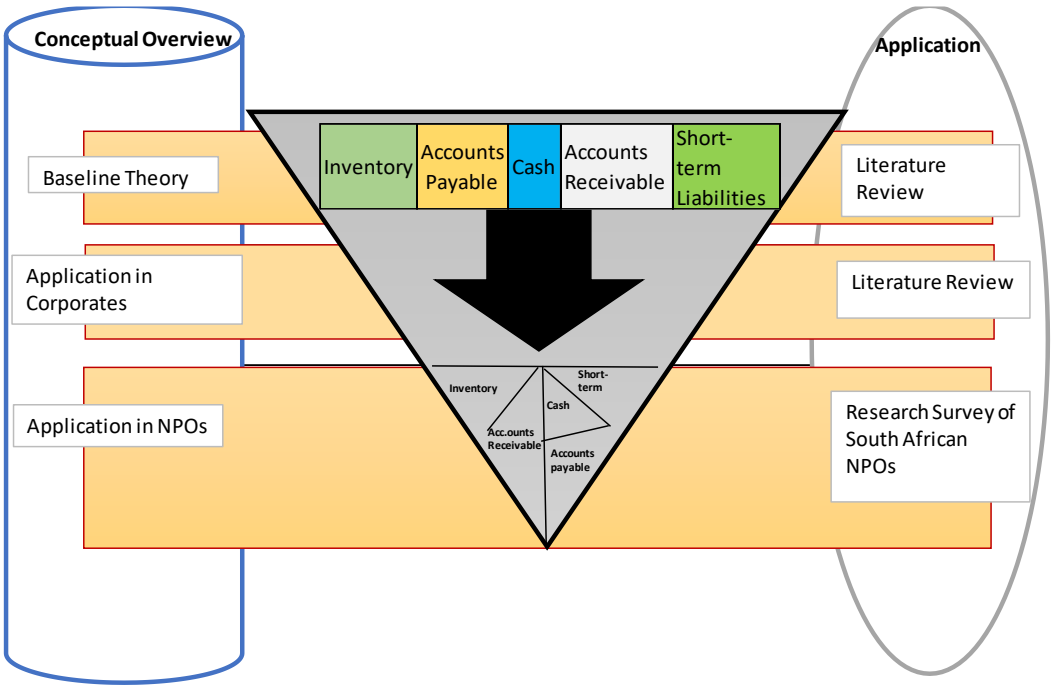

Figure 2.1: Literature review and application of research

The researcher examined the articles, books and work papers of the last five years on the following key search areas: non-profit organisation(s), working capital, working capital management, ratio analyses, liquidity and working capital management approaches for application in business. The research included looking for the sources of theory and methodology for inventory, accounts receivable, cash, accounts payable and short-term liabilities. Each one was reviewed to provide a grounded foundation for the subject area. The literature review also assisted with the development of the research questionnaire as it provided the context for each component (Leavy, 2017:57).

A literature review is like an upward spiral culminating in the critical literature on the topic of choice (Saunders *et al.,* 2019:56). Therefore, the approach adopted in the literature review was first to understand the theories of the components of working capital. The base theories of each component are explained so the reader can understand the fundamentals of the concepts as the building blocks of working capital management. A review was then done on how the latest studies had

applied these theories to understand how these theories had impacted corporations (Figure 2.1).

The literature on NPOs is insufficient; only a partial financial theory of working capital management developed in 1984 by Richard Wacht is available (Zietlow *et al.,* 2018:35). Wacht is considered a pioneer in the financial management development of the NPO sector and, although this academia is over 35 years old, he remains relevant.

The application of theories to corporates in the studies reviewed provides a framework for success and can be used as the baseline for the NPO sector (Ahangar, 2020). The application only differs in that the corporate target of chasing profitability becomes ensuring liquidity for NPOs and the growth composite entrenched by corporates becomes survival for NPOs.

2.2 Components of working capital

Working capital is made up of various components; what they contain, how they are made up and what purpose each of them plays within an organisation need to be explained. They form the building blocks of the organisation's operation and revenue generation. They are as follows:

- Cash consists of cash in the bank which is available to use or is within money market accounts or physical cash (Ismail, 2017; Vuković *et al.,* 2022).

- Accounts receivable are goods or services that are sold to a customer on credit terms and which are payable within a short term (generally within 30, 60 or 90 days) (Ismail, 2017; Kharabadze & Jikia, 2018).

- Inventory is made up of goods that can be raw materials used in the production of finished goods, finished goods used for resale or consumables used in the supply of goods (Ismail, 2017). Packaging, which is used for finished goods, also forms part of inventory as it culminates in

the value of the final product. In other sectors, inventory has a much wider definition, including machinery spares and commodities that are used in manufacturing. In this study, the focus is on raw materials and finished goods.

- Accounts payable, on the other hand, are goods and services an organisation purchased on credit terms and which will be paid within the terms (30, 60 or 90 days) stipulated per the credit agreement between the parties (Ilter, 2019; Ismail, 2017).

- Short-term liabilities are loans that are acquired by an organisation from financing institutions and are payable in the short term. They are generally revolving credit accounts or short-term finance options (Wu *et al.*, 2019).

- Short-term marketable securities are made up of short-term investments within fixed deposit accounts or money market accounts in financial institutions (Ismail, 2017; Tharian, 2020). This topic is out of the scope of this research as the focus here is on liquidity and this topic is based on investments.

In the next sections, a detailed overview of each component and the theories that guide and manage them are presented.

2.2.1 Cash

The Keynesian model of cash requirements includes three main reasons for holding cash: the transaction motive, precautionary motive and speculative motive (Vuković *et al*., 2022). The transaction motive is for the daily or monthly expenses of the organisation, including salaries, utilities and other operating expenses. The precautionary motive is for the unexpected needs of the organisation, such as expenses for a breakdown in machinery and equipment.

The third motive is the speculative motive which is purchases made to take advantage of lower costs and to benefit from discounts or favourable exchange

rates (Vuković *et al*., 2022). The early pioneers of cash management (Baumol – 1952, Tobin – 1956, Miller and Orr – 1966 and Richards and Laughlin – 1980) looked at determining the minimum cash balance an organisation should hold (Chang, 2018; Jalal & Khaksari, 2020; Malkiel, 2017). A review of the cash models aimed at establishing which cash models were being used by welfare NPOs in South Africa.

2.2.1.1 Baumol model

The Baumol model developed by William J Baumol in 1952 assumes that cash flow is relatively certain over a period (Malkiel, 2017). These constantly certain cash flows can fund the transaction requirements of an organisation. The classic Baumol model graph (Figure 2.2) is the saw-tooth depiction of inflow over a period of time.

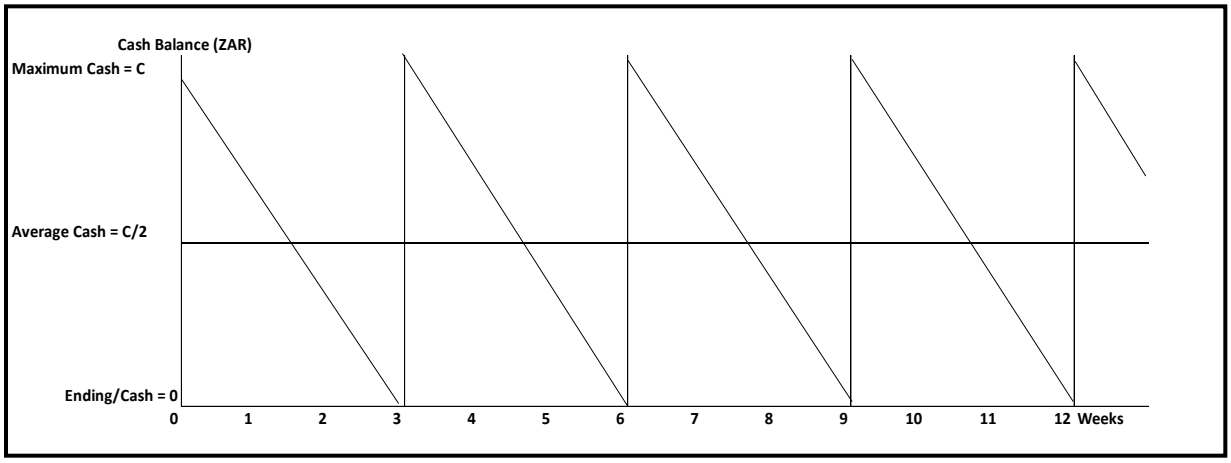

Figure 2.2: Cash balances under the Baumol model
Source: Adapted from http://mytypings.com/baumol-model/

Baumol went further to assume that the opportunity cost of holding cash had a trade-off with the transaction cost of holding inventory/goods as illustrated in Figure 2.3.

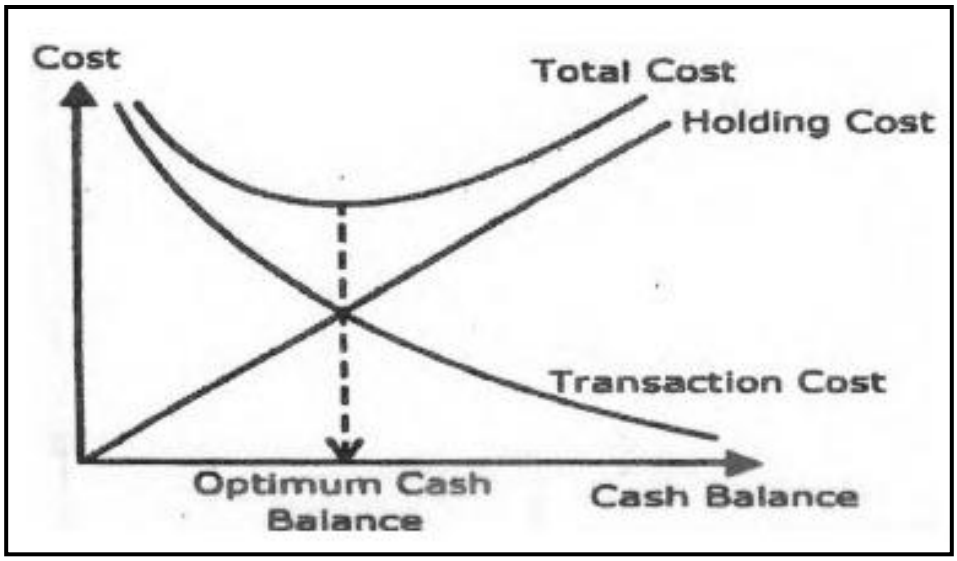

Figure 2.3: Transaction demand for cash
Source: Adapted from Malkiel (2017:276)

This trade-off negates the possibility of investing idle cash to obtain a return. In optimal trade-off, as one orders goods, the transaction cost of ordering reduces as the order increases in value. This results in a trade-off on the cost of holding cash because as cash values increase, the opportunity cost of holding cash increases. Equilibrium is established when the opportunity cost is equal to the transaction cost of ordering goods. The major weaknesses of this model are the precautionary and speculative motives of holding cash balances (Malkiel, 2017:276). Despite its limitations, the purpose of the model is to establish an optimal cash balance which will effectively manage working capital costs.

2.2.1.2 Miller-Orr model

The Miller-Orr model developed in 1966 updated the Baumol assumption on the fixed inflow of cash to more erratic flows of cash within control limit assumptions as shown in Figure 2.4.

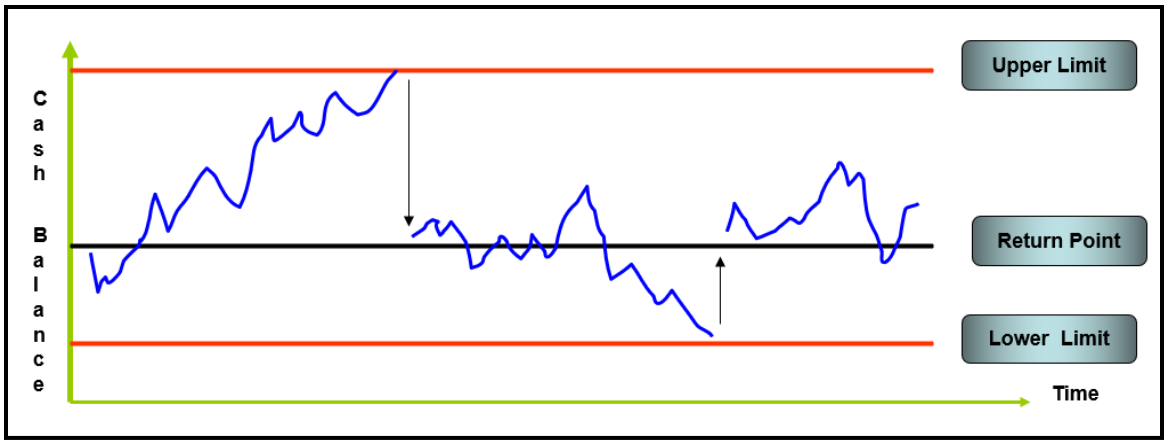

Figure 2.4: Cash movements in the Miller-Orr model

Source: Adapted from Miller and Orr (1966)

The lower limit signifies the limit at which more cash flow needs to be brought into an organisation by selling investment securities to increase the cash flow of the organisation. On the reverse side is the upper limit of control which signifies that there is too much cash in the organisation and this needs to be invested in securities or a deposit account which will yield a return (Jalal & Khaksari, 2020).

The question about at what point of cash should be held is asked and the answer is to get to the return point limit. When an organisation is at the lower control limit, it must sell a sufficient investment to get back to the return point limit. Likewise, if an organisation has more cash and reaches the upper control limit it needs to invest sufficient cash for it to return to the control limit. To establish the return point, the organisation first needs to calculate the spread. The following is the calculation of the return point (1) and the spread (2):

$$Return\ point = Lower\ limit + \left(\frac{1}{3} \times spread\right) \quad 1$$

$$Spread = 3\left[\frac{\frac{3}{4} \times transaction\ cost\ \times variance\ of\ cash\ flows}{interest\ rate}\right]\frac{1}{3} \quad 2$$

Therefore, the upper limit is the lower limit plus the spread. This model requires a constant review of the daily cash balance in the organisation's transaction account and the application of the limits (Moraes & Nagano, 2013:565). Being a more advanced model and taking variable cycles into account, organisations need more skill to manage this methodology. The research question here is: do NPOs have the skill set to manage cash as proactively as corporations?

2.2.1.3 Stone model

The Stone model, built on similar principles to the Miller-Orr model, uses control limits to determine the amount of cash the business requires (Salas-Molina *et al.,* 2018:217). The advances made by the Stone model are that it uses future predictions/forecasts to establish project cash inflows and expected outflows to establish whether net cash will be within the return control limit range. This forecast methodology allows for a reduction in the number of transactions required compared to the Miller-Orr model and is more futuristic.

This model assumes that the finance manager of the organisation will be responsible for forecasting the inflows and outflows of the organisation. This is more advance than the previous two models. The aim is to understand how advanced the NPO sector is in the management of cash. Cash is one of the most important components of working capital and it is therefore important to understand how far the advanced level NPOs have reached in cash management.

2.2.1.4 Beranek model

The Beranek model assumes that the cash inflow is greater than the outflow and that this will result in a cash surplus (Gamsakhurdia & Batiashvili, 2016). Figure 2.5 depicts the time pattern of cash balances for the Beranek model.

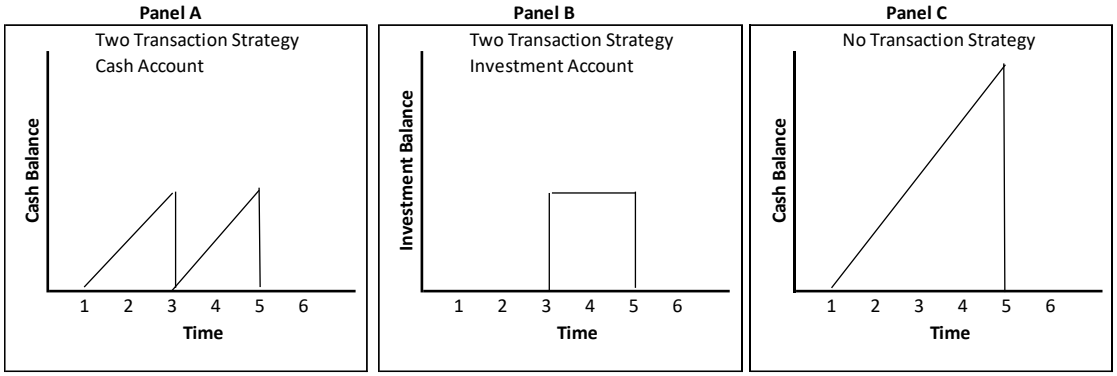

Figure 2.5: Time pattern of cash balances for the Beranek model
Source: Michalski (2010)

As sales take place throughout the month, cash generated will be received within the month in small increments (Panel A). As these are received, they are invested (Panel B) until they are needed to be used for payables (Panel C) (Gamsakhurdia & Batiashvili, 2016). This model uses an aggressive approach to cash management by ensuring that cash is not lying idle within an organisation's non-interest-bearing bank accounts. This is also another very proactive cash-managed model which requires time to manage when it is used in NPOs. The benefit of this model to working capital is the additional income derived from holding cash in investments compared to ideal holding accounts.

2.2.2 Accounts receivable

All organisations involved in the sale of goods and services offer customers more than one payment option based on the type of business entity they are. For a small convenience store or large retailer, its everyday customer pays cash on the purchase of goods and services. However, for manufacturing and supplying retailers with continuous/daily goods and services for use or resale to customers, the payment terms could differ based on various characteristics and options (Kharabadze & Jikia, 2018).

A supplier can provide their customer with favourable terms to retain their business and ensure a level of continuity within the business. Based on certain reviews, a

supplier can provide customers with payment terms that allow customers to trade goods or services and pay later. The collection of this type of transaction between the parties is commonly referred to as accounts payable. The customer pays the supplier at the end of each month – or 60- or 90-day month-end – for the purchases (Urhoghide & Korolo, 2022). These terms are agreed upon between the parties before the conclusion of the transaction and become a standing trade agreement between the parties.

Similarly, in NPOs, goods that are produced by an organisation are sold to its customers on a credit basis. Likewise, some NPOs also provide customers with services which are paid for later. An example of this is the local Hospice that provides palliative care which the user of this service pays later or gets his medical insurance company to pay (Hospice, 2022). The norm is that a debtor application is completed and submitted by the customer to the NPO so that a debtor's account can be opened. This application will be accompanied by an agreement document between the parties.

The control of the accounts receivable process has been informed by various theories over the years (Urhoghide & Korolo, 2022). A short description of each one and its primary control processes follows. The primary purpose of each of the methods is to control working capital and to evaluate which methodology is used by NPOs in South Africa and the success they achieve in maintaining the liquidity of their organisations.

2.2.2.1 Markov chain analysis

The Markov chain analysis is a methodology where data are reviewed at discrete time intervals and a comparative trend is established based on the data collected (Karris, 2007:D1-D3). The process entails the finance manager reviewing the debtors control ledger or debtors ageing schedule to establish the amount that has been paid, bad debts and the outstanding amount for the next 30 to 90 days.

Formulae are applied to establish probabilities between these variables to assess the future trends in payments. This predicts the level of probability of cash flow and establishes the provision that needs to be raised for bad debts. This type of methodology is incorporated in many organisations' debtor management policy documents and needs to be updated based on changes in the market and industry requirements (Narain, 2022).

2.2.2.2 Joint probability analysis

Joint probability analysis is another analytical method that can be used to assess the debtors ageing report and works on the probability that independent variables take place at the same time (Wozabal & Hochreiter, 2012). When one looks at the debtors ageing analysis, many independent customers need to pay at a given time. The joint probability analysis works on the fact that organisations have more than one customer paying on the same day. The question becomes what is the joint probability of the independent customers paying on the same specific day. One needs to review the customers independently and the payment terms to establish this probability. Several aspects, such as the correctness of the invoices, proof of delivery and follow-up with customers to acquire remittance advice documents to establish that the amount being paid is done, need to be reviewed. The formula for joint probability is (3):

$$p\ (A + B + C + \ldots) \qquad 3$$

p = probability factor

A, B, C…..Z = customer amounts

2.2.2.3 Linear discriminant model

The linear discriminant model method uses categories as the basis of the analysis. In an organisation's debtors' book, the customer can be categorised based on industry type, payment reliability, organisation size or payment terms (Habachi & Benbachir, 2019). These categories are based on patterns or characteristics of the organisations which could be similar. Based on this, an organisation can build a

debtor's model or profile of these criteria which can be used to calculate the payment pattern of its debtors' book. A company debtors' policy has the characteristics and criteria the finance manager needs to follow as well as the probability factors that need to be considered when the calculation is performed. The formula is as follows (4):

$$X = (A \times 0.2) + (B \times 0.1) + (C \times 0.4) + (D \times 0.3) \quad 4$$

X = the amount to be collected
A, B, C, D = the classification of the debtor group
Numerical factor = 100% as its totals to full population

2.2.2.4 Decomposition method

The decomposition method entails taking the full debtors' book and breaking the customer's accordance into debtor knowledge, confidence in payment, attitudes and behaviour. This debtor's analysis review is based on self-assessment through business and industry knowledge (Bialowolski *et al.,* 2021). The way this is done is by a full review of each customer at the invoice level. This review will reveal that the goods were supplied, the invoices were created correctly and that there is proof of delivery for payment to take place.

This level of detail is time-consuming but also necessary when it comes to a complex organisation that needs to provide supporting documents to execute payment from customers. This method is used in industries, such as drop-shipments or services rendered to subcontracted parties, where branches or sites are scattered in vast regions and motivation for payment must be performed by the supplier of the goods or services.

2.2.2.5 The 5 Cs credit model

The 5 Cs of credit are used to grant credit to a customer. The 5 Cs look at character, capacity, capital, collateral and conditions (Narain, 2022). The supplier

of goods and services looks at each characteristic when providing credit. The credit history of the customer is looked at to establish character. The debtor is evaluated by his ability to pay back the supplier based on capacity (look at how they manage payments to other suppliers – credit references are done) (Narain, 2022). When a relationship starts, an upfront payment might be required and capital injection into projects or supplier agreements is checked. Based on these criteria, a supplier can establish a pattern to build a payment history and form a reliable relationship with the customer.

2.2.3 Inventory

Inventory is made up of materials which could be various types of goods that can be consumed or utilised in the production process. In the production process, inventory is divided into three types: raw material, goods processed (semi-finished products) and final finished products which are ready for utilisation or consumption (Conley *et al.*, 2019). NPOs use all or any combination of inventory and it is, therefore, important to understand how inventory is ordered and managed as this has a direct impact on the control of working capital. Below are various theoretical methods of how inventory is managed. The study aimed to understand those methods used by NPOs and how they have benefitted managing working capital.

2.2.3.1 Economic order quantity

When an organisation purchases inventory, it needs to understand the total quantity of inventory required as it needs just the right quantity. Too much inventory will result in overstock; too little will result in understock. So, an organisation needs to determine the right amount of inventory that needs to be purchased. If an organisation purchases too much inventory its ordering cost will be low. Likewise, if it purchases high volumes, it will incur a total storage cost which is its total carry cost (TCC). Therefore, the organisation needs to find a balance between the TCC and the total ordering costs (TOC).

Figure 2.6 depicts the economic order quantity (EOQ) which is the equilibrium level between TCC and TOC (Gitman & Zutter, 2012:609-612). This theory was developed by Ford W. Harris and is well known for its early implementation in the US Airforce due to the high value of maintenance parts carried.

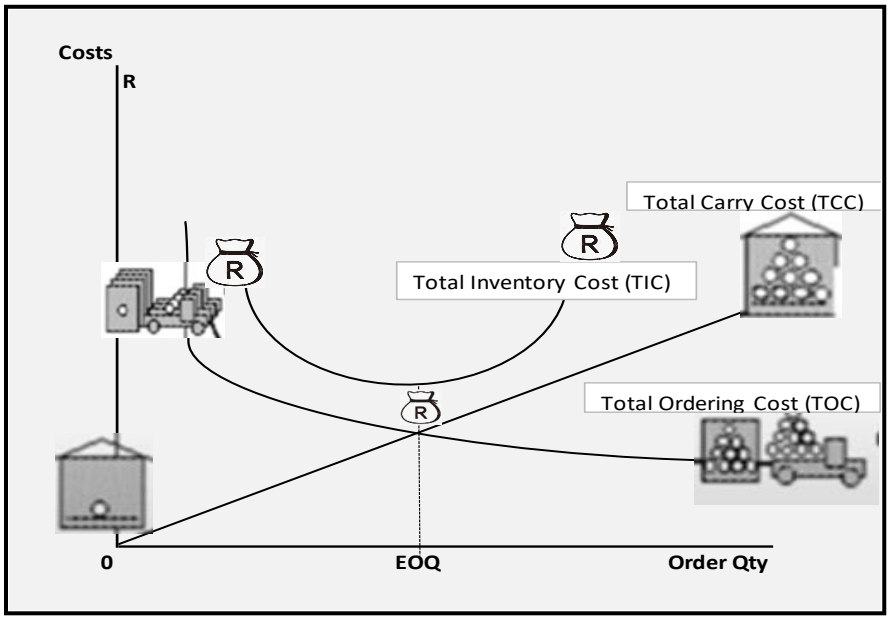

Figure 2.6: Determination of the optimal order quantity
Source: Adapted from Kriri (2018: 2680)

For an organisation to establish the holding cost of inventory the following calculation formula (5) can be used:

$$Holding\ cost = \frac{Holding\ cost}{Number\ of\ units}\ \text{x Average Inventory} \qquad 5$$

For the organisation to establish the reorder point, it needs to consider safety stock and the time it takes for a new order to be replenished. Once this replenishment point is reached, then a new order can be placed. Figure 2.7 describes the maximum inventory level held and order point or when a new order is placed. This replenishment cycle creates a circular routine for stock orders based on cost, efficiency and optimisation (Priniotakis & Argyropoulos, 2019). The reordering of

inventory at a specific point ensures that inventory is effectively managed which means that working capital has been managed efficiently due to reduced costs.

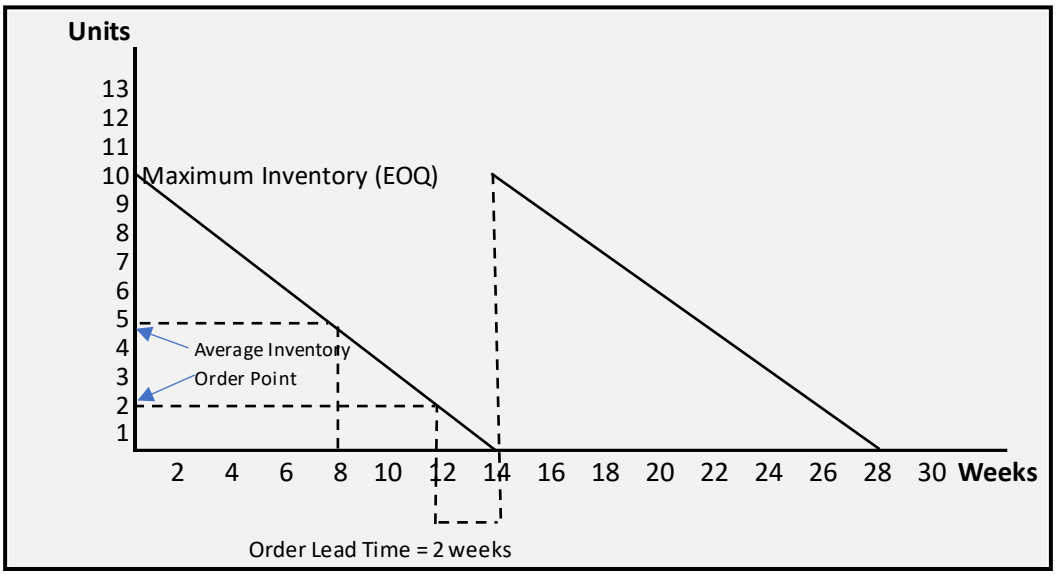

Figure 2.7: Inventory position of safety inventory

Source: Adapted from Wanti *et al.* (2020:4997)

2.2.3.2 Just-in-time system

Just-in-time (JIT) is a process, developed by Taiichi Ohno, where goods are ordered and arrive just before they are needed for consumption, sales or production (Afrifa *et al.,* 2021). This allows organisations to hold less stock on hand. According to Gitman and Zutter (2012:612-613), replenishment of stock takes place when goods are required; this reduces the carry stock costs and is beneficial to an organisation. JIT is impacted by many underlying factors including the reliability of suppliers, that goods are not niche products and that the goods are built to supply and not built by the specification. An effective distribution line needs to be established so that the flow of goods is not interrupted. Rigorous quality points are also needed. This methodology aims at utilising inventory as needed, thus, not incurring holding costs, insurance and security costs. This reduction in costs ensures the effective use of working capital from an inventory

and cash management perspective. This is a model that could apply to NPOs in South Africa and relates to some questions that the research aimed to address.

2.2.3.3 ABC inventory control method

The ABC inventory control method classifies inventory based on annual consumption value and classifies the inventory into A (high value/high stockout cost), B (medium value/medium stockout cost) and C (low value/low stockout cost) classes.

Priniotakis and Argyropoulos (2019) note that the ABC inventory control method is very popular and the classification is done using the Pareto method where A items are 10% in volume but 70% in value while B items are 20% in volume and 25% in value and C items are 70% in volume and 5% in value. Therefore, replenishment looks at A items, then B items and finally C items for any organisation based on cost, importance and ease of replenishment. The impact this has on working capital is that the control of high-value inventory is managed effectively thereby reducing the high level of accounts payable and inventory.

2.2.4 Accounts payable

Customers purchase goods and services from suppliers and their accounts need to be settled as per the trade agreement between the parties. Accounts payable relates to this agreement and the various ways that this can be managed. The impact that this has on the supplier is their ability to service the industry, thus, paying the supplier on time is of pivotal importance (Kadima *et al.,* 2021).

This circular cash flow relationship has a rippling effect on the value chain. It is also of critical importance that this relationship is maintained and there is communication between parties as there are trade discounts that impact the relationship and the quality of goods that move between the parties. The internal policies of the organisation dictate how this is managed and, therefore, the organisation’s policy must be clear on how finance controllers need to respond to

credit granting and payment terms (Narain, 2022). Below are three primary commercial terms used in accounts payable. The research established which were frequently used by welfare NPOs and the results achieved in the management of working capital.

2.2.4.1 Payment before discount period

Most organisations use a settlement discount philosophy to get customers to pay on time or within a specific date range. They generally have a term of sale which states 2.5% on 15 days. This allows the customer to take 2.5% off the payment amount should the payment be made on the 15th day of the sale. This also allows the supplier to bring in cash before the month-end period so they can use it to pay for other services or commitments such as salaries or statutory obligations (Hocheol & Konari, 2019).

This payment term is favourable to customers as they get an additional 2.5% off the margin if goods or services are sold on a back-to-back basis or this can lower their short-term interest borrowing facility. From the purchaser's point of view, the short-term borrowing facility must be able to cover the interest benefit or the organisation must have sufficient cash flow (working capital) to take advantage of this arrangement (Gill *et al.,* 2020).

2.2.4.2 Payment after discount period

When a customer pays the supplier after the discount period, they are generally conceding the discount based on the terms agreed upon between the parties unless a quality or delivery issue with the product occurred (Ahangar, 2020). From a customer point of view, it is always important that communication with the supplier is streamlined to understand delivery patterns and hold-ups as this could impact an organisation's margin. If advance communication is made, then the customer can take the discount after the date with substantiation. The policy of the organisation and the trade credit agreement between the supplier and customer need to be clear (Hocheol & Konari, 2019).

2.2.4.3 Payment after credit period

An organisation that pays after the credit period does so because of cashflow constraints or other payment-related problems. Studies by Kasozi (2017) and Ilter (2019) have found that the late payment of suppliers affects the supply chain and this can impact goods and services flow as one supplier is dependent on another; this is how the supply chain works (Kasozi, 2017). Holding up one supplier could have a rippling impact on the whole supply chain. Customers who are unable to meet their commitment should communicate with the supplier; this will establish a transparent relationship.

Late payment has a negative impact on the supplier; it affects their creditworthiness and reputation in the industry and impacts the flow of goods and services between all in the value chain. In practice, it has now been found that large corporates pay late with no regard as they maintain strength within the industry. This impacts small suppliers that do not have sufficient working capital facilities and eventually, they must close (Ilter, 2019).

2.2.4.4 General credit model

When the general credit model is looked at from the customer's point of view, it involves the settlement of all their monthly obligations on time and per their credit agreements. When customers suffer financial cash flow impediments, they apply various models to reduce the risk of exposure (Kharabadze & Jikia, 2018). A classic credit model splits the creditors into three groups: essential, moderate and common. In this way, the customer can pay his essential supplier first as this will have an impact on his organisation and production or his ability to render services. The customer generally works down the pecking order theory of suppliers from those that will have the most impact to the least. This generally happens when there is low working capital, few to no short-term borrowing facilities and the organisation is dependent on the payments from accounts receivable (Kadima *et al.*, 2021).

2.2.5 Short-term liabilities

Short-term liability is a current liability that is used as a bridging facility between current assets and trade payables. This is typically when the organisation has made more commitments than the cash flow can manage or experiences a spike in purchases or commitments (Zimon, 2020a). As part of the organisation's banking facilities, there will be overdraft facilities, short-term market accounts or revolving facilities in place to take care of these types of shortfalls.

Based on market conditions and the organisation's credit charter, this could cost organisations a significant amount based on interest charges. It is therefore important that the cost of interest for this facility is factored in based on the goods and services costs. There are four key short-term facilities available and the study aimed to understand which options were used by welfare NPOs in South Africa and the impact they had on the organisation's liquidity.

2.2.5.1 Revolving credit

Financial institutions offer revolving credit facilities to organisations based on the principle that the organisation has a predetermined set amount. Once this is used and paid back, the amount is set back for use again by the organisation. This revolving credit gives an organisation a level of security because it knows that facilities at a predetermined level are available to use should the need arise (Brigham & Houston, 2015:547).

The advantage of this type of facility is that it is there and, when an organisation is in need, it does not need to go out and look for such a facility or go through lengthy and rigorous procedures and processes. Having access to a facility such as this is based on an organisation's credit character and, if not well managed, can be revoked. It is therefore important that organisations maintain their credit rating to have a facility such as this available as a line of safety. Facilities such as this are costed into the banking package so indirectly organisations pay for these services and need to use them appropriately (FNB, 2022).

2.2.5.2 Secured lending arrangements

A secured lending arrangement is when a predetermined agreement is set up with a bank facility to provide an amount of money to an organisation based on predetermined conditions and factors (Ismail, 2017). This is used for small projects that need to be executed quickly and over a short period but require upfront funding with payment being received on completion or a phased-cost basis. The organisation generally confirms security, which could be a contract between parties that has the execution requirement and the payment milestones, to the financing institution. Other types of agreement could also be short-term leases that require an upfront deposit that needs to be financed and an organisation using a secured lending facility to cover this agreement (Lofton, 2021).

2.2.5.3 Bank overdraft facilities

Overdraft facilities are generally part of current account facilities that most organisations have with their banks. There is a predetermined set amount that organisations are allowed to go over until they reach the amount which is part of the facility (Yonus, 2021). As this is a short-term and unsecured facility, the interest rates on these facilities are higher than normal facilities within the banking environment (FNB, 2022). It is therefore very important that cash flow forecasts warn organisations of the emerging breach of these facilities so arrangements can be made with other sources due to the high cost associated with this type of facility.

2.2.5.4 Credit card facilities

The use of credit card facilities by organisations for services because they prevent cash from being carried has become popular (Verkijika, 2020:71-78). This facility, if managed correctly, can be advantageous as the bank provides 45 days of interest-free terms on condition the full outstanding amount is paid on the prescribed day. These facilities are used by organisations for travel, fuel and consumables. It can be part of the full banking package and is based on an organisation’s creditworthiness and performance (FNB, 2022).

2.3 Working capital management

Zimon (2021) explains working capital through an allegory about a Yankee travelling merchant who sold goods between villages all over the country. Because he needed goods for trade on his wagon and could not travel back and forth from the supplier, he went to a financing house (bank or financial institution in today's terms) and borrowed the cash from them at an interest cost. He then purchased the goods from his various suppliers in cash or requested extended payment terms. Thus, on the back of his wagon was his working capital – purely inventory at the outset.

As he sold the goods to villagers, he turned the inventory into cash. In some instances, he granted his worthy customers' credit. The agreement was that on his return, he would collect the cash from them. After he sold off all his goods (inventory), he would return on the same route collecting his outstanding debts and returning to his original town. With cash in hand, he would pay back the cost of the borrowing to the financing house and pay back certain suppliers who had allowed a credit option directly to him. What was left over, excluding the expenses and maintenance of his horse and cart, was for his pocket.

This was the start of the working capital concept in the United States of America. As the peddler's business grew bigger, he had a few more peddlers working for him. His borrowing grew and his business flourished (Zimon, 2021). There are negative stories as well where the expenses and non-payment by villagers due to poor crops resulted in the peddler being unable to pay back the full amount to the financing houses or suppliers, resulting in his working off the debt in the countryside taverns.

The same principle applied today was formalised over 200 years ago in the United States and other European countries such as Holland – the traders of the Dutch East India Company in the 16th and 17th centuries. If a principle like this is so old, does it make sense for the researcher to ask questions and conduct surveys on this topic? The answer to this is relatively simple. Over the centuries, businesses

have had to change the way they trade and countries have legislation which governs their financial principles, communication and engagement.

Financing has also changed with e-commerce, the internet and payment methods modernising. One might have the same type of business in country A and another in country B but the financing strategy for each could be entirely different (Talonpoika *et al.*, 2016). Factors that affect different strategies are size, inflation, exchange rates, cost of borrowing or lending, employment (skill availability), political factors and legislative requirements.

Working capital can be defined as the number of current assets used in a business to generate revenue to pay back the current liabilities owed. Current assets are made up of inventory, accounts receivable and cash while current liabilities are made up of accounts payable and short-term borrowing. It is important to note that inventory and debtors are components that revolve around cash – the sale of goods and the collection of outstanding amounts owed from accounts receivable (Yao & Deng, 2018). These funds are used to pay service providers and suppliers and are classified as accounts payable.

Some people borrow funds for the short-term funding of their businesses and this borrowed money needs to be paid from current assets or cash. All these components are known as short-term because the turnaround time for them is generally within one year. Therefore, working capital is looked at as a short-term financing activity due to the turnaround time of these components.

An organisation needs to use the right balance of amounts of each component to create the correct equilibrium or scale of balance. Each component should have the right policy or theory applied so that the total current assets and current liabilities work harmoniously with each other and no imbalances occur. The downside of not having the right complementary amounts of each component is that the organisation suffers illiquidity (Vuković *et al.*, 2022).

The strategies employed in the management of working capital can be best described as how a conductor of an orchestra performs. If one instrument in the family of instruments is used incorrectly, it can create an imbalance and spoil the entire performance despite the rest of the instruments playing perfectly well. In most organisations, policies are set up by the controlling body which is involved in establishing the vision and mission of the organisation and the policy document provides guidelines and direction.

2.3.1 Working capital investment policy

When any organisation starts up, it needs to decide what type of business financing model to use. There are two types: long-term funding and short-term funding requirements. Long-term funding deals with investment in capital investments such as buildings, machinery and equipment. This type of funding can be sourced in one of two ways depending on the business plan/model.

The first requirement is by way of capital injection into the organisation or by way of long-term borrowing from a financial institution which could be in terms of a mortgage bond or infrastructure development funding which is paid over a long-term period. The second requirement is short-term funding which is for the daily running of the organisation. This second requirement is the working capital requirement. For this, the organisation can use part of the capital injection to fund operations or could use short-term borrowing facilities exclusively (Zimon, 2021).

The decision on which financing model works best is based on the policy that drives the organisation. This will also decide how the finances will be managed when the organisation grows in the future. According to Brigham and Houston (2015:523), organisations can apply one of three types of investment policies: restrictive, relaxed or moderate. All three are dependent on the type of organisation that is operating. An organisation that sells goods and services on a cash basis and has a 30-day credit facility with suppliers need not have large amounts of financed working capital. Such organisations can apply the restrictive or moderate

investment policy as the cash coming in from sales is funding the payment to accounts payable and there are no accounts receivable on the financial books.

In another business type – where an organisation has suppliers providing credit for goods and services for 30 days, the accounts receivable process is another 30 days and there is inventory that needs to be converted to final goods which takes 90 days – financed working capital for over 90 days will be required due to the long cash conversion cycle within which that organisation is operating (Brigham & Houston, 2015:527-528). Organisations of this nature apply relaxed or moderate approaches as short-term financing will not assist in the length of time taken for the conversion of cash. Such an organisation will apply a long-term financing option to invest in the working capital requirement of the organisation.

The investment policy of working capital is decided by the type of business model adopted by the organisation. A quick cash conversion cycle will apply restrictive to moderate investment policies while long cash conversion cycles apply relaxed to moderate policies (Brigham & Houston, 2015:526). An understanding of the different options allowed the researcher to test which option was being applied by welfare NPOs within South Africa and the impact it had on the liquidity of the organisations.

2.3.2 Working capital finance policy

With the advancement of business practices, an organisation can fund its working capital financing needs in many non-conventional ways. Over the last decade or two, financing institutions have come to understand that organisations want to grow and concentrate on their core which is goods manufacturing or service rendering. As a result, they have discovered innovative ways to alleviate the confinements of accounts receivable.

Finance institutions are willing to alleviate the pressure of waiting for accounts receivable to become due and provide the business with a portioned amount of the overdue upfront in cash so the organisation can use the cash in other areas of its

operations (Ibrahim *et al.*, 2021). This way of handling the business pressures of accounts receivable is a process of debtor factoring (Ismail, 2017). The way this process works is the financial institution reviews the accounts receivable book based on the 5 Cs principle and establishes which debtors meet their criteria for factoring.

Once the institution agrees on which debtors will be covered, they apply a proportional coverage to the factor which means they will pay up to a certain percentage which is generally 80%–90% of the outstanding amount to the organisation in cash and when the payable amount is due the customer will pay the financial institution the full-face value of the invoice (Ismail, 2017). Monthly, the organisation will factor in sales/invoices for 80%–90% of the invoice value to the financial institution so that they get early payment to be used on other operational activities. The financing institution generally agrees on a percentage of the face value as their fee for upfront payments or might agree on a full-on banking agreement with the organisation for full services (FNB, 2022).

Another innovative working capital financing strategy that has come about for inventory is inventory bonding. Most organisations purchase inventory to ensure that their pipeline supply is constantly available. With the new way of bonding inventory, an organisation can place orders for the inventory but not take ownership of it; therefore, it will be off the balance sheet. The organisation only takes ownership when the goods are required in their operations.

This form of bonded inventory is where a financing institution assumes ownership of the goods for the period of bonding and when the organisation is ready to take ownership, this is passed over to the organisation (Fu *et al.,* 2020). This allows a company to reduce its inventory, tax obligations and accounts payable as the assets and liabilities are off the balance sheet until they are required. Although these may be considered financing schemes, they assist in the liquidity of the organisation and reduce the direct investment required in working capital (Fu *et al*., 2021; Wu *et al.*, 2019).

2.3.3 Working capital policy

‘Working capital investment policy’ and ‘working capital financing policy’ are concepts that are often confused or used synonymously. Working capital investment policy refers to the basic decision in an organisation based on the type and business model of the organisation; working capital financing policy is how the business will apply the working capital investment policy decision. Once these two steps have been taken, the overall working capital policy of the organisation is determined. The working capital policy encompasses how the various components of inventory, accounts receivable, accounts payable and short-term liabilities will be managed on a day-to-day basis and the monthly decisions that need to be taken (Kumaraswamy & George, 2019; Lumapow & Tumiwa, 2020). It also provides guidelines on how to manage customer accounts and supplier payments.

Policy documents are formulated internally by the respective departments within the organisation under the auspices of the subject head who is usually the Finance Director or Chief Finance Officer. The subject head will co-ordinate with the Supply Chain Head on the policies that relate to accounts payable as there is a relationship between finance and supply chain on supplier compliance and management between the parties.

The accounts receivable policies will be coordinated between the finance subject head and the head of sales, the Sales Director, as they deal with customers and their relationship with them. When it comes to policies on inventory there is generally a coordinated approach that includes Operations Management, the Sales Director, the Supply Chain Head and Finance Management. The last set of policies revolves around short-term liabilities and cash management. These policies are generally prepared between finance management and treasury which are within the same division (Njiru & Githinji-Muriithi, 2018).

The policies are reviewed by the various tiers of management and are sent for executive or board approval. They could also be sent to external auditors for review to ensure they comply with various accounting standards such as the International

Financial Reporting Standards or Generally Accepted Accounting Principles (IFRS, 2019). Once all these policies are formulated, the full collection of these will dictate how working capital will be managed in the organisation (Njiru & Githinji-Muriithi, 2018). Any changes going forward will be controlled by document control standards which are part of all organisational quality control requirements for document control.

The research addressed how NPOs attended to internal policies and established an understanding of how mature the policy process was within welfare NPOs in South Africa. As policies provide a formal direction of management, the researcher questioned the level of policy maturity compared to the management of the working capital of NPOs.

2.4 Approach to working capital management

Once an organisation has its investment policy and financing policy in place, it looks at the way it controls its overall working capital policy components. In their general overview, Charitou *et al.* (2016) confirm that there is an aggressive investment policy where a minimal level of investment in current assets versus fixed assets is invested. Conversely, a conservative investment policy will hold a greater proportion of capital in liquid assets with the opportunity cost of less profitability to the organisation. If the level of current assets increases in proportion to the total assets of the organisation, management will be more conservative in managing the current assets of the organisation. To measure the degree of aggressiveness of the working capital investment policy, equation 6 is used:

$$\frac{\text{Total current assets}}{\text{Total assets}} \qquad 6$$

If the ratio is less than 0.5, it means a relatively aggressive investment policy has been used; more than 0.5 is considered a relatively conservative investment policy (Charitou *et al.*, 2016).

An aggressive financing policy uses higher levels of current liabilities and less long-term debt. The opposite of it is a conservative financing policy that uses more long-term debt and capital and has fewer current liabilities (Charitou *et al.*, 2016). An organisation is more aggressive in terms of current liabilities management if it is concentrating on the use of more current liabilities and is putting its liquidity at risk. The measure of aggressiveness of a financing policy used within an organisation is measured by the following working capital financing policy ratio (equation 7):

$$\frac{\text{Total current liabilities}}{\text{Total assets}} \qquad 7$$

If the ratio is less than 0.5, it means the organisation follows a relatively conservative financing policy; a ratio of more than 0.5 means that a relatively aggressive financing policy is followed by the organisation (Charitou *et al.*, 2016).

As per Rasyid *et al.* (2018), working capital approaches (conservative, moderate and aggressive) based on financing decisions involve the utilisation of long-term and short-term finance to fund permanent and seasonal current assets. It is commonly believed that a conservative policy has the lowest return and risk, while an aggressive policy has the highest return and risk. Moreover, the acceptability of risk is contingent on factors such as the level of operational risk, sales volatility and the expenses associated with short-term finance. Hence, these aspects must be considered when making policy decisions.

The three different approaches, accompanied by the level of risk, return and composition, are discussed next. Based on this, the research question that emanated was which approach was used by welfare NPOs in South Africa and what level of liquidity they were achieving. Later, the approach used by corporate entities and their performance outcomes are also discussed.

2.4.1 Aggressive working capital approach

The aggressive approach to working capital management adopts a philosophy that part of the requirement of current assets is funded by short-term fund sources. This

approach is considered low cost but with high risk and high levels of profitability for the business. The aggressive approach emphasises holding a small amount of cash in the bank and ensuring that receivables and inventory, as well as marketable securities and deposits, are at a low level (Figure 2.8).

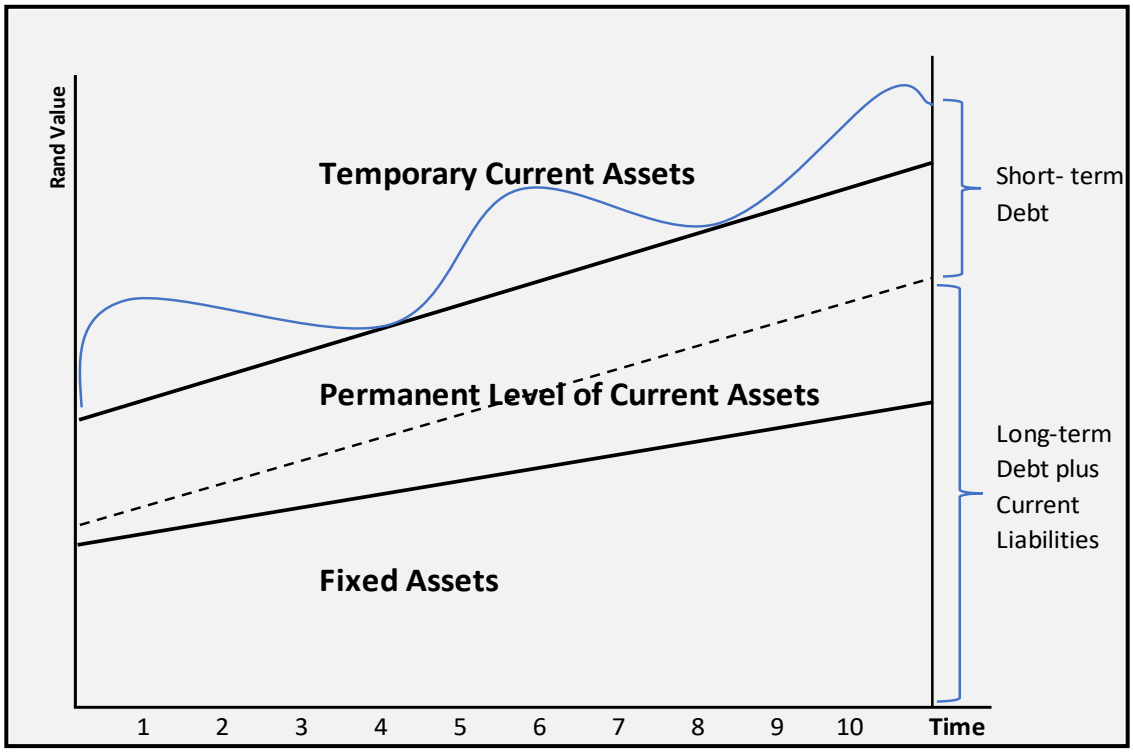

Figure 2.8: Aggressive working capital policy
Source: Adapted from Els *et al.* (2019:184)

Any seasonal fluctuation of working capital needs as well as growth in permanent working capital needs due to organisation growth must also be funded from current assets (Zimon, 2020b). The way this approach is applied in the aggressive management approach is by reducing the cash conversion cycle. According to Zimon (2020b), this is done by increasing the accounts payable terms (days), reducing debtor days, moving to a more cash-based business and reducing inventory or reducing inventory turn days. This will increase cash turnover and result in faster cash flow within the organisation without additional loans or security facilities (Pakdel & Ashrafi, 2019).

2.4.2 Conservative working capital approach

Opposite aggressive working capital management is the conservative approach which uses the philosophy of having the entire amount of current assets funded by long-term financial sources. Should there be seasonal requirements in funding, then short-term funding sources would be used to bridge the gap. When there is an oversupply of cash, marketable securities can be used to invest (Figure 2.9).

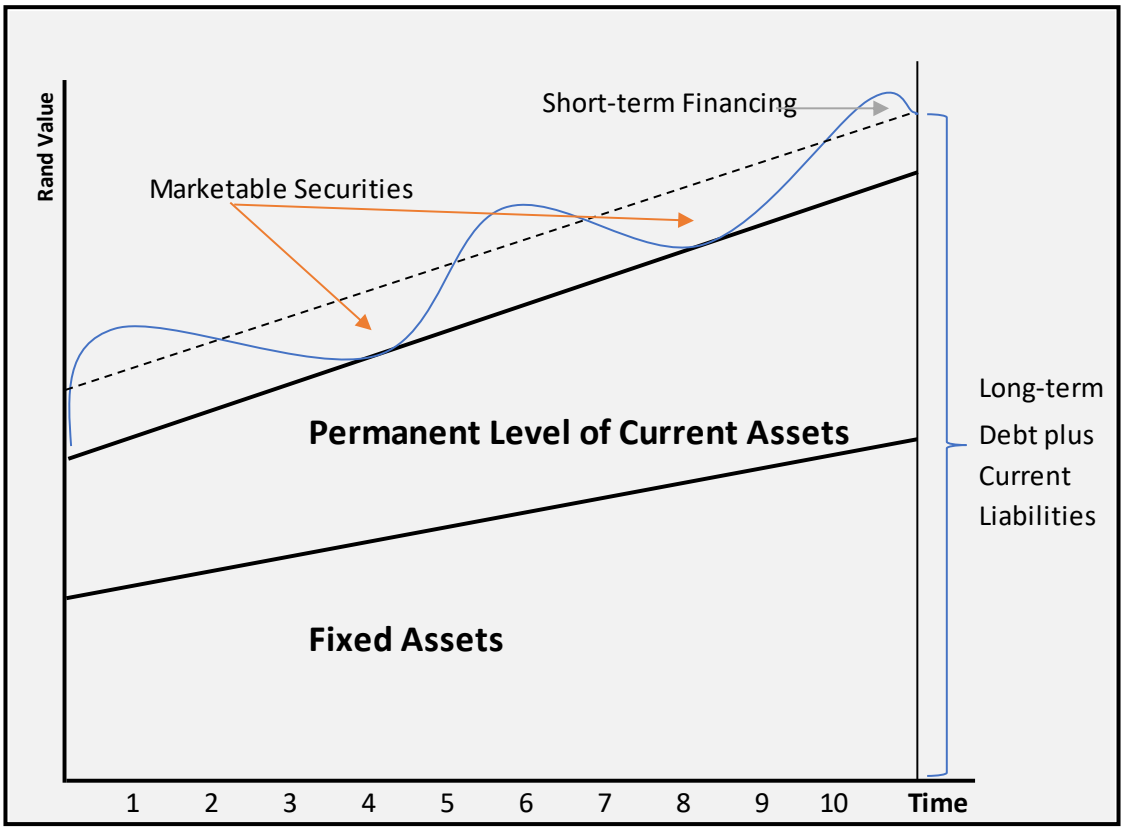

Figure 2.9: Conservative working capital policy
Source: Adapted from Els *et al.* (2019:184)

This approach to working capital management is considered very high cost due to the high cost of interest on securing long-term funds but, at the same time, low in risk and impacts profitability negatively (Zimon, 2021). As described by Zimon (2021), the impact on the cash conversion cycle is only during seasonal peaks or emergencies. The impact of reducing inventory and accounts receivable or increasing accounts payable is taken as required. On some occasions, only one

of the three levels occurs, such as when some organisations have inventory clearance sales (Pakdel & Ashrafi, 2019).

2.4.3 Moderate working capital approach

The hybrid approach of both the above models to managing working capital is the moderate approach or hedging approach as illustrated in Figure 2.10. In this method, the organisation applies the matching methodology in which long-term financing covers the permanent level of current assets and fixed assets while short-term financing covers the temporary requirement for current assets (Els *et al.*, 2019:185).

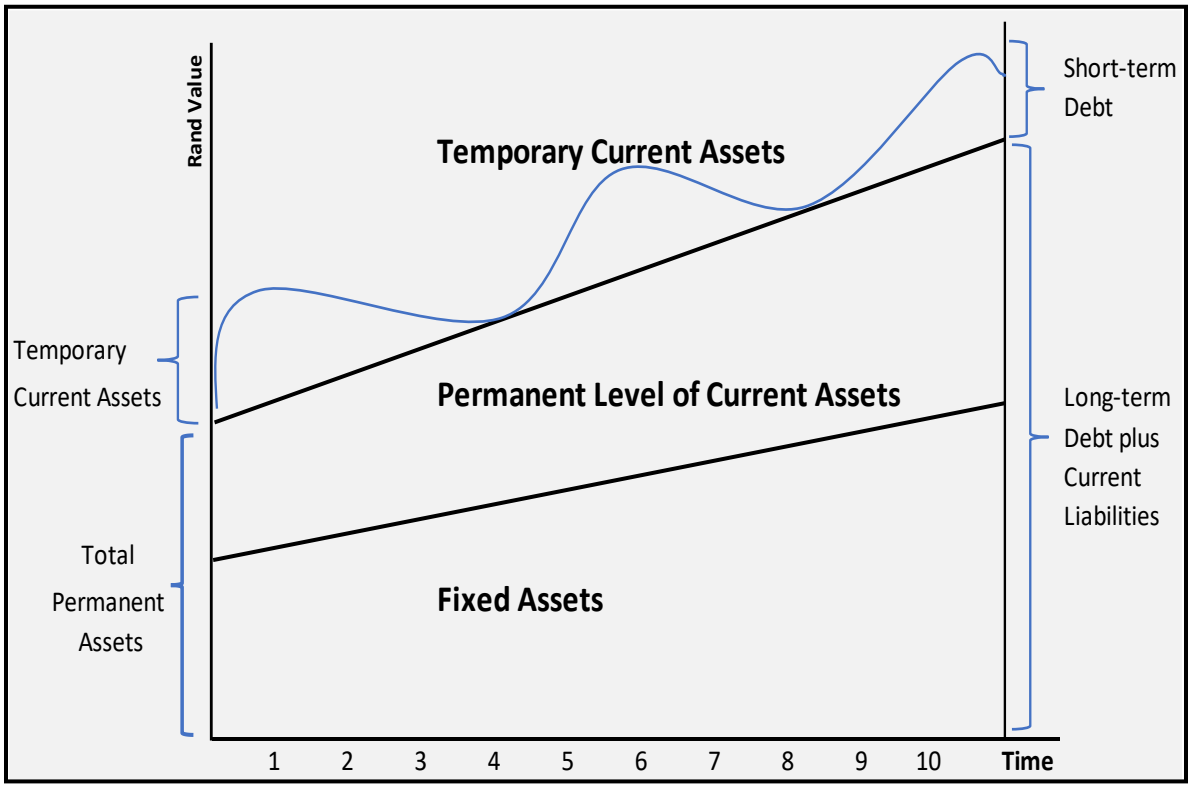

Figure 2.10: Moderate working capital policy

Source: Adapted from Els *et al.* (2019:185)

According to Zabolotnyy and Sipiläinen (2020), this approach is based on a proportionally high cost of permanent current assets and a low financing cost for

the short-term financing requirement. The trade of the interest cost of finance is balanced between the temporary and permanent levels of requirements.

In this scenario, the impact on the cash conversion cycle to finance the temporary requirement is current assets and more strenuous than the conservative approach. In this approach, current assets are managed more vigorously and based on fluctuations in business cycles. This means that any of the three levers of inventory, accounts receivable or accounts payable could be pulled together or in combination based on the required amount. This method is a more active management between business requirements and financial leverage (Pakdel & Ashrafi, 2019).

2.5 Policy formulation techniques for working capital management

An organisation requires financing for fixed assets – the permanent assets of the business – and this is generally covered by long-term finance. The next levels of financing required are the permanent and variable levels of working capital. Permanent working capital is the compulsory working capital of any organisation so that it can function within an accounting period. This requirement is classified into two categories: primary working capital, which is there for the sustainability of the business, and normal working capital, which is used in the operation of an organisation's activities (Herdinata, 2017:31).

Variable or temporary working capital is based on a change in the situation in one period and is divided into five types. When seasonal working capital is required, it is because of seasonal demand; for example, during winter the demand for heating increases and as a result the cash requirement will be higher. Emergency working capital is required when an unexpected incident occurs – a requirement to repair or replace. Cyclic working capital is based on a change in the operating activities of an organisation. Special and reserve working capital are for special programmes and the need for cash due to uncertain changes, respectively (Herdinata, 2017:31; Ismail, 2017:13).

An understanding of the various types of working capital needs to be matched to the types of working capital financing options will establish a working capital policy formulation technique that best suits an organisation as various factors affect working capital requirements (Zimon, 2021).

Long-term finance is obtained in one of two ways for NPOs specifically. When an organisation is founded, the founding members of the organisation contribute the founding contribution to establishing the organisation. This is the initial capital contribution of the organisation which is comparable to the initial equity in a business. This is used for the permanent funding of the organisation and if an amount is left over, it can be used for operational requirements or working capital. Another option available for businesses is equity issue which is the sale of shares to the public. However, this option is not available to NPOs due to the type of organisation. Therefore, this is outside the scope of this study.

Other sources of funding which can be used to match the working capital requirements are lines of credit and trade credit. Lines of credit are when an organisation borrows from the bank for a short-term period – between 30 and 90 days; this can be paid back when project funding comes in or goods are sold (Wu *et al*., 2019). Trade credit is normally the cheapest but is based on the organisation's credit history. Trade credit allows an organisation to extend payment terms with a supplier and convert or sell goods to a customer and shorten the cash conversion cycle (Ismail, 2017).

Based on the organisation's working capital requirements, factoring is another source that can be used in the short term or long term. This type of option is typically used when trade credit is difficult to obtain or there are many opportunities and few financing options. Therefore, the working capital requirement needs will determine if this option is the best choice (Ismail, 2017). Another option is a short-term loan which could be secured or unsecured based on an organisation's credit history. Such a loan is used either as a bridge between project or cyclic requirements.

Based on the type of working capital needed, an organisation must choose the right option and the decision to choose it is based on factors such as interest rates, which are costly to the organisation and the risk associated with the option taken. An organisation needs to use a risk analysis matrix to establish which best suits the organisation's situation.

The last factors to be considered are the payback period and cash flow projections. These relate to an important component which is the ability of an organisation to meet its financing commitments (Ismail, 2017). The techniques used must also be related to the economic conditions, the organisation's circumstances and the most effective option the market (financing institutions) can offer.

2.5.1 Combination of policies and models

As organisations look for financing options that cover long-term as well as short-term periods, it is appropriate for them to look at covering both periods with policies so that there is an overlap and the whole organisation is covered. If organisations have a relationship with their bank, the facilities to cover short-term as well as long-term requirements should be negotiated once. This established relationship will assist in a unified approach to addressing the total financing of the organisation (Lofton, 2021).

As an organisation's working capital is a strategic management tool that guarantees the potential success of the organisation, it needs to be managed by the various managers within the organisation who cover accounts payable, inventories, accounts receivable and short-term loans (Zabolotnyy & Sipiläinen, 2020). Therefore, the combined strategies of each area need to culminate to form one overall model which addresses the total working capital strategy of the organisation.

Figure 2.11 depicts the essential working capital decision process concerning the current assets and the financing components. The process determines the best

strategy to follow and this becomes the overall strategy that the organisation will follow (Zabolotnyy & Sipiläinen, 2020).

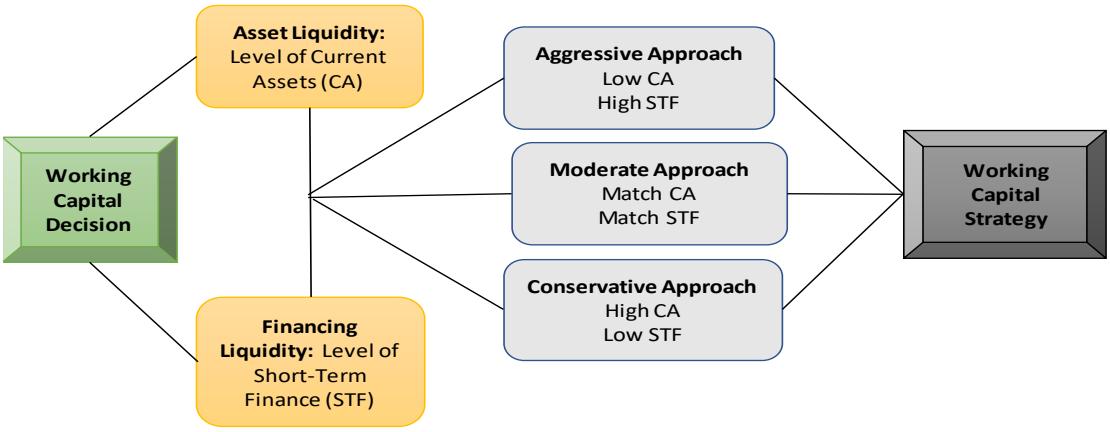

Figure 2.11: Working capital decision process

Organisations also tend to adapt their internal strategies for financing. If an organisation needs funding for growth or an additional project, it will look at internal mechanisms for leverage. The first option applied is internal cost cutting which means reducing internal operational expenses.

Another option is the use of the pecking order theory which follows a hierarchal method of internal financial decision-making (Lofton, 2021). This is applied by adjusting internal costs and investments to release cash for investment rather than seeking external finance. Options taken based on the pecking order theory include delaying payment to the supplier, changing debtor payment terms (reducing the days outstanding), using approved financing facilities (overdraft and revolving credit), reducing inventory, purchasing goods from suppliers as required and stopping the carrying of buffers.

2.5.2 Approaches that can be adopted

The question of which debt – short-term or long-term – is best always arises. In any organisation, the cost is always a factor for consideration; an example is the

upward-sloping yield curve of debt which depicts the cost of short-term debt as more expensive than long-term debt. The reason for this is the term nature of the debt and the market condition (Lofton, 2021). Short-term debt is riskier and fluctuates based on economic conditions; long-term debt is more stable as the cost of the debt is consistent over a period.

If an organisation borrows more in the short term, it is exposed to changing costs but also has the flexibility to negotiate out of the term. In long-term debt, the amount is generally fixed; an organisation must make sure that the right amount is fixed as it does not want to be overburdened with financing costs (Brigham & Houston, 2015:526). Understanding which option is used by NPOs in welfare organisations is a way of better understanding their view on interest cost and risk as well as the long-term financial view of the organisation.

2.6 Key object of working capital management

The management of working capital needs to be constantly monitored because the management components are like the vital signs of a human that need to be checked regularly. Questions about how these key components should be monitored and at what frequency arise. Monitoring methods and the frequency thereof for each of the management components must be considered.

2.6.1 Cash management

Cash is money that is in the bank account or money that is within the organisation. Due to safety reasons, most organisations try to minimise the cash within their organisations unless they have a retail shop on site that is involved in the trade of goods and services. In this case, the money is banked regularly (daily) through money carriers (e.g., Fidelity cash carriers).

The next key area is the bank account in which money is held (Shubita, 2019). Most organisations have a few bank accounts based on strategic requirements. The main account is the current account which books daily transactions that need

to be run at least two to three times a week and evaluated by the accountant who looks at transactions booked and payments made. The reconciliation of these accounts needs to be done monthly when reporting the financials and any discrepancies need to be investigated and reported timeously. Bank accounts are the most liquid of assets an organisation has and can be used to settle accounts payable, labour costs and operating expenses as needed (Vuković *et al.*, 2022).

2.6.2 Accounts receivable management

Money owed by a debtor is an account receivable of an organisation – the sales that organisations process for goods and services to customers that have debtor accounts. When the transaction is processed there must be a check done that the customer has sufficient credit at the facility to cover the purchases which need to be processed. Also, once payment is made to the organisation, the accountant needs to ensure that the debtor's account is updated timeously as this will make credit available for any further purchases (Yao & Deng, 2018).

The debtor account needs to be analysed monthly for ageing so that any non-payment by debtors is picked up and a follow-up can be made to understand why the payment was not paid (Kharabadze & Jikia, 2018). This will cover reasons such as goods not being supplied on time or goods being of poor quality.

Follow-up also establishes a relationship between an organisation and its customers to better understand their requirements. According to Narain (2022), a key objective of analysing debtors is the creation of bad debt provisions. This is a key account term that allows for the provision of reserves for the unlikely event of a debtor being unable to pay his debts. The organisation will suffer the loss but the loss will not impact the business negatively as the reserve will assist with the loss. Any debtor policy has a methodology, a proportional calculation, historical trending or an ABC analysis of debtors which is applied by an organisation to calculate this bad debt reserve (Bialowolski *et al.*, 2021). Therefore, the monthly reconciliation of the debtor account is a key principle that organisations need to follow to maintain a healthy financial system.

2.6.3 Inventory management

Inventory is made up of raw materials used to process finished goods or finished goods used in an organisation. Organisations generally have a policy document on how to handle inventory. The policy guides the organisation on when procurement of goods should take place and the methodology that must be used. It also entails the management of obsolete stock and how the rotation of inventory must take place (Conley *et al.*, 2019) to ensure that an organisation uses the oldest inventory first and then the latest. The policy will also determine the way goods are held in the organisation.

Inventory is one of the most valuable tradable goods an organisation has and needs to be managed appropriately. Organisations also tend to have soft inventory, which is goods such as fragile care blankets and health care swabs which are used as part of the service industry. It is key that an organisation manages the inventory with stock counts at least twice a year to ensure that what is reflected in the accounting system is on the shelves of the organisation (Conley *et al.*, 2019).

2.6.4 Accounts payable management

The key objective of managing the creditor process is to ensure that all purchases from the supplier are authorised through the application of a purchase order to the supplier. Purchase orders are authorisations by an organisation for the supplier to supply certain goods based on a quote supplied and the quantities required. This is fundamental in monitoring an organisation's spending patterns and, from an accounting perspective, can monitor cash obligations. Once goods are received by an organisation, they are generally processed as received on the accounting system so that payment can be prepared. The quality of the goods is a determinant factor in payment and is generally controlled by the supply chain function (Cowton & San-Jose, 2017).

Payment must be accompanied by an invoice, purchase order and proof of delivery, signed by the organisation's representative; this is an important processing requirement (Narain, 2022). Once this is prepared, creditor reconciliation can be prepared so that payment can be made as per the payment terms. Organisations, in some instances, may be entitled to supplier discounts or early payment discounts. These need to be factored in so that payment is prepared accordingly.

Another factor that also needs to be considered is whether goods are returned to the supplier because of quality issues; a credit note must be issued and is also part of the reconciliation process. Credit management's key objective is to ensure that payment is prepared accurately and made on time (Cowton & San-Jose, 2017). An organisation needs to ensure that when supplier commitments are made, they are forecasted and part of the commitment to cash flow. An organisation can face liquidity problems with more commitments than cash inflows issued.

2.6.5 Short-term financing

The right amount of financing is always required within an organisation to cover all its short-term needs. This needs to be controlled by cash flow forecast so that commitments can be monitored and can be offset by revenue inflow. Care must always be taken when revenue inflows are being forecast as this is not an exact science.

Over-forecasting revenue inflows will mean that the organisation ends up with cash shortfalls (Lofton, 2021). Therefore, when this is done, a certain level of proportion deduction needs to be factored into the calculation. Most organisations use historical trends or pure percentage factoring. An organisation's management policy will dictate the right application. It is important and key that this planning process is updated monthly so that any changes can be considered and any changes that might have taken place over the month can be highlighted.

2.7 Working capital management risks

The management of working capital is associated with many risks and each of them requires a mitigation plan so the organisation is not faced with a circumventive risk that cannot be reversed. Inventory has its risks, such as over-purchasing certain inventory which could result in the items becoming obsolete, resulting in loss to the organisation; such risks need to be managed (Conley *et al.*, 2019).

Another risk factor that needs to be taken into consideration is the management of inventory. Care needs to be taken as damage to inventory will result in customers not purchasing the goods and write-offs, which are a loss to the organisation. Another factor that affects risk is inventory quality. Quality needs to be maintained according to set quality standards and this needs to be managed rigorously so that inferior products are not produced (Ahangar, 2020).

The risk associated with debtors means that credit evaluations need to be done regularly on customers that pose a risk of non-payment. It is always advisable to have a customer risk matrix, which the sales team must update, that highlights downturns in purchases and market knowledge of the customer's lost contracts or contracting involvement. This will allow the organisation to be offensive in its credit rating and reduce the exposure and risk associated with the customer (Kharabadze & Jikia, 2018).

Another factor of risk that needs to be taken into consideration with debtors is the exposure to having only a few customers. This classic saying 'do not have all your eggs in one basket' relates to the risk of having only a few big customers; if one of them affects the organisation's turnover adversely, the whole organisation is impacted.

When creditors are looked at from a risk point of view, the organisation needs to understand the impact that the supplier has on key supplies to the organisation and the impact this has on the organisation if there are no other suppliers in the

market. In some industries, there are only a few suppliers that supply certain key components. Such suppliers need to be considered strategic partners as the impact that they could have on the organisation could be detrimental (Louw *et al.*, 2016). Therefore, most organisations have a supplier risk matrix that identifies this key issue. Other factors that need to be focused on are supplier quality, stock holding, the impact of pricing and the skill set of suppliers.

Banking relationships are also a risk factor and need to be managed regularly. Banks follow certain trending models and look at industrial norms when judging their customers. This generalisation can have a negative impact on organisations. It is therefore advisable to have quarterly meetings with the banking customer relationship manager to provide a full view of the business's performance and upcoming strategic decisions. In this instance, the bank is fully aware of the specifics of the organisation and does not take a generalised view of the organisation (Tait & Van der Walt, 2019).

Another factor that organisations need to look at constantly is the interest rate risk to which they are exposed. The cost of interest rates has a direct impact on an organisation's solvency and liquidity. Other risks that need to be looked at are foreign market exposure and exchange rate fluctuations. These need to be managed in advance with the aid of hedgers or price negotiation. Factors which impact market securities also impact the outcome of the investment organisations hold with financial institutions (Al-Zararee *et al.*, 2021).

An organisation must compose a full risk matrix to cover all areas, including working capital management components. This matrix needs to be reviewed at the organisation's board meetings so that strategies can be developed to manage all risks effectively and not expose the organisation to risks that could have been managed in advance (Burks, 2018; Mikeladze, 2021).

2.7.1 Liquidity

Effective management of liquidity is the management of an organisation's short-term resources over a short period to avoid failure. This entails ensuring that there are sufficient current assets to cover current liabilities. In liquidity management, the focus should be on ensuring that cash is available to settle the liabilities of the organisation (Shubita, 2019). The cash conversion cycle is a salient feature in ensuring that the flow process of transforming goods and services into cash is achieved. The techniques to manage the components of working capital are essential to ensure that an organisation has sufficient liquidity to cover all its obligations.

In the corporate arena, businesses focus on profitability to ensure there is sufficient cash to cover expenses. This focus is not always appropriate as an organisation that focuses on turning the conversion cycle faster can impact profitability unfavourably. The studies of Ibrahim *et al.* (2021), Mandipa and Sibindi (2022) and Nastiti *et al.* (2019) prove that shortening the cash conversion cycle in businesses affects their profitability positively. This is relevant as the impact of reducing profitability has an impact on liquidity.

Liquidity and profitability sit on either side of the pendulum and the impact on one side has the opposite effect on the other. With the shortening of the cash conversion cycle, organisations forecast the sale of inventory which means lower margins due to the turnover of inventory and holding lower levels of inventory. The impact of reduced margins impacts profitability directly. With the direct impact of pushing debtors to pay faster, sales are reduced as debtors tend to purchase less if they are being coerced to pay faster. The impact of this is a reduction in sales for an organisation which impacts the profitability of the organisation and increases the liquidity risk. An organisation needs to decide on which side of the pendulum they will lean because one side has an impact on the other. The cycle of converting cash needs to be weighed to determine what the best combination is and how it will impact the organisation (Wu *et al.*, 2019).

A measure to ensure that an organisation is within the correct level is a ratio analysis of the balance sheet in terms of liquidity. A liquidity ratio measures an organisation's ability to settle its short-term obligations as they become due while a solvency ratio looks at the overall financial position of the organisation (Shubita, 2019). The financial ratios of an organisation can be evaluated by comparing the average ratios of similar organisations in the same industry for a specific number of years.

Liquidity measures the period during which assets can be converted into cash. The more quickly the current assets are converted into cash, the more liquid the organisation is. A high liquidity ratio means that an organisation has a better ability to pay its obligations quickly. Two different liquidity ratios – the current ratio and the cash ratio – are starting points to evaluate liquidity.

The current ratio is calculated as follows (equation 8):

$$\frac{\text{Total current assets}}{\text{Total current liabilities}} \qquad 8$$

Lancksweerdt *et al.* (2021) state that "total current assets and total current liabilities are taken from the statement of financial position". This ratio indicates that the organisation has enough current assets to pay its current liabilities with a margin of safety. A higher ratio indicates a high ability to be able to meet due payments. If the current ratio is less than 1, the organisation has liquidity problems; if it is high, it means that there is an excess of current assets – accounts receivable, cash or inventory. A current ratio between 1.5 and 2 is lucrative for most organisations. The industry average is also another way to check whether the ratio is acceptable.

The other measuring tool is the cash ratio. The cash ratio is calculated as follows (equation 9):

$$\frac{\text{Cash and cash equivalents}}{\text{Current liabilities}} \qquad 9$$

Cash and cash equivalents include money in the bank plus cash on hand and within the organisation. When the cash ratio is low, it indicates that the organisation is incapable of generating sufficient cash to settle its short-term debts (Peprah *et al.*, 2019). The risk is that the organisation is unable to meet its current obligation and would require mitigation options to cover this shortfall.

To expand the view, a net liquidity balance ought to be looked at and this calculation is as follows (equation 10):

Cash and equivalents + short-term investments – current liabilities 10

In this calculation of net liquid balance, short-term investments, current liabilities and the cash and cash equivalent accounts are considered. This means that the short-term investment can be converted into cash to cover the shortfall required for current liabilities. A positive result of this calculation means the organisation can cover its current liabilities. A negative result means the organisation is in financial distress (Dar & Dar, 2017).

Other tools organisations use are solvency ratios which assist an organisation in understanding its ability to meet its short-term obligations. The ratio used is the number of days cash on hand which directs the organisation on the number of days cash the organisation has.

The number of days cash on hand is calculated as follows (equation 11):

$$\frac{\text{Operating cash}}{\text{Cash expenses per day}} \qquad 11$$

Cash expenses per day are calculated as follows (12):

$$\frac{\text{Cash expenses}}{\text{Number of operating days}} \qquad 12$$

This gives an organisation a view of how many days of cash they must have to cover their operating expenses. If the view is to have sufficient for two months,

then the coverage should be 60 days. This view is based on the policy of the organisation.

To analyse the cash position and liquidity level of an organisation, calculating more than one ratio is more rational. Evaluating only one ratio may be misleading. While analysing the ratios, it is more meaningful to look at comparative years. Furthermore, the ratios must be evaluated in light of the policies and procedures set by the organisation's board (Njiru & Githinji-Muriithi, 2018).

According to Kharabadze and Jikia (2018), the primary aim of working capital management is to attain and uphold an optimal equilibrium between each component of working capital. Consequently, precisely implemented working capital management policies are imperative for an organisation's continuity (Rasyid *et al*., 2018).

A balance between profitability and liquidity within organisations is needed. Therefore, working capital must be assessed regularly as the survival of an organisation is very dependent on having the right combination of current assets and current liabilities – inventory, accounts receivable, cash, accounts payable and short-term liabilities or securities. The choice of the right combination is based on the costs and risks which also need to be considered when decisions involving working capital financing are made.

In actuality, effective working capital management has emerged as a critical concern in organisations. A significant number of financial executives are facing challenges in identifying the primary working capital drivers (as illustrated in Figure 2.12) and determining the optimal level of working capital needed (Tharian, 2020).

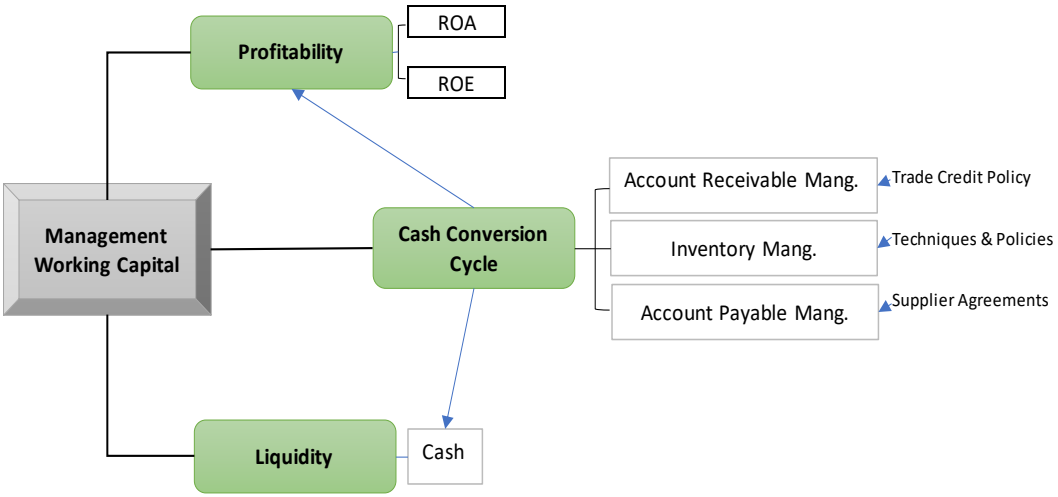

Figure 2.12: Working capital drivers

The primary function of working capital management should be to oversee an effective composition of the various working capital elements in an organisation. Additionally, it should guarantee the proficient management of the organisation's liquidity in its daily operations. Liquidity and profitability are fundamental factors in all organisations.

2.7.2 Solvency

Solvency is a concept related to liquidity but addressed from a different point of view. When one looks at liquidity, an organisation can turn its current assets into cash so that its current liabilities can be paid down. Solvency, on the other hand, relates to a business having sufficient assets in total to cover its total liabilities (Ibrahim *et al.*, 2021). The referent here is total assets to total liabilities which is a more long-term view and is referred to as factual insolvency. An organisation that has more total liabilities than assets is commercially insolvent. Commercial insolvency could result in the closure or reorganisation of an organisation (SAICA, 2022; Shubita, 2019).

From a long-term perspective, organisations need to ensure their solvency ratio is always positive as it also impacts their liquidity ratio. Liquidity is all about having the right combination of current assets which can be converted to cash to pay off liabilities. Having assets such as inventory but a large current liability results in illiquidity as the organisation is in a cash-negative situation. To alleviate this, an organisation needs to borrow cash as a short-term option to cover its illiquidity situation. Therefore, solvency must have an impact on liquidity and liquidity impacts cash management (Ibrahim *et al.*, 2021).

2.7.3 Cash management

Cash management is an important component of the management of an organisation's liquidity as this is the most tradable form of settling debts or liabilities. Organisations use cash forecasts to manage cash flows within their organisations (Mikeladze, 2021). Other organisations manage cash flow by maintaining a specified cash amount, such as three times the monthly spending requirements, in their banking facility for transaction requirements.

The three motives for cash requirement are the transaction motive, precautionary motive and speculative motive (Vuković *et al.,* 2022). The matching principle strategy is used by some organisations to accommodate these three motives. For the transaction motive, a business has cash in its current bank account to cover two to three months of operating expenses. It has an overdraft facility to cover the precautionary motive and, finally, it has a revolving credit facility or short-term loan facility to cover the speculative motive (Vuković *et al.*, 2022).

The most important resource for an NPO is cash. To maintain solvency, financial viability or, in simple terms, the ability to pay its bills, an organisation must have sufficient liquid assets. Certain non-cash assets, such as donations receivable, eventually contribute to liquidity and are a part of the cash management process (Shubita, 2019).

When an NPO experiences an uneven flow of revenue within the year, it must have a proper cash flow forecast. It might not be possible to control the uneven flow of funds in the organisation. As a result, the organisation needs to decide how it will bridge the gaps where the inflow is less than the outflow of funds. Delaying expenditure, accessing new funding options, or borrowing in the short term are options.

The alternative of accelerating the payment term from accounts receivable can be an option or, on the accounts payable side, the postponement of payment is a possibility (Mikeladze, 2021). This is when many organisations ask some fundamental questions to guide their decision-making process: Can internal control measures, such as cost-cutting activities, be put in place? Can some projects be postponed to a later date? Is this situation short term and is there a revenue stream in the pipeline that needs to be approved? Is there no choice but to borrow and will it be long-term or short-term?

These fundamental decision-making questions would be asked within an organisation when there is a cash shortfall within the organisation. It is always the first principle of cash management to plan in advance so that the shortfall can be overcome. Therefore, the fundamental requirements of a business are its planning and forecasting tools which need to be reviewed monthly by the management team (Mikeladze, 2021).

2.8 Working capital management ratios

With the use of ratio analysis and based on trending, historical or non-profit sector norms, an organisation can decipher what risks are coming or whether there is a positive landscape ahead. The use of the right ratio is important to an organisation. In studies on ratio analysis conducted by Boigues (2016), Durrah *et al.* (2016) and Cashwell *et al*. (2019), the following ratios were identified as good indicators of an organisation's liquidity to identify its outlook:

- Current ratio;

- Number of days cash on hand;
- Net liquidity balance;
- Quick ratio;
- Cash conversion cycle; and
- Emery's Lambda index.

The first three ratios were discussed in Section 2.7.1 of this chapter. The next three will now be discussed to provide a clear view of all the ratios that can be used in a complementary boutique of ratios to address working capital liquidity.

According to Dar and Dar (2017:26), the quick ratio is a measure that shows that an organisation can settle its current liabilities with its quick assets which are made up of cash, cash equivalents or marketable securities. The quick ratio is directed at an organisation using assets that convert within 60 to 90 days to pay off liabilities and is used the most to liquidate assets. Inventories are deducted from the calculation as it is considered the most difficult to value due to obsolescence and the damage factor. The calculation for the quick ratio is as follows (equation 13):

$$\frac{\text{(Current assets – inventories)}}{\text{Current liabilities}} \qquad 13$$

A ratio that is over 1 means that liabilities can be settled easily; a ratio below 1 is where the current liabilities are greater than the liquidity assets. This means the organisation will not be able to settle all its payments (Dar & Dar, 2017).

The cash conversion cycle or cash-to-cash cycle is where goods and services are transformed from the material into cash and generated by sales. The components that make up the cash conversion cycle are inventory, sales and payables. They are calculated as averages to get to the conversion cycle. The following (equation14–17) are the calculations:

$$CCC = DIO + DSO - DPO \qquad 14$$

Day's inventories outstanding (DIO):

(Average inventories ÷ Cumulative cost of sales) × 365 = 15

Average number of days that inventory is held

Day's sales outstanding (DSO):

(Average receivables ÷ Cumulative sales) × 365 = 16

Average number of days until a company is paid by its customers

Day's payables outstanding (DPO):

(Average payables ÷ Cumulative purchasing volume) × 365 = 17

Average number of days until an organisation pays its suppliers

The results of these calculations are important indicators of how long an organisation takes to generate cash (Chang, 2018). This also gives the organisation liquidity-generating capability. When doing a cash forecast of the liquidity assumption, financial planners determine the state of liquidity by the days in the answer.

Another liquidity measure that has been newly developed is Emery's Lambda which is only used as a control measure to indicate the liquidity of the organisation in comparison to the previous five liquidity measures (Emery, 1984). Developed by Emery in 1984, this measure identifies factors that need to be considered when compared to the traditional ratio used. Emery formulated the Lambda index to overcome some of the voids in traditional liquidity measures.

Liquidity measurement needs to be recognised as an important part of the financial management of an organisation (Dary & James, 2020). Emery (1984:26) states that five ideal liquidity measures need to be considered:

- The knowledge that the organisation can meet its cash requirements;
- All liquid resources available to the organisation must be included but not the illiquid resources;
- Estimation of the organisation's future net cash flow;
- A level of uncertainty of cash flow must be factored in; and
- The calculation needs to be adaptable to different time horizons.

Karris (2007:E1-E4) also asserted that traditional liquidity measures cover only the immediate past period but are never futuristic. Emery (1984:28) listed four factors that affect an organisation's liquidity and which should be considered:

- The size of the liquid reserve;
- The direction of the net cash flow;
- The variability of the net cash flow; and
- The length of the analysis horizon.

These are considered thought-provoking factors and intrinsic to the calculation. In Karris (2007:E1), the Lambda index (liquidity index) is calculated as follows (equation 18):

$$\frac{\text{Initial liquid reserve + Total anticipated net cashflow during the analysis period}}{\text{Uncertainty about net cash flow during the analysis period}} \quad 18$$

An initial liquid reserve is made up of cash, marketable securities and short-term credit facilities. The total anticipated net cash flow during the analysis horizon is the mean of cash flow over the time horizon (years, e.g., 4) plus the current cash flow period. Uncertainty about cash flow during the analysis period is the standard deviation of net cash flow throughout the analysis (number of years same as the denominator). The higher the Lambda index, the less likely that the cash requirements will exceed the cash on hand which means that the organisation is more liquid.

Based on the literature review, the last time a study was done that addressed financial management in NPOs and the use of ratios in South African NPOs was in 1994 by Strydom and Stephen (1994). They looked at various financial management avenues within NPOs and ratio analyses. Abraham (2006) studied the financial analysis model in the non-profit sector in Australia and used ratio analysis in his study. The outcome of that study was that ratio analysis is a good measure of financial performance and helps an organisation identify financial anomalies. Based on this, corrective action can be taken before financial problems arise. This supports the fact that ratio analysis in NPOs can be beneficial to their financial sustainability.

A study by Cashwell *et al.* (2019) went on to establish two key useful indicators: trending analysis and benchmarking. They go on to state that ratios are not a goal but rather a monitoring tool for the management team to direct the financial position and operations of an organisation. Their study also goes on to advise that a good foundation must have at least five years of ratios for comparative purposes.

2.9 Welfare non-profit organisations

NPOs, which are registered under the NPO Act 71 of 1997 (NPO, 2022), aim to serve the community of South Africa and now also get involved in natural disaster relief globally if required. The benefits provided by NPOs are enjoyed by many in the broad socioeconomic arena from individual welfare organisations to humanitarian relief, political lobbying, animal rights and care, community upliftment, traditional community building and environmental care and advocacy (Choto *et al.*, 2020). The benefits welfare NPOs provide are the bridge between government, corporates or SMEs and communities.

At their core, NPOs are set up not to benefit people through a profit motive but rather to assist with ‘cash or in-kind’ contributions. Various pieces of legislation such as the Income Tax Act 58 of 1962, the Trust Property Act 57 of 1988, the Companies Act 61 of 1973, the Fundraising Act 107 of 1978 and the Non-profit Organisations Act 71 of 1997 govern the legislative running of these organisations

(NDA, 2022). Below is a list of areas covered by NPOs in South Africa according to the above-listed acts:

- Welfare and humanitarian;
- Health care;
- Land and housing;
- Education and development;
- Religion, belief or philosophy;
- Cultural;
- Conservation, environment and animal welfare;
- Research and consumer rights;
- Sport; and
- Providing funds, assets, or other resources.

According to the DSD Codes of Good Practice for South African NPOs and the resources that are available for them are as follows (DSD, 2022):

- Donations of money;
- Donations of products, property, equipment, skills or services (gifts-in-kind);
- Sharing of costs, such as paying the telephone account or providing office space;
- Sponsoring an event, such as a music concert, to raise funds;
- Purchasing services that the NPO provides, such as a skills training workshop;
- Purchasing products that the NPO makes, such as T-shirts or toys;
- Buying tickets to a sports event or a raffle;
- Interest from an investment or on reserve in the NPO's bank account; and
- Membership fees or subscriptions to a publication.

Globally, the focus on finance in NPOs is not older than four decades. In 1984, Wacht presented a finance theory on NPOs; thereafter, other authors started focusing on philanthropy, the benefit of NPOs in society and other general management ideologies (Zietlow *et al.*, 2018:35).

An NPO's finances compared to those of for-profit organisations have different metrics to guide them and an NPO measures its performance differently. It is therefore important that NPOs use metrics that relate to their industry to manage their finances. NPOs in South Africa operate in many different environments from urban developed suburbs to the rural areas of the various provinces. The complexity of skills that NPOs can hire and the type of work they do in the respective communities must also be considered.

According to Schatteman and Waymire (2017), before the 1980s, only 11 non-profit finance articles were published in *Non-profit and Voluntary Sector Quarterly* and the first volume of *Non-profit Management and Leadership* was published in 1990. The number of non-profit finance research articles, particularly in non-profit management journals, has increased rapidly over the past three decades indicating an increase in the overall growth of the non-profit sector. Over the last three decades, an increase in globally finance-related published articles was noted – from two articles between 1980 and 1989 to 14 between 2010 and 2014 (Schatteman & Waymire, 2017:129); this shows that the extent of the interest in this sector has grown.

The impact of working capital on NPOs is key to the daily running of these organisations. Welfare NPOs have revolutionised from just being providers of food and warm clothes to communities. They provide communities with specialised services, such as nursing or paraplegic services to the aged or to people who are near demise (Hospice, 2022).

Welfare NPOs are also involved in providing the blind community with braille services – printing, providing training courses and editing services for books and examinations. For blind and deaf communities, welfare NPOs function in a working

environment where they run little factories which produce basket weave products, knitted products and other handmade commodities on a large scale. The goods are sold to outlet stores daily and then to customers. Thus, although the term is welfare NPOs, these organisations are empowering people with manufacturing-oriented services as an additional source of revenue for them (Choto *et al.,* 2020; Hung & Hager, 2019).

Organisations and communities have realised that just donations and government funding cannot ensure the survival of the welfare NPO sector. Based on their abilities and capabilities, the individuals in the welfare NPOs need to become productive. These little micro-enterprises are run within the welfare NPOs and by the same individuals involved in the daily operations of the welfare NPOs. They take daily decisions on inventory management – items which need to be acquired to produce the goods and services. This component ties up a significant portion of their cash. Also, sales of the end commodities are made to retail stores and this means operating within a debtor model. Thus, the question arises as to how these components are being managed within welfare NPOs. The impact of these components and the way the organisations function are important to the livelihoods of the people, staff and communities with whom welfare NPOs interact daily (Choto *et al*., 2020; Ebenezer *et al.*, 2020).

2.9.1 Working capital sustainability within welfare non-profit organisations

Working capital has become important in welfare NPOs for two very different reasons: one is for managing the organisations themselves daily and the other is for managing their daily micro-business activities. It is therefore important that a welfare NPO has a good balance between both these management activities as one could overshadow the other and result in an organisation's downfall. Through the literature review of this study, the various business methodologies followed by organisations were outlined so that an understanding of how organisations managed the various methodologies and theories could be gained (Hung & Hager, 2019).

Maboya and McKay's (2019) study looked at financial stability challenges facing the South African non-profit sector and uncovered that only 20% of their respondents understood the importance of financial sustainability. This indicates that 80% of the respondents did not understand the preservation of money in investments and the conversion cycle of money. Based on this, there is a gap in the understanding of the decision-makers of NPOs. The inability to control the finances of an organisation will result in organisational failure. This was evident in the study outcome and a great deal needs to be done to protect this sector of the economy.

In the study by Farhan *et al.* (2019) on NPOs in Africa, they highlighted that focusing on the sustainability of NPOs in Africa is key as Africa has the most and largest NPOs in the world. This was attributed to the fact that Africa has the most prevalence of poverty and other social issues. Therefore, this study on NPOs in South Africa is of key importance as there is a high level of NPO dominance here rather than in the rest of the world.

In their study on the financial sustainability of NPOs, Ebenezer *et al.* (2020) raise the point that prudent financial management and technology practices need to be followed by NPOs for their financial sustainability. Their study goes on to complement the study of Farhan *et al.* (2019) in maintaining that the financial sustainability of NPOs is key to developing countries in Africa. The results of their study reveal that sound internal financial management practices are one of the key components of the survival of NPOs.

Peprah *et al.* (2019) claim that the relationship between working capital and financial sustainability in not-for-profit organisations in Ghana is linked and, if not managed appropriately, could lead to the closure of these organisations. The findings reveal that liquidity is an essential part of the working capital relationship to ensure the financial sustainability of organisations.

Choto (2019) study of NPOs in South Africa reveals the importance of sustaining NPOs within the country because these organisations address the huge inequality

gap. NPOs provide services to the disadvantaged communities and individuals of the country for which the state cannot provide. The Choto study looks at ways NPOs in South Africa can adapt their management strategies to ensure their sustainability. This study would complement that objective as working capital management is an area of expertise that is needed as part of the management strategies required in NPOs.

2.9.2 Welfare non-profit organisations within the South African context

The Non-profit Organisations Act was promulgated in South Africa on 3 December 1997 and the first NPO in the country was registered on 1 September 1998 by the DSD (2022). The preferential treatment of certain NPOs over others was possible because of the Fundraising Act (107 of 1978) and the Affected Organisations Act (31 of 1974) (NDA: 2021). After the change of government in South Africa, these two acts were repealed and all NPOs were recognised under the single NPO Act. The reason for having two different governable acts previously was that in the apartheid era, the ruling government was concerned that organisations would register as NPO to get involved in fundraising campaigns for the liberation struggle fought by the marginalised. This changed over time and an act to govern all NPOs in South Africa was promulgated.

In South Africa, the diverse population groups create an environment in which NPOs can be productive and effective. The abilities of welfare NPOs can be developed to enable them to become effective partners with both the government and private sectors to uplift and care for South Africa's communities and environments. Welfare NPOs are encouraged "to accept the responsibilities of ensuring that they respond to and maintain high standards of practice through good governance, effective management, optimisation of resources, successful fundraising, productive relationships with government, beneficiary communities, donors, sponsors and the public, careful administration of their organisations and ethical behaviour" (DSD, 2022).

Welfare NPOs according to the DSD Codes of Good Practice (DSD, 2022) “are expected to be careful and effective managers of the resources entrusted to them by donors, sponsors and the state. Financial management systems, no matter how simple and basic, need to be developed and maintained by an organisation’s office bearers to ensure the appropriate use of resources”. It is estimated that 35 million individuals donate about R22 billion a year to NPOs and the total value of the NPO sector in South Africa according to the last Davis Commission Report before it was disbanded in 2019 was R60 billion (DTC, 2018:1).

Within the NPO landscape, there are various types of NPOs providing various services, goods and development programmes which were setup up by Camay and Gordon in 1997. This classification was adopted by the NDA (NDAR, 2021:26) and is as follows:

- Humanitarian relief organisations assist in natural disasters, famine or conflicts;
- Welfare services are there to provide children or adults with education, healthcare, housing and counselling services; they cover the aged or disabled communities as well;
- Service organisations provide civil society services, such as legal advice or labour consulting services;
- Technical innovation covers projects in farming communities and water purification initiatives. It also assists in gardening programmes for the aged and youth;
- Traditional community-based function covers stokvels or burial societies.
- Cooperative societies come together to get involved in specific economic activities, such as basket weaving or knitting, in communities;

- Religious and faith-based organisations are the coming together of individuals to promote a specific faith group or create an education programme for a faith-based community;

- Economic interest associations are where people with similar economic interests come together to form ratepayers' associations, labour unions or engineering societies;

- Professional associations have also been established and are used to educate the youth on specific professions and get them actively involved in pursuing career opportunities in, among others, engineering, accounting, arts and drama;

- Human rights promotion is community-based initiatives that focus on specific human rights actions such as the abuse of children or the protection of victims of rape and violence;

- Community development concentrates on areas of skill development or promoting education classes or literature clubs; and

- Advocacy associations focus on civil society rights and government lobbying to try to direct legislation on a path the community believes is best (e.g., e-tolling in South Africa).

Despite the wide spectrum of NPOs in South Africa, the literature has concentrated on specific areas of interest. Cashwell *et al.* (2019) focus on NPO accounting, emphasising the recording of transactions and the preparation of financial statements rather than the evaluation of financial and operational effectiveness analysis and benchmarking to improve the effectiveness of management and boards charged with monitoring NPOs. Their study outlines that NPO managers and boards should actively measure and evaluate not only spending ratios but also measures of liquidity and operational effectiveness.

Maboya and McKay (2019:5) studied NPOs in South Africa and identified four key themes of importance: donor management, new funding, financial sustainability and managing finances in NPOs. In their study, it was found that respondents within these organisations revealed a weak understanding of financial sustainability (Maboya & McKay, 2019:6). Their research subjects responded that, with big reserves, they could live off the interest; some responded that it was good to spend all on programmes rather than keep cash for a 'rainy day'. Their mind-set was that their organisation had a specific objective and the focus should be on achieving that objective with little concern for cash as donor support would cover these requirements.

The study by Maboya and McKay (2019) went on to show that only a minority (20%) of the respondents understood the need for the financial sustainability of NPOs. Also, the burden of financial management was placed on the Chief Executive Officer who was expected to drive and ensure the organisation's financial sustainability (Maboya & McKay, 2019:6). In the study of the 14 factors that were identified, the third-ranked in importance was financial sustainability and the fourth was analysis and review of the financial position of the organisations.

Welfare NPOs are acknowledged as the main drivers of social support and the promoters of good behaviour in society (Peprah *et al.*, 2019). Choto *et al.* (2020) agree that welfare NPOs deliver critical services to society through social value creation; they focus on the gap in society that is not addressed by corporate or government sectors. It is therefore vital to keep this economic sector operational as the failure or demise of welfare NPOs impacts both the economy and communities negatively. The desperation that the demise of welfare NPOs engenders in communities results in social evil and moral decay in the communities and leads to crime, financial desperation and community breakdown. However, according to Mikeladze (2021), many NPOs lack proper systems for financial management, monitoring, evaluation and managing overall programme performance which leads to their failure to earn the trust of their donors. This study

aimed to fill the gap which compared welfare NPOs with for-profit organisations to establish whether this was true and what could be done to eliminate the gap.

Bezuidenhout (2017:124) looks at the essential marketing principles for NPOs in South Africa. Her study reviews the lack of marketing expertise and management skills in NPOs and recommends that innovative business models in NPOs be implemented to achieve sustainability. She further recommends that additional studies should focus on developing a framework for NPOs that is market-oriented and examines marketing principles for NPOs to develop a strategy through which NPOs can market themselves in South Africa.

According to the Trialogue report of 2021 (Trialogue, 2021b), only about 21% of NPOs in South Africa had reserves for longer than six months in 2021 in comparison to the previous year which was 30%. In a year, 9% of organisations' reserves had dropped. The concerning part of this report revealed that in 2021 more than half of the NPOs (53%) – up by an incredible 20% from 33% in 2020 – did not have any cash reserves for their organisations (Trialogue, 2021b:228). When organisations were looked at for three months in 2020, 15% had reserves but in 2021, this had reduced to 6% (Trialogue, 2021b:228). Based on this study and in all categories, the cash reserves of NPOs had diminished by over 50%. This impacted the survival of these organisations as working capital, specifically cash, is considered the lifeblood of any organisation. These low numbers alert of an alarming problem.

Currently, the South African government supports many welfare NPOs in South Africa. In 2021, just under R1.3 billion was provided by the government to organisations delivering a wide range of social services directly to communities (DSD, 2022).

According to the United States Agency for International Development, the 2020 Civil Society Organisation (CSO) Sustainability Index for South Africa revealed that, for the fourth year in a row, the financial viability of CSOs had declined (USAID, 2021). Some CSOs had been driven into liquidation, while some had

compromised on the quality of their services or labour force. This does not only affect welfare NPOs but also impacts several other people in society, including the employees of welfare NPOs, communities and the populations who were benefiting from the services of the welfare NPOs. To scale down and reduce the financial burden on their organisations, some welfare NPOs resort to employing fewer qualified staff (Blalack, 2016).

2.9.3 Working capital studies and their impact globally

Poojitha (2019) studied the management of working capital in firms by looking at the direct impact working capital had on liquidity and the performance of firms. A high current asset ratio over current liabilities impacts organisations positively, while the opposite ratio impacts organisations negatively.

Rasyid *et al.* (2018) studied 158 non-financial firms on the Indonesian Stock Exchange; their study revealed that an aggressive working capital financing policy had a negative impact on profitability while an aggressive investment policy showed a positive impact on profitability. Companies tend to use more current assets to reduce their short-term debt, thereby, increasing profitability. Puraghajan *et al.* (2014) conclude that an aggressive strategy increases risks and returns on equity.

In India, Farhan *et al.* (2021) studied 829 manufacturing firms and established that they followed conservative financing and investment policies as advised by regulators, policymakers, investors and financial managers. Their findings were that investment policy positively impacts return on assets while a conservative financing policy negatively affects return on assets. Indian companies, therefore, invest in expanding both their inventories and trade credit to their customers. Farhan *et al*. (2021) describe the cultural and socio-cultural business practices of the communities that play a significant role in their financing options.

Zabolotnyy and Sipiläinen (2020) conducted a study in Northern Europe on listed food companies and found that these companies applied a moderate strategy of

working capital as they matched their level of current assets to current liabilities. They applied a method of maximising cash compared to an increase in short-term debts. They also decreased inventory and current liabilities to reduce the cost of operations which helped to reduce the risk and improve the return of the organisations. This assisted in mitigating the liquidity fluctuation as well as reducing the financial risk. This is a different approach compared to that of companies in India.

In 2018, Korent and Orsag (2018) conducted a study over six years on Croatian software companies and found that working capital management has a nonlinear and concave quadratic relationship with profitability. Sefideh and Asgari (2016) studied listed companies on the Tehran Stock Exchange to find the relationship between working capital management and the risk management strategies of companies. The study included 110 companies and established that current assets or current liabilities can follow either a conservative or aggressive strategy but the risk or reward factors need to be considered as these have an impact on the profitability of companies.

In 2010, Ngwenya undertook a study on 69 JSE-listed companies and found that a positive change in accounts receivable had a negative impact on the cash conversion cycle and impacted profitability negatively; a negative change in accounts payable and inventory had a positive impact on the cash conversion cycle and profitability. They concluded that not all components of working capital had a direct relation to the cash conversion cycle and profitability.

Louw *et al.* (2016) conducted a study on 18 retail firms listed on the JSE to establish a relationship between working capital investment and working capital, inventory, trade receivables and trade payables. The conclusion researched was that a reduction in inventory, trade receivables and trade payables resulted in an improvement in profitability. Inventory management had the strongest impact but because the retail sector sold goods faster, they needed to implement better inventory management systems such as consignment stock and ordering points.

Another observation from the Louw *et al.* (2016) study was that a reduction in trade payables was a result of surplus cash because the retail industry sells its products on cash bases and this results in paying trade payables sooner. Despite these payments, when looking at gross margin improvement, no improvement was noted which means that the improvement in trade payables did not result in improved margins. This means that organisations that pay early need to negotiate better payment terms to improve the gross margin. As South Africa has high-interest rates, early payment would be beneficial to organisations investing cash in the short term.

Louw *et al.* (2016) performed another study in South Africa, uncovering the retail industry and comparing it to the construction industry. They found that the retail industry inventory only had an impact on gross profit compared to the construction industry inventory which had an impact on return on assets. Based on this, it is evident that the type of industry has a different impact on working capital and profitability and is affected by different components of the accounting spectrum.

In their study on ratio analysis, Srividhya *et al.* (2020) established that ratios can look at five areas: liquidity, activity, debt, profitability and markets. They further went on to state that ratios provide insight into an organisation's financial health and financial condition as well as its profitability. Ratios can be used to help organisations plan and control their finances. Another benefit is that ratios can be used to measure the performance of organisations.

Durrah *et al.* (2016) undertook a study on food-listed companies in Amman and Bursa in 2016 with the aid of liquidity ratios to establish the performance of these companies. It was established that there was a positive relationship between liquidity ratios (quick ratios and defensive interval ratios) and operating cash flow margins. These ratios are a good indicator of the financial health status of organisations.

McLaren and Struwig (2019) conducted a study on South African universities in 2019. They used financial ratios to establish the financial stability of the

universities. Their study concluded that ratios assist in assessing an organisation's performance and reserves and that risk ratios cover the examination of the liquidity of an organisation.

Otekunrin *et al.* (2021) conducted a study on listed agricultural and agro-allied companies in Nigeria and found that higher trade payables and shorter inventory turnover resulted in increased profitability but that decreasing payables and inventory resulted in decreased profitability. The conclusion was that the longer the length of the cash conversion cycle, the better the increase in profitability. The same conclusion was reached by Arnaldi *et al.* (2021) who studied 105 manufacturing SMEs in the Czech Republic.

In their study of the literature on working capital, Prasad *et al.* (2018) concluded that 79% of the literature validated that working capital management increased an organisation's profitability and working capital efficiency. Ibrahim *et al.* (2021) state that as working capital is so important, financial executives should spend more time on working capital management than on other financial activities. The reason behind this is that current assets change daily, if not hourly, which means that management decisions need to be aligned with these rapidly changing components. They go on to state that management must ensure that they keep their eye on which current assets can be quickly converted into cash, which assets need long-term financing and the associated cost relative to short-term finance.

Deeposhree (2013) conducted a study in the United Kingdom of 96 firms in four industries – food, chemical, electronics and electrical equipment. The study confirmed that there was a correlation between working capital management and profitability. The study tried to establish whether this correlation existed in multiple industries; the correlation did indeed exist in multiple industries.

Altaf and Ahmad (2019) conducted a study in India of 437 non-financial companies and found that there was a U-shaped relationship between working capital finance and performance. Ren *et al.* (2019) conducted a study in China and found that the relationship between working capital and performance was different in state-

owned enterprises compared to non-state-owned enterprises. There was a negative relationship between the cash conversion cycle and organisation performance for non-state-owned compared to state-owned organisations. Their study revealed that a difference in ownership structure was the only factor that could produce different outcomes in the same country with the same industries and legislature.

Urhoghide and Korolo (2022), in their study on the performance management of Nigerian companies, found that an improvement in the average collection period and inventory conversion period had a positive impact on the performance of organisations. They declared that credit collection policies should be designed in a way that would maximise collection and reduce bad debts. They also went on to conclude that the inventory conversion period should also be improved to increase profitability. This was further agreed on by Leah *et al.* (2022) who researched the consumer and industrial products of listed Nigerian firms.

Alvarez *et al.* (2021) conducted a study on the performance of working capital in emerging economies in the Latin American country of Argentina. They found that an improvement in all components of working capital had a positive impact on company performance. The study also noted that, conversely, an increase in debt impacted leverage and profitability negatively.

In the study by Nastiti *et al.* (2019), it was found that by reducing the cash conversion cycle, an organisation can release internal funds which can be used for the intrinsic growth of organisations. Normally companies seek external finance for growth; however, with higher financing costs and by internally managing working capital, they can release internal financing. This reduces the cost of higher additional financing and the cost of holding inventory, resulting in improved profitability. The study was based in Indonesia and the researchers recommended that cross-country analysis be done within the same industries to better understand this outcome and its application to other countries.

Mandipa and Sibindi (2022) looked at a retail firm listed on the JSE in South Africa and found that analysing its working capital, average collection period, average age of inventory, collection period and cash conversion cycle had an impact on the firm's performance. They concluded that firms should be prudent about optional working capital management practices as this impacts the organisation's financial performance.

Mabandla and Makoni (2019) studied food and beverage companies listed on the JSE from 2007 to 2016 and found that accounts receivable and inventory improvement created an improvement in profitability while accounts payable negatively impacted profitability. They concluded that an aggressive working capital policy should be adopted for firms to perform well and create shareholder wealth.

Dalci *et al.* (2019) conducted a study on 285 German non-financial firms and found that, when the cash conversion cycle was reduced, it was beneficial to small and medium-sized businesses. For a large business, this benefit was not evident which implies that the size of the business has an impact on the cash conversion cycle and profitability. In contrast, a study done by Anton and Anca (2022) on 5431 European listed firms resulted in a U-shaped relationship and indicated that organisations in countries with strong financial institutions held lower levels of working capital. This result emphasises that the development of the economy of countries impacts the level of working capital requirements.

Over the past decade, numerous extensive studies have explored the application of working capital management in various contexts, such as country, industry, product, and economy. Despite their length, each study offers a unique perspective. This observation aligns with the "earth is not flat" analogy, highlighting the breadth and complexity of the topic, which involves multiple variables and factors.

2.9.4 Welfare non-profit organisation statutory compliance

Organisations in SA are governed by two sets of compliance requirements, legislative compliance and statutory compliance, as they are publicly registered organisations. Legislative compliance was covered earlier in this chapter. The coverage for NPOs now is based on the statuary requirement which is the accounting requirement under the International Financial Report Standard (IFRS) for SMEs. This research examines the requirement for accounts standards on the requirement for compliance reporting, policy application and frequency standards.

According to Section 30(1) of the Companies Act, annual financial statements must be prepared within six months after the financial year (SACA, 2023). This aligns with the IFRS for SMEs (IFRS Foundation, 2019) which requires the organisation's board of directors or finance committee to review and sign-off on these statements annually. This includes a calculation of the organisation's liquidity status for the current financial year and its projected year, as well as the accounting standards used as the basis for the organisation's financial policies, which are included in the financial statement notes.

Statutory compliance:

1. Organisations should have at least one annual meeting per year. Small organisations can hold two meetings in a calendar year based on business requirements. The yearly signing of annual financial statements with supporting documents is generally a prerequisite for holding the yearly meeting (IFRS Foundation, 2019).

2. Finance committee (audit committee) hold meetings based on business size. They can hold between one to four meetings per year based on organisational requirements (IFRS Foundation, 2019).

The frequency of meetings is provided as a guideline and needs to be applied by organisations respectively. Meetings are held to comply with the statutory requirements and guidelines of compliance in South Africa.

2.10 Literature gap

When one evaluates worldwide literature and as the financial aspect of welfare NPOs has only been around for the last three decades, the field is considered relatively young. The study by Choto *et al.* (2020) on the contribution of NPOs to the socioeconomic development of South Africa directed that more research needed to be done to unpack the place and contribution of NPOs in South Africa. Other research on NPOs has looked at their marketing, leadership, governance, donor challenges and financial sustainability in South Africa (Bezuidenhout, 2017, Choto *et al*., 2020; Maboya & McKay, 2019). Studies have been undertaken in Australia where ratios were addressed but in contrast to indicators of sustainability (Abraham, 2006). The literature also observed ratio analysis of NPOs in the United States of America (Boigues, 2016; Lofton, 2021).

When a review of the literature on working capital management is undertaken, little is found on welfare NPOs but there is a huge amount that focuses on for-profit organisations. Research on for-profit organisations goes back many decades as described before in the Yankee trader analogy. In Europe, research on for-profit organisations goes back even further to the time when Karl Marx defined working capital as variable capital in the 19th century (Opeoluwa, 2021).

Research studies on working capital in for-profit organisations look at each component of working capital and how each impacts the sustainability and financial performance of for-profit organisations (Alvarez *et al*., 2021; Anton & Anca, 2022; Dalci *et al*., 2019; Nastiti *et al*., 2019; Urhoghide & Korolo, 2022). What is apparent from the various studies on for-profit organisations is that several factors – the size of the firm, country, industry, ownership, politics, management decision-making and type of organisation – impact working capital performance. However, no unique characteristics seem to fit all organisations. No study covers all these characteristics in one study, nor is the same problem statement, as described in this chapter, addressed. Thus, the research gaps that have been uncovered are as follows:

- No study on welfare NPOs based in South Africa – a developing country with unique characteristics (economy, political landscape and socio-economical setup) – has been undertaken;

- Working capital management that uses ratio analysis as a guide in welfare NPOs is not the subject of any study;

- Liquidity as a performance measure of welfare NPOs has not been investigated;

- A study evaluating which working capital component gives rise to liquidity has not been pursued within welfare NPOs in South Africa; and

- Determining which working capital approach is best for application in welfare NPOs in South Africa has not been featured in any study.

As the NPO sector is the third most significant sector in the economy and is a large part of developing economies, especially South Africa's, it is important that an academic understanding be acquired within this field. Also, as a relatively new area of study, this research will be a stimulus for further studies.

2.11 Conclusion

This chapter presented a review that constructed the foundation of the empirical part of the research. The important foundation theories of working capital for each management component were explained. The formulation and achievements of working capital financing strategies were examined. Working capital investment policies and how they are implemented to achieve financing objectives were investigated. The way each component of working capital is significant in the total theme of managing working capital was explored. The review also provided a view of the way risk and other economic factors affect working capital management and its implementation strategies.

A look at how welfare NPOs compared to for-profit organisations provided insight into the differences. Coverage of studies done in for-profit organisations and how changes made in these organisations positively impacted the performance and value of these organisations was presented. In addition, a review of NPOs in South Africa revealed that academic studies that were undertaken in this sector over the last 30 years and, more specifically, in the last five years were fragmented. Although there were general increases in the NPO sector, a significant increase was not noticed in South Africa when compared to other countries in Africa. The impact of the many types of welfare NPOs in this sector was looked at in terms of the benefits the sector brought to all communities.

Finally, the impact that the welfare NPO sector has on the economy and the people as well as the literature gap that is present in the sector were reviewed. Chapter 3 discusses the theoretical framework of working capital management within corporate entities and in literary studies.

CHAPTER 3: CORPORATE LITERATURE REVIEW

3.1 Introduction

The theoretical underpinnings of finance are shaped by the political and economic ideologies prevalent in different countries. Socialism, communism and capitalism are the three major paradigms that have influenced the development of finance theory (Oqubay *et al.*, 2021). While these paradigms form the basis of theoretical origin, it is important to note that their application varies across countries. South Africa, for instance, follows a democratic capitalist model, albeit with some imperfections (Oqubay *et al.,* 2021). To address these imperfections, welfare NPOs in the country have emerged to mitigate issues related to inequality, social unrest and development (Ferati, 2022).

This chapter contributes to the second step of the research approach and involves a literature review of for-profit organisations across the world over the last decade to identify the most effective working capital policies that lead to high profitability and liquidity. Given the availability of unrestricted information in various countries, the majority of studies on for-profit organisations focus on corporates. The literature review also examines which components of working capital could be reorganised or adjusted to suit the financial, political and business circumstances prevailing in a given country.

The globalised and competitive nature of markets compels most organisations to adopt the capitalist model which prioritises growth and profitability (Ferati, 2022). Accordingly, companies aim to maximise the utilisation of resources such as working capital to achieve higher profits. The underlying principle is that the cost of capital is high and its use must yield optimal outcomes (Urhoghide & Korolo, 2022). This mindset drives the performance of companies and shapes their working capital management practices.

The ensuing discussion analyses each component of working capital in the context of the profit-oriented mindset prevalent in the literature to identify patterns and complement the research results of welfare NPOs in South Africa.

3.2 Cash management

Cash is widely regarded as one of the most valuable commodities in the free world and numerous theories have emerged on how to manage this resource to maximise its value. Among the most significant cash management models are the following:

- Baumol model;
- Miller-Orr model;
- Stone model;
- Beranek model; and
- Keynes's general theory.

The Baumol model proposes that organisations should strive to maintain a specific level of cash balances that allows them to meet their transactional needs while minimising the opportunity cost of holding excessive cash reserves (Malkiel, 2017). The Miller-Orr model aims to manage cash balances by establishing control limits for an organisations daily cash position, above and below which funds are transferred between the organisations cash account and a short-term investment account (Jalal & Khaksari, 2020).

The Stone model focuses on the management of cash flow rather than cash balances; it proposes that organisations should align their inflows and outflows of cash to avoid the need for external financing and reduce the risk of cash shortfalls (Salas-Molina *et al*., 2018:217). The Beranek model emphasises the importance of forecasting cash balances and developing a cash budget to identify and manage potential cash shortfalls (Gamsakhurdia & Batiashvili, 2016). Keynes's general

theory emphasises the importance of maintaining adequate liquidity to manage financial uncertainty and economic instability (Vuković *et al.*, 2022).

Each of these cash management models offers unique perspectives on how organisations can optimise their use of cash resources. However, the suitability of each model depends on various factors such as the organisations size, industry and financial circumstances. Therefore, organisations must assess and select the most appropriate model to manage their cash effectively.

3.2.1 Policy identification

Jalal and Khaksari's (2020) study highlights the transaction theory for holding cash. This theory suggests that organisations tend to hold less cash when they follow a short cash conversion cycle. As a result, such organisations are more likely to invest in growth activities within the organisation or in investment instruments. Similarly, Vuković *et al*. (2022) found that companies in the Balkan countries tend to hold less cash due to favourable external financing sources, enabling them to be profitable and stimulate business growth.

Shubita's (2019) study on Jordanian industrial firms revealed that large organisations tended to hold more cash compared to small organisations but at the same time, they also held larger debt and facilitated little growth. Additionally, the study found that if an organisation had many different sources of cash, it tended to hold low levels of cash. The net working capital of cash was also found to be a good predictor of cash holding levels within an organisation.

Al-Zararee *et al*. (2021:229) examined cash management from a financial institution's perspective and found that banks needed to lengthen customer terms and prolong cash transfer cycles due to working capital management issues. Failure to address such issues could damage the relationship with financial institutions, impact future relationships and be costly. Therefore, organisations needed to borrow within their means and maintain sufficient liquidity to make regular payments for borrowings.

Dalci *et al*. (2019) conducted a study of 285 non-financial firms in Germany and found that the size of an organisation was a key determinant of its working capital requirements. Small to medium-sized firms tended to speed up accounts receivable collections to reduce cash holding and improve profitability. Gul and Sahin (2022) argue that organisations follow the pecking order theory; they use cash for investment purposes first, followed by debt settlement and finally equity. High investment firms hold lower cash because they use internal financing first and only hold excess cash as a precautionary measure. The cost-benefit analysis of cash holding is essential to determine the right balance of cash reserves.

Gao *et al.* (2021) describe the holding of cash as being determined by market risk and the cost of interest. As interest rates increase, organisations hold more cash to avoid using financed investments for operating costs. Hapsari and Norris (2022) find that profitable organisations in Indonesia invest their accumulated cash in worthwhile projects to generate income. Excess cash does not generate income and organisations must manage their cash reserves effectively.

Jalal and Khaksari (2020) suggest that organisations should hold less cash and invest more to grow their businesses. Vuković *et al*. (2022) find that companies in the Balkan countries hold less cash due to favourable external financing sources, which allows them to be profitable and stimulate business growth. Shubita (2019) discovered that large organisations hold more cash than small organisations but have larger debt and facilitate little growth. Multiple sources of cash result in lower levels of cash holding.

Dalci *et al*. (2019) assert that an effective accounts receivable collection strategy can lead to an increase in cash flow. This view is in contrast to that of Gao *et al*. (2021) who argue that the cost of holding cash, as determined by interest rates, should be taken into consideration. Al-Zararee *et al*. (2021) find that banks need to lengthen customer terms to prolong cash transfer cycles, which can damage the relationship with financial institutions.

These studies provide different perspectives on cash management, including the amount of cash to hold, the cost of holding cash, the size of the organisation and the ability to manage cash internally. These variables were covered in the survey questionnaire (Appendix 2) to understand which components were favoured by welfare NPOs in South Africa. Effective cash management is essential for the financial health of organisations and requires a balanced approach.

3.3 Accounts receivable

The management of accounts receivable is an essential aspect of the overall financial management of an organisation. According to Narain (2022), the success or failure of an organisation can be influenced by the management of debts, making such management a critical focus area for management. To assess the performance of the debtors' book, the following methodologies can be adopted:

- Markov chain analysis;
- Joint probability analysis;
- Linear discriminant model;
- Decomposition model; and
- 5 Cs credit model.

These approaches are used to provide a warning signal of debtor distress and assist management in being proactive to prevent disasters related to debtor management and sustain liquidity. The Markov chain analysis is a statistical model used to analyse the probability of a debtor moving from one payment status to another over a given period (Karris, 2007:D1-D3). Joint probability analysis is used to evaluate the probability of various factors occurring together that may affect the likelihood of a debtor paying their debts (Wozabal & Hochreiter, 2012).

The linear discriminant model utilises several variables, such as credit score, payment history and other financial metrics, to create a model that predicts

whether a debtor is likely to default (Habachi & Benbachir, 2019). The decomposition model breaks down the debtors' book into components such as ageing, credit quality and the likelihood of payment (Bialowolski *et al*., 2021). The 5 Cs credit model evaluates the creditworthiness of a debtor by analysing five variables – character, capacity, capital, collateral and conditions (Narain, 2022).

By analysing the debtors' book using these methodologies, organisations can gain valuable insights into the performance of the debtors' book and make informed decisions regarding debt management. The findings from these analyses can help organisations establish whether the debtors' book is aligned with their policy and determine if any changes are required to prevent debtor distress. Ultimately, the proactive management of accounts receivable is crucial for ensuring the financial sustainability of an organisation.

3.3.1 Policy identification

Louw *et al*. (2016) conducted a study of retail firms in South Africa and found that a reduction in trade receivables resulted in increased profitability in the retail industry. Similarly, Urhoghide and Korolo (2022) examined companies listed on the Nigerian Stock Exchange and concluded that effective policies and processes for receivables management were necessary to reduce bad debts, use cash efficiently and increase profitability.

Mandipa and Sibindi (2022) conducted a study on South African retail firms and found that a shorter collection cycle impacted financial performance positively. Narain (2022:6) identified five key techniques that organisations should implement for effective debtor collections: a clear and consistent credit policy, a credit review of new potential customers, detailed invoices with payment options, discount offerings and clear communication channels between both parties. These techniques enabled cash flow forecasting to predict losses or risks to an organisation.

Iqbal and Wang (2018) studied manufacturing firms in Pakistan and found that maintaining an effective credit policy could reduce the accounts receivable collection period and enhance profitability. Silaghi and Moraux (2022) assert that offering trade credit allows businesses to grow and operate smoothly. Discounts can facilitate long-term relationships and fund buyers' businesses. Therefore, price discounts and trade credit are complementary instruments for businesses to build relationships.

According to Afrifa *et al*. (2021), the view that trade credit is a cost or margin reduction for businesses is incorrect. Instead, by providing trade credit to customers, inventory is moved to them earlier, thereby reducing the holding costs, such as insurance, warehousing and security, for businesses. This perspective provides a net-zero cost viewpoint on trade credit and inventory holding costs.

The literature reviewed sheds light on the debate surrounding the speed of accounts receivable collection and effective credit policy management. Louw *et al*. (2016) and Mandipa and Sibindi (2022) advocate for a reduced accounts receivable collection approach. This is complemented by Urhoghide and Korolo's (2022) suggestion to have a small bad debt provision. Conversely, Afrifa *et al.* (2021), Iqbal and Wang (2018) and Silaghi and Moraux (2022) argue that an increase in accounts receivable can facilitate organisational growth and increase margins, making it an enabler. Narain (2022) emphasises the importance of a strong credit policy application to complement the enabler of growth and better cash management.

These studies provided evidence to the researcher of the importance of effective receivables management policies and processes in promoting financial stability and growth for businesses. The implementation of robust credit policies and the management of accounts receivable can balance the benefits of reducing holding costs with the potential for facilitating growth. Offering trade credit to customers can also reduce holding costs for businesses and facilitate growth.

The studies suggest that clear and consistent credit policies, detailed invoices and effective communication channels can facilitate efficient debtor collections and enable cash flow forecasting. Additionally, the potential benefits of offering trade credit include fostering long-term relationships with customers and supporting the growth of buyers' businesses. Effective receivables management practices and policies are crucial components of overall financial management for businesses.

The findings of the reviewed studies underscore the importance of a balanced approach to accounts receivable management that incorporates robust credit policies, efficient debtor collections and effective communication channels to promote financial stability and growth. The survey questionnaire (Appendix 2) addressed these key principles and was part of the assessment of the NPOs.

3.4 Inventory management

The three most significant theories related to inventory management are:

- EOQ;
- JIT; and
- ABC inventory control method.

Inventory management is a crucial component of effective supply chain management and plays a critical role in ensuring that organisations maintain optimal inventory levels while minimising costs. To achieve this, various theories have been proposed, with the most prominent ones being the EOQ, JIT and ABC inventory control methods.

The EOQ theory aims to identify the optimal order size to minimise the total inventory costs. The theory suggests that there is an optimal level of inventory that can be ordered to minimise the combined costs of ordering and holding inventory. The EOQ model considers factors such as inventory carrying costs, ordering costs and demand variability to determine the ideal order quantity (Gitman & Zutter, 2012:609-612).

JIT is a lean inventory management system that aims to reduce inventory holding costs by producing or procuring inventory only when it is needed. JIT theory relies on a pull-based system where the production or procurement of inventory is triggered by customer demand. JIT aims to reduce waste by improving supply chain efficiency and minimising inventory carrying costs (Gitman & Zutter, 2012:612-613).

The ABC inventory control method categorises inventory items based on their value and frequency of use. The method suggests that inventory items should be classified into three categories: A, B and C. Category A items are high-value items that are used frequently and should be closely monitored, while category C items are low-value items that are used infrequently and can be managed with minimal monitoring. The ABC inventory control method aims to optimise inventory management by focusing resources on high-value items and minimising costs associated with low-value items (Priniotakis & Argyropoulos, 2019).

The effectiveness of each approach in enhancing working capital performance varies depending on the business and industry in question. Therefore, businesses should choose an inventory management approach that best suits their specific needs, considering the potential risks and opportunities associated with each method. The three theories of inventory management – EOQ, JIT and ABC – have distinct characteristics that businesses should consider when managing their inventory. The choice of methodology ultimately depends on the specific needs and circumstances of the business and its impact on working capital performance should be carefully evaluated.

3.4.1 Policy identification

Several studies have investigated the relationship between inventory management and organisational performance. Researchers, including Alvarez *et al*. (2021), Dalci *et al*. (2019), Farhan *et al*. (2021), Farooq *et al*. (2020), Iqbal and Wang (2018), Louw *et al*. (2016), Otekunrin *et al*. (2021), Pakdel and Ashrafi (2019), Patki (2021), Poojitha (2019), Nastiti *et al.* (2019), Mandipa and Sibindi (2022) and

Urhoghide and Korolo (2022) conducted studies in countries such as Pakistan, India, South Africa, Nigeria, the Czech Republic, Tehran, Argentina, Indonesia and Germany and found a negative relationship between inventory reduction and profitability. These studies suggest that implementing a working capital management policy that leads to lower inventory and higher accounts payables can result in higher profitability.

Louw *et al*. (2016) conducted a study in the South African retail sector and recommended developing an advanced management system to optimise inventory and increase profitability. Many of the inventory models can be incorporated into an enterprise resource planning (ERP) system. Based on this review, the aggressive management of inventory led to maximum organisational results. Afrifa *et al*. (2021) identified three main theories that establish a relationship between inventory and organisational performance: the precautionary motive, speculative theory and transaction cost theory. These theorists suggest that costs must be considered when holding inventory.

Mandipa and Sibindi (2022) conducted a study of working capital management practices in retail firms listed on the JSE over ten years and found that inventory reduction had a positive impact on net operating profit margins and return on assets. This suggests that a lower level of inventory can have a positive impact on organisational performance. Otekunrin *et al*. (2021) conducted a study of agriculture and agro-allied companies in Nigeria and found a negative relationship between high levels of inventory and profitability.

Patki (2021) conducted a study of the Indian retail industry over eight years and found that holding too much inventory tied up funds unnecessarily and resulted in a decline in operational efficiencies. Companies that held lower levels of outstanding inventory achieved higher inventory turnover rates and higher profit margins.

Therefore, profit-oriented organisations strategise the procurement of commodities following the supply chain process as expounded by Ilter (2019) and Kasozi

(2017). Such entities allocate both temporal and monetary resources to optimising transportation logistics, stock maintenance and stock assortment to satisfactorily meet demand needs. Expedited technological advancements facilitate enhanced operational efficiency, thereby positively influencing working capital demands.

Given that inventory is the most volatile of current assets, holding too much of it can negatively impact an organisation's working capital commitments. This is clearly expressed in the number of studies identified in the literature. The researcher took special note of Afrifa *et al.*'s (2021) three motives for holding inventory and Louw *et al.*'s (2016) recommendation to use ERP systems to manage inventory levels and replenishment. These components of inventory management were covered in the research study questionnaire (Appendix 2) to understand their importance in the decision-making process for inventory management in NPOs.

3.5 Accounts payable

The management of accounts payable involves the establishment of commercial agreements between parties and the implementation of internal trade policies. Within the contract of sale on the payment policy, Jha and Mishra (2019) identified four fundamental trade agreements that organisations could follow:

- Payment before discount period;
- Payment after discount period;
- Payment after credit period; and
- General credit model.

Payment before discount period involves making payments for goods or services before the expiration of the discount period. The discount period is the duration during which the supplier offers a discount to the buyer for early payment. Paying before the discount period ensures that the buyer takes advantage of the offered discount, reduces the overall cost of goods or services and promotes a positive

relationship between parties. This method is considered a conservative to moderate approach to accounts payable management.

Payment after discount period involves making payments after the discount period has expired. While this approach may be cost-effective for the buyer, it is considered an aggressive approach to accounts payable management. Suppliers may view this approach as detrimental to the relationship between parties, which could affect the supply relationship.

Payment after credit period, this approach involves making payments after the agreed-upon credit period. The credit period is the time during which the supplier allows the buyer to pay for goods or services. This approach is often considered the most flexible option for buyers but it can be detrimental to the supplier's cash flow and can affect the supply relationship.

The general credit model involves establishing a credit agreement that outlines the terms and conditions of the payment policy, including the credit period, payment due date and interest rates on overdue payments. This approach provides flexibility to both the buyer and supplier and can promote a sustainable and positive supply relationship. However, it requires effective management of accounts payable to avoid the negative impacts of delayed payments on the supplier's cash flow.

3.5.1 Policy identification

Several studies have investigated the relationship between a creditor’s payment period and financial performance. Silaghi and Moraux (2022) finds a positive significant relationship between the two variables. Similarly, Ibrahim *et al*. (2021) and Louw *et al.* (2016) find that an increase in the creditor’s payment period results in higher profitability for the organisation. Furthermore, Kumaraswamy and George (2019) describe trade credit as a relationship-building tool between suppliers and customers that can trigger goodwill and loyalty and eliminate rival competitors. Effective credit management can improve cash flow and an organisation’s

profitability, as evidenced by their study of Saudi Arabian firms covering energy, materials and capital goods (Kumaraswamy & George, 2019).

Li *et al*. (2020) focus on supplier payment types – advance payments, cash, credit, advance-cash, advance-credit and cash-credit. They argue that an organisation needs to consider factors that it needs to control to prevent a high default risk on trade credit. This can be achieved by establishing the optimal selling price, credit period and cycle time, thereby assisting in business growth. Machokoto *et al*. (2022) find that trade credit is the largest and most important source of short-term funding and can form a substitute for bank credit, positively impacting an organisation's value, sales growth, investment and employment.

Furthermore, Prsa *et al*. (2022) studied SMEs in Croatia and found that trade credit was a flexible way of using current liabilities and was advantageous due to the lower cost. A short delay in payment obligation can increase profitability as the income can be used to generate additional sales without negatively impacting supplier relationships.

However, the review of the literature revealed that payment after the credit agreement could have a detrimental impact on the relationship between parties and this could affect the supply relationship (Cowton & San-Jose, 2017). This approach is considered aggressive in managing payables. On the other hand, payment before discount period is a conservative to moderate approach. It is important for organisations to consider the impact of their accounts payable policies on their suppliers and to establish a mutually beneficial payment agreement that promotes sustainable and positive supply relationships.

Overall, these studies suggest that an increase in the accounts payable days can result in higher working capital and improved profitability for an organisation. Maintaining a positive relationship with suppliers and effective credit management are essential to achieving these benefits. Other payment options such as terms and settlement discounts should also be considered to manage default risk on

trade credit. These components were further investigated in the survey questionnaire (Appendix 2) to gather the views of welfare NPOs in South Africa.

3.6 Short-term liabilities

The management of an organisation's finances plays a crucial role in determining its relationship with financial institutions, as well as the level of facilities that it qualifies for based on its credentials and financial strength. To meet their short-term funding needs, organisations can choose from a variety of financial products offered by financial markets. Among the most commonly used are the following:

- Revolving credit;
- Short-term secured lending arrangements; and
- Bank overdraft facilities.

Revolving credit that is made available by financial institutions is a conservative approach to short-term funding. Under this arrangement, organisations can borrow up to a predetermined amount and repay the borrowed amount at their convenience. Interest is only charged on the outstanding balance, providing a degree of flexibility for the borrower (Brigham & Houston, 2015:547).

Short-term secured lending arrangements, on the other hand, are an aggressive approach to short-term liabilities. Under this arrangement, the borrower pledges collateral to secure the loan and in return, they can borrow a larger sum of money. These loans often have a shorter repayment period and a higher interest rate than other short-term funding options due to the higher degree of risk involved (Lofton, 2021).

Bank overdraft facilities represent a moderate approach to short-term liabilities. This arrangement allows the borrower to withdraw more money, up to a predetermined limit, than is available in their account. Interest is charged on the overdraft balance and the borrower is required to repay the overdraft amount within a set timeframe (Yonus, 2021).

The choice of short-term funding option that an organisation selects should be based on its financial goals, risk appetite and cash flow requirements. Financial institutions offer a range of funding options and organisations should consider the benefits and risks associated with each option before making a final decision.

3.6.1 Policy identification

Rasyid *et al.* (2018) recommend that organisations prioritise long-term investment over short-term investment when it comes to working capital management to adhere to a conservative approach. Al-Zararee *et al*. (2021) find that banks tend to lengthen credit terms or extend payment periods to meet the working capital requirements of their customers. While this provides the customer with a longer repayment period, it also incurs additional costs for the organisation. Therefore, organisations must ensure that they meet their commitments on time.

Nicolas (2022) highlights the importance of short-term financing for SMEs in France. SMEs weigh short-term financing against internal financing, capital markets and financial institutions but the opportunity cost of short-term financing is high. Thus, organisations need to focus on permanent financing solutions. Lin and Qiao (2021) suggest that economic fluctuations and organisational profits affect bank loans and their ability to cover loan payments. According to an evaluation of over 16 000 manufacturing companies in China, accounts payable may also serve as an alternative to short-term borrowing (Lin & Qiao, 2021).

Gao *et al.* (2021) emphasise that borrowing is determined by risk factors and the interest rate. Risk factors are determined by an organisation’s ability and impact the debt pricing or the cost of borrowing for an organisation. Hence, organisations must manage a risk-free business to qualify for a well-priced interest rate, which will be determined by the borrowing mechanisms available and the value of the borrowing.

Prsa *et al*. (2022) find that SMEs rely heavily on short-term financing due to the increasing difficulty of obtaining financing from financial markets. Nicolas (2022)

and Rasyid *et al*. (2018) debate the use of short-term financing versus long-term financing, which is influenced by the adopted working capital approach and the availability of short-term financing facilities in the market. The researcher incorporated other factors such as the interest cost of borrowing, payment terms and the use of alternative short-term financing options in the survey questionnaire (Appendix 2).

3.7 Working capital policy approaches

In Indonesia, Rasyid *et al*. (2018) conducted a study and found that an aggressive working capital management policy, in the form of an aggressive finance policy, had a negative impact on profitability, while an aggressive investment policy had a positive impact on profitability. In contrast, Sunardia *et al*. (2021) conducted a study in Indonesia and found that a conservative working capital policy, both in investment and financing, yielded a positive sustainable growth rate over five years. The difference between the approaches is evident in that the increase in profitability in the aggressive approach is attributed to high liquidity risk, while in the conservative approach, the decrease in profitability is attributed to low liquidity risk.

Louw *et al*. (2016) conducted a study in the South African retail sector and found that a reduction in working capital investment increased profitability. This could be achieved by reducing or optimising inventories and increasing the payables payment period. In Farhan *et al*.'s (2021) study on manufacturing firms in India, they found that a conservative investment and financing policy resulted in high profitability and financial sustainability. This required a higher investment in current assets such as inventory and accounts receivable.

Dalci *et al*. (2019) identified several actions, such as delaying payment to suppliers, turning over inventory more quickly and speeding up the collection of accounts receivable, that management could take to enhance profitability for small to medium firms. For large firms, the strategy was different; customers were encouraged to make large purchases when demand was low, which reduced

supply and production costs. The added advantage was also the ability to get early discounts for account payables, which led to higher profitability.

Anton and Anca (2021) conducted a study of 719 Polish firms over ten years and revealed a U-shape relationship between working capital and performance. This study was classified as a study of an emerging economy. Managing accounts payable, accounts receivable and inventory maximised the effect of working capital and achieved organisational performance but this had an optimal level that, when reached, started to deteriorate and declined into a negative performance. Hence, the financial executive's ability to comprehend this aspect and duly account for both extrinsic and intrinsic determinants while adapting the constituents of working capital is of paramount significance.

Bharathi *et al*. (2020) conducted a study on Finnish and Swedish organisations and revealed that shortening the cash conversion cycle improved organisational performance. The two key areas of concentration were the impact of reducing the accounts receivable days and increasing the accounts payable days. These two components had the largest effect on organisation profitability. The impact of inventory was also recognised but the type of industry played a major factor in this change.

In ALOdat *et al*.'s (2022) study of 306 Jordanian-listed firms over 18 years, it was revealed that companies should adopt an aggressive working capital management approach. As the aggressive working capital approach has a low investment but high return and risk, this achieved high performance for the companies under study. This study is also in line with Bharathi *et al.*'s (2020) study which suggested that components of working capital needed to be adjusted to reduce the cash conversion cycle to fund working capital investment, ultimately leading to higher returns for an organisation. This approach also needs to be aligned with Anton and Anca's (2021) study on the U-shape relationship between working capital and performance.

The present research took cognisance of the various approaches and changes in the components of working capital to achieve a high level of liquidity. Alternative options for working capital investments were covered in the questionnaire (Appendix 2) to understand whether alternative investment or finance methods were used in welfare NPOs in South Africa. Informed by recent research conducted by ALOdat *et al*. (2022) and Anton and Anca (2021), which focuses on the effects of internal and external factors on working capital management, this study underscores the importance of adapting to the prevailing economic environment. In this regard, the researcher evaluated the extent to which welfare NPOs were adaptable to changes in the contemporary economic milieu.

The research findings promised to provide valuable insights into the strategies adopted by welfare NPOs in South Africa to optimise their working capital management practices. Ultimately, the study is expected to contribute to the existing literature on working capital management and offer practical recommendations to enhance the financial sustainability of welfare NPOs in South Africa.

3.8 Summary of literature

The evaluation of organisations across the globe revealed that external and internal factors that affect the management of working capital components exist. Decisions regarding the management of these components cannot be made in isolation and all external factors must be considered before deciding on the optimal route to follow. Consequently, there is no global approach to working capital management; the decision on the most effective methodology to select must be based on the circumstances prevailing in the organisation or sector. Table 3.1 indicates the external and internal factors that need to be considered and their impact on the performance direction in which the component could move.

Table 3.1: External and internal factors' impact on working capital components (Author's interpretation)

Factors/Components	Inventory		Accounts payable		Cash		Accounts receivable		Short-term liabilities	
Political	▼	▲	▼	▲	▼	▲	▼	▲	▼	▲
Economy type	▼	▲	▼	▲	▼	▲	▼	▲	▼	▲
Cultural	▼	▲	▼	▲	▼	▲	▼	▲	▼	▲
Industry	▼	▲	▼	▲	▼	▲	▼	▲	▼	▲
Product type	▼	▲	▼	▲	▼	▲	▼	▲	▼	▲
Interest rate	▼	▲	▼	▲	▼	▲	▼	▲	▼	▲
Maturity of country	▼	▲	▼	▲	▼	▲	▼	▲	▼	▲
Management style	▼	▲	▼	▲	▼	▲	▼	▲	▼	▲
Organisation size	▼	▲	▼	▲	▼	▲	▼	▲	▼	▲
Financial institution maturity	▼	▲	▼	▲	▼	▲	▼	▲	▼	▲
Technology	▼	▲	▼	▲	▼	▲	▼	▲	▼	▲
Transportation	▼	▲	▼	▲	▼	▲	▼	▲	▼	▲

Based on the synthesis of the literature on working capital components, it was determined that the management of these components can significantly impact an organisation's performance. The direction of the working capital component can be represented by an increase or decrease in investment, with the upward

direction indicating improved performance and the downward direction indicating poor performance.

Studies by Dalci *et al.* (2019), Farhan *et al.* (2021), Louw *et al*. (2016), Rasyid *et al.* (2018) and Sunardia *et al*. (2021) concluded that efficient working capital management can improve organisational performance. Table 3.2 identifies the components and the ideal direction that should be followed to result in respective positive performance.

Table 3.2: Summary of working capital performance outcomes from studies (Author's interpretation)

Type	Direction	Performance
Cash management	=	▲
Account receivable	▼	▲
Inventory management	▼	▲
Account payable	▲	▲
Short-term liabilities	▼	▲

This chapter's literature review covered the topic of working capital in corporations extensively; the analysis included over 346 articles, with more than 80 of them focused on the corporate aspect. Due to the diverse nature of these articles, some focused on specific components of working capital or certain approaches. However, this research aimed to cover all five components of working capital – cash management, accounts receivable, inventory management, accounts payable and short-term liabilities. Additionally, the study examined three working capital approaches and their impact on liquidity.

The corporate literature review further expanded the scope of the study to include various countries around the world, highlighting the internal and external factors that affected working capital policies. As a result, the literature review was comprehensive; not only the various components and approaches but also the external and internal factors that need to be considered were examined. Finally, the literature review proved useful in developing the survey questionnaire by identifying key drivers for each working capital component question (Table 3.3).

Table 3.3: Components from the studies that are part of the questionnaire (Author's interpretation)

Cash	Accounts receivable
cash holding cost	speed collection
collection strategy	collection approach
cash surplus	bad debts
cash planning	credit policy
alternative income	settlement discounts
Inventory	Accounts payable
holding cost of inventory	payment terms
reorder policy	credit limits
computer systems (ERP)	settlement discounts
obsolescence	relationships
Short-term liabilities	WCM approaches
short- versus long-term	aggressive, moderate, conservative
interest cost	alternatives
interest types	policy changes
	financing and investment

To better understand how welfare NPOs manage their working capital components, the relevant components from Table 3.3 – each extracted from the aforementioned studies – were incorporated into the research study questionnaire (Appendix 2).

3.9 Conclusion

As evidenced by the review of studies conducted over the past five to ten years, it is clear that the global economy and business landscape have undergone significant changes. To survive in this ever-evolving environment, businesses established in the last decade have had to adapt to the various political, economic, cultural, globalisation, financial markets and industrialisation changes that have arisen. This adaptation has resulted in the need for businesses to adjust their investment choices and resource allocation to their working capital components; they have had to take advantage of more efficient transport and better financial institutional speeds, both of which have been facilitated by technological advancements.

Due to the rapid changes within the business environment, it is important to note that no universally applicable methodology can be applied globally across all industries and business types. Each organisation must adopt the best options based on its specific circumstances, business size and the state of the economy. Studies examined in this chapter have shown that the adjustments made to the working capital components of organisations were based on improving performance by considering the external factors that impact businesses and industries. Therefore, it is crucial to understand all the factors involved in making decisions related to working capital management fully.

In the following chapter, the methodology for the study is outlined and the execution of the study is discussed in detail. The primary focus of this research was to add quantitative research that evaluates the impact of working capital policies on the performance of NPOs. The chapter describes how the study was conducted and the design that was implemented.

CHAPTER 4: RESEARCH METHODOLOGY AND DESIGN

4.1 Introduction

This research study examined welfare NPOs in South Africa. Currently, there are over 250 000 registered NPOs in the DSD database (DSD, 2022). The researcher obtained information on the way these organisations managed their working capital. The primary aim was to understand which of the three approaches to working capital management the organisations used. While trying to understand this it was also relevant to understand how NPOs managed each component of working capital – cash, inventory, accounts payable, accounts receivable and short-term liabilities. In this way, the full picture of working capital management within the welfare NPOs could be built. The researcher also needed to understand the liquidity position of welfare NPOs based on the practices they applied.

With this information, the researcher was able to analyse each component of working capital against the theoretical models that have been developed over the years. Many studies have been undertaken in the corporate arena; in Poland in 2012, a study compared NPOs to corporates on accounts receivable and the impact this aspect had on working capital. The study involved 6 000 for-profit organisations and 3 000 NPOs and found that the accounts receivable interest cost was lower in non-profits compared to for-profit organisations but, due to restrictive policies, non-profits did not use this advantage to boost their solvency (Michalski, 2012:912).

A study by Alvarez *et al*. (2021:32) on Argentinian companies found that there was a statistically significant positive relationship between working capital improvement and company profitability. In Kenya, Egypt, Nigeria and South Africa, it was found that an improvement in the cash conversion cycle, which is made up of improvements in inventory turns and accounts receivable being turned quickly had resulted in an improvement in working capital and the corporation involved had improved on its performance (Ukaegbu, 2014:1). All the studies that have been mentioned concentrated on corporates where the financial data, which their

regulators required them to provide, were available in the commodity exchange markets of their respective countries.

Welfare NPOs in South Africa are not obligated to publish financial data publicly like listed companies. The only obligation an NPO has per the DSD website is the following: "… it is obligated, in terms of sections 18 and 19, to submit within nine (9) months after the end of its financial year, annual reports (a narrative report, annual financial statement and an accounting officer's report) including any changes to the organisation's constitution, physical address and office bearers" (DSD, 2022). Annual reports can alternatively include a narrative report, 12 months of bank statements and an affidavit. Once the DSD has the financial information, the public may access the information through a request because the information is protected as part of Section 25(2) of the Non-profit Organisation Act 71 of 1997 (DSD, 2022).

As the information was not readily available as in other sectors and countries, the researcher needed to contact the individual organisations. In this way, the researcher could establish the format of the decision-making process, who took these decisions and what the outcomes of the decisions taken had been. All this information would ideally need to be acquired with one instrument.

A review of the research design process established three very compelling and different options. Leedy and Ormrod (2016:21) portray research as an inquiring mind which wants to find answers; therefore, they adopt a seven-step cyclical research process. This cyclical process includes the initial study but also creates open questions for further inquiry investigation. Thus, they continue and describe this process as a helix spiral that continually revolves. In the 'research onion' devised by Saunders *et al.* (2019:130), the research process evolves from an outer layer into the core, layer by layer and there is an end to a specific inquiry. Cooper and Schindler's (2014:14) research process, which is more like a structure flow diagram, has milestones for each part of completion.

Based on these three approaches, the researcher needed to analyse which was the best fit for this research project. After mindful consideration, the research onion was considered the best fit due to the terminal nature of the study and the process that needed to be followed based on the research question. As a foundation of any research study, the research philosophy must be understood as this forms the basis of the study.

4.2 Research philosophy

Research philosophy can be described as establishing an archway into a research study like the Roman archway that led into the Roman capital of BCE 32. Saunders *et al.* (2019:131) define research philosophy as the important assumptions of the way one views the world. These will become the assumptions of the research strategy and finally determine the method chosen for the research study. The research philosophy that one chooses becomes the direction of the research study. Just as when entering an ancient Roman city, the arches were the entryways leading to different parts of the city, when one chooses the direction to follow in a research study, various ways to get to the end destination are offered. It is therefore important that the correct philosophy is chosen upfront so that the correct direction is taken.

Academics have fostered their own interpretation of research philosophy. Creswell and Creswell (2018:44) change paradigms into worldviews of which there are four: postpositivist worldview, social constructivist worldview, advocacy or participatory worldview and pragmatic worldview. Their postpositive worldview is a scientific method of research while their social constructivist worldview aims to better understand the world by having participants provide unlimited contexts and views on the topic under discussion. Their advocacy or participatory worldview gets participants involved in the research; participants help to design questionnaires and collect data and, ultimately, benefit from the research. Their pragmatic worldview entails a mixed approach where the aim is to acquire a solution to the problem and the approach adopted is action in the situation that needs resolution.

Saunders *et al.* (2019) explain that the research philosophy that one uses needs to be justifiable and defendable against others. The researcher reviewed each one of the philosophies against the research question to establish which best fitted the study at hand based on the 'research onion' of Saunders *et al*. (2019:130). The philosophy used also reveals the assumptions made by researchers and their views of the world (Saunders *et al.*, 2019:131).

The three major research philosophies are epistemology, ontology and axiology (Creswell & Creswell, 2018:60; Saunders *et al.*, 2019:133-134). The researcher reviewed each one of them to identify a match to the research problem to find the best fit.

Epistemology describes the means of how knowledge, or what is considered knowledge, in the world is acquired and how truth or reality is obtained (Cooksey & McDonald, 2019:247). Saunders *et al.* (2019:144) divide this view into a positivist philosophy, which is knowledge developed using tables and statistical data, and an interpretive philosophy which is more a researcher using feelings and attitudes.

Ontology refers to a viewpoint concerned with the presuppositions that are made when considering whether something makes sense, is real, or is the very nature or principle of the social phenomenon that is being investigated (Scotland, 2012:9). Further elaboration on ontology includes subjectivism and objectivism (Saunders *et al.*, 2019:144). Subjectivism means that the research subject will cast their personal view on the research topic; the objective research subject prescribes and adheres to the view into which they have been locked (Saunders *et al.*, 2019:145).

Axiology involves the ethical concerns on which one needs to reflect before one does research; it is the understanding of the acceptable behaviour concerning research (Kivunja & Kuyini, 2017:28). Researchers have their own set of beliefs and views which need to be disassociated from the research at hand to ensure that the outcome is not contaminated. A researcher's judgement should neither impact the flow or direction of the study nor the conclusions of the study. These aspects need to be independent of each other.

The various views of philosophy provide the direction one needs to follow to determine which is best for the study. As this study intended to obtain financial information from various organisations and the views of their respective decision-makers, objectivism was chosen as the view of this study. While epistemological, it would be a realistic view because the research was aimed at obtaining data from the actual operating organisations and the individual decision-makers. Axiologically, it would be an independent view as the research has no benefit in the sector and was merely trying to add value to an area of the sector that had been neglected. Based on the views of different academics, this route was the most logical with which to address the research question.

Research philosophies include positivism, critical realism, interpretivism, postmodernism and pragmatism. A researcher needs to understand and establish which philosophy best fits the research question. Positivism is associated with the natural scientist; everything works like a machine that works mechanically. The approach adopts a quantitative method to acquire data. Critical realism is associated with the archaeologist; everything is made up of layers that need to be unearthed like an archaeologist who goes through facts by layers and tries to find a reason. One would use a variety of ways to acquire data.

Interpretivism is like an artist/actor; the way one looks at something and interprets the outcome of the research varies. The physical world is interpreted differently by different people. In contrast, postmodernism is associated with political activists who undertake in-depth investigations that are more reflective. Data are obtained qualitatively for such studies. The pragmatist is like an architect that uses practical means to improve and solve problems. A mixed method or multiple methods are used to obtain data (Saunders, 2020).

Based on the research question, the research philosophy that was chosen was positivism as the aim of the study was to obtain facts on the problem and, compared to all the other philosophies, it was the best fit. Saunders (2020) states that research at this level is considered ‘grey’ and, for each research decision the

researcher takes, he needs to evaluate his options and motivate why the specific option is chosen compared to the alternatives.

Leedy and Ormrod (2016:26) believe that philosophy should not be considered an 'either this or that' option but research should acknowledge the full spectrum. Based on the view that not all decisions are cast in stone, the researcher evaluated each view and chose positivism since working capital has interlink components. The research questions are the best take-off point for a researcher's position relative to each philosophy in research (Creswell & Creswell, 2018; Saunders *et al*., 2019). The route that this study followed was based on the 'research onion' of Saunders *et al.* (2019) and is depicted in Figure 4.1.

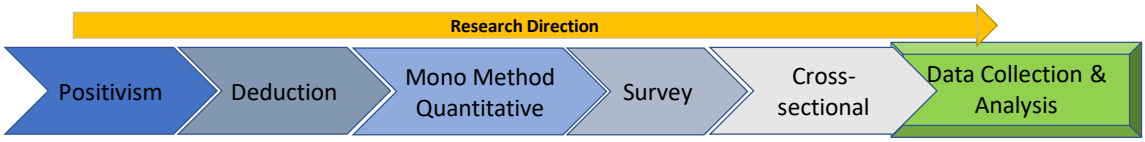

Figure 4.1: Study route based on 'research onion'
Source: Saunders *et al*. (2019:174)

4.3 Research approach

Kothari (2004:20-21) provides an overview of good-quality research. Such research must be structurally and sequentially systemic, have a logical process flow, have good empirical data and needs to be replicable. In the approach phase, the use of one of two extremes – induction where one builds theory and deduction where existing theory is tested – must be decided. Based on these two extremes, a hybrid approach – abduction – might also be an option. A researcher needs to understand the differences comprehensively and relate them to the research question to establish which approach best fits the study.

4.3.1 Deductive approach

Saunders *et al*. (2019) believe that deduction moves straight to the development of a theory and, thereafter, subjects it to rigorous tests to check whether the theory works. This approach allows the deduction of a hypothesis from the theory. The hypothesis is expressed in operational terms that suggest a relationship between two specific concepts or variables. This operational hypothesis must then be tested and the specific outcome of the inquiry examined to confirm the theory (Saunders *et al*., 2019:153-154).

Deduction is a synonym for theory–then-research which forms the basis of positivist scientific inquiry. A deductive approach is defined by a closely structured plan that can be duplicated as needed. The research questions are highly precise and commonly take the form of a quantifiable hypothesis.

Data are structured in advance and then simply categorised. Establishing categories in advance presumes familiarity and comprehension of a topic and more significantly, research categories mirror the researcher's viewpoint. A test to ensure that there is a sufficient sample size must be conducted and must allow for extrapolation to establish the population. Finally, the testing of the hypotheses is concluded as a pass or fail.

4.3.2 Inductive approach

The inductive approach is seen as a method by which a study aims to develop a theory that elucidates the nature of the problem and the significance of human events, thus improving understanding of the situation (Saunders *et al*., 2019:155). Research–then–theory is a synonym for the inductive approach in which data play a primary role in the development of theory. In this approach, the data collected is typically unstructured and categories or themes are identified during the analysis process.

Unlike deduction in which a causal relationship is investigated, in induction, a cause-effect relationship is sought (Saunders *et al*., 2019:155). The result is that

multiple theories can be expressed as there is no hypothesis testing. Contrary to the deduction method, this approach might use a small sample of subjects. This approach also employs the qualitative data collection method.

4.3.3 Abduction approach

Saunders *et al*. (2019:153-158) describe the deductive-inductive approach as one of several used to distinguish between quantitative and qualitative approaches in research. Again, in practice, the distinction may not be so clear; for this reason, some methodologists (Collins & Stockton, 2018) have proposed the terms ‘exploratory’ and ‘confirmatory’ – quantitative research can be exploratory and qualitative research confirmatory.

Traditionally, quantitative research is linked with theory testing, wherein the theory is developed first, whereas qualitative research is linked with an inductive or theory-generation approach. However, the research purpose is not necessarily connected to a specific approach. For instance, quantitative research can also be utilised for theory generation and qualitative research can be utilised for theory verification.

Abduction is composed of a new phenomenon that is revised into a theory. One does not close a hypothesis as there is a need to understand the data collection and establish a new phenomenon.

4.4 Approach to the study

In line with the discussion in the previous section on the three approaches and based on the research question, one of the three approaches needed to be adopted so that a good research design could be established. Based on the approach chosen, one can identify which instrument and method to adopt in a study.

It has been constantly advocated that the best choice is based on the research question. The research question in this study aimed to test the theory, as

expressed in the literature, on working capital management within NPOs. The plan was to look at the decision-making process and understand the financial impact that this had on organisations. Based on this, the most appropriate option was the deductive approach as quantifiable data were needed and pre-existing theories from the literature would need to be tested within the sector. The motivation for choosing deduction was based on the prerequisites cited in Saunders *et al*. (2019:153-154) and originally established by Blaikie in 2010 as the six sequential steps that need to be tested. Each one of them are evaluated in the research method.

4.5 Research method

Creswell and Creswell (2018:29) present their research strategies as three alternatives – quantitative, qualitative and mixed methods; each has specific options. Cooper and Schindler (2014:21) divide their research studies into reporting, descriptive, explanatory and predictive methods which are more conducive to business case problems. Saunders *et al.* (2019:174) divide their view into six options – mono method quantitative, mono method qualitative, multi-method quantitative, multi-method qualitative, mixed method simple and mixed method complex. The decision on which method to use is based on the research question and what best suits the objective of the research.

Zikmund *et al*. (2013:64) define exploratory research as research that can be used to help identify and clarify a decision that needs to be made. They go on to state that this process narrows the scope of the research subject and provides specific direction to the problem and research objectives. By discussing the subject matter with well-informed individuals within the field, a researcher can better focus on the research subject. This crystallisation of the subject will provide better direction for the data collection phases as well as provide many decisive research techniques.

Saunders *et al*. (2019:187) go on to state that exploratory research provides insight into whether the subject problem is worth pursuing or flexible to adaptation. They also add that focus group interviews could be added to exploratory research.

Saunders *et al*. (2019:186) point out that exploratory research is defined as a valuable means of finding out what is happening by seeking new insights, asking questions and assessing phenomena in a new light. It can be especially beneficial if the goal is to comprehend the exact nature of a problem. Saunders *et al*. (2009:187) advise that there are four principal ways to conduct exploratory research – research of the literature, interviewing experts in the field, engaging in in-depth individual interviews with subject experts and conducting focus group interviews.

Exploratory research involves creating better opinions about researching for a study. The main emphasis of exploratory research is on the discovery of ideas and insights regarding the root causes of issues. It permits the researcher to become acquainted with the problem studied and to generate hypotheses to be tested in the study (Saunders *et al*., 2019:191). Therefore, given that an exploratory study aims to generate a theory, the exploratory approach is linked with inductive reasoning. This theory is subsequently employed in a descriptive study and employs descriptive questions to establish the causes of the problem in a more general sense.

Saunders *et al*. (2019:195) highlight that the objective of any research is to portray an accurate profile of persons and events. Blanche *et al*. (2006:44) state “that the main intention of descriptive studies is to describe and analyse a particular phenomenon”. Therefore, descriptive studies offer precise observations and their research design centres on ensuring the validity, accuracy and reliability (consistency) of these observations, as well as the representativeness of the sampling (Blanche *et al.,* 2006:44).

4.6 Research design

According to Creswell and Creswell (2018:49), a research design is based on the nature of the research problem, the researcher’s personal experience and the audience to whom the study is aimed. Zikmund *et al.* (2013:66) define a research design as “a master plan that lays down the approaches and processes for

gathering and examining the required information". It is therefore a strategy for directing a study with firm control of the factors that may influence the correctness of the research outcomes (Gray *et al.*, 2016:114). Creswell and Creswell (2019:43) refine research design as the culmination of three components – a philosophical worldview, a strategy worldview and the specific methods or approach to the study.

Research design outlines the type of data required, the methods applied in the collection and analysis of the data and how the data answer the research question and becomes the connection of the conceptual research problems to the pertinent empirical research (Sekaran & Bougie, 2016). According to Fasola *et al*. (2018:233), a research study comprises three parts: design, running the study and presenting the results. Yin (2013) proposed that the research design addresses a logical problem and not a logistical problem.

As per Saunders *et al*. (2019:178), strategy is viewed as the approach by which a researcher addresses the research inquiries of a study. It is deemed a methodological link between the research philosophy and the selection of techniques employed for gathering and analysing data. Thus, the selection of the research strategy is influenced by the research questions, aims and philosophy adopted for the study.

The objective of this research study was to obtain information from the decision-makers of welfare NPOs in South Africa. The organisations are spread across nine provinces throughout South Africa and vary in size and type. Accordingly, this study adopted a mono-quantitative research method – a survey. The quantitative phase of this study comprised the collection and analysis of survey data. A quantitative method entails the collection of data where the variables are interrogated but not manipulated by the researcher which is generally called a descriptive research design. More specifically, it is survey research which entails data collection in a non-experimental environment.

Survey research elicits information from the participants, summarises their responses – through percentages, frequency counts or sophisticated statistics

indexes – and then draws inferences about a particular population from the responses of the sample (Leedy & Ormrod, 2016). Surveys regularly utilise questionnaires to facilitate the gathering of a large amount of data from a sizeable population in the most cost-effective manner.

The survey sample is drawn from a known population and a structured questionnaire is utilised (Cooper & Schindler, 2014; Saunders *et al.*, 2019). The survey strategy is used to gather quantitative data to answer the 'what', 'who', 'when', 'where' and 'how' questions and is mainly used in descriptive and exploratory research.

Structured questionnaires are employed in conducting surveys, indicating that data are collected in a uniform format. Thus, the survey strategy tests the theory of a study. In this study, the survey strategy was used in conjunction with stratified sampling and the design of the questionnaire and sampling procedures were carefully planned to yield reliable and valid data (Leedy & Ormrod, 2016; Saunders *et al.*, 2019).

The reasons for utilising the survey strategy in this study included the duration and cost of the survey, the time value of the information and the coverage of a wide range of topics (Saunders *et al.*, 2019). The survey strategy of this study comprised developing the questionnaire, pilot testing the questionnaire, designing a sample plan, collecting the data and finally analysing the data.

4.7 Research population

A research population is a group that has a similar characteristic or commonality that forms a total population within a defined location (Cooksey & McDonald, 2019:829). The NPOs in South Africa registered with the DSD number 257 578 (DSD, 2022). The DSD is the legislative body within South Africa that is the ultimate custodian of NPOs. South Africa has nine provinces and each province has its respective legislature but when it comes to NPO registration, this takes place at

the national level in Pretoria and is handled by the Ministry of Social Development as per the NPO Act 71 of 1997 (NPO, 2022).

As classified by the NDA, these registered organisations are from a variety of 12 sub-sectors including humanitarian relief, welfare services, civil society services, technical innovation programmes, traditional community organisations, cooperative societies, faith-based organisations, economic interests, professional associations, human rights organisation and skill development and advocacy groups (NDA, 2022). The largest of them are welfare-based services (NDA, 2022). These can be considered the specific elements that are described by Cooper and Schindler (2014:338).

The researcher extracted the number of registered NPOs as of 5 May 2022 based on the population register of NPOs in South Africa. The full listing of the 257 578 organisations was available on the DSD website and was downloaded to Microsoft Excel. The information extracted included the registration number of the NPO, the name of the organisation, the province in which it operates, the date of registration, the registration status and the date of cancellation of the registration, if any. As only active welfare NPOs were sought, the researcher sorted the database according to currently active NPOs and established this as the total population of active welfare NPOs in South Africa.

4.8 Sampling

According to Cooper and Schindler (2014:338), sampling is considered a selection of a portion of the total population based on a specific element. They go on to explain that a sample should be lower in cost to attain, able to acquire accurate results, collect data speedily and establish a specific element that can be defined. Welfare NPOs are registered under the NPO Act 71 of 1997 and are therefore public organisations with limited restrictions to access, unlike private companies and individuals (NPO, 2022). Due to the nature of registration and following the objectives of the NPO Act Chapter 1 Section 2 (d) “creating an environment within which the public may have access to information concerning registered non-profit

organisations", the Act allows access to the public to non-profit information and is therefore non-restrictive.

The NLC is a commission that publishes its beneficiary list in its annual financial statement so the public is aware of how the funds have been allocated. The beneficiary list and the winner list are two totally different pieces of information. The winner list of the NLC is protected by regulation 8 of the Lotteries Act which involves the personal information of individuals.

The beneficiary list is a list of NPOs that are funded for various public projects that aim at benefiting the communities they work in as well as the individuals that they serve. Therefore, the list is not protected by confidentiality or restriction. As part of an organisation's disclaimer, anyone wanting to use information from the organisation needs to apply for permission to use such information as per Section 18(1) of the Promotion of Access to Information Act 2 Regulation 6 of 2000 (NLC, 2022). Under access to information Form A, the NCL website was accessed to get permission from the NCL to use its beneficiary list for study purposes in November 2021 before the commencement of the study. This request was approved by the NCL and granted in February 2022 with a disclaimer of the non-funding of this study.

With the implementation of the Protection of Personal Information (POPI) Act of 2013 the following concerning the study needed to be addressed (POPIA, 2022): first, contact with the study target sample and second, the management of data under the Act.

As no section in the Act refers to study purpose contact and this section is related to "direct marketing by means of unsolicited electronic communication", the respondents were contacted under Section 69 (2) a (ii) of POPIA. In this section, the respondent "who has not previously withheld such consent" can be contacted "only once to request the consent of that data subject" (POPIA, 2022). In compliance with the above section, in his cover letter, the researcher requested consent; if the respondent did not provide consent, the study subject would not be

contacted again. Once the respondent gave consent, the respondent could continue to the research questionnaire link and a reply email of such consent would be filed.

On the second topic of data collection and compliance under POPIA, the researcher had three options which were:

a) the redaction of organisation identity (removal of the actual name and coding them as organisation a, b, c etc. – for those organisations that actually provide names – or going totally anonymous);

b) assurance that the information would be held in a computer device that is password-protected; and

c) after the analysis was done, the information would be deleted.

The researcher finally opted to go totally anonymous as this would allow compliance with POPIA and obtain approval from the university's ethics committee. As the respondents were anonymous, there was no need to delete the data.

Based on the study title, it might also be inferred that financial information was being collected but this was not the case. The only value-based question was a ratio for liquidity and this was a range-based question; the other questions were about decisions taken on the policies of the various components of working capital. Again, no financial data were collected in this study from the target population. The reason this was made very clear was based on the fact that financial data are considered sensitive for organisations and need to be stored correctly to comply with legislation.

4.8.1 Target sample

The best route of sample selection is determined by an evaluation of the characteristics of the total population. Cooper and Schindler (2014:344) guide the

sample selection process with five sequential questions – the target population, parameters of interest, sample frame, sampling method and sample size. As the population was researched purposively, the sampling was directed into a funnel process by using the welfare NPOs funded by the NLC of South Africa as the target population (Saunders *et al.,* 2019:296).

The NLC funds NPOs based on a set of guidelines that refines the population into worthy and deserving establishments (NLC, 2022). Also, the funding programmes of the organisations are known countrywide where urban and rural communities are exposed to the NLC. This is an advantage which prevents sample selection biases as the entire population is aware of these organisations due to media marketing campaigns and an extensive distribution network.

The NLC has established criteria; for any award greater than R500 000, the applicant needs to submit NPO proof of registration, an NPO memorandum of incorporation, two consecutive years of signed audited financial statements, a project business plan and a budget. Based on these requirements, funding applications are assessed (NLC, 2022). The criteria used were appropriate for the sample as they had defined certain NPOs as worthy and with a longevity vision.

The process of the sample choice that was followed in this study is described by Saunders *et al.* (2019:316); the questions that where posed are as follows:

- Can data be collected from the entire target population?
- Is a sampling frame available?
- Must the sample proportionally represent the population?
- Does the research require face-to-face contact?
- Does the sampling frame contain relevant strata or clusters?
- Does the sampling frame contain certain periodic patterns?
- Sample choice?

A sample frame, which Zikmund *et al.* (2013:392) describe as the working population, for the data feed must be established. Cooper and Schindler (2014:343) consider the sample frame as a representation of the population that the research question addresses. Once the sample frame has been finalised, the decision on whether probability or non-probability sampling is going to be used needs to be taken (Zikmund *et al.*, 2013:391). The research question of this study aimed to establish working capital management policies and their relation to liquidity which funnels down to the sustainability of NPOs. Welfare organisations within the nine provinces were the target sample based on the research question and this established the sampling options. The chosen sampling route adopted in this study was adapted from Saunders *et al.* (2019:27) and is presented in Figure 4.2.

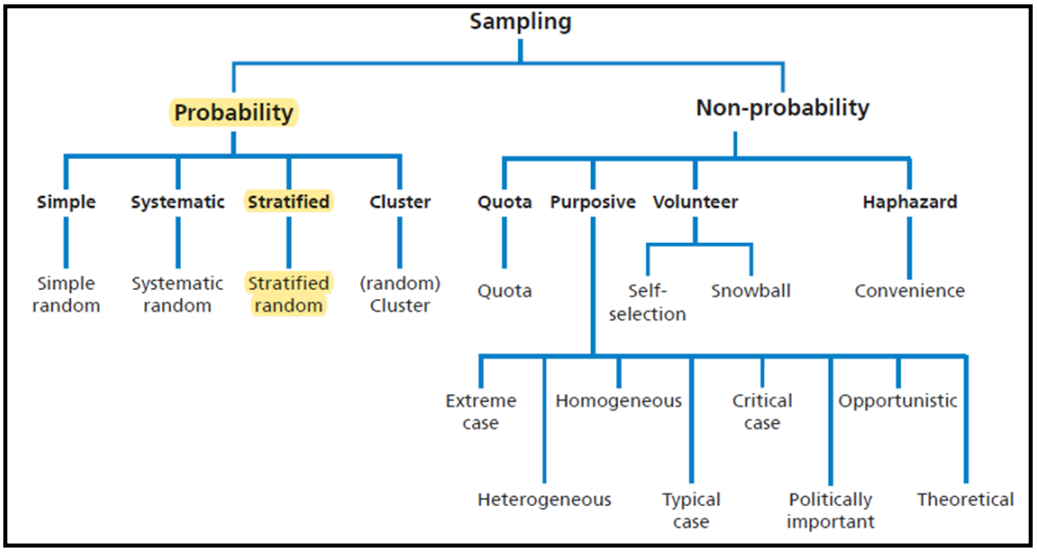

Figure 4.2: Chosen sampling route
Source: Adapted from Saunders *et al*. (2019:297)

4.8.2 Sample size

To establish a sample of the population and one that is representative of the population, a researcher can choose probability or non-probability sampling (Leedy & Ormrod, 2016:177). By using a probability sample, a researcher can direct the sampling to stratified sampling (Cooper & Schindler, 2014:347-354).

Saunders *et al.* (2019:312) divide the sampling frame into sectors or departments and use either simple random or systematic random sampling.

The option chosen in this study was probability sampling because the researcher wanted the study to have a full representation of the target population which is representative of the total population. The researcher further directed the study to stratified random sampling so that all nine provinces of South Africa could be covered.

Table 4.1: Number of organisations per strata (province)

Province/Strata's	No. of Sample per Strata	Response bias (15%)	Total Sample per Strata
Eastern Cape	48	7	55
Free State	54	8	62
Gauteng	90	14	104
KwaZulu-Natal	83	12	95
Limpopo	108	16	124
Mpumalanga	39	6	44
Northern Cape	41	6	47
North West	34	5	39
Western Cape	48	7	55
Total	**544**	**82**	**626**

The process used to narrow down the sample size was based on the NLC's 2020 published list of NPOs to which donor awards had been made in their annual financial statements (NLCAFS, 2022). The list comprised 2749 awardees. Of these, 1470 organisations are welfare organisations spread over South Africa. The researcher only targeted NPOs involved in the welfare sector as this is the largest sector – 37% of the total population and made up of 95 304 organisations (NDARR, 2021). As the researcher needed to establish the number of samples required per strata, the following application was used: (total sample size/entire population) x population of strata. Ultimately, the final sample was 626 (Table 4.1); the total sample unit split per strata/provinces included a 15% response bias.

The sample covers all nine provinces. A breakdown of the provincial allocation of the 626 organisations is presented in Figure 4.3.

Province/Stratas	Total Sample per Strata
Eastern Cape	8,8%
Free State	9,9%
Gauteng	16,6%
KwaZulu-Natal	15,3%
Limpopo	19,8%
Mpumalanga	7,1%
Northern Cape	7,5%
North West	6,2%
Western Cape	8,8%
Total	**100%**

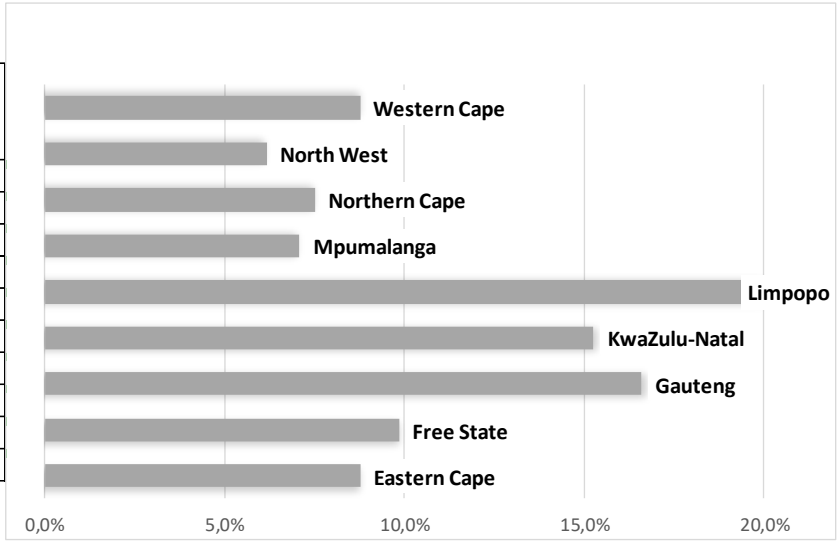

Figure 4.3: Sample population of the NPOs per province

4.8.3 Sampling procedure and process

The researcher followed the systematic process, proposed by Cooper and Schindler (2014:344), to identify the sample. The full target population was established by relying on the national regulator, the DSD, to obtain the information (DSD, 2022). Once this was confirmed as being the target population, the sample frame was established by obtaining data from a national government agency, the NLC that funds NPOs in South Africa. The criteria that this organisation uses are strict as it aims to provide support to the organisations which are the most deserving and meet legal requirements.

Once the sample frame was established, the sample frame was found to have categories that needed to be evaluated as most specific to the research question. Based on this, it was established that only studying welfare organisations per strata would provide a fair representation of the entire country's welfare organisations' liquidity and working capital policies comparisons. This gave a sample of 626 from the nine different provinces of South Africa. This was a representative sample of

the target population and would provide meaningful data to address the research question.

The sample reflects 43% of the target sample. According to Cooper and Schindler (2014:354), the decision on the total sample based on the strata could be proportional or disproportional. Based on the calculation done to determine the sample size the proportional option was chosen, therefore, the different provinces have a proportional allocation of test samples. The purpose of this made the inferential statistical comparison more compatible and provided just reasoning. As the sample is all welfare organisations within the target sample, it is homogenous. As they were sampled from various provinces, they are considered heterogeneous according to Cooper and Schindler (2014:351).

4.8.4 Sample selection bias

Sample selection bias is driven by the fact that any research poses a level of preference to a certain sample population and, therefore, the choices are steered in that direction. Creswell and Creswell (2018) and Leedy and Ormrod (2016) define stratified sampling as a situation in which participants are chosen from strata randomly or systematically based on a process. The process entails the following: establishing the variables to define the strata and then determining the proportion of the population's variables for stratification. Thereafter, there is a choice of proportional or disproportional stratification which is chosen based on needs or risks. The option is to also separate the sample frame into strata and randomise the elements of the strata in the sample frame. Finally, when drawing the sample, a random or systematic procedure can be followed (Cooper and Schindler, 2014:354). This process allows for the sample to be non-biased.

The total population of NPOs in South Africa are made of 12 different types. This study aimed to focus on welfare organisations within South Africa as this is the largest sector of NPOs. Welfare organisations are positioned in all areas of South Africa. To determine the stratification, the nine provinces of the country – Eastern Cape, Free State, Gauteng, KwaZulu-Natal, Limpopo, Mpumalanga, Northern

Cape, Northwest and Western Cape – were used. This classification assisted the study in establishing a clear stratification of the variables or population.

An analysis was performed on the welfare population and the number of organisations within the nine strata was found to be disproportional. When the quantity of sample proportion chosen between the provinces was chosen this was taken into consideration to ensure that proportionality can be maintained and, therefore, the sample calculation used was calculated by the following formula: (total sample size/entire population) x population of strata. This allowed for the sample to be proportional according to Cooper and Schindler's (2014:354) selection process. The number of non-biased samples needed to be 626. To maintain a non-biased process, the actual sample selection from the databases followed random selection.

To avoid any personal selection of the sample, the researcher used an independent source, a South African national agency – the NLC. The information that was used is also reputable as it is from the Annual Financial Statements of the NLC which are audited by external auditors – the Auditor General of South Africa (NLC, 2022). As the sample selection report was based on a specific criterion, sample bias was eliminated.

4.9 Data collection methods

The collection of data for research can be done by observation, interview, experiment, electronic interviews or surveys, telephone calls, focus groups and archival data (Cooper & Schindler, 2014:85). Choosing the correct method is based on the research question, the type of data one needs and the logistics and resources that are needed. According to Saunders *et al.* (2019:465-466), the following must be evaluated: time, cost, logistics and type of study.

Based on the research question, the data needed was the perspective of finance managers from NPOs on the way they manage working capital, as well as the current liquidity position of their organisations. The sample was from within the

country but was vastly spread over nine provinces. Therefore, contact communication was not viable as the spread of the sample was vast and the cost associated with such acquisition would have been huge. Thus, a qualitative study was ruled out as it would not be a viable option.

The research was conducted as a quantitative study and the data that were accumulated was primary data from the sampled finance decision-makers. Many instrument types can be used for quantitative studies so the types needed to be evaluated to find the best fit for the study. The option chosen was a survey questionnaire.

The questionnaire was designed using measurement scales – nominal, ordinal and interval. The question types were multiple-choice, fill-in-the-blanks and Likert scales and rating scale questions. In sections relating to receivables, inventory and payables, the Likert scale question rates – 1 = 'Never' up to 5 = 'Always' –were implemented. The questions were structured to establish a preference between statements. The purpose of having different types of questions was that the questionnaire was trying to probe working capital and its components from a variety of angles and methodologies. Testing of the questionnaire was conducted to establish whether the questionnaire had been designed effectively (Saunders *et al.*, 2019:518).

4.9.1 Quantitative methods

An optimal method of data collection is the questionnaire. One of the two ways to complete the responses is by self-completion by the respondent and the other is by the researcher over the phone or in person. The way data were collected in this study was with a questionnaire that the sample respondents completed and sent back (Cooksey & McDonald, 2019:362).

Based on a study conducted on financial management in an NPO in South Africa, Strydom and Stephen (2014:60) found that 75% of finance managers have an undergraduate degree with an average of over 13.7 years of experience in the

finance sector. Bearing this in mind, a questionnaire with financial topics was not too difficult to answer as the population was a mature group. The questionnaire was designed using Google Forms (2022) and sent to the sample group via electronic mail as the communication method.

Saunders *et al.* (2019:536-537) emphasise the importance of including a clear and concise introduction to the questionnaire to explain why the participants should take the survey and how they will benefit from doing so. This practice can help researchers attain a high response rate, especially when it is included on the first page of the questionnaire as an accompanying cover letter. Considering the above, this study adopted the suggestions of Saunders *et al.* (2019:537) about the explanation of the purpose of the questionnaire to achieve a high rate of return of completed questionnaires by participants.

As the sample group was from a wide area of South Africa, including all nine provinces, the most effective way of communication was electronic mail. Also, in some NPOs, decision-makers could have been volunteers who only spend a specific amount of time at the NPOs; therefore, a questionnaire would give them the convenience of completing the survey during their available time at the organisation (Cooksey & McDonald, 2019:361).

The questionnaire included questions in a general section that were aimed at obtaining information about the organisation and the participant; the next section addressed working capital management within the organisation and the financial health of the organisation. The data collection instrument obtained nominal, interval and ordinal data from the respondents. The aim was to test the theory of working capital approaches against each of the organisations and understand their financial liquidity position based on the policies they implemented.

The questionnaire probed topics on inventory, cash, accounts payable and accounts receivable so that the researcher could better understand the decision-making process within NPOs (Cooper & Schindler, 2014:82). The questions were designed taking into consideration the work by Saunders *et al.* (2019:512) on the

role of variables – a dependent variable has an impact on other variables, an independent variable will impact a dependent variable and a moderating variable will impact both independent and dependent variables.

The survey was aimed at the finance community; therefore, the questionnaires were addressed to the finance officer or finance manager of each organisation. A week before the end of the month, which allowed for the completion of the survey, an electronic mail reminder was sent to all respondents. At the end of the month, an assessment was done on the response rate.

Once all the forms had been collected and based on the tests and set up for analysis, they were coded (Cooper & Schindler, 2014:379). Statistical testing aims at comparison, association and correlation to look for relationships or patterns based on the responses and testing of the hypotheses.

4.9.2 Pilot study

When a new research instrument is developed, it is advisable to have it tested for validity and reliability. The key purpose here is to ensure that the questions in the instrument are direct and comprehensible to the respondents. Five of the 30 questions structure came from working capital studies conducted in Pakistan, Australia, the United States and Canada by Nazir *et al.* in 2012, Khoury *et al*. in 1999, Belt and Smith in 1991, and Smith and Sell in 1980 respectively. The balance of the questions emanated from the literature reviews, gaps in the research and the research question being addressed.

The sample test of the questionnaire was piloted by current-year doctoral students who were also working on similar research projects. An evaluation form accompanied the questionnaire to elicit feedback on improvements and the effectiveness of the questions being asked as well as to establish whether the questions were able to be understood. This process aimed to validate the instrument before it was sent out to respondents (Cooper & Schindler, 2014:383; Leedy & Ormrod, 2016:311).

Once the instrument was confirmed effective for use, it was sent to all the sample respondents. The time frame given for its completion was one month and it was expected that it would be sent back completed via electronic mail. This was according to the research plan that had been prepared at the outset of the study.

4.10 Reliability and validity

Once an instrument is prepared, a test for its reliability and validity needs to be considered. This process entails looking at the level of success of the instrument as well as the ability of the research design to be replicated so that reliable results of the study can be formulated. Various types of validity constructs need to be looked at to establish whether the instrument and design pass the requirements to ensure a valid study. A valid study without reliability is possible; therefore, both sub-strata must be complementary to each other (Cooper & Schindler, 2014:260).

4.10.1 Reliability

Reliability can generally be described as the dependability of a measurement instrument to yield the same result on repeated trials (Leedy & Ormrod, 2016:257). The aim is to ensure an error-free, consistent measurement over time for all the questions. Three measurement bases are found – inter-observer/inter-rater reliability, test-retest and internal consistency (Cooksey & McDonald, 2019:805).

In inter-observer/inter-rater reliability, two different observers correlate their independent observations to establish similarity, if any. The Cohen kappa coefficient is the measure used to establish this relationship. The test-retest occurs in one of two ways. The test is split and this works well if both halves of the test are equivalent. The alternative option is the parallel option where the sample is administered two variations of the test; however, boredom or fatigue could be possible disadvantages (Cooksey & McDonald, 2019:807).

In internal consistency reliability, Cronbach's alpha is a reliability coefficient that indicates how the items in a set are positively correlated to one another. Cronbach's alpha is the popular reliability statistic published by the mathematician

Cronbach in 1951 (Cho & Chun, 2018:3). It determines the internal consistency of variables in a survey. Cronbach's alpha is computed in terms of the average intercorrelations among the items measuring the concepts. An alpha coefficient of 0 establishes no reliability; a position of 1.0 establishes perfect reliability (Cooksey & McDonald, 2019:805). Cronbach's alpha was used to test the reliability of the research instrument in data collection in this study.

4.10.2 Validity

According to Cooksey and McDonald (2019:800), validity is the degree to which a measure does what it is intended to do – testing how well an instrument is developed to measure the concept it is intended to measure. Measuring the validity of research occurs from an internal and external perspective. Validity measures content, criterion relation and constructs (Cooper & Schindler, 2014:257).

Content validity is like a university test in which an assessment is done based on the content provided. It is an objective test that addresses skills, aptitudes, learning, capabilities and potential. Criterion-relation validity is based on one extreme predictor and a criterion; the predictor makes statements about the criterion (Cooksey & McDonald, 2019:803). Construct validity is guided by the positivist pattern which measures physical, physiological and economic measures. This method emerges from a hypothesised construct and theoretical thinking which uses multivariate statistical procedures for analysis. Based on the current research instrument and methodology, the option of construct validity was applied in this study.

4.10.3 Research bias

According to Leedy and Ormrod (216:188), research response bias can occur. As this was not a qualitative study, the researcher had no contact with the respondents. In addition, the study used a survey which limits researcher bias. In terms of research bias, the researcher is not from the sector, nor has he worked within the sector. His primary goal was to establish whether he could assist the

sector based on his experience in the corporate sector. From the outset, the researcher had taken a positivist view with a non-biased and deductive reasoning approach.

4.10.4 Research instrument

The research instrument idea came from the literature review. In 1978, Smith and Sell conducted a study on working capital practices in the USA and, in 1991, it was expanded to Australia. In 1994, Khoury *et al*. did the same study in Canada. In all these studies, a survey questionnaire was used but adapted to the research demographics and study purposes. The last study recommended that the questionnaire be used for future studies and adapted by adding more questions (Khoury *et al.*, 1999:57). The researcher was reassured by the use of these surveys in multiple counties, proving it to be a tried and tested instrument and, thus, it was used in the current study. The instrument was adjusted to focus on the research objective and the language was adjusted to British English, the common communication language in South Africa.

With the pilot having been undertaken before the survey questionnaire was sent out, the researcher enjoyed the added reassurance of knowing that the research instrument was creditable. The use of Google Forms as the communication tool coupled with the survey having been sent out via electronic mail assured the researcher that the survey would reach the intended participants.

4.11 Interpretation

Once the survey was completed, the researcher removed the data sheets from Google Forms. The data sheet was an Excel spreadsheet that had all the responses to the 30 questions which had been asked. Once this sheet had been removed, each question was reviewed to assess the completeness of the survey. In some questions, the responses needed to be coded based on the outcome setup in the questionnaire.

The available data would make no sense unless it was summarised and interpreted with statistics (Leedy & Ormrod, 2016:229). Therefore, the correct set of tests needed to be established based on the bank of tests available in the statistic software package, SPSS. The aim was to establish patterns, relationships, sequences and correlations. There are generally two types of statistics – descriptive statistics and inferential statistics. The general statistical tests and proposed outputs are presented in Table 4.2.

Table 4.2: General tests and proposed outputs

Statistics	Analysis	Output
Descriptive Statistics	Mean	Bar/Line or Pie graphs
	Standard deviations	Box plots/Histograms
	Frequencies	Frequency tables
	Percentages	Stacked graphs
Inferential Statistics	One sample test of difference/One sample hypothesis test	SPSS output
	Confidence interval	SPSS output
	Chi Square statistical test	SPSS output
	T-test or ANOVA	SPSS output
	Pearson correlation	SPSS output
	Bi-variate regression	SPSS output
	Multi-variate regression	SPSS output
	Kruskal Wallis test	SPSS output

Leedy and Ormrod (2016:235-236) define descriptive statistics as an inter-correlation of data and inferential statistics as the use of a small sample result to extrapolate to the total population.

The conceptual framework for this study is presented in Figure 4.4.

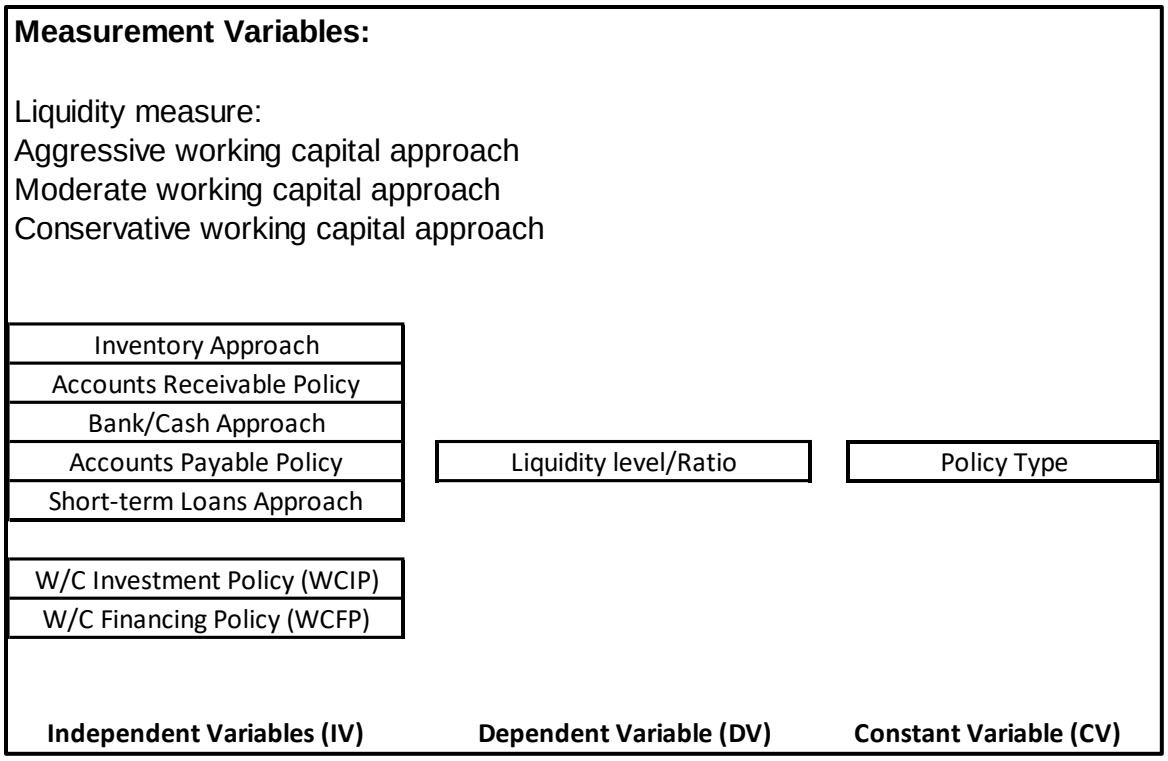

Figure 4.4: Conceptual framework – variables affected

The analysis of the general section of the sample was to establish the median, mode, standard deviation and range of the participants to establish the characteristics of the sample. The aim was to establish the confidence level of the participants in the study. A correlation coefficient was used to investigate the degree of association between the different variables including the relationship between working capital management and the liquidity of NPOs.

Correlation analysis was also used to further examine the dependency of the liquidity variable on the working capital management variable and other chosen independent variables. After the relationship between the variables had been established, the results of the chosen samples were compared. Again, SPSS was used to do the quantitative analysis. Between the subgroups of cash, accounts receivable, inventory and accounts payable an understanding of variances among the groups was established. As a result, the ANOVA test (one-way analysis of variance) was run between the groups which resulted in the standard deviations

among the groups and the variances. The data were also tested for normality which would establish whether the Pearson's or Spearman tests should be used.

The hypotheses of the study that will be tested are as follows:

Hypothesis A

H_1: Working capital management policies have an impact on liquidity status.

H_0: Working capital management policies have no impact on liquidity status.

Hypothesis B

H_1: Working capital approaches have an impact on liquidity level status.

H_0: Working capital approaches have no impact on liquidity level status.

To establish which approach is used and its impact on liquidity the following research questions are framed:

Research question B1:
Does the aggressive working capital management approach achieve a liquidity status of >1 or;

Does the aggressive working capital management approach achieve a liquidity status of <1?

Research question B2:
Does the moderate working capital management approach achieve a liquidity status of >1 or;

Does the moderate working capital management approach achieve a liquidity status of <1?

Research question B3:

Does the conservative capital management approach achieve a liquidity status of >1 or;

Does the conservative working capital management approach achieve a liquidity status of <1?

4.11.1 Data analysis

Descriptive, inferential and modelling statistics could be used in data analysis in a quantitative study (Saunders *et al*., 2019). Salkind (2017:41) states that a research study could use descriptive statistics to describe and organise some of the characteristics of the distribution of the scores that the researcher has collected. Leedy and Ormrod (2016:99-100) state that data analysis requires logical reasoning and is more subjective; it searches for patterns and relations within variables.

Descriptive statistics can be presented in graphs and tables while the inferential statistical test can be presented in text format (Sekaran & Bougie, 2016:361). Sekaran and Bougie (2016:314) state that multiple regression analysis, in which the regression coefficient can establish the importance of the independent variable in comparison to the dependent variable, can also be used. Factor analysis is another quantitative tool used for grouping many variables into a smaller group of variables with similarities to responses. This study used ANOVA to establish the variances among the groups of working capital components.

Saunders *et al*. (2019:597-601) highlight that descriptive statistics also allow the study to describe and compare variables numerically and statistically. The description of a variable will mainly concentrate on the central tendency and dispersion. SPSS was used to statistically test the data. Once the questionnaires were returned, the response rate was examined to check the response bias. Cronbach's alpha test was also used to check the level of consistency of the questionnaire responses (Salkind, 2017:166).

The correlation coefficient explains the relationship between two independent variables. It is a numerical index that shows the change in one variable because of any change in another variable (Salkind, 2017:124). The Spearman rho analysis was used in this study to establish the relationship between variables such as those between working capital management and liquidity. According to what was discussed previously, efficient working capital management increases liquidity; hence, a positive relationship should be expected between the measures of the working capital management components.

The chi-square test is used to understand the association between two variables. This test is conducive to nominal, ordinal, interval and ratio data. It establishes whether two distribution tables are independent or not. The aim is to understand the acceptance of the null hypothesis (Saunders *et al.*, 2019:609-610).

Software packages, such as SPSS, calculate Cramer's V statistic and place this in the same box as the chi-square statistic as described by Saunders *et al.* (2019:610). This measure is normally included as an addition to the chi-square test as it measures association. The scale of measure is that 1 represents the perfect association and 0 indicates no association.

Phi can be used as an alternative test to establish whether two variables are associated or not. The measurement scale is a bit different from Cramer's V in that -1 shows a negative association, 0 shows no association and 1 shows a perfect association (Saunders *et al.*, 2019:611). These tests were used for hypostasis testing in this study (see Chapter 5).

Saunders *et al.* (2019:615) show that ANOVA is used to establish the spread of data values within and between groups of data and compares their means. ANOVA was used to test the dependent groups for variances. The differences are produced by the F ratio or F statistic.

To test Hypothesis A, test statistics and the p-value statistical test were used to determine which hypothesis to accept. Based on this, the researcher was in a

better position to understand which working capital management approach delivered the best liquidity result. At the same time, the researcher could also understand whether the working capital management approach had a relationship with liquidity or not. Based on this understanding, organisations can use the best approach going forward and prevent liquidity problems.

The data can also be used to establish trends in the provinces of South Africa. These trends can be used to compare the nine provinces to establish which provinces have strong working capital management performance and strong liquidity. Based on these trends, one can decipher which areas might need more assistance than others. Trending analysis is a good tool to use when conducting statistical analysis.

Once the hypothesis was tested, triangulation analysis, which compares the results of general theory on the components of working capital to what actually takes place in welfare NPOs, took place. Gaps were identified and addressed. The next step was the comparison between for-profit organisations and non-profit organisations to establish whether there was a gap and understand how this gap could be closed or resolved. This three-way comparison tries to close the gap between theory, practical application of the for-profit sector and the research gained from the NPO sector (Figure 4.5).

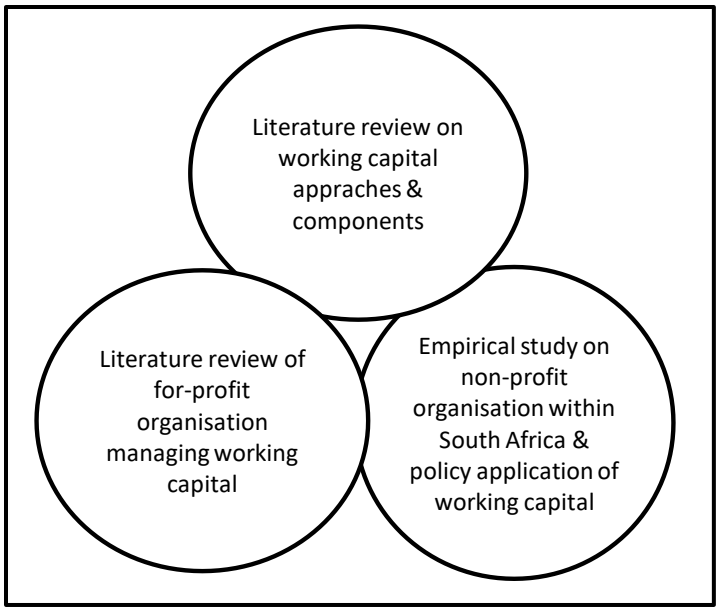

Figure 4.5: Triangulation analysis of the research

4.11.2 Researcher's role in data analysis

As the interpretation of data needs to be presented statistically, a researcher undertakes this function. A researcher needs to be able to understand the statistical tests available for the data that is accumulated. A researcher also needs to be able to use the statistical package – IBM SPSS 2022 – for data interpretation. Another role that a researcher plays is the design and setup of the data collection instrument (Leedy & Ormrod, 2016:99). A high level of accuracy is needed here as the results of the data acquired will impact the study; therefore, this process needs to be carried out diligently.

A researcher takes on many roles during the research process but what remains key is their ability to remain non-biased and follow the research path that the research question established (Leavy, 2017:237-242). Data analysis needs to be done with a high level of understanding and interpretation.

4.11.3 Credibility

From the outset, the research process needs to be treated with respect and a high level of ethical morality is required. It is easy to do research and later find the results are not creditable or reliable. It is therefore essential that, at each stage, a researcher questions the process that they have followed to understand whether this meets the research criteria set out or whether a deviation has occurred (Leavy, 2017:154-155). If there has been a deviation, the researcher needs to acknowledge it and go back to the research material (research books) or consult their supervisors for assistance.

As far as the research plan for this study was concerned, the researcher had put in sufficient checkpoints to ensure the creditability of the process and was sure that the data met research standards.

4.11.4 Data dependability

The research data gathering tool, which was Google Forms, was considered dependable as it is a tool that is used worldwide. The company providing this tool has a set of standards to uphold as it provides services in multiple jurisdictions. The dependability of the data analysis carried out is based on international standards of compliance (Google Forms, 2022).

4.11.5 Transfer of data

Information was extracted from the Google Forms database. The researcher opted to use the premium service despite there being a cost involved; many other survey websites offer free services. The reasons for this were that the survey questionnaire was complex and the researcher wanted the integrity of the data assured.

The data were downloaded from Google Forms to Microsoft Excel – a very reputable software program – and then uploaded to SPSS for data interpretation and analysis. This process was handled by the researcher and no third-party

assistance was used (Saunders *et al.,* 2019:412). The aim was to ensure that during the transfer, no data went missing or was deleted. One of the checks that were done was checking the number of lines downloaded against the number of lines uploaded into SPSS. This checking process gave the surety that the right amount of data had been transferred.

4.11.6 Data presentation

Scatter plots and histograms were used to show the distribution of data (Saunders *et al*., 2019:591). They are always used to see whether the data are following a normal distribution or have a skew to the right or left. Bar graphs and pie graphs were used to show comparatives as well as the ratios of the answers of the sample population. Scatter and histogram graphs were used to show the relationships between the dependent and independent variables (Saunders *et al.*, 2019:597).

Various approaches can be employed to structure the data – comparative, chronological, linear-analytic, theory-building or 'suspense' structures were options available (Saunders *et al.,* 2019:713). As the research study was financial, the researcher believed that the best option would be linear-analytical as this focuses on the deduction of the theory-testing process.

4.12 Ethical considerations

The research included many NPOs throughout the country and the study aimed to understand the aspects of the non-profit sector directed at finances. The North-West University Business School has a process that requires the compliance of student researchers to obtain approval to access information as a researcher. The code requires honesty, accountability, professional courtesy and good stewardship; a researcher needs to agree to this code (NWUBS, 2022).

The researcher needed to attend a workshop so that he was familiar with the research requirements and obligations. Once the internal application process had been completed, the researcher received an approval certificate which allowed him to conduct the research; this is a standard process (Cooksey & McDonald,

2019:333). From this point, the research process officially started. All data received electronically needed to be held in a password-protected device as the information was considered confidential. As this was an electronic survey, the computer used was password-protected so information was not freely accessible to anyone besides those directly involved in the research (Cooksey & McDonald, 2019:170).

When an area like finance is the focus, many people feel their organisations are being scrutinised and are uncomfortable answering finance-related questions. Therefore, it was important to provide certain assurances to the participants so that they felt comfortable communicating with the researcher.

To overcome the fear of sharing financial information, the research was conducted via a questionnaire which allowed the respondents to remain anonymous and ensured confidentiality (Leedy & Ormrod, 2016:343). This aspect was also covered in the cover letter to the organisation's respondent. As this was computer-based research, the participant could quit the survey at any point. This left the entire participation choice up to the individual. The study participants could also remain anonymous when providing their response survey as Google Forms was set to not collect respondents' email addresses. In the research, the focus was not on any organisations but only on a general discussion of the sector. According to Zikmund *et al.* (2013:88), participants whose confidentiality can be maintained find it easier to participate and respond truthfully.

The researcher applied to the ethical clearance committee of the University for Research Clearance. The university understood the focus of the study and its objectives as well as the sector in which the study was conducted. The researcher could share this certificate with the respondents to confirm that the researcher was bound by a fixed set of rules and obligations. The researcher committed to the research ethics committee that all information received on this topic would remain in the possession of the researcher and not be shared with any third party unless approved by the university or its affiliates.

As the research was conducted via a survey questionnaire, there was no contact between the researcher and the respondents, thus, COVID-19 protocols did not have to be followed. Ultimately, no social stress or anxiety was endured by the respondents due to the type of study method used. The respondents were made aware that this study was voluntary and at any time they felt uncomfortable they could withdraw from the study. It was also stated in the cover letter that this study would be published as a doctoral study thesis and the duration to complete this survey was 30 days from receiving the initial email.

To maintain honesty in presenting the study results, the researcher ensured that accuracy would be maintained and that there would be no misrepresentation when presenting the study results. This meant that the study findings would be neither overstated nor understated.

4.13 Conclusion

This chapter described the research methodology. The purpose of a research design was to maximise valid answers to a research question. This was achieved by using a non-experimental, quantitative, exploratory-descriptive approach that was contextual. The survey questionnaire was the main data collection instrument and was piloted for validity. Data were collected using electronic communication due to the range and size of the sample population covering the entire country.

The researcher made sense of the data by using a descriptive statistical data analysis method and ensuring that the data were trustworthy by undertaking a review process. The research question was further augmented by using inferential statistics to establish correlation patterns. The researcher's observance of the principles of beneficence and ethical research standards meant that the participants were morally and ethically protected.

In the next chapter, the outcome of the research on working capital management in welfare NPOs within South Africa is presented. It includes how the research was done and what the respondents had to say about how they managed their

organisations and which options of working capital management were the most predominate. This was later evaluated in conjunction with the current studies undertaken on corporates and the above welfare NPO studies so the researcher could triangulate the three: welfare NPOs, corporates and theoretical founding models.

CHAPTER 5: QUESTIONNAIRE RESULTS

5.1 Introduction

The study addressed working capital policies and the impact thereof on liquidity in welfare NPOs in South Africa. Based on the literature review, a research questionnaire was designed on working capital management, working capital policies and working capital finance and investment approaches. Working capital is made up of five different components; each component was addressed to understand how it was managed, what policies were implemented and what approaches were followed. This allowed the researcher to compare the findings against the theoretical approach models to understand what functioned best for welfare NPOs in South Africa to ensure their positive liquidity levels.

Working capital management in the for-profit sector has a large knowledge base and this knowledge base enabled the researcher to identify similarities and commonalities in the welfare NPO sector. The aim was to establish such relationships and devise a way forward for improvements based on the growth and high level of sustainability of for-profit organisations.

5.2 Pilot study

When the questionnaire was designed, the baseline idea was established from studies on the economic sector that were undertaken in the United States, Canada, Australia and Pakistan. The study originated with Keith V. Smith (Smith, 1973), a well-known author and researcher in the study field of working capital. Thus, the researcher was assured that the use of the survey questionnaire within the working capital research arena had been tried and tested. The questionnaire was used in developed economies and then in semi-developed economies with success. Based on this versatility, the subject content of working capital components was explored successfully, therefore, the survey questionnaire was chosen to be used for this research study.

The pilot study in this research was undertaken to establish whether the questionnaire was comprehendible in South African English when compared to other parts of the world. Furthermore, the pilot study was also required to establish the level of complexity and duration of participation by the respondents (Saunders *et al*., 2019:67). The pilot study was undertaken with the current-year doctoral students from the North-West University Business School. The outcome of the pilot study was as follows:

- The questionnaire was too compressed and the recommendation was that better spacing among questions and sections was required.
- The cover letter specified that the duration of the questionnaire was 45 minutes to an hour. The respondents confirmed that this was a 30- to 40-minute questionnaire; a correction to the cover letter was made.
- All participants confirmed that the study was well-suited for electronic communication; this was the re-confirmation that was needed as the initial studies were paper-based and disseminated via the postal service.
- Consensus that the sections, survey questions and types used were acceptable was reached.
- A question was raised about whether the questionnaire could be completed on a mobile device such as a smartphone or electronic tablet. This was then checked and Google Forms is compatible with smart electronic devices which made this a convenient method of access for participants. This was also updated in the cover letter of the questionnaire.
- Lastly, all respondents confirmed that the questionnaire was not too long; the length had been a concern. A survey should not be so bothersome to a participant that their early withdrawal from the study could ensue (Saunders *et al.*, 2019:540-541).

Based on the feedback from the pilot study participants, all required changes were made to the questionnaire and it was finally sent out to the target sample via electronic mail.

5.3 Response rate

The survey was executed between November and December of 2022 for 30 days with the Google Forms application in the configuration of an electronic survey questionnaire. The questionnaire comprised 30 questions of which five were general and 25 were about the research. The respondent sample size from the target population of welfare NPOs in South Africa was 626. The survey covered all nine provinces or strata of South Africa. The respondents were sent the survey with a cover letter explaining the purpose and benefit of the survey to them and the NPO sector. The respondents were further given a time allocation of a month to complete and return the survey. Based on the pilot study review, it was also advised that the average time it would take to complete the survey was 30 to 40 minutes.

The survey achieved an acceptable total response rate of 63.29% (Table 5.1); this response rate for the sample size is acceptable for analysis according to Saunders *et al.* (2019:302-305).

Table 5.1: Response rate based on the target sample

	Target Sample	Response	Response Rate
NPOs Sample	626	396	63,29%

Table 5.2 indicates the spread of the respondent sample over the provinces/strata within South Africa. The sample reflects a fair representation based on the demographics of the country and population makeup. The highest response rate was in KwaZulu-Natal (73%) and the lowest was in the Eastern Cape (58%).

Table 5.2: Response rate per province/strata based on the target sample

Province	Target Sample	Response	Response Rate
Eastern Cape	55	32	58%
Free State	62	38	62%
Gauteng	104	65	63%
KwaZulu-Natal	95	70	73%
Limpopo	124	77	62%
Mpumalanga	44	27	61%
Northern Cape	47	30	64%
North West	39	23	59%
Western Cape	55	34	62%
Total	626	396	63,3%

5.3.1 Sample characteristics

In a survey, it is appropriate to understand the demographics of the population (Creswell & Creswell, 2018:304). This survey looked at four characteristics of the sample: age, current occupation, qualification and the number of years the respondent had worked for the organisation.

The age demographic gave the researcher an idea of the maturity of the sample and an understanding of the composition of the staff within welfare NPOs in South Africa. The occupation of the respondent allowed an understanding of the person's role and responsibility within the organisation which provided a good metric as to whether the survey had reached the target respondents within the organisation as per the research design. The qualification gave a good breakdown of the skill set of the welfare NPO sector as well as looked at the policies that this skill set managed or implemented. The last characteristic was the number of years the respondent had been at the organisation – this was a view into the experience level of the individuals within the organisations as well as the maturity of the individual within the organisations and sector.

Table 5.3 shows the age distribution of the respondents. It indicates that 70.2% of employees were between the ages of 31 and 50 years. This was an indicator that

most of the respondents were within a mature age range. Only 9.6% of the respondents were in the peripheral age ranges of between 20 and 30 years and greater than 61 years.

Table 5.3: Age distribution analysis

Age		Frequency	Percent	Cumulative Percent
	20-30	22	5.6	5.6
	31-40	103	26.0	31.6
	41-50	175	44.2	75.8
	51-60	80	20.2	96.0
	61>	16	4.0	100.0
	Total	396	100.0	

Figure 5.1 displays the analysis of the occupations of the respondents. The occupation response rates were as follows: chief finance officers who completed the survey totalled 61.1%, the finance controllers totalled 24.2% and the finance managers totalled 11.4%. Chief executive officers and volunteer consultants made up 3.3% of the remaining respondents. The total number of respondents from the finance community who responded to the survey was 96.7% which fulfilled one of the aims of the survey.

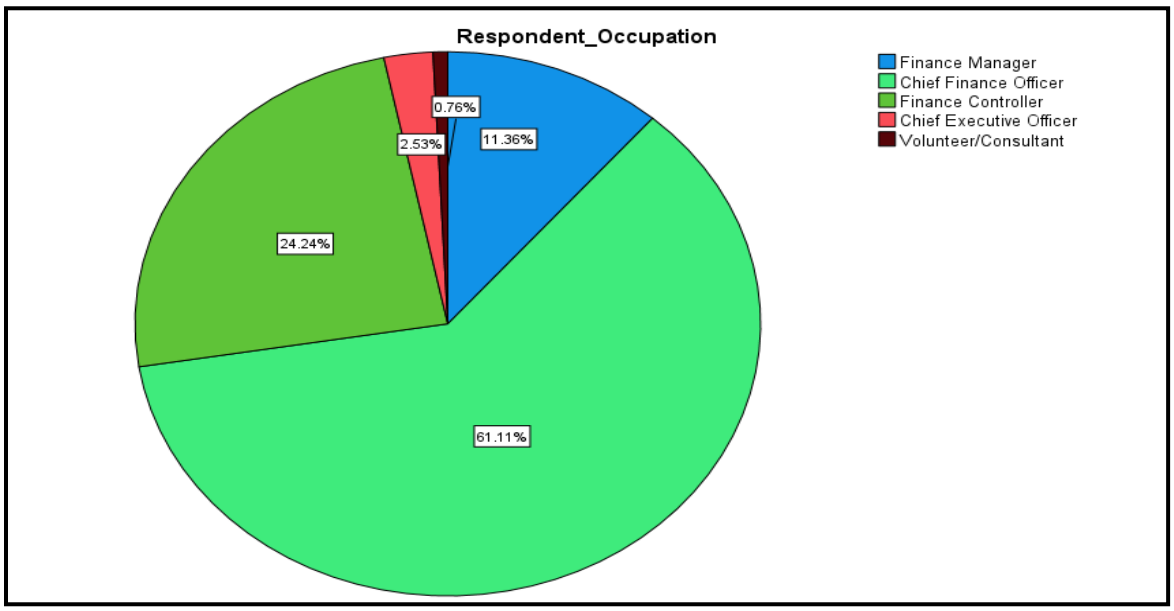

Figure 5.1: Respondents' occupations

Considering that the respondents targeted were senior finance individual decision-makers, the highest qualification responses mirror this trend: 59.3% were postgraduates and 36.9% were graduate respondents as illustrated in Table 5.4. These percentages align with the aim of the survey which was to address the target population based on educational qualification.

Table 5.4: Analysis of qualification of respondents

Qualification		Frequency	Percent	Cumulative Percent
	Matric/Diploma	2	.5	.5
	Graduate	146	36.9	37.4
	Postgraduate	235	59.3	96.7
	Masters/Doctorate	13	3.3	100.0
	Total	396	100.0	

By analysing the years of experience of the respondents, a level of confidence in the respondents' skill level was provided. Over 32% of the respondents had between 6 and 10 years of experience and 47% had between 11 and 20 years of experience. Therefore, the majority of just under 80% had experience ranging from 6 to 20 years (Table 5.5).

Table 5.5: Respondents' work experience

Years of Experience		Frequency	Percent	Cumulative Percent
	<=5	61	15.4	15.4
	6-10	130	32.8	48.2
	11-20	186	47.0	95.2
	21-30	18	4.5	99.7
	31>	1	.3	100.0
	Total	396	100.0	

The evaluation of the four criteria – age, job function, qualification and work experience – of the sample population within provinces provided a view of the sample population that responded to the electronic survey. The survey was completed by a highly qualified group of finance individuals who covered the full

spectrum of the sample strata of South Africa. Based on this, the defined aims of the sample criteria and coverage were met.

With this level of diversity from the sample population, the next step was to establish the reliability, normality and variation of the questionnaire before a detailed analysis was done to test the hypotheses and the relevant policy coverage of the working capital and liquidity of welfare NPOs in South Africa as per the objectives of the research study.

5.3.2 Reliability

To determine the internal consistency (reliability) of the study scales, a computation of Cronbach's Alpha (α) coefficient variables had to be performed. The α coefficients for all four sets of working capital component scales were assessed and found to be the following: cash management = 0.834, accounts receivable = 0.816, inventory management = 0.754 and accounts payable = 0.880 (Figure 5.2).

Cash Management - Cash

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.834	.842	4

Accounts Receivable - AR

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.816	.819	5

Inventory Management - INV

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.754	.766	5

Accounts Payable - AP

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.880	.885	5

Figure 5.2: Reliability test results

According to (Cooksey & McDonald, 2019:805) the Cronbach rating $\alpha \geq 0.9$ is excellent, $0.9 < \alpha \geq 0.8$ is good, $0.8 < \alpha \geq 0.7$ is acceptable and $0.7 < \alpha \geq 0.6$ is questionable. Based on these guidelines, three of the scales (cash management, accounts receivable and accounts payable) were good and one of them (inventory management) was in the acceptable range

5.3.3 Descriptive statistics of survey characteristics

Descriptive statistics, through the mean, mode and medium, are used to display the measure of the central tendency of the survey results. The spread of measure is calculated by the standard deviation which is the total variability of the distribution (Holmes *et al.*, 2018). The mean of the components ranged from 2.6 to 2.8 (Table 5.6). The survey followed a five-point Likert scale which meant the midpoint was 2.5 which is the theoretical medium (midpoint of the scale). The mode is the most common choice. The results indicated that the majority of the responses were above the midpoint of the scale.

Table 5.6: Descriptive statistics per component

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
Cash	396	1.00	5.00	2.6667	1.14461
AR	396	1.00	5.00	2.8020	1.00580
Inv	396	1.00	5.00	2.7803	.88459
AP	396	1.00	5.00	2.8586	1.15292
Valid N (listwise)	396				

The standard deviations of the components ranged from 0.88 for inventory and 1.15 for accounts payable which are within the 65% to 95% quantiles of deviation.

5.3.4 Normality

Before carrying out the tests on the hypotheses, a check of the data for normality needed to be done to determine the applicability of either parametric tests

(Pearson) or non-parametric (Spearman) testing. This was done using Kolmogorov-Smirnov and Shapiro-Wilk tests. The test results of the Kolmogorov-Smirnov and Shapiro-Wilk tests revealed that the data were not normality distributed as the results were not ($p > 0.05$). The results for both tests irrespective of sample size were $p < 0{,}001$ which means the data are not normally distributed. (Table 5.7).

Table 5.7: Test for normality

Tests of Normality

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Cash	.244	396	<,001	.857	396	<,001
AR	.178	396	<,001	.905	396	<,001
Inv	.111	396	<,001	.931	396	<,001
AP	.178	396	<,001	.896	396	<,001

a. Lilliefors Significance Correction

This was further verified with the normal Q-Q plots from SPSS (Appendix 6) which showed the distribution of data for cash, accounts receivable, inventory and accounts payable. This implied that the variables were not normally distributed and non-parametric testing (Spearman correlation) could be applied; this was further evaluated with a comparative of Kruskal-Wallis and ANOVA testing. This was done as the data were established to be non-parametric and within some groups, the sample size was smaller than 30. Dual testing was considered a safer option.

5.3.5 Kruskal-Wallis tests

The Kruskal-Wallis test is used for non-parametric data where there are three groups or more. Four groups – cash, inventory, accounts receivable and accounts payable – were used in the current research. The test is equivalent to the ANOVA test and one-way ANOVA on ranks, which is based on ranking data if data in the

groups are not related and independent of one another. The test determines the statistical difference between the medians of three or more independent groups. The post hoc test performs multiple comparisons between all the combinations of the groups. The results of the Kruskal-Wallis test are presented in Table 5.8.

Table 5.8: Kruskal-Wallis test

Test Statistics[a,b]

	Cash	AR	Inv	AP
Kruskal-Wallis H	.725	.551	1.875	1.157
df	3	3	3	3
Asymp. Sig.	.867	.908	.599	.763

a. Kruskal Wallis Test

b. Grouping Variable: Liquidity_status

The mean rank for the groups ranged between 195 and 219 for the four levels of liquidity between the groups. The test results revealed a p-value of >0.05 for all variables: cash – p-value = 0.867; accounts receivable – p-value = 0.908; inventory – p-value = 0.599; accounts payable – p-value = 0.763. Therefore, the difference was not statistically significant.

5.3.6 One-way analysis of variance

The next test that was carried out was the variance test which tests each group – cash, accounts receivable, inventory and accounts payable – to understand the variances among each of the groups at the liquidity level. The reason this test was done was that the sample sizes in each level of liquidity were not all greater than 30. The test used to establish the p-value of each group was the ANOVA test. If the p-value = < 0.05 then there is a significant difference between the groups being compared. ANOVA assists a researcher to establish differences in groups but is not a direct indicator of where the difference is. For this purpose, significant ANOVAs need to be followed up by post hoc analyses.

One of the assumptions of an ANOVA is that the variances are equally distributed within the groups. This is tested by Levene's test; the results are presented in Table

5.9. Levene's test for the equality of variances indicated that this assumption was met for all the variables (p > 0.05).

Table 5.9: Levene's test – homogeneity of variances

Tests of Homogeneity of Variances

		Levene Statistic	df1	df2	Sig.
Cash	Based on Mean	.880	2	393	.416
AR	Based on Mean	.069	2	393	.933
Inv	Based on Mean	.189	2	393	.828
AP	Based on Mean	1.288	2	393	.277

The descriptive statistics which depict the main components of standard deviation and the mean among the various groups are presented in Table 5.10.

Table 5.10: Descriptive for liquidity level

Descriptives

		N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
						Lower Bound	Upper Bound		
Cash	<1	173	2.6272	1.18971	.09045	2.4486	2.8057	1.00	5.00
	= 1	84	2.6399	1.07990	.11783	2.4055	2.8742	1.00	5.00
	>1	139	2.7320	1.13038	.09588	2.5424	2.9216	1.00	5.00
	Total	396	2.6667	1.14461	.05752	2.5536	2.7797	1.00	5.00
AR	<1	173	2.7618	1.01003	.07679	2.6103	2.9134	1.00	5.00
	= 1	84	2.8595	1.02583	.11193	2.6369	3.0821	1.00	5.00
	>1	139	2.8173	.99345	.08426	2.6507	2.9839	1.00	5.00
	Total	396	2.8020	1.00580	.05054	2.7027	2.9014	1.00	5.00
Inv	<1	173	2.8127	.87581	.06659	2.6813	2.9441	1.00	5.00
	= 1	84	2.7619	.85896	.09372	2.5755	2.9483	1.00	5.00
	>1	139	2.7511	.91520	.07763	2.5976	2.9046	1.00	5.00
	Total	396	2.7803	.88459	.04445	2.6929	2.8677	1.00	5.00
AP	<1	173	2.8104	1.20508	.09162	2.6296	2.9912	1.00	5.00
	= 1	84	2.8405	1.09535	.11951	2.6028	3.0782	1.00	5.00
	>1	139	2.9295	1.12465	.09539	2.7409	3.1181	1.00	5.00
	Total	396	2.8586	1.15292	.05794	2.7447	2.9725	1.00	5.00

The ANOVA test results revealed a p-value of > 0.5 for all variables: cash – p-value = 0.704; accounts receivable – p-value = 0.748; inventory – p-value = 0.811;

accounts payable – p-value = 0.655 (Table 5.11). Therefore, the difference was not statistically significant and no follow-up analyses were performed.

Table 5.11: ANOVA test

ANOVA

		Sum of Squares	df	Mean Square	F	Sig.
Cash	Between Groups	.924	2	.462	.351	.704
	Within Groups	516.576	393	1.314		
	Total	517.500	395			
AR	Between Groups	.589	2	.295	.290	.748
	Within Groups	399.009	393	1.015		
	Total	399.598	395			
Inv	Between Groups	.329	2	.164	.209	.811
	Within Groups	308.757	393	.786		
	Total	309.086	395			
AP	Between Groups	1.128	2	.564	.423	.655
	Within Groups	523.913	393	1.333		
	Total	525.041	395			

5.4 Results on working capital policies

In this section on working capital policies, the research addressed the magnitude of policies implemented in the NPO sector and how they were applied through the demographics of the country concerning the nine strata that had been sampled. The quantum per stratum is understood to provide a good overview of policy application among the different provinces/strata.

The research went on to look at the policymaker involved in the setup of working capital policy in the organisation to understand whether decisions were made by one person or by a collective of members. The frequency of policy reviews to assess the adaptability of organisations to economic changes, an evaluation of which approach of working capital management was being used and the size of the organisation this research had covered were also addressed.

Of the NPOs, 82.8% have formal policies compared to 13.4% that have no policies and 3.8% that have informal policies. This indicated the sector's formality in the

running of the organisations and that they followed a structure base of financial control. The level of policy formality was consistent within the strata or provinces of South African welfare NPOs (Figure 5.3).

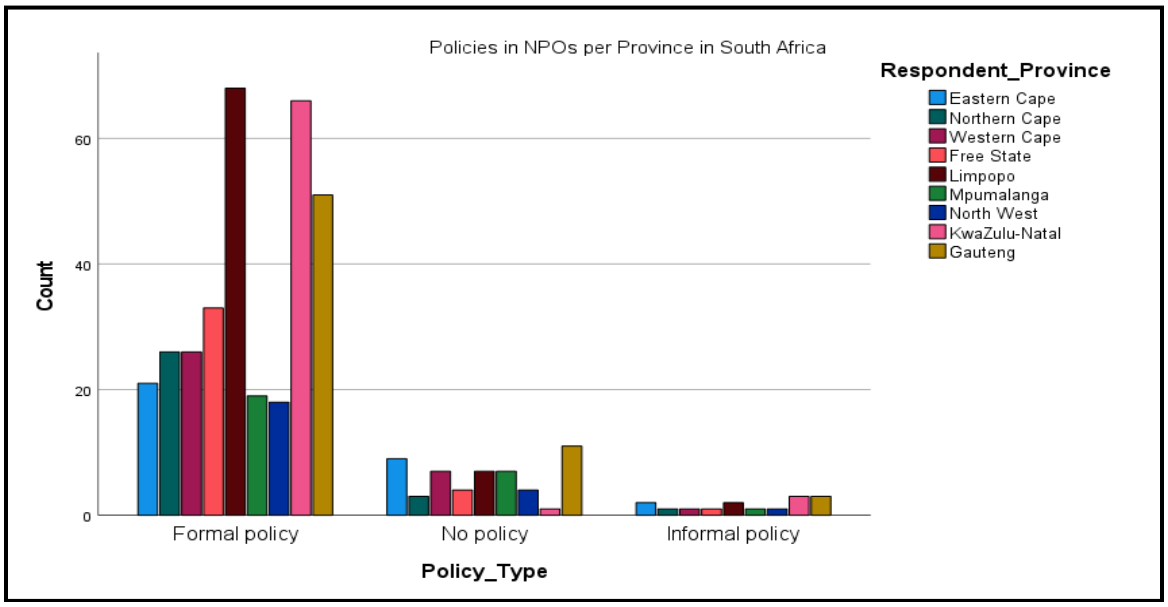

Figure 5.3: Policies per province/strata

The relationship between the policy types administered by organisations per province was evaluated to establish whether this was a contributing factor. It could have been that one or a few provinces were applying the policy while the others were not. The tests indicated that there was an insignificant relationship between these two variables (Chi-square = 24.333, df = 16, $p < 0.082$) (Table 5.12). The phi and Cramer's V revealed an association of 0.248 and 0.175, respectively.

Table 5.12: Relationship between policy type and province/strata.

Chi-Square Tests

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	24,333[3]	16	,082
Likelihood Ratio	27,119	16	,040
Linear-by-Linear Association	1,140	1	,286
N of Valid Cases	396		

a. 14 cells(51,9 %) have expected count less than 5. The minmum expected count is ,87.

Symmetric Measure

		Value	Approximate Significance
Nominal by Nominal	Phi	,248	,082
	Cramer's V	,175	,082
N of Valid Cases		396	

A detailed split of the policy types per strata/provinces is represented in Table 5.13.

Table 5.13: Cross tabulation policy type by province/strata

Respondent_Province * Policy_Type Crosstabulation

			Policy_Type			
			Formal policy	No policy	Informal policy	Total
Respondent_Province	Eastern Cape	Count	21	9	2	32
		% within Respondent_Province	65.6%	28.1%	6.3%	100.0%
	North Cape	Count	26	3	1	30
		% within Respondent_Province	86.7%	10.0%	3.3%	100.0%
	Western Cape	Count	26	7	1	34
		% within Respondent_Province	76.5%	20.6%	2.9%	100.0%
	Free State	Count	33	4	1	38
		% within Respondent_Province	86.8%	10.5%	2.6%	100.0%
	Limpopo	Count	68	7	2	77
		% within Respondent_Province	88.3%	9.1%	2.6%	100.0%
	Mpumalanga	Count	19	7	1	27
		% within Respondent_Province	70.4%	25.9%	3.7%	100.0%
	North West	Count	18	4	1	23
		% within Respondent_Province	78.3%	17.4%	4.3%	100.0%
	KwaZulu Natal	Count	66	1	3	70
		% within Respondent_Province	94.3%	1.4%	4.3%	100.0%
	Gauteng	Count	51	11	3	65
		% within Respondent_Province	78.5%	16.9%	4.6%	100.0%
Total		Count	328	53	15	396
		% within Respondent_Province	82.8%	13.4%	3.8%	100.0%

Formal policy application ranged from 65.6%, the lowest, in the Eastern Cape to 94.3%, the highest, in KwaZulu-Natal. The highest no-policy implementation was in Eastern Cape at 28.1% while the lowest was in Kwa-Zulu Natal at 1.4%. The highest stratum with informal policies was the Eastern Cape at 6.3%. Based on this, there was no significant deviation in policy application among provinces/strata.

It was then relevant to understand the relationship that existed between the policymakers of the organisation and the size of the organisation that they managed. The tests indicated that there was a strong significant relationship between these two variables (Chi-square = 132.353, df = 15, $p < 0.001$) (Table 5.14). The phi and Cramer's V revealed = < 0.001. The phi and Cramer's V revealed an association of 0.578 and 0.334, respectively, which is a strong association (Cohen,1998).

Table 5.14: Relationship between policymakers and organisation size

Chi-Square Tests

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	132,353[a]	15	<,001
Likelihood Ratio	59,313	15	<,001
Linear-by-Linear Association	,012	1	,913
N of Valid Cases	396		

a. 16 cells(66,7 %) have expected count less than 5. The minmum expected count is ,04.

Symmetric Measure

		Value	Approximate Significance
Nominal by Nominal	Phi	,578	<,001
	Cramer's V	,334	<,001
N of Valid Cases		396	

Based on the data in Table 5.15, the demographic of the decision-makers of the organisations' working capital policies was as follows: the Finance Committee (80.6%) is the most prevalent decision-maker of policies within welfare NPOs in South Africa followed by the Board of Management (9.8%), Chief Finance Office (7.3%) and others (2.3%). Based on the survey responses, finance committees had control of the working capital policies of the NPOs in the welfare NPOs in South Africa.

Table 5.15: Cross tabulation of policymakers by organisation size

Policy_Setup * Organisation_Size Crosstabulation

		Organisation_size				
		>1 mil <25 mil	> 25 mil	> 100mil <	> 200 mil	Total
Board of Management	Count	19	0	20	0	39
	% of Total	4.8%	0.0%	5.1%	0.0%	9.8%
President/Chairman	Count	0	4	0	0	4
	% of Total	0.0%	1.0%	0.0%	0.0%	1.0%
Finance Committee	Count	117	9	185	8	319
	% of Total	29.5%	2.3%	46.7%	2.0%	80.6%
Treasurer	Count	2	0	1	0	3
	% of Total	0.5%	0.0%	0.3%	0.0%	0.8%
Chief Financial Officer	Count	12	6	11	0	29
	% of Total	3.0%	1.5%	2.8%	0.0%	7.3%
Chief Executive Officer	Count	0	2	0	0	2
	% of Total	0.0%	0.5%	0.0%	0.0%	0.5%
Total	Count	150	21	217	8	396
	% of Total	37.9%	5.3%	54.8%	2.0%	100.0%

When the review period for organisations to conduct policy changes was examined, 90.4% conducted their reviews annually and 2% half-yearly; only 1% of organisations reviewed their policies monthly or quarterly (Table 5.16).

Table 5.16: Policy review period

Period		Frequency	Percent	Cumulative Percent
	Monthly	2	.5	.5
	Quarterly	2	.5	1.0
	Half-yearly	8	2.0	3.0
	Annually	358	90.4	93.4
	Whenever necessary	26	6.6	100.0
	Total	396	100.0	

Based on the requirements of the IFRS for SMEs, finance committees must meet to ratify their annual financial statements yearly (SAIBA, 2023). This statutory requirement appears to be the rationalising factor for the yearly policy reviews.

Figure 5.4 indicates that 54.5% of organisations applied a conservative approach to working capital management, followed by 34.3% that applied a moderate approach and 10.9% an aggressive approach. Only 0.3% applied a policy which changes over time approach.

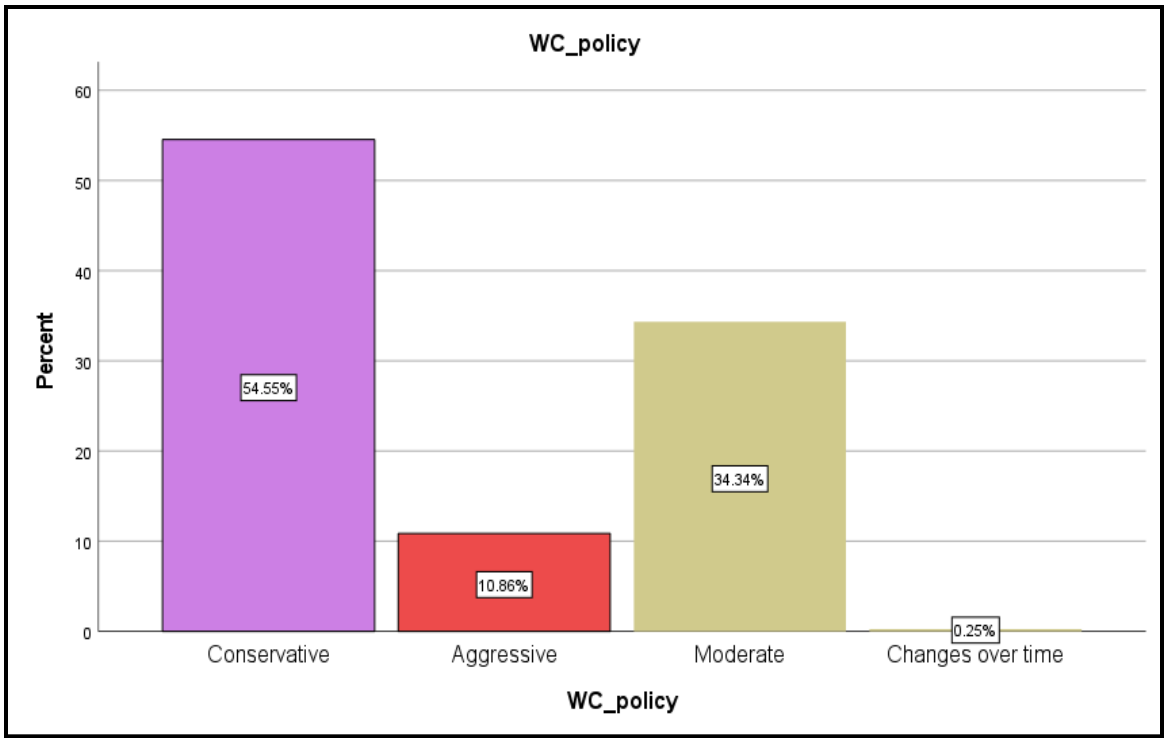

Figure 5.4: Working capital policy approach

Table 5.17 indicates the size of organisations according to ZAR value. Only 2% of organisations in the study had revenue greater than ZAR200 million while the majority (54.8%) had a revenue base of between ZAR100 million and ZAR200 million. The second largest coverage by revenue – between ZAR1 million and ZAR25 million – was 37.9%. Based on this coverage, the study achieved covering small organisations of ZAR1 million to large organisations which are greater than ZAR200 million. This provides a good sample range of organisations' sizes based on revenue.

Table 5.17: Size of the organisations by ZAR value analysis

ZAR value	Frequency	Percent	Cumulative Percent
>1 mil <25 mil	150	37.9	37.9
> 25 mil <100 mil	21	5.3	43.2
> 100mil < 200 mil	217	54.8	98.0
> 200 mil	8	2.0	100.0
Total	396	100.0	

The questions raised about organisation size, type of working capital policy adopted, policy type, who is responsible for policy formation and at what frequency policies were reviewed delivered the following predominant response: the size of the organisations was large – between ZAR100 million and ZAR200 million; the organisations followed a formal policy structure which applied a mostly conservative working capital approach managed by finance committees; policies were reviewed yearly.

5.5 Working capital components

Part of the second objective of the research question which guided the study was to understand what type of policies or approaches were used to manage each component of working capital. This section presents a systematic review of each component of working capital as it was analysed in the general literature and corporate review sections. First, the current assets of cash management, accounts receivable and inventory are reviewed. This is followed by the current liabilities – accounts payable and short-term liabilities. This gives substance to the overall working capital approach applied and the individual policy application per component of working capital.

5.5.1 Cash management

Cash management is the ability to use available cash as effectively as possible or the ability to use current cash to generate more cash/income. The components of cash surplus are highlighted to understand how important it is and how it is important to management. Part of effective management of cash is the utilisation of planning tools which are budgets or forecasts; these were tested as part of cash management. How ratio analysis, which included trending from previous periods/years, was used in cash management was addressed. The last area that was focused on was the use of free cash flow – defined as ‘cash is king’ in the questionnaire.

Question 11 of the survey was formulated to understand four key areas of cash management – cash surplus, preparation of budgets and forecasts, use of liquidity ratios and how important cash was to organisations. The rating scale used was 'never', 'rarely', 'sometimes', 'often' and 'always'. The analysis used 'often' and 'always' on the scale as the positive end while 'never' and 'rarely' were used as the negative end of the decision-making choice.

The results (Figure 5.5) revealed that cash surplus had a 50.3% positive decision-making option which was in line with the next question that cash was valued highly (57.3%). This means that cash has a large consideration value among NPO decision-makers within welfare organisations in South Africa. The next responses raised a concern: cash planning with the use of budgets and forecasts had a much lower response at 43.5%, which is below the medium. This was further cemented by the fact that the liquidity ratio had an equivalent 43.1% focus as well. This type of response is contrary to citations in studies by Poojitha (2019:406) and Srividhya *et al*. (2020) on ratios used in organisations to achieve positive results.

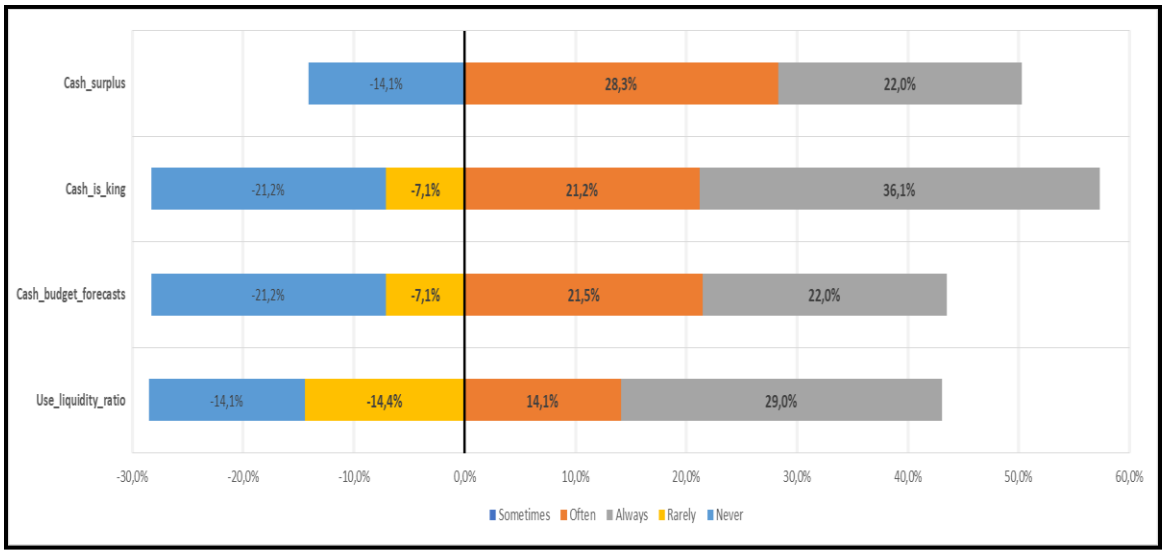

Figure 5.5: Cash drivers

It was further relevant to understand the relationship that existed between the organisation's size and the cash threshold held among organisations. The test indicated that there was a strong relationship between these two variables (Chi-

square = 99.943, df = 6, p < 0.001). The phi and Cramer's V reveal an association of 0.500 and 0.353, respectively.

Table 5.18: Relationship between organisation size and cash threshold

Chi-Square Tests

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	99,943[3]	6	<,001
Likelihood Ratio	132,539	6	<,001
Linear-by-Linear Association	81,498	1	<,001
N of Valid Cases	396		

a. 4 cells(33,3 %) have expected count less than 5. The minmum expected count is ,81.

Symmetric Measure

		Value	Approximate Significance
Nominal by Nominal	Phi	,500	<,001
	Cramer's V	,353	<,001
N of Valid Cases		396	

Cash is a major driver in any organisation and needs good planning, therefore, a reserve needs to be held within the organisation's bank accounts for operating expenses. The amount is based on monthly expenses to pay all regular expenses. The analysis (Table 5.19) revealed that organisations with under ZAR100 million revenue plan for between one (1) and two (2) months while larger organisations which have over ZAR100 million revenue plan for between two (2) and three (3) months for accumulated operating expenses. This is in line with the study by Njiru and Githinji-Muriithi (2018) which concluded that organisations need to have a future view of operating expenses. The data revealed that 75.8% of all organisations hold two (2) months of operating expenses.

Table 5.19: Crosstabulation cash threshold by organisation size

	Organisation_size								Total	
	>1 mil <25 mil		> 25 mil <100		> 100mil < 200		> 200 mil			
	N	%	N	%	N	%	N	%	N	%
1 month of operating expenses	33	22.0%	7	33.3%	0	0.0%	0	0.0%	40	10.1%
2 months of operating expenses	117	78.0%	14	66.7%	162	74.7%	7	87.5%	300	75.8%
3 months of operating expenses	0	0.0%	0	0.0%	55	25.3%	1	12.5%	56	14.1%
Total	150	100.0%	21	100.0%	217	100.0%	8	100.0%	396	100.0%

It was additionally important to grasp the connection between an organisation's size and the amount of cash surplus it held. The tests indicated that there is a strong relationship between these two variables (Chi-square = 283,362, df = 6, p < 0.001). The phi and Cramer's V reveal an association of 0.846 and 0.598, respectively, which is a strong association (Cohen,1998).

Table 5.20: Relationship between organisation size and cash surplus

Chi-Square Tests

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	283,362[3]	6	<,001
Likelihood Ratio	375,970	6	<,001
Linear-by-Linear Association	28,449	1	<,001
N of Valid Cases	396		

a. 3 cells(25,0 %) have expected count less than 5. The minmum expected count is 2,10.

Symmetric Measure

		Value	Approximate Significance
Nominal by Nominal	Phi	,846	<,001
	Cramer's V	,598	<,001
N of Valid Cases		396	

The survey further aimed to understand how surplus cash was managed. The response (Table 5.21) was that smaller organisations just leave cash in their current account while larger organisations manage their cash in call or money market accounts which gives them the ability to earn interest on unused cash. Larger organisations of over ZAR200 million have a split preference of 75%

call/money accounts and 25% fixed-term deposits. Some small organisations (38.7%) also use fixed-term investment options.

Table 5.21: Management of surplus cash

How surplus cash is managed	Organisation_size								Total	
	>1 mil <25 mil		> 25 mil <100		> 100mil < 200		> 200 mil			
	N	%	N	%	N	%	N	%	N	%
Leave in current account	91	60.7%	13	61.9%	0	0.0%	0	0.0%	104	26.3%
Deposit in call/money market account	1	0.7%	2	9.5%	178	82.0%	6	75.0%	187	47.2%
Invest for fixed term	58	38.7%	6	28.6%	39	18.0%	2	25.0%	105	26.5%
Total	150	100.0%	21	100.0%	217	100.0%	8	100.0%	396	100.0%

Correlation coefficients are used to establish the significance, size and direction of the relationship between continuous variables. A correlation of > 0 to 1 is a positive association measure while a measure of < 0 to -1 is a negative association measure and 0 is where there is no association (Holmes *et al*., 2018:554). According to Cohen (1988), the interpretation of correlation could be interpreted as follows: r = 0.10 as small magnitude, r = 0.30 as medium magnitude and r = 0.50 as large magnitude.

The examination of the correlation among the cash variables of cash surplus, cash budgets and forecasts, use of liquidity ratios and free cash flow ideology with the Spearman rho test revealed the following relationships (Table 5.22).

Table 5.22: Spearman's correlations between cash drivers

Correlations

			Cash_surplus	Cash_budget_ forecasts	Use_liquidity_r atio	Cash_is_king
Spearman's rho	Cash_surplus	Correlation Coefficient	1.000			
		Sig. (2-tailed)	.			
		N	396			
	Cash_budget_forecasts	Correlation Coefficient	.814	1.000		
		Sig. (2-tailed)	<,001	.		
		N	396	396		
	Use_liquidity_ratio	Correlation Coefficient	.536	.338	1.000	
		Sig. (2-tailed)	<,001	<,001	.	
		N	396	396	396	
	Cash_is_king	Correlation Coefficient	.547	.420	.474	1.000
		Sig. (2-tailed)	<,001	<,001	<,001	.
		N	396	396	396	396

Cash surplus had the largest magnitude of association with cash budgets ($r = 0.814$, $p < 0.05$) which implies that as the cash surplus factor increases so the cash budgeting factor increases. There was also a large effect (Cohen, 1988) between cash surplus and the use of liquidity ratios ($r = 0.536$, $p < 0.05$) and cash surplus and free cash flow ($r = 0.547$, $p < 0.05$). A medium magnitude was revealed between the free cash flow and the use of budgets ($r = 0.420$, $p < 0.05$) and free cash flow and the use of liquidity ratios ($r = 0.474$, $p < 0.05$). A smaller magnitude was noted between the use of cash budgets and liquidity ratios ($r = 0.338$, $p < 0.05$). All the variables show a positive and statistically significant correlation with cash surplus and cash budgeting having a large correlation of 0.814 (Cohen, 1988) and cash budgets and liquidity ratios (0.338), the lowest.

5.5.2 Accounts receivable

The monitoring of accounts receivable is an indicator of the inflow of cash within an organisation. The questions in this section addressed the aggressive ability of organisations to manage the inflow of cash. They also looked at the methodologies applied to monitor accounts payable as these tools are enablers to effective collections and follow-ups on outstanding amounts. Figure 5.6 indicates that the majority of the respondents (64.7%) used the collection period to monitor accounts receivable while the rest (35.3%) used ageing schedules to collect accounts

receivable. None of the respondents used income monitoring or any other options. Accounts receivable was a key driver of cash accumulation and was only limited to two options, which reveals a major gap in methodology application.

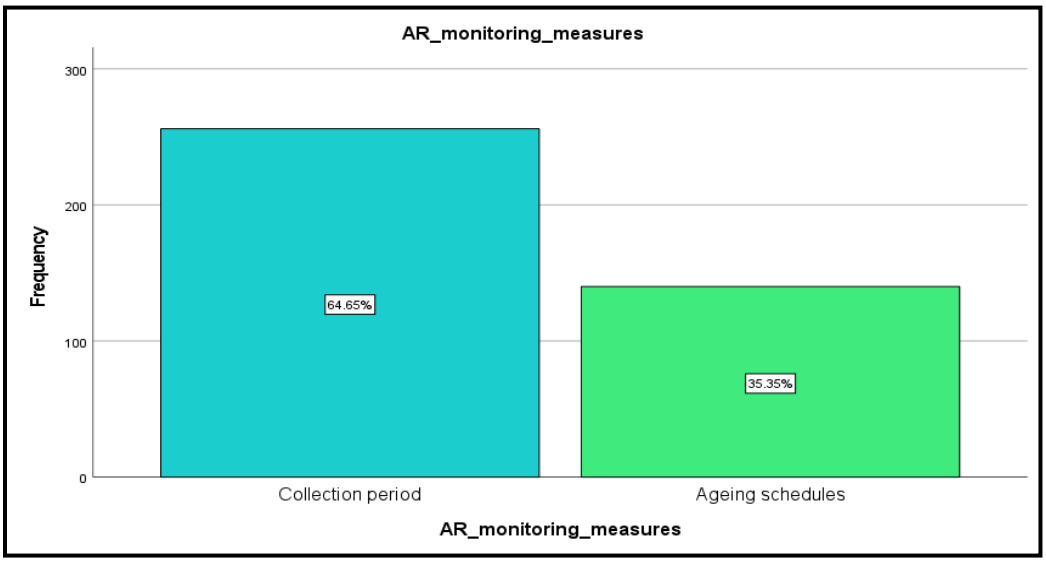

Figure 5.6: Accounts receivable monitoring

The same rating scale method used in cash was applied to accounts receivable and the following was the outcome (Figure 5.7).

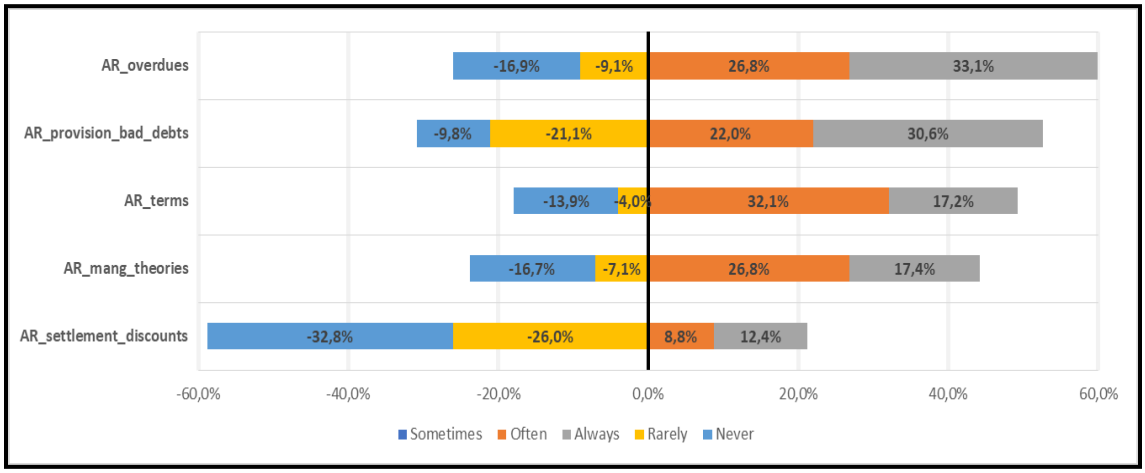

Figure 5.7: Debtor management key drivers

Accounts receivable overdue and bad debt provision were ranked at 59.9% and 52.6% positively, respectively. Thus, a high level of concern over unpaid accounts

and the provision for bad debts existed. There was uncertainty in 32.8% of the responses regarding accounts receivable terms being below the medium and only reflecting a 49.3% positive sentiment. This was also confirmed by the low level of focus on management theories (44.2%) and an even lower focus on settlement discounts with a 58.8% negative focus.

Although 91.6% of NPOs have debtor payment terms of 30 days and only 3.28% have cash or 15-day payment terms, there should be a strong focus on payment terms but, as in the previous question, less than 50% of the respondents placed a high emphasis on terms (Figure 5.8). Only 5% provided debtor payment terms of over 60 days.

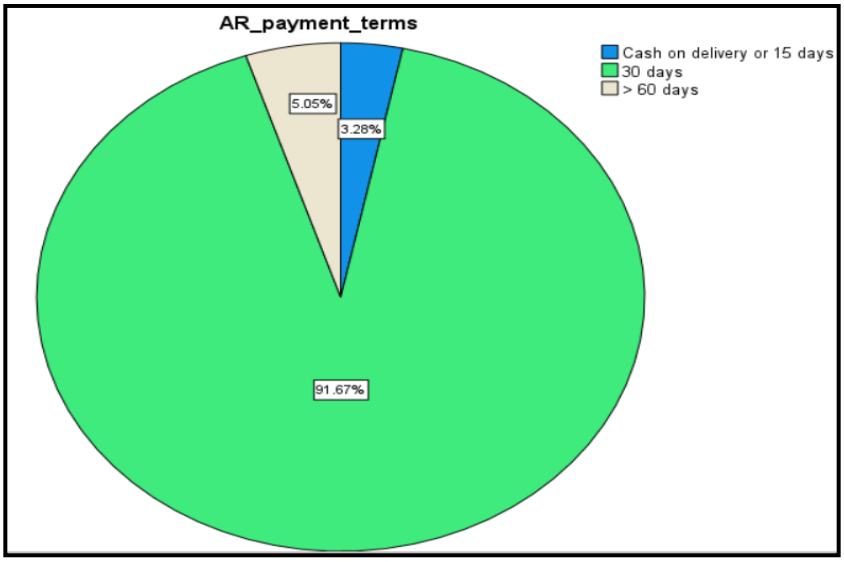

Figure 5.8: Debtors' terms of payment

A point of interest was the limited use of accounts receivable monitoring and the lack of focus on payment terms. This is an indicator of inattentive accounts receivable policies. Tighter terms with the use of settlement discounts can be a stimulus to trigger cash at a faster pace if the right level of focus is placed on these two key variables equally.

Table 5.23 presents the correlation between accounts receivable drivers. With the components of accounts receivables, the following variables had a largely positive

relationship with one another (Cohen, 1988): settlement discount and overdue (r = 0.512, p < 0.05), AR theories and settlement discounts (r = 0.521, p < 0.05), AR term and AR settlement discount (r = 0.603, p < 0.05) and AR theories and AR terms (r = 0.677, p < 0.05). The other associations were medium except for the only small one which was provision for bad debts and management theories (r = 0.224, p < 0.05).

Table 5.23: Spearman's correlation between accounts receivable drivers

Correlations

			AR_overdues	AR_provision_bad_debts	AR_terms	AR_mang_theories	AR_settlement_discounts
Spearman's rho	AR_overdues	Correlation Coefficient	1.000				
		Sig. (2-tailed)	.				
		N	396				
	AR_provision_bad_debts	Correlation Coefficient	.320	1.000			
		Sig. (2-tailed)	<,001	.			
		N	396	396			
	AR_terms	Correlation Coefficient	.383	.331	1.000		
		Sig. (2-tailed)	<,001	<,001	.		
		N	396	396	396		
	AR_mang_theories	Correlation Coefficient	.392	.224	.677	1.000	
		Sig. (2-tailed)	<,001	<,001	<,001	.	
		N	396	396	396	396	
	AR_settlement_discounts	Correlation Coefficient	.512	.452	.603	.521	1.000
		Sig. (2-tailed)	<,001	<,001	<,001	<,001	.
		N	396	396	396	396	396

The theoretical expectation was that a very strong association should be found between settlement discounts and overdue or accounts receivable terms as they are complementary main key drivers but this was not the case in this analysis. The variables showed a positive and statistically significant correlation but not a very strong correlation for the main key variable drivers.

5.5.3 Inventory management

Inventory management is defined as having just the right amount of inventory to facilitate customers' demands. Therefore, the right replenishment method must be used. The questions raised in this section were to improve the understanding of the impact of costs, stock levels, inventory planning, borrowing to purchase inventory and finally an understanding of which literature inventory methods were

used. Figure 5.9 reveals that 44.1% of organisations used an ‘as and when required’ method followed closely by 33.3% that used ‘computerised controlled systems’ and 19.1% that used ‘reorder policy’. Only 3.2% of organisations used cost-balancing models for inventory replenishment. Based on the comparison of ‘as and when required’ and using costs as a factor of the inventory replenishment method, costs were not an underlining factor when making inventory replenishment decisions for welfare NPOs.

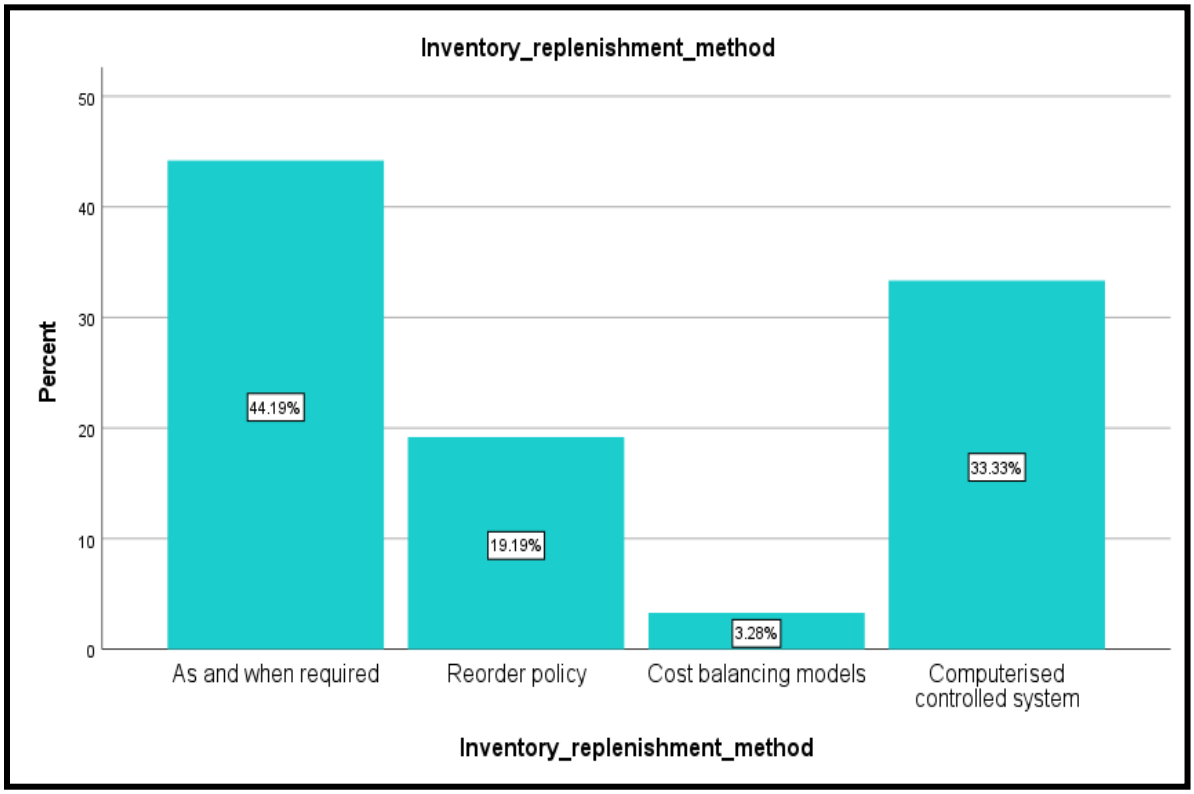

Figure 5.9: Inventory replenishment policy

When establishing which criteria NPOs used to find their inventory policies, a huge 92.9% of organisations used their organisations' income as the base for policy formulation (Figure 5.10). None of the organisations used criteria such as inventory levels or their borrowing ability to formulate policy. Only 7% used inventory cost as the basis of inventory policy. This is in line with the previous question on inventory replenishment where only 3.28% used cost as a decision-making tool. Based on the policy of inventory management and the replenishment method considering

costs, it is evident that cost is not a key decision-making variable in inventory management in NPO welfare organisations in South Africa.

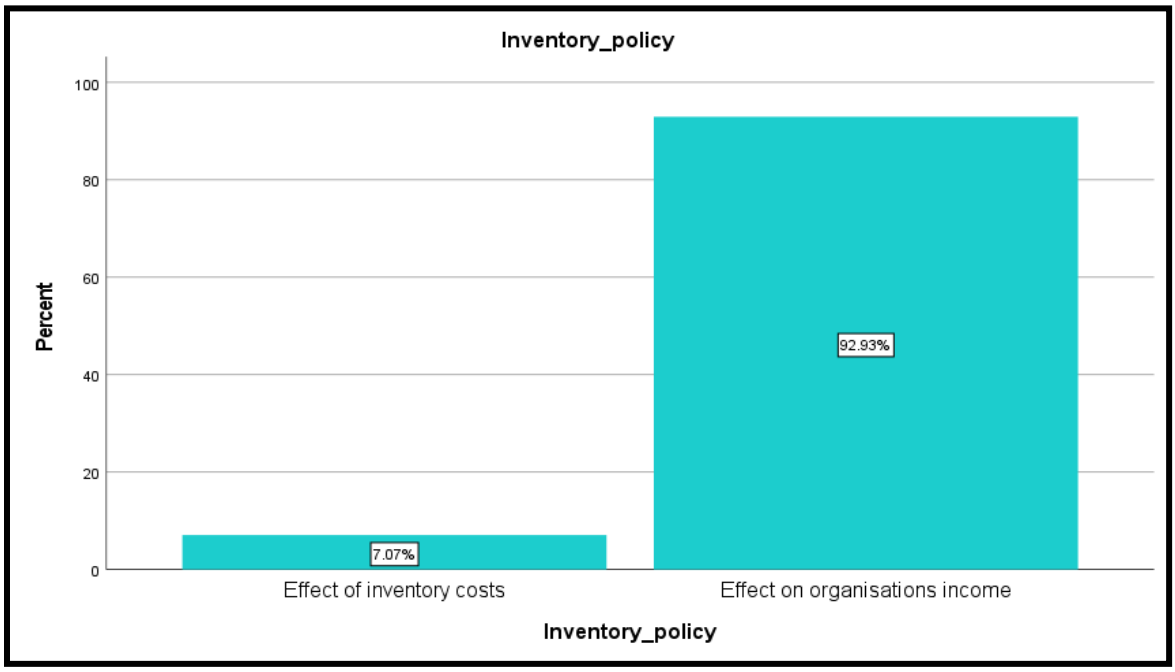

Figure 5.10: Changes in inventory policy

An evaluation of which characteristics had high priorities was evident in Question 20, which re-affirmed the responses to the previous two questions with only 21.5% of respondents inclined to use inventory purchasing discounts (Figure 5.11).

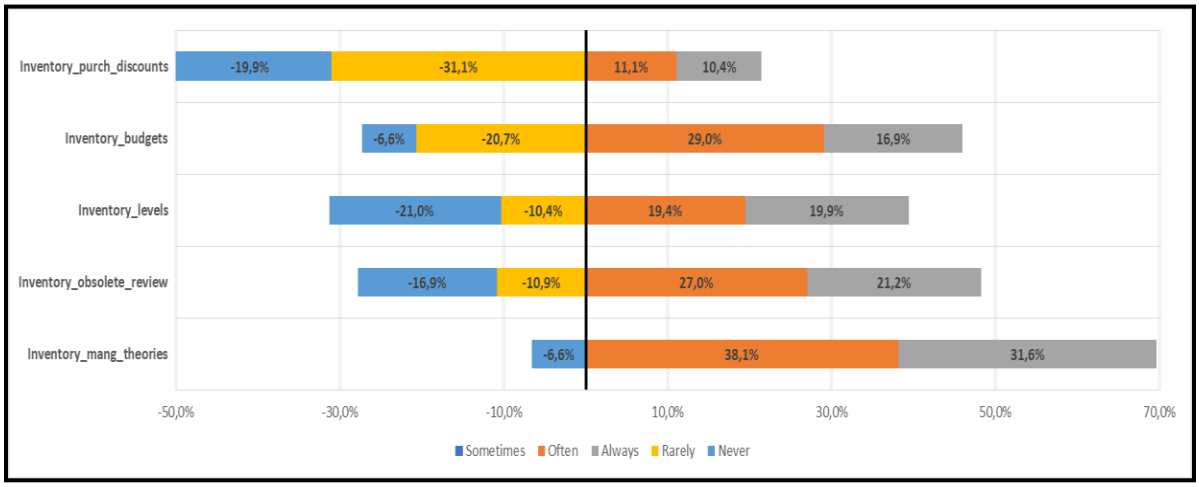

Figure 5.11: Inventory management key drivers

Less than 50% of organisations used an inventory budget which is in line with the purchasing of inventory ‘as and when required’. Inventory levels were monitored with only a 39.4% priority while inventory obsolescence had a 48.2% positive response rate. As this sector involves welfare organisations, a high level of service is rendered by this sector as it looks after many people, therefore, goods supplied need to be within acceptable quality limits. This would be the reason for the high obsolescence checking.

On the use of inventory management theories, the positive responses received were 69.7% (Figure 5.11) which is not in line with the inventory methodologies applied as well as the inventory policy setup. Inventory levels also had a 31.4% negative concentration and inventory budgeting had a 27.3% negative response. This, therefore, contradicts the relationship with inventory theories that have such a high level of concentration.

Within inventory, as indicated in Table 5.24, the only large magnitude effect of association is with management theories and purchase discounts as well as obsolescence reviews with a ($p = 0.686$, $r < 0.01$) and ($p = 0.509$, $r < 0.01$), respectively (Cohen, 1988). Other components have a medium to small effect on one another. Based on management theories, a higher magnitude of associations should be between inventory levels, budgets and purchase discounts as they revolve around EOQ, JIT and ABC inventory methodologies which are key drivers of inventory management. This is not evident in the responses survey analysis below.

Table 5.24: Spearman's correlation between inventory key drivers

Correlations

			Inventory_levels	Inventory_budgets	Inventory_mang_theories	Inventory_obsolete_review	Inventory_purch_discounts
Spearman's rho	Inventory_levels	Correlation Coefficient	1.000				
		Sig. (2-tailed)	.				
		N	396				
	Inventory_budgets	Correlation Coefficient	.413	1.000			
		Sig. (2-tailed)	<,001	.			
		N	396	396			
	Inventory_mang_theories	Correlation Coefficient	.194	.211	1.000		
		Sig. (2-tailed)	<,001	<,001	.		
		N	396	396	396		
	Inventory_obsolete_review	Correlation Coefficient	.170	.171	.509	1.000	
		Sig. (2-tailed)	<,001	<,001	<,001	.	
		N	396	396	396	396	
	Inventory_purch_discounts	Correlation Coefficient	.342	.442	.686	.372	1.000
		Sig. (2-tailed)	<,001	<,001	<,001	<,001	.
		N	396	396	396	396	396

5.5.4 Accounts payable

In this section, the aim was to understand how NPOs pay their suppliers for goods and services purchased. The question aimed to understand the methodology applied as well as the practices of outflow of cash as this impacts the liquidity of the organisation. Figure 5.12 depicts that 86.6% of the organisations made payments to their suppliers within a 30-day payment term; only 10.6% applied a greater than 60 days' payment term and only a small proportion of respondents (2.7%) paid on delivery of services or goods. This indicated that the majority of the sector had normal trading terms which were on average 30 days after invoicing or statements.

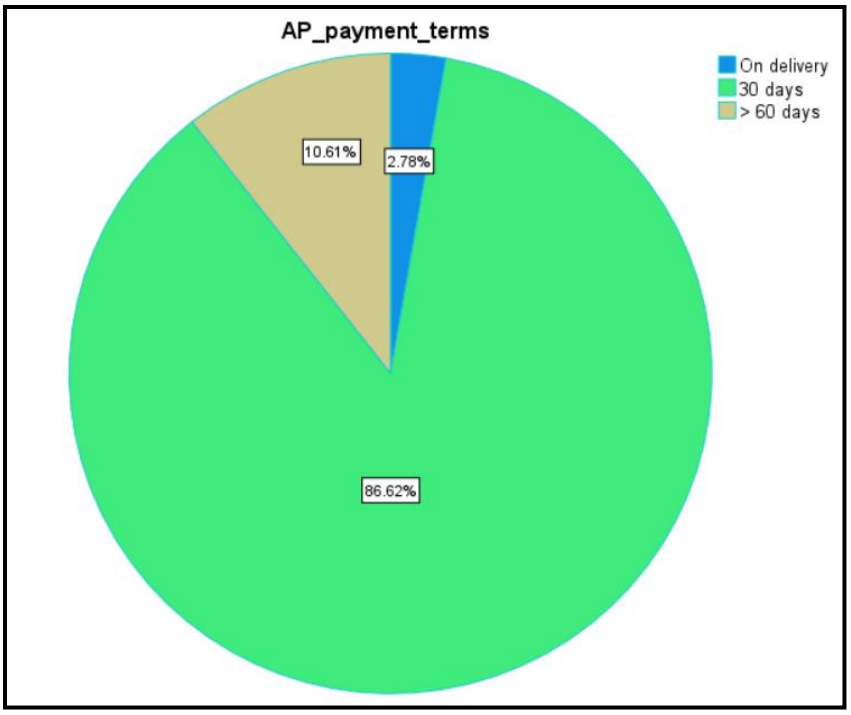

Figure 5.12: Payment of suppliers

Figure 5.13 depicts the analysis of accounts payable key characteristics and reveals that obtaining accounts payable credit facilities is not easy with a 63.9% negative response. A review of payment terms obtained a 43.4% positive response followed by a focus on seasonal accounts payable terms with a 50.3% positive response. The accounts payable credit limit review was lower than seasonal increases in account payables by 6.9%. The obtaining of better payment terms was below the 57.3% positive response rate.

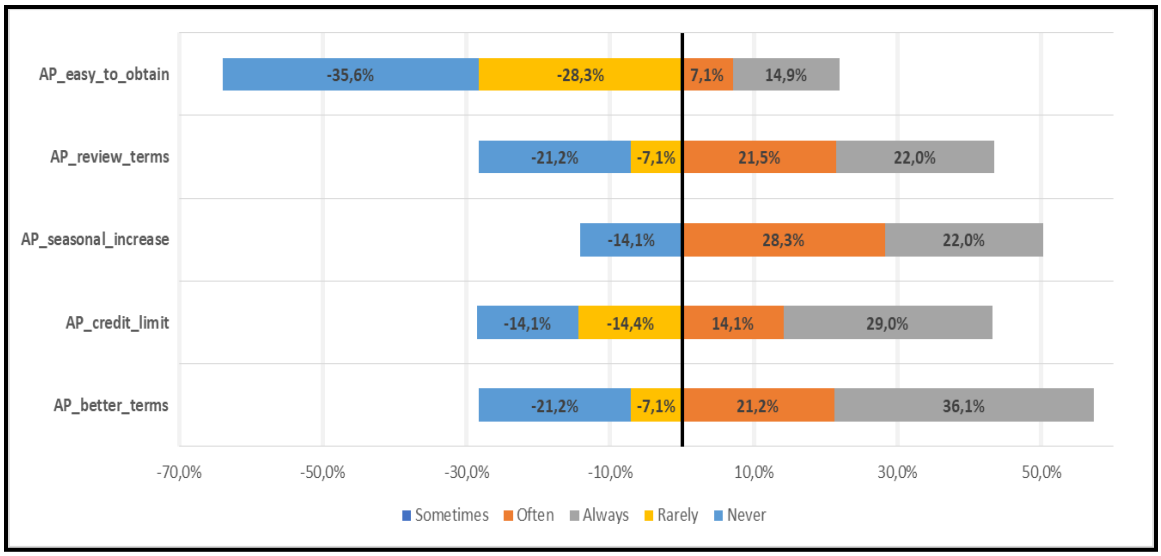

Figure 5.13: Accounts payable management key drivers

Based on these responses the sector can adjust limits during seasonal arrangements but this does not have a high level of positivity on permanent credit limit increases. Organisations also placed a high level of reliance on better payment terms which reveals good communication between suppliers and consumers.

Settlement of accounts payable within the prescribed period has advantages to the debtor as suppliers offer customer discounts. The response to this was an overwhelming 78.03% that always took the discounts by paying on the due date (Figure 5.14). Only 19.95% expressed a sometimes approach to paying on the due date and taking the discount. Just 2% showed no interest in taking the discount. This revealed that the majority tried to meet their obligations by paying on time which indicated that the credit limit terms should show a better improvement.

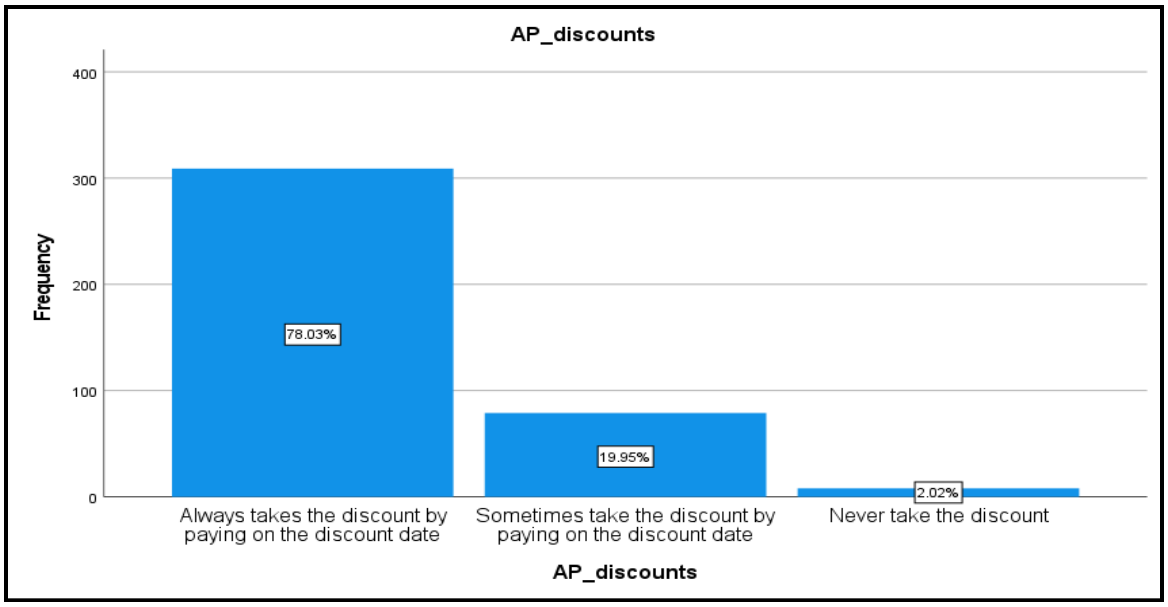

Figure 5.14: Policy on cash discounts

The next question in this section was formulated to understand whether NPOs can get better accounts payable terms as they are involved in the social upliftment of communities. Only 16.67% agreed with this while a huge 50.76% remained neutral and over 32.58% disagreed 16.67% strongly disagreed and 15.91% disagree with this idea (Figure 5.15).

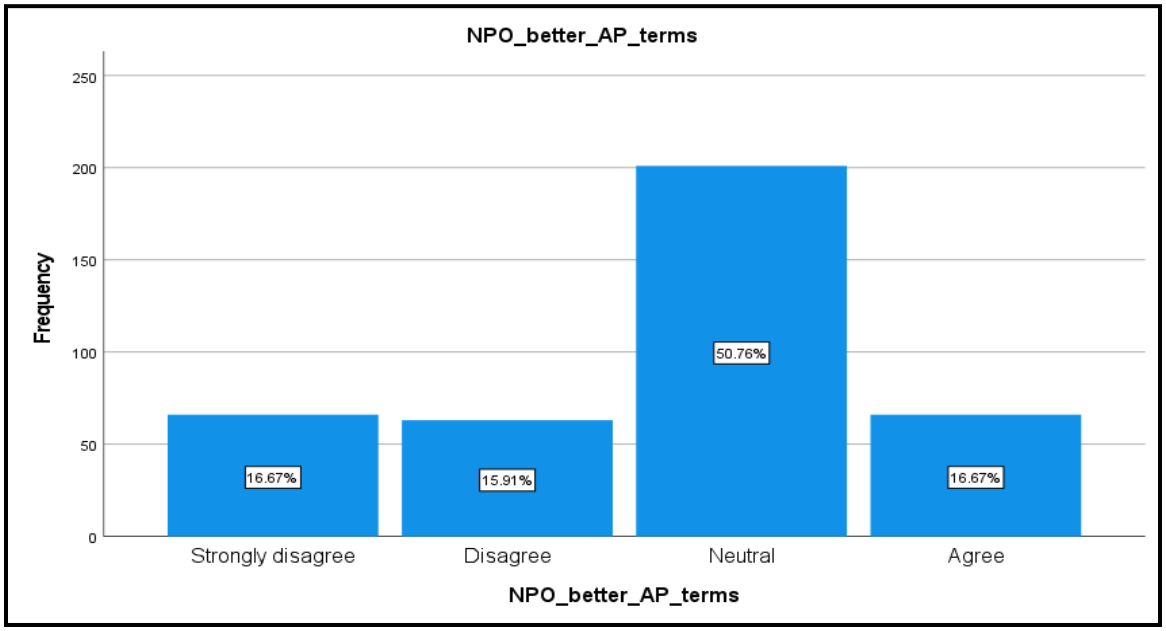

Figure 5.15: Negotiation of terms of payment

The review of the correlations of accounts payable noted a large magnitude association between accounts payable seasonal increases and review of payment terms as well as accounts payable easy to obtain – ($r = 0.814$, $p < 0.01$) and ($r = 0.812$, $p < 0.01$), respectively (Table 5.25). This explains that credit increases during seasonal demand are conventional. A medium correlation was found between other variables, more specifically between better payment terms and credit limits ($r = 0.474$, $p < 0.01$) and accounts payable review of payment terms and credit limits ($r = 0.338$, $p < 0.01$). Based on the literature review, these components should have had a larger association than the results of the survey.

Table 5.25: Spearman's correlation between account payment key drivers

Correlations

			AP_better_terms	AP_credit_limit	AP_seasonal_increase	AP_review_terms	AP_easy_to_obtain
Spearman's rho	AP_better_terms	Correlation Coefficient	1.000				
		Sig. (2-tailed)	.				
		N	396				
	AP_credit_limit	Correlation Coefficient	.474	1.000			
		Sig. (2-tailed)	<,001	.			
		N	396	396			
	AP_seasonal_increase	Correlation Coefficient	.547	.536	1.000		
		Sig. (2-tailed)	<,001	<,001	.		
		N	396	396	396		
	AP_review_terms	Correlation Coefficient	.420	.338	.814	1.000	
		Sig. (2-tailed)	<,001	<,001	<,001	.	
		N	396	396	396	396	
	AP_easy_to_obtain	Correlation Coefficient	.651	.578	.812	.637	1.000
		Sig. (2-tailed)	<,001	<,001	<,001	<,001	.
		N	396	396	396	396	396

5.5.5 Short-term liabilities

Short-term liabilities were the fifth component of working capital to be analysed. The purpose of short-term liabilities is to provide bridging finance between accounts receivable and accounts payable expenses or payment for building up inventory. The questions in this section related to when short-term liabilities are used by organisations in their normal operating cycles to better assess when and where they fit in terms of planning and need. The next question addressed interest costs as this adds to an organisation's expenses and impacts liquidity.

Over 80% of the organisations used short-term financing as part of the cyclical aspect of the organisation's total financing (Figure 5.16). This means that they had a direct dependence on this type of finance. Only 9.3% accepted that short-term financing was a regular and constant part of the organisation's total funding while 9.8% claimed it to be a seasonal part of the organisation's financing. None of the organisations used the as the need arises type of finance option.

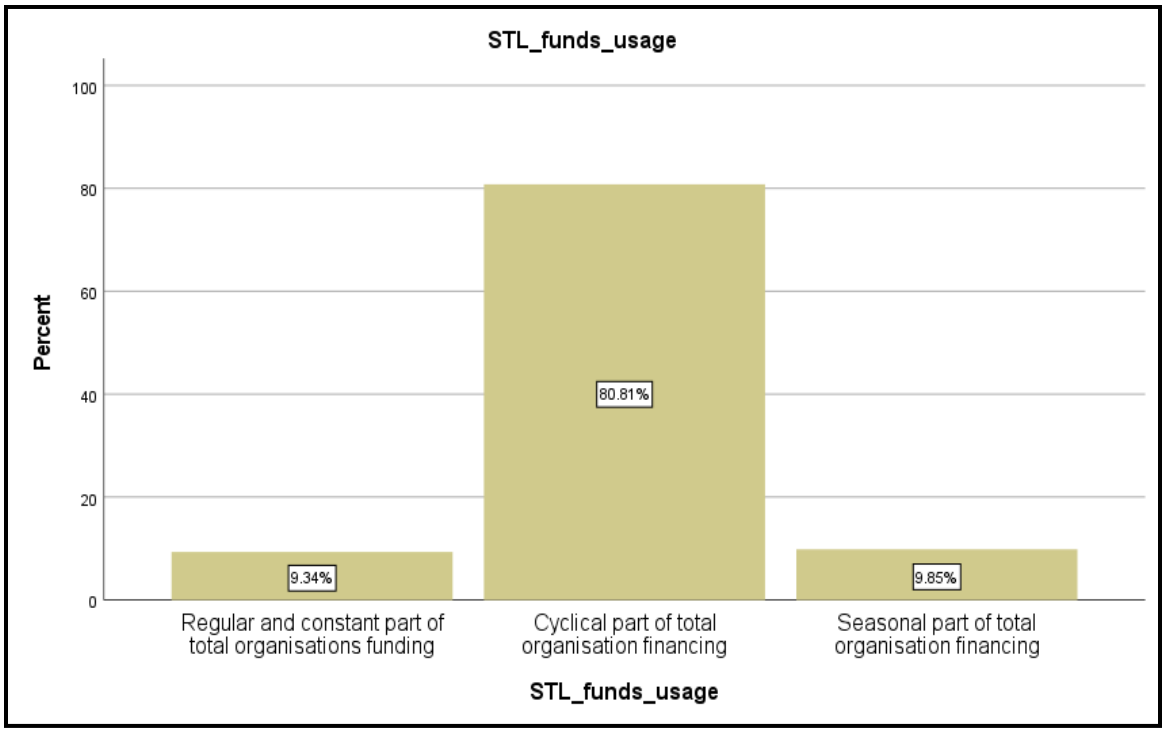

Figure 5.16: Managing short-term loans

The next question was formulated to understand what the cost aspect of using these short-term facilities was as these are a pricier way to finance an organisation's working capital needs. There was a 53.5% response of simple interest being applied to short-term loans while 41.9% had open lines of credit which entailed that they were set flexibly or based on individual credit status with commercial banks (Figure 5.17). Only 4.5% had short-term facilities set up with compensating balance facilities. This is considered the most economical as 26.3% of respondents left money in their current accounts with no interest-bearing opportunity as described earlier in Table 5.21.

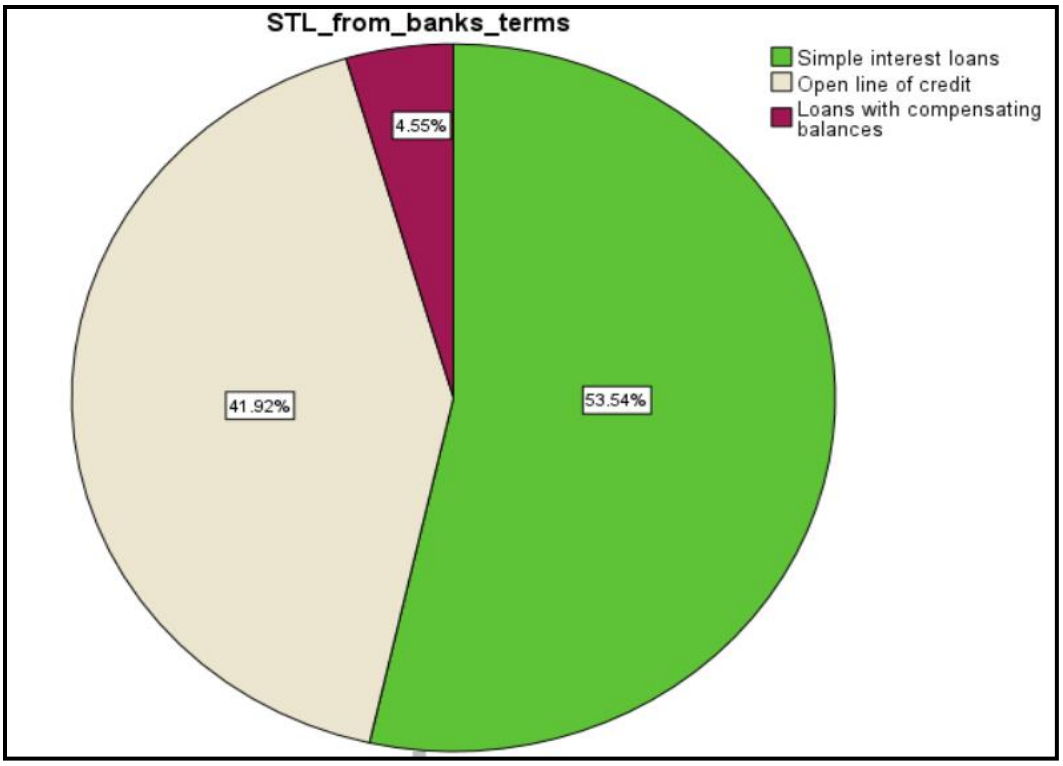

Figure 5.17: Short-term loan options

Short-term loans should be a last resort as this is the priciest of finance mechanisms. When these are negotiated, they should be part of the overall banking facilities as there are better interest rate offerings when part of a consolidated banking facility. Short-term financing is affected by the type of working capital policy approach that an organisation adopts.

5.6 Results on liquidity of working capital

Ratio management is a tool used to trend the liquidity of an organisation over time to assess the predictive patterns of the future. The research assessed how frequently ratio management was used in NPOs to understand how innovative organisations were in terms of financial planning. The research study went on to look at the liquidity impact based on the size of the organisation to assess whether the problem impacted organisations based on size. The analysis continued to address whether liquidity had a relationship with the impact of policy application as set out in the research objective. This was followed by reviewing cash holding to

understand the level of future planning and liquidity. Lastly, the questionnaire asked respondents to rank the importance of each component of working capital; this was to understand how the NPO sector understands the importance of working capital.

Likewise looking at ratios regularly, based on trending or baseline comparisons, is an important monitoring platform. Based on this, a question was formulated to understand the frequency at which organisations monitored their liquidity ratio. Figure 5.18 displays the frequency of liquidity monitoring.

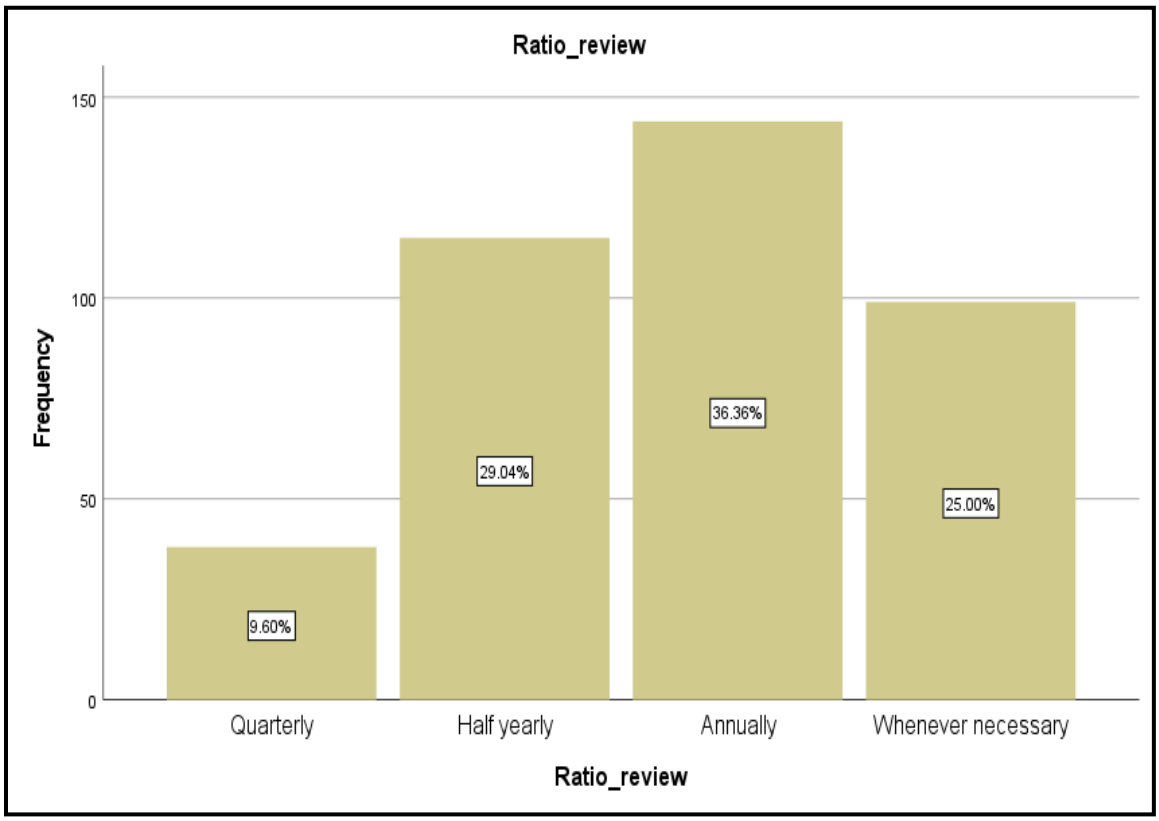

Figure 5.18: Liquidity monitoring

The response was that 36.3% reviewed liquidity ratios annually during annual financial statement sign-off or approval; 29% were done at half-yearly intervals, generally when the mid-year performance of the organisation was reviewed. Only 9.6% did quarterly reviews and 25% of the respondents did ratio reviews on an ad

hoc basis. Ratio analysis is a simple process, but no respondents performed monthly reviews – one of the choices in the options; monthly reviews had a zero-response rate.

It was also important to comprehend the relationship between an organisation's size and its liquidity status (Table 5.26). The tests indicated that there was no significance between the two variables (Chi-square = 5.073, df = 6, p 0.535). The phi and Cramer's V revealed a weak association, 0.113 and 0.080, respectively. This means that liquidity is not discriminated against based on organisational size.

Table 5.26: Relationship between organisation size and liquidity status

Chi-Square Tests

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	5,073[3]	6	,535
Likelihood Ratio	5,280	6	,508
Linear-by-Linear Association	,415	1	,520
N of Valid Cases	396		

a. 4 cells(33,3 %) have expected count less than 5. The minmum expected count is 1,70.

Symmetric Measure

		Value	Approximate Significance
Nominal by Nominal	Phi	,113	,535
	Cramer's V	,080	,535
N of Valid Cases		396	

Table 5.27 displays a detailed analysis of the liquidity status with a focus on liquidity levels greater than 1 by the size of the welfare NPOs in South Africa. Of the respondents, 64.9% had a liquidity ratio of 1 and below which means that they are unable to cover their liabilities. Only 28% of organisations were over 1 and below 2 which means that they can cover their liabilities and are in a financially secure working capital position. This means that three in five welfare organisations in South Africa are facing financial liquidity problems despite their organisation size.

Table 5.27: Crosstabulation organisation size by liquidity status

% within Organisation size						
		Organisation size				
		>1 mil <25 mil	> 25 mil <100 mil	> 100mil < 200 mil	> 200 mil	**Total**
Liquidity_status	>2	6,0%	4,8%	8,3%		7,1%
	<2 but >1	27,3%	19,0%	30,0%	12,5%	28,0%
	<1 but =1	66,7%	76,2%	61,8%	87,5%	64,9%
Total		100,0%	100,0%	100,0%	100,0%	100,0%

The analysis (Table 5.27) was not discriminate on the size of the organisations which range from small to large. Looking at large organisations (> 200mil), the ratio was worse as almost four in five organisations were in financial liquidity distress; this result filtered down to three in five, four in five and three in five based on the sizes of > 100mil to < 200mil, > 25mil to < 100mil and > 1mil to < 25mil, respectively. Organisations do indeed face liquidity problems within the welfare sector of South African NPOs. Only 7.1% of the sample population had a liquidity ratio of above 2 and the majority of them were within the medium to small organisation category.

Based on the liquidity status, the analysis in Figure 5.19 indicates that 43.69% were below the liquidity level and a further 21.2% were in line with liquidity. Only 35.1% of the sample respondents were above the liquidity level of greater than 1.

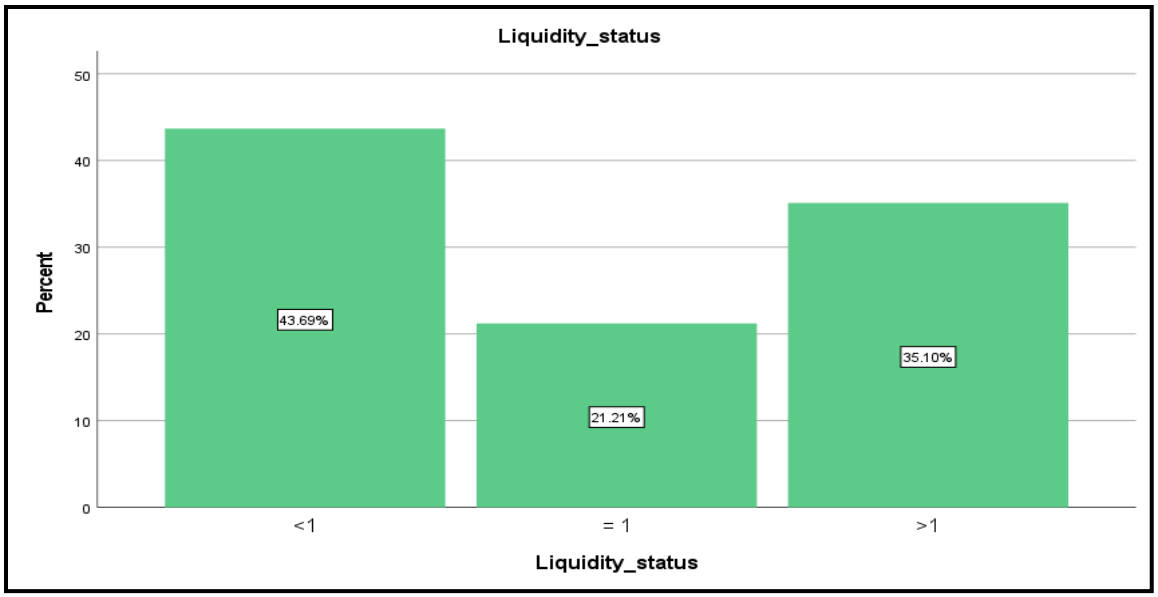

Figure 5.19: Liquidity status of welfare NPOs

As part of liquidity management, sufficient cash should be available to cover expenses. Therefore, understanding the organisational cash threshold is a good indication of how cautious an organisation is about cash management. This question related to not only this but also the understanding of the reserve holding phenomenon. As is observed in Figure 5.20, 75.7% of organisations held a two-month operating cash holding.

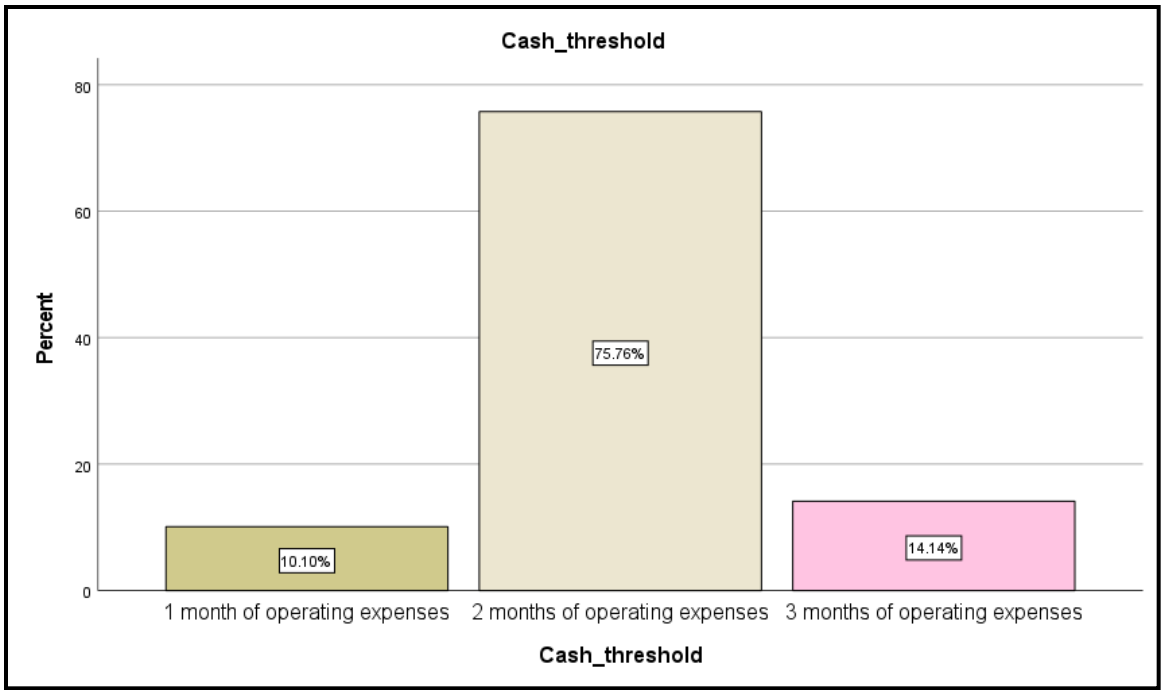

Figure 5.20: Cash threshold

Of the sample, only 14.1% held a three-month operating expenses buffer. Based on poor liquidity and the low level of cash holding threshold, the poor liquidity status of welfare NPOs in South Africa is inevitable.

To conclude the discussion of working capital and its components, a question was asked about the importance of the five components of working capital. Each organisation was given an option of rating the importance of working capital for NPOs (Table 5.28).

Table 5.28: Importance of working capital

	Very Important Row N %	Important Row N %	Not Important Row N %
AR collection	38.6%	10.4%	51.0%
INV investment	39.9%	30.1%	30.1%
Bank balance	47.5%	20.5%	32.1%
AP slow payment	48.0%	21.0%	31.1%
STL payoff	26.0%	18.2%	55.8%

The first was the speed of collection for accounts receivable and, based on the responses, more than 51% of the respondents considered this of no importance. The next was the minimum investment in inventory which had the highest selection of 39.9% as a very important option. Having a high bank balance was the next option; 47.5% considered this to be very important. The slow payment of account payables was considered very important with 48% ranking this as an option. Lastly, was the payoff of short-term liabilities; 55.8% considered this not important.

Based on the ranking, the components that were very important to the organisation were the slow payment of accounts payable (48.0%) followed by a high bank balance (47.5%), then minimum investment in inventory and accounts receivable collection with 39.9% and 38.6%, respectively. Lastly, the payoff of short-term liabilities was 26%. When observing it from the lower end of 'not important' the two high components were short-term liability payoff (55.8%) and accounts receivable collection (51.0%). After the analysis of working capital components, the study tested the hypotheses.

5.7 Hypothesis testing of working capital

The research study objective was to test the hypotheses. The study had a Hypothesis A and a Hypothesis B; Hypothesis B had three research questions to be assessed.

5.7.1 Hypothesis A

H_1: Working capital management policies have an impact on liquidity status.

H_0: Working capital management policies have no impact on liquidity status.

The evaluation of Hypothesis A, which compared whether policies can achieve an impact on the liquidity status of welfare NPOs in South Africa, revealed the data in Table 5.29. To test Hypothesis A, the Pearson chi-square, phi and Cramer's V statistical tests were performed on the data. The Pearson chi-square test was performed to understand whether there was a significant relationship between the

liquidity status variable and the policy variable. The result was a p-value of 0.046 which is significant; as a result, the null hypothesis was rejected. This means there is a significant relationship between the variables.

Table 5.29: Hypothesis A: Statistical tests

Chi-Square Tests

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	9,694[a]	4	,046
Likelihood Ratio	10,644	4	,031
Linear-by-Linear Association	5,824	1	,016
N of Valid Cases	396		

a. 1 cells(11,1%) have expected count less than 5. The minmum expected count is 3,18

Symmetric Measure

		Value	Approximate Significance
Nominal by Nominal	Phi	,156	,046
	Cramer's V	,111	,046
N of Valid Cases		396	

The phi and Cramer's V tests were to understand the substantive significance of the relationship between the two variables. A value of d = 0.2 indicates a small effect, a value of d = 0.5 is a medium effect and a value of d = 0.8 is a large effect (Ellis & Steyn, 2003). The results revealed 0.156 and 0.111 which indicates a small effect. Thus, working capital policies have a significant but small impact on liquidity levels in practice.

The crosstabulation of liquidity levels and policies to test Hypothesis A is displayed in Table 5.30 which provides the different policy types and the respective liquidity status.

Table 5.30: Crosstabulation liquidity levels by policy types

			Liquidity status			Total
			<1	= 1	>1	
Policy Type	Formal policy	Count	136$_a$	73$_a$	119$_a$	328
		% within Policy Type	41.5%	22.3%	36.3%	100.0%
	No policy	Count	25$_a$	9$_a$	19$_a$	53
		% within Policy Type	47.2%	17.0%	35.8%	100.0%
	Informal policy	Count	12$_a$	2$_{a, b}$	1$_b$	15
		% within Policy Type	80.0%	13.3%	6.7%	100.0%
Total		Count	173	84	139	396
		% within Policy Type	43.7%	21.2%	35.1%	100.0%

Each subscript letter denotes a subset of Liquidity status categories whose column proportions do not differ significantly from each other at the,05 level.

The results of the crosstabulation revealed that organisations that had formal policies had a 36.3% positive liquidity status compared to 41.5% that had a lower than 1 liquidity status. This represents 82.8% of the sample population (based on Figure 5.3 demographics). Organisations with no formal policy represented 13.4% of the sample population and 35.8% were on a positive liquidity status in comparison to 47.2% on a lower than 1 liquidity status.

In the last section of the sample population, which was 3.8% of the informal policy type, only 6.7% achieved a positive liquidity status while 80% were on a lower than 1 liquidity status. Based on the interpretation of the statistical results, policies in practice do not provide a majority result of positive liquidity level status for welfare NPOs in South Africa despite having a significant relationship. Therefore, the null hypothesis was rejected, based on the chi-square, phi and Cramer's V tests.

H_1: Working capital management policies have an impact on liquidity status. = Accept √

H_0: Working capital management policies have no impact on liquidity status. = Reject X

5.7.2 Hypothesis B

H_1: Working capital approaches have an impact on liquidity status.

H_0: Working capital approaches have no impact on liquidity status.

There are three research questions:

Research question B1:

Does the aggressive working capital management approach achieve a liquidity status of > 1 or;

Does the aggressive working capital management approach achieve a liquidity status of < 1?

Research question B2:

Does the moderate working capital management approach achieve a liquidity status of > 1 or;

Does the moderate working capital management approach achieve a liquidity status of < 1?

Research question B3:

Does the conservative capital management approach achieve a liquidity status of > 1 or;

Does the conservative working capital management approach achieve a liquidity status of < 1?

The results of the Hypothesis B statistical tests are displayed in Table 5.31.

Table 5.31: Hypothesis B: Statistical test

Chi-Square Tests

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	251,279[3]	6	<,001
Likelihood Ratio	306,586	6	<,001
Linear-by-Linear Association	185,406	1	<,001
N of Valid Cases	396		

a. 3 cells(25,0 %) have expected count less than 5. The minmum expected count is ,21.

Symmetric Measure

		Value	Approximate Significance
Nominal by Nominal	Phi	,797	<,001
	Cramer's V	,563	<,001
N of Valid Cases		396	

The relationship between the variables of approaches and liquidity status was statistically analysed. The Pearson chi-square result was a p-value of < 0.001 which shows a significant association between working capital approaches and liquidity levels. The Cramer's V result of 0.563 showed a large effect between the two variables.

A detailed look at each of the approaches to establish which approach achieved a positive level of liquidity is displayed in Table 5.32. This enabled the correct level of liquidity status to be correlated with the policy adopted.

Table 5.32: Crosstabulation liquidity status by working capital approach

			Liquidity status			
			<1	= 1	>1	Total
WC policy	Aggressive	Count	9[a]	3[a]	31[b]	43
		% within WC policy	20.9%	7.0%	72.1%	100.0%
	Moderate	Count	21[a]	9[a]	106[b]	136
		% within WC policy	15.4%	6.6%	77.9%	100.0%
	Conservative	Count	143[a]	72[a]	1[b]	216
		% within WC policy	66.2%	33.3%	0.5%	100.0%
	Changes over time	Count	0[a]	0[a]	1[a]	1
		% within WC policy	0.0%	0.0%	100.0%	100.0%
Total		Count	173	84	139	396
		% within WC policy	43.7%	21.2%	35.1%	100.0%

Each subscript letter denotes a subset of Liquidity status categories whose column proportions

Research question B1:

The aggressive working capital approach can result in a liquidity level of greater than 1, equal to 1 or less than 1. Below are the detailed questionnaire statements to establish the level of liquidity achieved by the aggressive working capital approach:

a) Aggressive working capital approach = Liquidity level > 1.
b) Aggressive working capital approach = Liquidity level = 1.
c) Aggressive working capital approach = Liquidity level < 1.

Based on the results displayed in Table 5.30, most organisations (72.1%) that adopted an aggressive working capital policy achieved a liquidity ratio of greater than 1. Therefore, this aligned with the rejected null hypothesis and a positive inferential relationship was confirmed:

Aggressive working capital approach = Liquidity level > 1. Accept √
Aggressive working capital approach = Liquidity level < 1. Reject X

Research question B2:

The moderate working capital approach can result in a liquidity level of greater than 1, equal to 1 or less than 1. Below are the detailed questionnaire statements to establish the level of liquidity achieved by the moderate working capital approach:

a) Moderate working capital approach = Liquidity level > 1.
b) Moderate working capital approach = Liquidity level = 1.
c) Moderate working capital approach = Liquidity level < 1.

Based on the results in Table 5.30, the majority of organisations (77.9%) that adopted a moderate working capital policy achieved a liquidity ratio of greater than 1. Therefore, this aligned with the rejected null hypothesis and a positive inferential relationship was confirmed:

Moderate working capital approach = Liquidity level > 1. Accept √

Moderate working capital approach = Liquidity level < 1. Reject X

Research question B3:

The conservative working capital approach can result in a liquidity level of greater than 1, equal to 1 or less than 1. Below are the detailed questionnaire statements to establish the level of liquidity achieved by the moderate working capital approach:

a) Conservative working capital approach = Liquidity level > 1.
b) Conservative working capital approach = Liquidity level = 1.
c) Conservative working capital approach = Liquidity level < 1.

Based on the results of Table 5.30, the majority of organisations (66.2%) that adopted a conservative working capital policy achieved a liquidity ratio of less than 1. Therefore, this aligned with the rejected null hypothesis and a negative inferential relationship was confirmed. Despite the relationship between the working capital approach and liquidity, the negative statement is adopted due to this relationship producing a negative liquidity level outcome as follows:

Conservative working capital approach = Liquidity level > 1. Reject X

Conservative working capital approach = Liquidity level < 1. Accept √

Centred on the approaches to working capital management, the aggressive and moderate approaches achieved an over 70% response rate indicating that organisations achieved a greater than 1 liquidity level. The conservative approach achieved a negative liquidity level with a 66% response.

Figure 5.21 provides a graphic display of the split between the liquidity level of the sample population among < 1, = 1 and > 1 and the policy types (formal policies, informal policies and no policies) to which they applied.

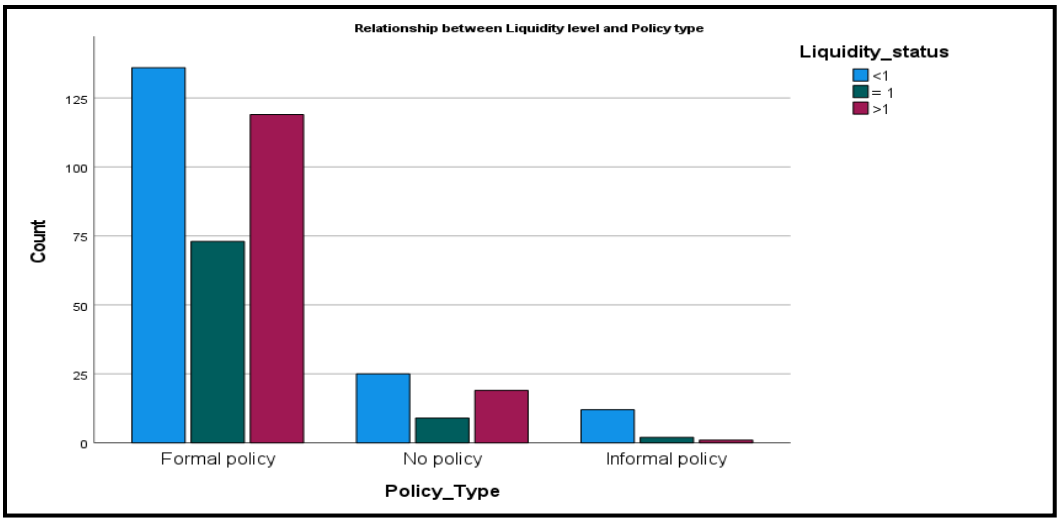

Figure 5.21: Summary of working capital policies and liquidity status

Built on the results, working capital policies have an impact on the liquidity levels of welfare NPOs in South Africa. However, the analysis of which working capital approach delivered a high liquidity level for an organisation indicated that the adoption of the aggressive and moderate approaches to working capital management achieved a high liquidity level; the conservative approach achieved a low level of liquidity.

The sample population's choice of approach displayed in Figure 5.3 indicated that only 10.9% of the sample population adopted the aggressive approach, 34.3% adopted the moderate approach and the largest portion 54.9% adopted the conservative approach. Based on these results, the sample population is not adopting the correct approach since the liquidity level is low. This is affirmed in Table 5.30 which indicates that the aggressive working capital approach achieved a 72.1% and the moderate approach achieved a 77.9% of liquidity level of > 1. The conservative approach achieved a 66.2% liquidity level of < 1. This confirms that the largest number of the sample population had adopted an incorrect working capital approach.

Of the total sample, 82.8% (Figure 5.3) adopted a formal policy but only 35.1% achieved a positive liquidity level. Therefore, Hypothesis A is accepted because, although the majority of organisations adopt a formal policy, the outcome is not

always a positive level of liquidity. An examination of Hypothesis B is based on a relationship between the working capital approach and the liquidity level. It was established that these two variables were significant (Table 5.29).

A deeper evaluation was done to understand the positive impact on liquidity levels and which approaches were adopted. When this was evaluated it was found that approaches that had a positive impact on liquidity levels were the following: aggressive = 72.1%, moderate = 77.9%, conservative = 0.5% and changes over time = 100%. Therefore, the respective approaches (aggressive and conservative) achieved a positive liquidity level which resulted in an acceptance of the positive answer to the research question (Table 5.29). This confirmed that these two approaches had a positive correlation between the Hypothesis B variables; the conservative approach resulted in a negative answer to the research question which established a negative correlation between the variables.

5.8 Results of analysis of working capital

The five components of working capital are important within respective organisations. This study aimed to understand which component in comparison to the others had a high level of importance in NPO welfare organisations in South Africa. The results are displayed in Figure 5.22.

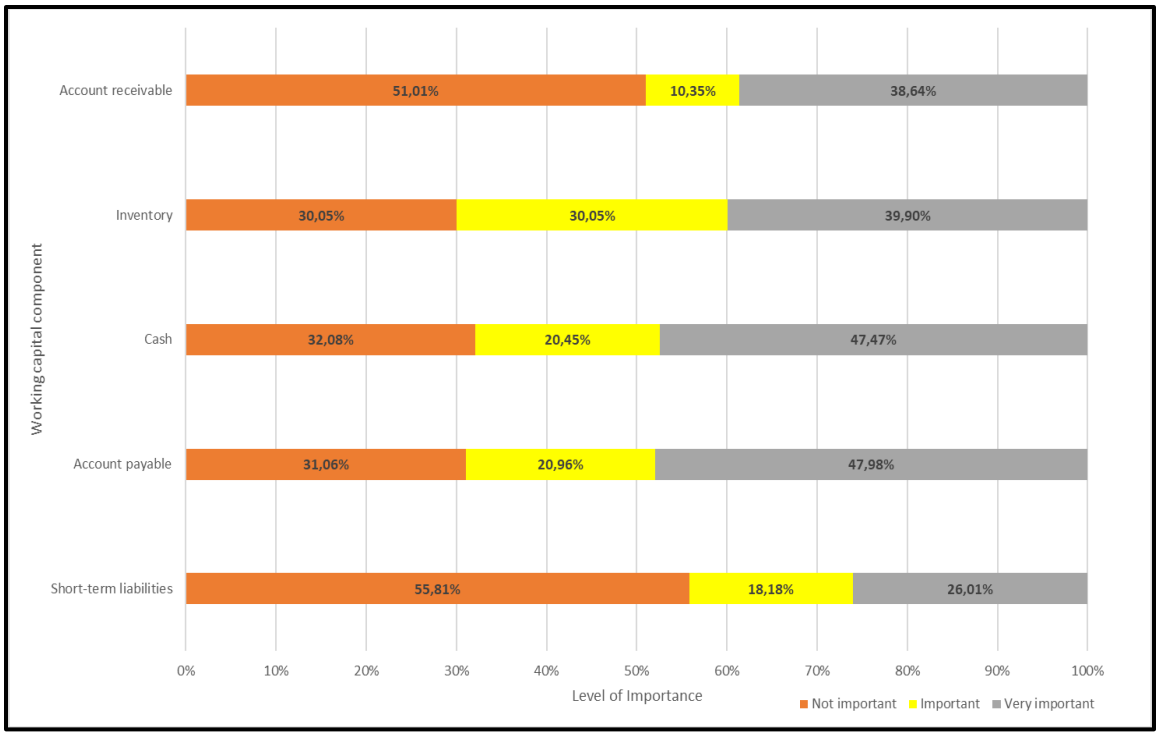

Figure 5.22: All components of working capital analysed by importance

Organisations assign a high level of no importance to accounts receivable collection as most of the respondents (greater than 50%) responded to the lack of the speedy collection of accounts receivable.

The next component which holds a significant amount of working capital is inventory and this question was formulated to understand whether maintaining a minimum amount of inventory within an organisation was considered important. Over 39.9% of the respondents considered holding minimum inventory very important which gives guidance on the significant importance of this component of working capital.

Cash in any organisation is regarded as an important part of daily operations and this was established in the next question – the basis was to understand how important it was to have a maximum bank balance. Of the respondents, 47.4% considered this a very important component of working capital. A good balance between the number of months of operating expenses held and how this is held in

banks is needed – addressed in Questions 13 and 14, respectively. Therefore, the interpretation of this needs to correlate with the respective questions.

When account payments were evaluated, over 47.9% stated that slow payment was very important. This high level of consensus clearly shows that NPOs use creditors as funders of working capital which could have an impact on their credit status and credit payment terms. This question (Question 29) needs to be evaluated with Questions 21, 23 and 24. This can establish whether there is a relationship between payment discounts, payment terms and the ability of NPOs to get favourable payment terms from creditors.

A major consideration in any business is the financing of working capital through short-term liabilities and the payment thereof on time. This impacts the creditworthiness and financing abilities of a business. Over 55.8% of the respondents considered the settlement of short-term liabilities slightly to not important. This response needs to be taken into consideration when determining how the financing is used and how the type of interest costs is incurred for short-term liabilities – addressed in Questions 25 and 26.

Based on the overview of the analysis above, it is valid to conclude that the minimisation of holding inventory is of the highest importance to organisations. This is then followed closely by slow payment of creditors which is not far behind the holding of maximum bank balances. The last two components of working capital importance are the speedy collection of accounts payable and the low importance of paying back short-term liabilities. The irony of these two components and their inverse relationship will be evaluated in the detailed analysis in the chapter to follow. Figure 5.23 presents the current state of working capital management.

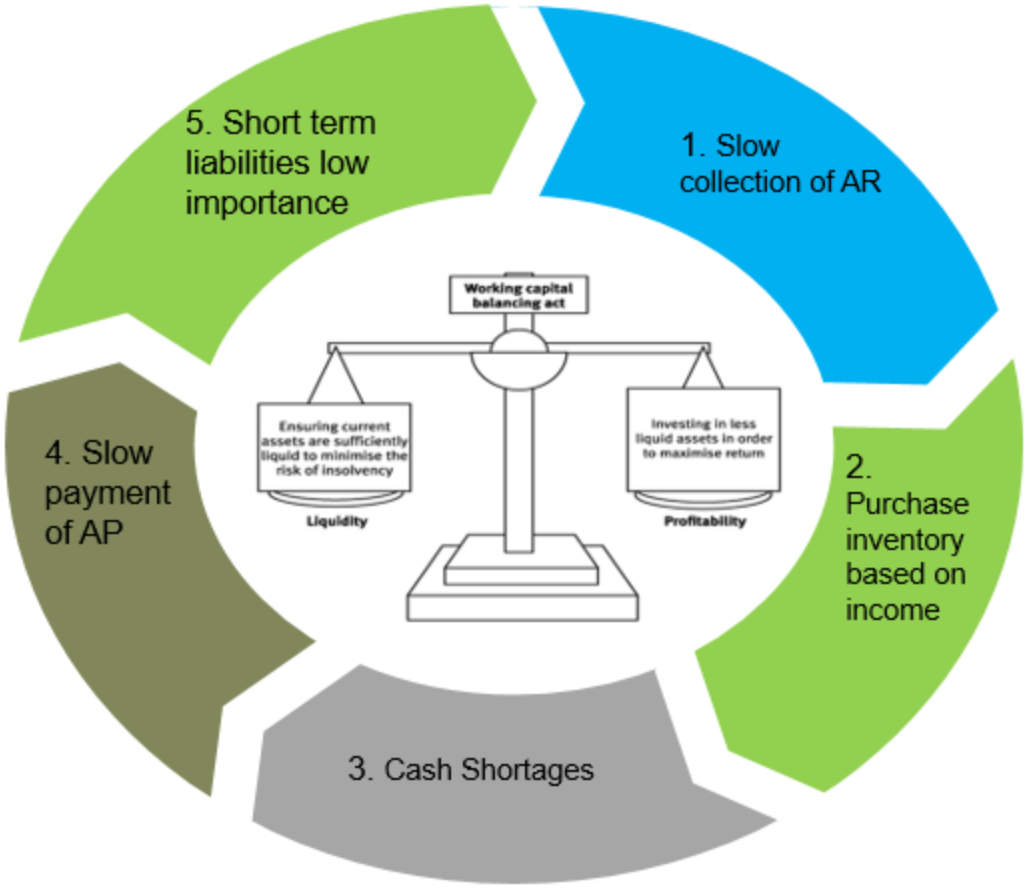

Figure 5.23: Current state of working capital management

5.9 Conclusion

Based on the responses of the 396 respondents from all nine strata and from various sized organisations who submitted their responses to the survey, the analysis of the results was able to provide a clear view of working capital management within welfare NPOs in South Africa. An analysis was conducted on the general aspects of the respondents which included years of experience, profession, qualification and age of respondents. The analysis then looked at the ability of the organisation to manage its policies based on its size and sub-strata location.

Once that was done, an in-depth analysis was conducted on each component of working capital – cash, accounts receivable, inventory, accounts payable and short-term liabilities. The evaluation examined how they were being managed and what methodology was applied to their management. Rating scales and Likert scales were used with a combination of multiple-choice options. These provided an opportunity to get a detailed view of the organisations' responses.

Finally, the study looked at the outcome of using various working policies and approaches to determine the liquidity ratio the organisation was able to achieve. Monitoring of ratios was also looked at to check the monitoring frequency and the impact it had on the organisation. Next, the researcher tested the working capital financing options to acquire an understanding of the investment options. Finally, both hypotheses were tested and the three research questions were evaluated to establish which working capital approach achieved a positive liquidity level for welfare NPOs in South Africa.

The next chapter addresses the outcome of the analysis and how this relates to the general literature and the management of working capital in for-profit organisations. The triangulation of the three aspects leads to the formulation of the conclusion and recommendations.

CHAPTER 6: DISCUSSION OF RESULTS

6.1 Introduction

The research question was primarily formulated to understand the relationship between working capital policies and the impact they have on the liquidity of welfare NPOs in South Africa. Five primary objectives were identified:

1. To understand the type of working capital investment and financing policies used by NPOs and the impact these policies have on liquidity.

2. To evaluate the components of working capital to understand which theoretical model/approach/policy is used and its impact on liquidity. This is done by the type of policy applied and the level of liquidity achieved.

3. To evaluate the relevant causes of these liquidity problems so that theoretical models and corporate applications can be used to make corrective improvements.

4. To determine ineffective working capital policies, working capital management components, ratios and liquidity by employing a survey questionnaire instrument to collect data to probe how the working capital management approaches used by NPOs creates liquidity problems.

5. To make recommendations on how management can improve liquidity within NPOs so that they can function efficiently and maintain sustainable growth for the country.

In this chapter, the discussion of the results addresses these research objectives accordingly. The results of the investment and financing policies used and the impact they have on working capital are discussed. Each of the five components of working capital and how they are managed within the sampled organisations is addressed. Based on how they are managed, comparisons are performed on the liquidity performance of the organisations to understand the impact the components have on liquidity in terms of their relationships. By comparing these

components to their liquidity results, the analysis unveils the policies that generate higher liquidity and those that are ineffective.

Once this understanding is achieved, the policies implemented by for-profit organisations and the results they achieve are reviewed. Based on this, a determination of the best option can be made and the way forward for a policy recommendation established.

The methodology applied is triangulation – explained in Chapter 4. The discussion addresses the analysis from Question 6 of the survey as each question addresses specific characteristics of the research study identified in Chapter 3 and needs to be understood. This is also correlated with the theoretical models and principles addressed in Chapter 2 – the general literature review.

6.2 Working capital policies

Policies are the key fundamentals to the running of an organisation (Njiru & Githinji-Muriithi, 2018). They provide an organisation's staff with direction in how the organisation should be run so there is uniformity within the organisation and all staff members follow the same direction. Uniformity is important in finance as this needs to be aligned with the organisation's mission and vision as well as the funding mechanisms of the organisation. All the question discussed in this section relate to the research question in Appendix 2.

Question 6 addresses policies – one of the fundamentals of this research. The finding was that 82.8% of organisations followed a formal policy while 13.4% followed no policy and 3.8% had informal policies. This indicates that most organisations follow a structured organisational process. As in many registered organisations, the protocol is to have formal policies in place to govern the organisation. This gives the organisation's staff direction and structures the process to follow.

Question 7 established the key decision-makers on the working capital policy setup within organisations and they are as follows:

- Finance Committee = 80.6%
- Board of Management = 9.8%
- Chief Financial Officer = 7.3%
- President/Chairman = 1%
- Chief Executive Officer/Treasurer = 1.3%

The results (90% – Finance Committee and Board of Management meetings) correlate with IFRS for SME accounting standards where board meetings are required at least twice a year and finance committee meetings yearly (IFRS Foundation, 2019).

Additionally, the key to understanding how often management policies are reviewed was addressed in Question 8 (Table 6.1). Frequency is a good gauge of how proactive or active an organisation is in reviewing its standards and ensuring they are up to date with organisational changes as well as legislative, economic and political changes. The key at this point is whether the organisation can adapt to change or not.

Table 6.1: Policy review time frame

Period		Frequency	Percent	Cumulative Percent
	Monthly	2	.5	.5
	Quarterly	2	.5	1.0
	Half-yearly	8	2.0	3.0
	Annually	358	90.4	93.4
	Whenever necessary	26	6.6	100.0
	Total	396	100.0	

The results of the survey indicated that over 90% of the organisations reviewed their policies annually; only 2% did reviews half-yearly and 0.5% did reviews quarterly or monthly. Of the respondents, 6.6% did policy reviews whenever necessary. It is clear from the results of the study that NPOs follow a structured

approach to timelines which is in line with the statutory requirements set out by the IFRS for SMEs (IFRS Foundation, 2019).

Statutory compliance should not be a prerequisite for evaluating policy changes. Both the business environment and the economy change daily which means that organisations need to adapt to these changes. Static policies create a problem for the staff. Policies are there to provide staff with guidelines on what they can do and how they should do it; they provide structure and alignment within organisations for their staff. However, with rapidly changing economic dynamics, the need for adaptability is inevitable. With such a high level of respondents (90.4%) only making changes to policies annually, it means that this sector is not adapting to change as it happens. This is a limiting factor, especially in the economic environment in which this sector operates.

6.2.1 Working capital investment policies

According to the theoretical literature, organisations can follow one of three investment policies to form the basis of their organisation's investment policy. A total of 91.9% of respondents follow a moderate approach to working capital investment whereas 6.3% and 1.8% follow relaxed and restrictive working capital investment approaches, respectively.

Table 6.2: Working capital investment approach

Approach		Frequency	Percent	Cumulative Percent
	Moderate	364	91.9	91.9
	Relaxed	25	6.3	98.2
	Restrictive	7	1.8	100.0
	Total	396	100.0	

A majority (91.9%) of organisations follow a moderate investment policy which means there is a combination of initial capital investments, long-term liabilities and

short-term liabilities. The moderating factor here is the costs that affect the organisation going forward. With the initial capital investment used as part of the working capital, there is no cost factor; it is a once-off investment. With the long-term loan option, there is a constant fixed cost to service the loan – the monthly interest cost. The final aspect to consider is the cost of short-term loans, which tends to be variable and considerably higher due to market volatility and associated risks. The subsequent section will delve deeper into how these combinations are utilised in the working capital finance approach implemented by organisations.

6.2.2 Working capital management approach

Based on Question 9a, which addresses the three working capital approaches, the welfare NPOs in South Africa come out with the following breakdown of working capital management approaches:

- Conservative = 54.5%
- Moderate = 34.3%
- Aggressive = 10.9 %
- Changes over time = 0.3%

Based on this result, it is evident that most organisations prefer to follow the conservative approach; only 0.3% are willing to adjust their working capital approach when compared to the review process timelines and the people required to set up and adjust the policies. Based on the responses to Question 8 of the survey, policies seem set in stone for long periods and change only takes place after long intervals – for the majority, after a year.

6.3 Working capital components

The components of working capital emanate from current assets and current liabilities which reflect the total working capital available to the organisation. The research question related to each component and how it is managed compared to

the theory and the way that this would be best managed by profit-making organisations are discussed. A way forward is outlined at the end of each working capital component section.

6.3.1 Cash management

In this section, the questionnaire examines cash management through a series of four questions. The first question seeks to identify the tools employed by NPOs to manage cash and their perception of the importance of cash management. The next question evaluates the relative importance of cash management compared to alternative income and credit sources, changes in inventory policies and timely debtor collections. The third question addresses the management of excess cash in bank accounts and considers investment opportunities. Finally, the last question explores the projections and expectations of cash flow and operating expenses. Overall, these questions are designed to gain insight into the role of cash management in NPOs and the strategies employed to ensure efficient and effective financial management.

Question 11 – purpose and research outcome: The question addresses cash management, ratio tools use in cash management and how cash is applied to the organisation. Often, NPOs do not experience cash surplus within their operations. They focus on preparing cash budgets and forecasts. Based on the response feedback, they focus neither on liquidity ratios in the management of cash nor the dashboard management of this component of working capital. Based on the respondents' responses, cash is an asset that receives a high level of focus within non-profit welfare organisations in South Africa.

Theory: Based on the responses, the only negative area of focus is the use of liquidity ratios in the management of cash flow. This is based on Mikeladze's (2021) view that the use of budgets and forecasting is an enabling tool in managing cash flow and performs as a guide for an organisation's performance.

Question 12 – purpose and research outcome: This question addresses the importance of cash planning to an organisation. This question focuses on cash surplus, income forecasting, credit terms, inventory planning and timeous debtor payments. A high level of importance is placed on cash shortages or surpluses. This is in line with Question 11 which addressed cash surpluses or the lack thereof. The responses to exploring alternative income indicated a low level of importance. The same low level of importance was received on alternative credit terms and the use of alternative inventory policies. The second lowest level of importance was the timeous payment of debtors. This engenders a high level of concern as, within this question, cash shortage was cited as having a high level of importance. However, one of the sources of cash is debtor payments and this received a low level of importance. Thus, there is no correlation between the two (Table 5.25). This is a clear weakness.

Theory: To maximise cash, the components of working capital – the collection of debtor payments timeously, extending credit terms or finding alternative inventory management policies – need to work harmoniously. A way to generate more cash is to look for alternative sources (Shubita, 2019).

Question 13 – purpose and research outcome: This question aimed to understand what NPOs do with surplus cash. The majority of cash surpluses are held in deposit accounts or money market accounts. Smaller organisations hold cash in current accounts rather than invest in deposit accounts or fixed-term investments. This is in line with operating expenses for smaller organisations falling due and purchases of inventory ‘as and when required’. Most larger organisations (greater than R100 million) select to use deposit accounts or money market accounts for holding surplus cash while some within this category use fixed-term investments to hold surplus cash.

Theory: This corresponds with the theory of cash holding where holding the right amount of cash is based on the cost of cash (Vuković *et al.,* 2022). The application of this methodology is lacking within the sampled respondents.

Question 14 – purpose and research outcome: This question aimed to understand how much future cash was held by organisations. This allowed the researcher to understand the cash planning process as well as the level of liquidity planning and levels. Cash holding is based on the size of organisations; large organisations (greater than R100 million) hold operating expenses for more than three months while smaller organisations maintain cash holding for operating expenses for two months. This is sensible as bigger organisations have larger fixed expenses to manage compared to smaller organisations.

Theory: The size of an organisation establishes the need for operating cash (Shubita, 2019). Organisations generally hold sufficient cash based on the cost of holding cash model. This is in line with interest rates and opportunity costs for cash.

Way forward: Cash flow is the lifeblood of an organisation (Hung & Hager, 2019) and a slowdown or stop of the cash flow results in the organisation coming to an operational halt. For-profit organisations, therefore, establish different buffers – the collection of accounts receivable, use of market securities and short- and long-term borrowing – to maintain a free cash flow. They also try to maintain an open line of credit or prolong certain accounts payable by mutual agreement with suppliers if there is a need to preserve cash resources by applying the pecking order theory (Lofton, 2021).

Based on the responses received, NPOs place a lot of emphasis on cash as they also realise its importance for the running of their organisations. When there is a lack of follow-up on accounts receivable, cash flow is adversely impacted and this results in organisations not meeting their expenses optimally. Dalci *et al.*'s (2019) study of 285 German firms found that speedy collection helped in cash flow obligations and financial performance.

It was also established by the survey that liquidity ratios were not used as in conventional for-profit organisations (Lancksweerdt *et al.*, 2021). This gives very little preparation or notice to NPOs of cash flow problems or opportunities and,

thus, negatively impacts the forecasting and budgeting of the organisation's resources for growth or expansion and even slows down projects or initiatives. For-profit organisations even use rollup bank accounts and, accordingly, benefit from cash in their current accounts and investment accounts by accruing interest on the total closing balances of the day.

As the use of ratios as predictors is lacking, NPOs should articulate these ratios more frequently and use them as part of the forecasting process (Srividhya *et al*., 2020). Also, free cash needs must be managed on a consolidated level with rollup bank accounts to benefit from the interest opportunity. Alternative cash funds should be part of the strategy of NPOs as single-source funding is not a healthy way to engage in business. A think-tank of alternatives within the cash flow arena to diversify or consolidate is needed and must be undertaken regularly, not yearly.

6.3.2 Accounts receivable management

In this section, a triad of questions aimed to probe the management of accounts receivable. The initial inquiry delved into the methodology and tool utilised in the collection of receivables, while the subsequent question evaluated the efficacy of debtor management practices, such as the extent of overdue receivables, provisioning for bad debts, debtor terms, deployment of debtor management theories and the use of settlement discounts as an incentive for customers. The final question scrutinised the terms provided to debtors – an area germane to comprehending cash collection cycles.

Question 15 – purpose and research outcome: The question addressed the tools used by NPOs in the management of accounts receivable. The timeous collection of accounts receivable impacts cash flow and organisation liquidity which implies that the method needs to be efficient and effective. Based on the responses for monitoring accounts receivable collections, the options chosen were income monitoring and ageing schedules. This means that payment terms for accounts receivable are the key monitoring mechanism. This is considered a key control mechanism but when addressed in the cash management section on the follow-

up of account receivable payments, this received the second lowest level of importance. It is clear that the mechanism is there to monitor payment controls but the follow-up on payments has no momentum. Ageing schedules are also a good indicator of accounts receivable. The options of a collection period which covers payment terms and other alternatives did not receive any responses.

Theory: Delinquent control mechanisms or ones without follow-ups on timeous payments impede the flow of cash and cash shortages and create low levels of liquidity. Urhoghide and Korolo's (2022) study covers the effect of the collection process and follow-through on accounts receivable.

Question 16 – purpose and research outcome: The question addressed how accounts receivable are managed and covers debtor overdues, bad debts, debtor terms, debtor management theories and settlement discounts. Overdue accounts receivable can be identified by the control mechanisms identified in Question 16. As this has a high level of focus, it is aligned with the principle of providing for bad debts. Less focus was placed on terms of payment, accounts receivable theories and settlement discounts.

Theory: Through control mechanisms, the visibility of the overdue accounts is clear and leads to the provision for bad debts. Based on Question 12, the focus that is lacking is the follow-up on overdue accounts. Very low focus is placed on settlement discounts as this is an enabler to ensure payment terms can be maintained (Narain, 2022:6). There should be a correlation between settlement discounts and overdue accounts. In this case, no focus is placed on the problem; the focus is rather on its shortcomings.

Question 17 – purpose and research outcome: This question was simply to understand the payment terms provided by NPOs which helps in understanding inflows versus outflows and the cash cycle. The outcome is that payment terms of 30 days were the highest option chosen. A very small percentage of respondents focus on cash or 15 days.

Theory: There should be a correlation between the number of payment days and settlement discounts. By providing an incentive for early payment, the payment terms can be reduced and a lower level of cash shortages can be facilitated.

Way forward: To maximise cash holdings and limit the use of borrowed cash to reduce interest costs, it is important to collect all accounts receivable on time. For-profit organisations use settlement discounts as an incentive for customers to pay their accounts receivable on time and within terms (Narain, 2022:6). Suppliers also use interest on overdue accounts as a deterrent for customers who pay late. Suppliers also apply the going repo rate plus a few percentage points of interest over this, which is over the borrowing rate applied by most banks, to calculate the interest to be charged on these overdue accounts (Jha & Mishra, 2019). This becomes a disincentive as it is above the normal borrowing rate which incentivises customers to pay on time. Customers who pay later now have a double penalisation: they lose their settlement discount and must pay an additional amount which is over the borrowing cost.

Profit organisations also follow a process of legal debt recovery which has costs associated but this is another deterrent that the customer must consider for late or delinquent payment. These contractual statements are part of debtor agreements and become enforceable as part of the commercial agreement. Therefore, follow-up on delinquent payments is essential and compliance with the policy requirement is critical for all parties.

As NPOs focus very little on overdue account follow-up and ensuring that this adherence is being complied with, customers become acquainted with this laxity and go on with late payments; the overdue account grows because of this. This becomes an expensive mistake over time and corrective action becomes difficult to implement as the practice has been entrenched with customers.

6.3.3 Inventory management

This section comprises three inquiries, the primary of which endeavours to investigate the methodology applied in inventory replenishment. The aim is to understand how inventory is ordered taking into consideration cost, planning/forecasting, cyclic replenishment, use of the EOQ system – which is a computerised system – and no planning or cost association. The subsequent inquiry aims to comprehend the policies implemented to manage inventory levels and the critical determinants of inventory replenishment. It aims at testing the determining policy factors for replenishment which are cost or income, buffer stock or inventory level and the impact of borrowing to purchase inventory. The ultimate question evaluates inventory planning, organisation and control, incorporating inventory budgets, obsolescence, discounted inventory purchases and the utilisation of inventory theories by management. The inquiries are aimed at discerning the fundamental tenets of inventory policy drivers.

Question 18 – purpose and research outcome: The question addressed the methodology applied to replenish inventory. The question was structured to understand if costs, such as EOQ or inventory level, were deciding factors like the JIT methodologies discussed in the literature review section. The option chosen for this question the most was inventory purchased ‘as and when required’ with computerised control systems as a close second option. When these options are further analysed, the ‘as and when required’ option for inventory procurement is more for organisations which are less than R100 million in size; organisations which are greater than R100 million in size tend to use computerised control systems for inventory procurement more.

Theory: As cash flow and credit terms are the key determinants for inventory replenishment, smaller organisations are hampered by these limitations and, therefore, use the ‘as and when required’ inventory replenishment method. Larger organisations which are more system-sophisticated use computerised functionality to replenish inventory (Louw *et al.*, 2016). This is in line with modern theory

applications as the organisational policy is built into the functionality of the enterprise control system.

Question 19 – purpose and research outcome: This question raised the awareness of inventory policy motives which are based on economical purchases or unplanned purchases. The research wanted to understand the motivational driver for inventory policy among NPOs. The predominant option for an organisation to use an established inventory policy is the organisation's income (92.9%). This is followed by the effect of inventory costs (7.1%). These were the only two of the four options chosen. None of the organisations used a level of inventory or borrowing cost as an inventory policy option.

Theory: Based on the comparison between income and cost as inventory evaluating criteria, income is the outstanding front-runner. The model on inventory establishes that cost should be the motivating factor in inventory procurement and replenishment. This is contrary to conventional theory, practice and trends (Patki, 2021).

Question 20 – purpose and research outcome: The question aimed to understand the factors that impact inventory management which covered inventory levels, inventory planning, obsolescence, inventory theory application and purchase of inventory on discounts. Based on Question 19, the focus here is placed on income unlike the focus placed on inventory management theories which contradicts the policy option choice. In this question, the focus is on inventory theories and the high level of obsolete review coupled with inventory levels. The response indicates that a high focus is placed on inventory theories but there is a low response on considering purchase discounts and inventory budgets. Therefore, the responses are contradictory.

Theory: The theory on inventory looks at planning as a critical focal aspect of inventory management. This is coupled with the cost aspect of inventory as the holding of inventory is made up of idle working capital that is a risk for obsolescence, damage, holding and security costs (Afrifa *et al.*, 2021). As the

response is high on inventory management theories and none of the key fundamentals of popular theories in the option choices is placed high, this is unusual.

Way forward: As inventory is one of the prominent aspects of the illiquidity of current assets and the priciest to be managed, it needs to be planned and controlled effectively. For-profit businesses spend a lot of time in this area as losses if inventory is not managed effectively could impact the total business severely. The cost associated with inventory damage means that goods need to be secured properly. Security includes insurance against the loss of goods by pilfering or theft and physical security measures.

For-profit organisations plan the acquisition of goods in line with the supply chain process (Ilter, 2019; Kasozi, 2017). They spend time and cash on transportation, holding the right amount of inventory and the correct combination to cover all demand requirements. Based on the responses, NPOs do not plan for inventory and purchases are based on ‘as and when required’; they also do not use the cost factor in the planning of replenishment as part of efficiency. Based on the cost management principle of inventory, for-profit organisations use EOQ or a buffer inventory model to handle stock requirements.

NPOs, on the other hand, rely on income as the base for inventory planning and replenishment which is a very costly method. NPOs should change their process and rely on ratio management for cash projection; this will provide a good basis for revenue collection projections. Once they have this in place, their computer system can be adapted to control inventory on a cost-based rather than an income-replenishment-based method. This will result in saving on the unwanted costs of small orders or repetitive orders which accrue additional costs for transportation and administration. This will result in efficiency and effective planning in the NPO environment and be of benefit to all organisations and the overall supply chain process.

6.3.4 Accounts payable management

This section comprises four questions that centre on the management of account payables and cash outflow. The initial question aims to examine payment terms to comprehend the outflow of cash and determine whether a corresponding linkage with the inflow of cash exists, as discussed in Question 17. The ensuing question explores payables and pertains to improved payment terms, credit limits, seasonal flexibility on credit terms, reviews of credit limits internally before purchases and the ease of obtaining supplier credit. Subsequently, the inquiry focuses on settlement discounts and which options were preferred to test payment standards. The last question in this section addresses the ease of obtaining supplier credit, considering that this sector is involved in non-profit activities.

Question 21 – purpose and research outcome: The question was simply to understand the payment outflow cycles. This was used to match the inflow and outflow of NPOs to better understand the cash cycles. Most of the respondents paid their accounts payable within 30-day terms. Only a small proportion chose greater than 60 days or on delivery.

Theory: Based on the matching principle of receiving payment from accounts receivable to pay the accounts payable of suppliers, this application works well. If the match were not consistent, funding from short-term liabilities with the aid of overdraft facilities to fund short-term loans would be required. The responses on accounts receivable indicate slow payments and that overdue amounts display little momentum on follow-up. This puts pressure on accounts payable and the level of inventory (Yao & Deng, 2018).

Stocking up on inventory is based on the level of income and does not affect the cost of holding or other factors. The timeous payment of accounts payable ensures that the credit rating of the organisation can be maintained, therefore, the credit terms need to be adhered to. According to Ilter (2019) and Kasozi (2017), slow payment affects the supply chain and its ability to fulfil orders at cyclic intervals. This leads to a disruption in the inventory stock process and the costs associated

with it escalate. Therefore, the use of income as the driving force to manage inventory and the accounts payable process causes harm to and deficiency within the supply chain process. This brings higher costs to the organisation.

Question 22 – purpose and research outcome: The question aimed to understand the factors that impact accounts payable – terms of payment, credit limits, seasonal credit limit increases, review of payment terms before purchases and ease of obtaining credit terms. Only 14.9% of the respondents confirmed that obtaining credit from suppliers is easier within the NPO sector. A total of 29% also confirmed that the credit limit obtained covers their purchases; only 22% stated that seasonal purchases were covered by adjustments to credit terms.

Theory: Considering that there are over 250 000 organisations in South Africa – the third highest sector of the economy, it is remarkably difficult to get supplier credit for this sector. Obtaining payment terms is based on the financial status of an organisation. Thus, due to the poor financial status of NPOs, they do not obtain good payment terms and sufficient credit terms to cover purchases. It is therefore also evident that inventory is purchased 'as and when required' due to credit availability and is income-driven.

Question 23 – purpose and research outcome: The question tried to understand how NPOs reacted to payment discounts from suppliers and whether this was taken advantage of or not. This impacts cash flow, low cost of purchases and short-term borrowing. Over 78% of the respondents take discounts and pay within the payment terms. Just under 20% pay on the discount date so that they can take the discount. This means that about 20% of the organisations experience problems in meeting the payment term to take advantage of the discount offered.

Theory: Settlement discounts are an incentive to meet the payment terms and offer customers payment enticements to meet their obligations. The rate is close to the cost of holding cash or borrowing cash which motivates the payment rather than preferring the option of holding or not using short-term liabilities. Settlement

discounts are a relationship builder between supplier and customer according to Silaghi and Moraux (2022).

Question 24 – purpose and research outcome: The researcher wanted to understand whether NPOs are impacted by easier credit payment terms from suppliers due to the sector in which the organisation is involved. As the NPO sector is involved in the upliftment of communities and the eradication of social evils, the question of whether the business community is willing to negotiate softer or more favourable payment terms for NPOs needs to be addressed. Only 16.7% agreed that better terms can be obtained by NPOs.

Theory: The view is that larger businesses offer NPOs better payment terms and higher settlement discounts. The loss suffered by these businesses is regarded as a benefit to corporate social initiatives (CSI). They can be used as an economic benefit for scoring points.

Way forward: For-profit organisations have established that the extension of payment terms on accounts payable is to the advantage of an organisation's working capital performance. They have also realised that the extension or protraction of payment has an adverse impact on the supply chain process and could affect the business negatively in the long run. They have also pointed out that prolonging the payment terms should be communicated so the suppliers are aware and can make alternative arrangements; this must not affect the relationship between the supplier and customer (Kumaraswamy & George, 2019). Also, this should not affect the credit rating status of the customer as this would impact their total financial credit rating status in the long term. Therefore, it is best to prolong the creditor payment as long as it does not affect these two criteria.

As this can impact organisations positively as well as negatively, this becomes the balancing act which needs to be managed within the guidelines. Therefore, an NPO's policy framework needs to be adaptable and able to comply with the principles of for-profit organisations. The respondents stated that prolonging

payment of accounts receivable is one of the key drivers in working capital management coupled with the fact that the terms for getting credit are strict.

6.3.5 Short-term liabilities management

In this section, two questions were posed to elucidate the bases of obtaining short-term loans for the organisation and to understand the interest options that were selected, thereby shedding light on the cost factor that may weigh on the organisation's interest expenses. This, in turn, has far-reaching consequences for the organisation's operating expenses and creditworthiness.

Question 25 – purpose and research outcome: Understanding how short-term liabilities are used as part of working capital financing is important to better understand their need. Over 80% of respondents indicated that short-term liabilities had been used as part of the cyclical part of their organisations' financing. Only about 9.3% use short-term liabilities as part of their regular and constant organisation financing. This can be correlated with the fact that only 10.9% of organisations follow an aggressive working capital approach.

Theory: As the working capital approach used is more conservative to moderate, this is in line with the use of short-term liabilities to facilitate a cyclic need for organisations. Although a more expensive approach, it is a safer option than other approaches. A small percentage of NPOs use the aggressive working capital management approach which requires the use of short-term liabilities for the working capital requirement (Zimon, 2020b). This is a riskier and least cost-effective approach; the short-term liabilities are used only when needed, therefore, interest charges are paid only when the facility is used. This is unlike the conservative approach which uses long-term liabilities which have fixed-term costs and are payable over a longer period.

Question 26 – purpose and research outcome: The next assessment was on how the costs or facilities of the short-term liabilities were used or arranged. As this has an impact on the cost of the organisation, were organisations using the most cost-

effective choice? A total of 53.5% of the users accessed simple interest loans and 41.9% accessed open lines of credit.

Theory: A simple interest loan is based on a predetermined interest rate that is paid for the amount of money that is borrowed. The amount is determined by an organisation's financial position and can change based on this criterion. As this is used to finance working capital and is a much more expensive option, the cost of this will be a burden on the operating expenses of the organisation. Even if used cyclically, the costs will be high as it is based on risks (Gao *et al.*, 2021). The open line of credit is based on the organisation's predetermined credit rating and has a ceiling but borrowing can be extended. The costs of these are also high because of the nature of the borrowing and risk criteria.

Way forward: Due to the investment option of working capital management and the approach used by NPOs, short-term borrowing is low. For-profit businesses, on the other hand, use this much more as they apply a more aggressive working capital approach compared to the conservative approach adopted by NPOs. The approach dictates the use of this component in the working capital mix. It is a costly option with high risk but also with high reward (ALOdat *et al*., 2022).

Change is dependent on the approach used by NPOs. The use of short-term loans is only for short-term cyclic requirements or low levels of credit granted by suppliers. In this instance, the organisation will borrow in the short term to pay for goods and services. Once an organisation can better manage the inflow of revenue, short-term liabilities can also be reduced.

6.4 Liquidity, risk management and policy drivers

This section comprises three inquiries that aim to investigate disparate aspects of liquidity management, working capital components and financing options. The first inquiry sought to ascertain the frequency at which liquidity risk was managed to comprehend whether the organisations in question were risk-averse or offensive, or whether such management was an occasional or routine tool. The second

inquiry sought to rank the most important to least important working capital components to gain insight into how this sector manages and controls its working capital components. This inquiry was particularly useful for comparative purposes between theoretical and for-profit organisations. The last inquiry addressed working capital financing options, which focused on organisation start-up, short-term borrowing versus long-term borrowing, inventory bonding, debtor factoring and internal cost-cutting measures to increase working capital.

Question 28 – purpose and research outcome: The purpose of this question was to understand the frequency at which organisations reviewed their liquidity ratios. This was to better understand the focus placed on liquidity and how proactive or reactive NPO management was to this challenge. Over 36% of organisations only reviewed liquidity ratios annually while 29% reviewed them half-yearly. None of the organisations within the study reviewed them monthly.

Theory: Liquidity ratios are part of the dashboard statistics of an organisation and should be prepared as part of the monthly management accounts. This is a good indicator of where the organisation is heading. Looking at these indicators only once a year or half-yearly appears to be a routine performance metric. This should not be the case as constantly monitoring the dashboard of the organisation indicates how the organisation is performing and changes can be made to adjust the trajectory of the organisation concerning finances or strategic objectives in times of challenges.

Question 29 – purpose and research outcome: This question was used to sum up the research study and better understand from management the importance ranking of the working capital components. The question addressed the speed of account collection, minimal inventory investment, maximisation of bank balances, slow payment of payables and the payment of short-term liabilities.

An evaluation was done to determine which of the five components of working capital was of the greatest importance within welfare NPOs in South Africa. The responses to the survey revealed that slow payment of creditors was the key driver

in managing working capital, followed by minimising the investment in inventory. This is in line with the policy driver of inventory to purchase inventory ‘as and when required’ which is driven by income but is not cost-beneficial. The next most important was the speedy collection of accounts receivable; the final two options were the maximisation of bank balances and payment of short-term liabilities.

Taking into consideration that the majority of NPOs follow a conservative working capital approach compared to an aggressive approach, the payment of short-term liabilities will be of little impact to them as the financing of working capital is drawn from long-term finance to maintain the conservative to moderate approaches. Only small fluctuations in working capital are financed by short-term liabilities, thus, their low level of importance.

Theory: Different sectors of the economy utilise working capital components differently and, therefore, prioritise them based on their pecking order needs (Lofton, 2021). Organisations which are high cash users consider cash to be of the highest importance. Within the NPO sector, there have not been studies on the importance of working capital. The research has uncovered that the pecking order of working capital within this sector is as follows: accounts payable, minimisation of inventory, accounts receivable, maximising bank balances and, finally, the payment of short-term liabilities.

Question 30 – purpose and research outcome: The last question was formulated to understand which source of financing was important for working capital utilisation. The highest level of importance was the initial start-up investment of the organisation which financed working capital. This was then followed by the long-term borrowing of the organisation. Although costly, it is in line with the conservative working capital approach followed by welfare NPOs. What was low on the list of choices was short-term financing and cost-cutting measures which can be used as part of working capital growth or expansion.

Theory: Start-up investments are used for the initial infrastructure setup of an organisation and a portion is used for its working capital setup. This has been the

conventional way of organisational setup but advancements in investments give an organisation's founder many other options. This sector has possibly not adapted to changes in the investment market. Cost-cutting measures and short-term liabilities are more inclined towards aggressive working capital approaches and their adoption has not been promoted in this sector. It is a higher-risk option but a more cost-effective method of working capital financing.

Way forward: For-profit organisations employ liquidity reviews more regularly and actively manage their working capital targets (Anton & Anca, 2021; Dalci *et al.*, 2019) as they are involved in a publicly traded company or private company. The reason for this is that the performance of the company is measured regularly by shareholders or company owners. Therefore, liquidity indicators are used as part of their monthly management meetings or shareholder press release statements. Also, the components of working capital are rated based on the pecking order theory of importance and are managed accordingly. Initial investments are different between for-profit companies and NPOs, therefore, there are no comparisons but NPOs need to look at alternative sources of working capital for growth and expansion. Sources could be in the form of debtor factoring or inventory bonding.

As an NPO's decision on start-up needs to be evaluated, more detailed research in this area of study should be undertaken. Investment options and setup models for NPOs in the country need to be examined in future research.

6.5 Hypotheses overview

The research study entailed Hypothesis A which interrogated whether working capital policies had an impact on liquidity within welfare NPOs in South Africa. Hypothesis B and the three research questions which focused on which working capital approaches delivered a positive liquidity level were also investigated. Hypothesis A was tested and it was found that there was a relationship between working capital policies and liquidity levels. Despite having the relationship, the liquidity level was below 1.

A more in-depth analysis revealed that working capital policy reviews were performed by nine out of ten organisations once a year (Table 5.12). This was also in line with the IFRS for SME regulations that board meetings be held once a year for financial statement approval. The rationale is that policy changes and approval of annual financial statements are part of statutory requirements and have not been proactively managed like in for-profit organisations.

Gitman and Zutter (2012:600), state that working capital changes so often that managers need to spend a third of their time managing these changes. Otekunrin *et al.* (2021) and Poojitha (2019) confirm that changes to certain components have resulted in financial performance improvements. Based on the null hypotheses failing, the research confirmed that every three out of five organisations are challenged with liquidity problems (Table 5.30). Based on the comparison between for-profit and NPOs, there needs to be proactive management of policy for better financial performance as a relationship between them exists.

Hypothesis B was evaluated first to confirm whether there was a relationship between the working capital approach and liquidity level; a significant effect between the two variables was confirmed. A more detailed review to establish which of the three approaches achieved positive liquidity revealed that the aggressive and moderate approaches were over 70% for each, respectively.

Although more than half of the respondents (54.5%, as indicated in Figure 5.4) opted for the conservative approach, it had a mere 0.5% positive impact on liquidity. A significant majority favoured an approach that failed to yield positive liquidity performance. According to Ibrahim *et al.* (2021), approaches adopted need to be aligned with the economic and business climate as changes take place rapidly.

6.6 Summary discussion on the management of working capital

Based on the research study, it was evident that organisations within the same country manage their financial requirements differently. Working capital can be

managed differently based on an organisation's needs and organisational setup. Working capital requirements also change according to organisational diversification. Therefore, this research refers to working capital requirements having different views.

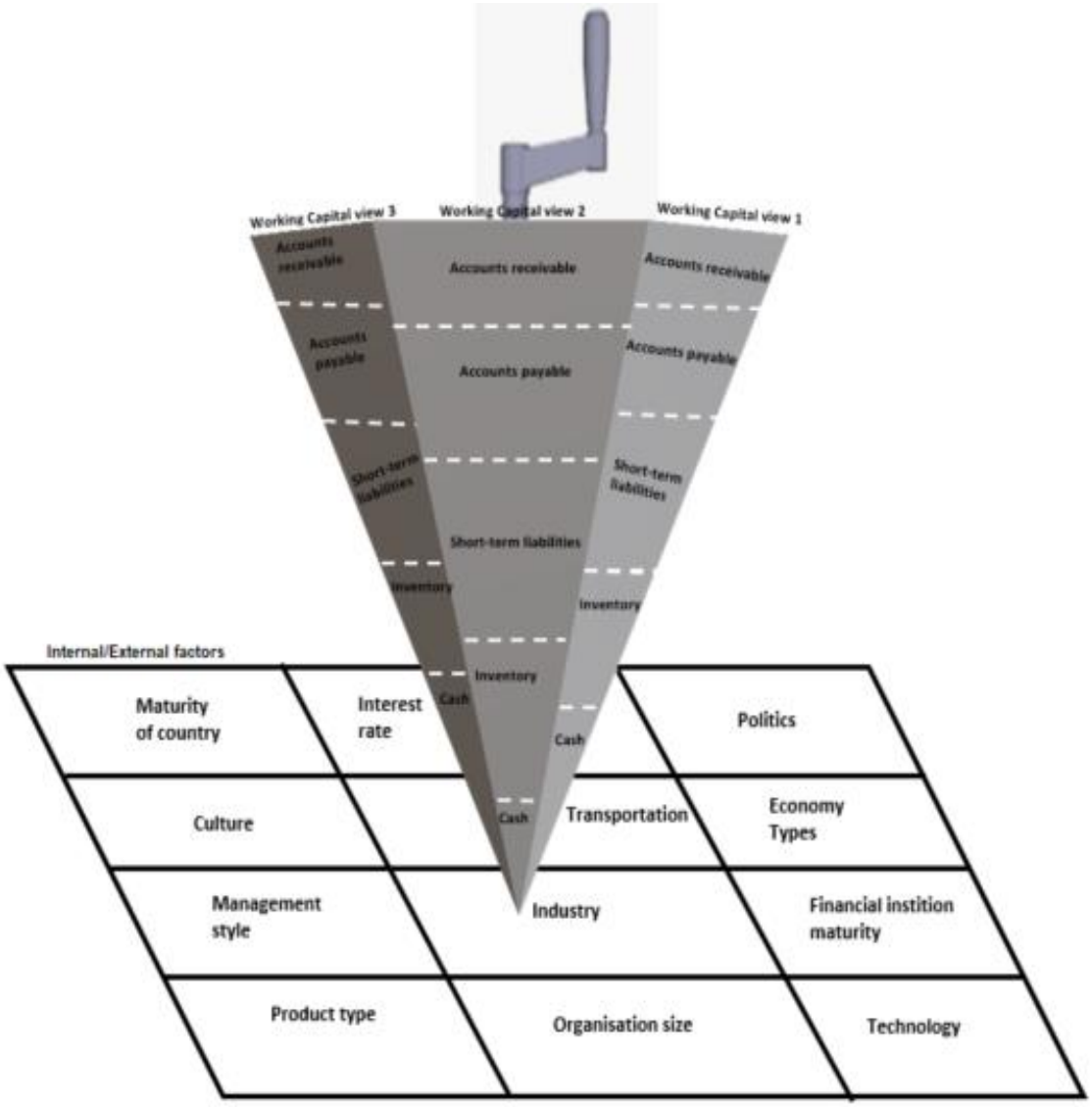

Figure 6.1: Working capital paradigm

Changes in circumstances would mean the proportionality of the working capital components would change resulting in a view advancement (Figure 6.1). Like a hexagon when the sides are changed, the views of the stacks of working capital

components change based on various factors. These factors could be business change, economic change, organisational growth or the restructuring of the organisation. However, what is incomparable is that the stack components of working capital need to adapt to the organisation's requirements.

This adaptation in working capital indicates that management constantly has to focus on the changes in the business and adapt the organisation to different views of working capital requirements. Once the view has been changed, the re-engineering of the financing and investment decisions needs to be re-evaluated based on the changes required in the working capital components.

The perspective for starting up an organisation is from the direction of working capital investment to working capital finance and then, finally, the working capital approach. This methodology is based on reverse engineering for established businesses where the foundation stacking blocks have now changed due to internal and external factors which require that an adaptation of the financing mechanisms and investment changes takes place.

Based on grounded theory and planning principles, the bottom-up approach has been lacking in many organisations as decision-makers enforce the top-down approach. When evaluating the fundamentals of finance, planning comes from the bottom up. In inventory management, capacity dictates the space requirements for operational efficiency and, in turn, directs inventory requirements. This is coupled with customer sales forecast which dictates the demand for commodities in the markets. Based on operational capacity and customer demand, the required components for the building blocks of inventory are determined.

Customer characteristics and payment terms dictate the flow of funds within an organisation as they impact accounts receivable based on terms of sales and allow for credit. The required component of accounts receivable is determined by customer characteristics. On the opposite side, the supplier or accounts payable requirements are determined by supplier capacity and market demand. Trading

terms dictate the accounts payable requirements and, therefore, the value required.

When it comes to cash holding and short-term borrowing, banking facilities as well as an organisation's ability to control the cash conversion cycle are involved. Banks provide facilities based on an organisation's ability to manage and turn cash – so they can show their ability to generate cash. These results will provide the organisation with banking facilities and the ability to hold on to those facilities. It is therefore critical that the conversion cycle is managed with a high level of efficiency as it impacts short-term liabilities as well as the liquidity cash in the bank accounts. In NPOs, donor relationships and the cash or kind funding passed on from them is a further component that needs to be managed effectively.

6.7 Research gap

The study addressed the uniqueness of South Africa's developing economy with a specific focus on welfare NPOs. The survival of these NPOs is based on the recent challenges they faced and what can be done from the internal financing function of working capital management which is the lifeblood of organisations. This study covered the following areas that had not been studied before:

- This is a South Africa study, based on all its complexities (political, economic and social landscape), that looks at the working capital management policies of welfare NPOs and their impact.
- This is the first study in South Africa that uses liquidity ratio to assess the impact of working capital policy effectiveness in welfare NPOs.
- It is a study which challenges the theory of using liquidity tools as indicators of working capital policy on organisational performance.
- It is also the first study to evaluate each component of working capital and the decision drivers within welfare NPOs in South Africa and their impact on the overall performance of these organisations.

- Finally, the study developed a working capital framework on the different approaches for welfare NPO's in South Africa. It determines each underline factor that needs to be consider in apply the three different working capital approaches.

The study not only covered its main aim but also opened other areas that would benefit from the investigation. They are addressed next in the limitations of the study.

6.8 Limitations of the study

In conducting this study, several limitations were encountered; they are as follows:

- Responding NPOs do not want donors to be aware of their internal problems and, therefore, respond as though all is fine. The reason behind this is that they do not want to create a negative impression of the management of finance due to the critical nature of this for an organisation as well as future donor funding.
- The sample chosen was based on welfare organisations. Studies can look at other areas of NPOs and this could result in different ways NPOs are managed. This study looked at using the NLC for the target population as the aim was to concentrate on NPOs that had credible annual financial statements and this was one of the criteria for funding by the NLC. Other options are available for choosing a sample that could be more widespread.
- The size of the target sample can be increased and this will result in a better inference of the target population to the total population. The sample used was purposive and looked at organisations that received funding only in 2020. A larger sample with comparative years of financing can be studied to determine its observations and outcomes.
- There could have been response bias, which is when the respondent knowingly answers a survey question incorrectly to skew the outcome of the survey. This is done because the respondent does not want the problem to be picked up. Even with literature triangulation, it does not surface.

- As this was an electronic survey only organisations with electronic mail addresses were included which eliminated respondents that did not have an email address and internet connectivity. Also, as organisations were selected from the entire country, response rates could be affected by internet connectivity and South Africa's power cuts.
- The literature review is limited due to the NPO sector being so young, therefore, there are very few articles to compare to get a good view of the NPOs sector in South Africa and the world. Good literature reviews always provide different perspectives and views on the topic and limitations of studies which in this case was not possible. Therefore, a more extensive literature review would have provided more depth to the research area.
- The factor that is beyond the control of the researcher is the completion of the questionnaire by the sample population. All efforts were made to remind the respondents to complete the questionnaire but, more than likely, some respondents might not have had the motivation or enthusiasm to get involved in the survey. This will impact the response rate of the sample population and the outcome of the research.
- Another factor that is foreseen is that many individuals do not want to participate in company or organisation surveys due to their lack of knowledge of the POPI Act of 2013 (POPIA: 2022). To overcome this risk, the researcher made it clear in the cover letter that this information gathering was generic and did not require the names of either the organisation or the individual. The aim was also to assure participants that the information would be kept confidential.
- Lastly, due to the time duration of the study, the researcher was confined to a finite number of samples. With more abundance of time, a larger sample and different communication methods could have been used to expand the study on the topic area.

6.9 Conclusion

The study observed the management of working capital in NPOs in South Africa and how different organisations managed differently. The different policies on accounts receivable, accounts payable, inventory, cash management and short-term liabilities culminated in a working capital policy for organisations. Different organisations follow different financing and investment options; one of three working capital approaches – aggressive, moderate or conservative – was used.

Each one of the components of working capital was addressed based on the triangulation methodology proposed in the research design phase. A review was conducted of the research outcomes for the sector per working capital component. The research then observed the theoretical models proposed by various authors to determine which best fitted the NPO sector based on the highest rating. Finally, this information was compared to studies done by for-profit organisations to provide the study with some guidance on the effective management of working capital within NPOs in South Africa.

During the study, various limitations were encountered and a summary of them was provided so that future studies would not be impeded by them. Chapter 7 covers the final recommendations of the study and proposes future studies on this topic.

CHAPTER 7: CONCLUSION AND RECOMMENDATIONS

7.1 Introduction

This research study was undertaken to investigate whether working capital policies had an impact on the liquidity level of NPOs. This investigation was required because over 53% of NPOs did not have cash reserves and a further 6% had less than three months of operating costs reserves (Trialogue, 2021b:228). In a study by Maboya and McKay (2019), it was found that only 20% of NPOs understood financial sustainability. Most of these NPOs experienced financial distress and closed due to a lack of proper financial management – a fact revealed by 50% of the respondents in the study by Maboya and McKay (2019:6). Thus, the present study established the following specific objectives:

1. To understand the type of working capital investment and financing policies used by NPOs and the impact these policies have on liquidity.

2. To evaluate the components of working capital to understand which theoretical model/approach/policy is used and its impact on liquidity.

3. To evaluate the relevant causes of these liquidity problems so that theoretical models and corporate applications can be used to make corrective improvements.

4. To determine ineffective working capital policies, working capital management components, ratios and liquidity by employing a survey questionnaire instrument to collect data to probe how the working capital management approaches used by NPOs creates liquidity problems.

5. To make recommendations on how management can improve liquidity within NPOs so that they can function efficiently and maintain sustainable growth for the country.

The present study utilised a survey questionnaire to acquire data to examine working capital policies and practices employed by welfare NPOs in South Africa and to assess their impact on liquidity. Chapter 2 entailed an extensive review of relevant literature on the theories that underlie each component of working capital. It also examined the three approaches to managing working capital and the investment and financing principles employed. The objective was to gain a deeper understanding of the application of these theories to welfare NPOs and corporate entities. Furthermore, the chapter delved into the literature on NPO studies conducted worldwide and the historical background of NPOs, specifically welfare NPOs, in South Africa.

The findings of the study were presented in Chapter 5. Due to the limited literature available on working capital management and NPOs in South Africa, a triangulation approach was adopted as a foundational methodology. The present study included examining studies about working capital management that had been carried out within profit-oriented entities to acquire an enhanced comprehension of the mechanisms linked to favourable levels of liquidity. Chapter 3 detailed the various studies on for-profit organisations conducted in different countries, industries, economies, political systems and cultures, revealing how each study modified the components of working capital to achieve either positive or negative outcomes for their organisations. Additionally, it became apparent from the studies that both internal and external factors had an impact on working capital management.

7.2 Study synopsis

The present study was grounded in fundamental theoretical models that encompassed all five components of working capital and the various approaches employed in their management. These models have evolved over the past two centuries in response to the changing needs of businesses (Schroeder *et al*., 2022). From this theoretical foundation, key drivers were established that link performance to applied principles. Efficient inventory processing methods, such as

JIT, EOQ and ABC, have proven to be highly cost-effective. Additionally, with the implementation of effective computerised systems, the accounts receivable process has been streamlined, resulting in faster processing of invoices and transactions. Furthermore, bank processes have evolved to offer customers a wide range of payment options.

The empirical basis for this study was provided by corporate studies which revealed that performance is contingent upon the effective application of these underlying drivers. The key terms, identified in Table 3.3, served as the basis for the questionnaire utilised in the research survey; the drivers that had the greatest impact were incorporated into the framework for working capital approaches.

In addition, the literature review conducted in this study underscored the critical role played by both internal and external factors in determining the success of working capital management. Specifically, the literature review in Chapter 3 identified 12 key factors that are essential in this regard – political, the type of economy, cultural factors, industry-specific characteristics, product type, interest rates, the maturity of the country, management style, organisation size, financial institution maturity, technology and transportation advancements.

7.2.1 Framework of study

Organisations have a choice of which working capital management approaches to adopt. Most of the respondents in the study preferred the conservative approach, which achieves lower liquidity levels and has static policy changes. However, active policy changes are necessary to adapt to the impact of all the factors identified in previous studies. Some organisations adopt the aggressive approach, which achieves higher working capital performance but involves high risk and requires a high level of active management.

Table 7.1 identifies the key concepts that were extracted from the various studies in Chapter 3 and used in the research questionnaire. The key components of cash, accounts receivable, inventory, accounts payable and short-term liabilities are then

separated into the three working capital approaches to identify a working capital framework for each approach. At the bottom of each of the columns in Table 7.1 is a heat indicator which depicts the level of risk and the level of active or passive management required in each approach.

- Aggressive working capital – high risk and high level of active management.
- Moderate working capital approach – medium risk and mid-level of active management.
- Cautious working capital approach – low-level risk and passive management.

This working capital framework is unique developed for the NPO welfare organisation in South Africa and forms the foundation for finance decision makers. Based on internal and external factors the most appropriate working capital approaches can be adopted by the level risk and management action needed. Each of the working capital components were assessed with Likert scale or preference options by the sample population to establish the framework (Table 7.1).

Table 7.1: Working Capital Framework from study

Policy Framework	Aggressive Working Capital Approach	Moderate Working Capital Approach	Cautious Working Capital Approach
Cash	Low cash reserves Planning & forecasting Alternate cash sources	Cash availability Liquidity ratio Alternative policy changes	Cash surplus
Accounts receivable	Use all monitoring & forecasting tools Settlement discounts for earlier payments Debtor overdue reviews Timeous receivables	Communication with debtors Ageing schedules Follow up payment	Monitor revenue Bad debt provisions
Inventory	Cost balancing methods Actively managed computer controlled systems Effect of inventory costs Borrowing costs	Re-order policy Computer controlled systems - perimeters reviewed Level of inventory	As and when required Computer controlled systems Organisation's income
Accounts payable	Better payment terms Aggressively use payment discounts Slow payment based on collections Use creditors as working capital	Credit limits to cover purchases Control payment commitments	Flexible credit limits - seasonal coverage
Short-term liabilities	Borrowing costs Discounted loans Internal working capital generation Cost cutting	Cost/benefit analysis Open lines of credit	Part of long-term funding Simple interest rate
Heat indicator			

Working capital policies and approaches cannot be chosen in isolation. This was evident in the literature review on the corporate management of working capital within for-profit organisations. From the literature review, it was evident that 12 internal and external factors affect the performance of working capital adjustment or decision-making consideration. Each of the factors was reviewed and its potential impact on policies and approaches to working capital management for NPOs was elucidated.

7.2.2 External and internal factors' impact on working capital policy

Working capital is constantly evolving in today's business landscape. According to the study by Ibrahim *et al*. (2021), working capital fluctuates every hour and requires constant monitoring. As a result, management should be actively engaged in the policy framework that governs its components. The effective management of working capital in an organisation is contingent upon an array of both internal and external factors. The identification and subsequent examination of the 12 key external and internal factors, elucidated in Chapter 3 of the corporate literature review, allows for the development of a balanced decision-making process. This process enables organisations to consider the various factors at play holistically and, subsequently, make informed decisions regarding their working capital management strategies.

7.2.2.1 External factors impacting working capital decision

The impact of country and industry type on working capital performance varies in different studies and is therefore a factor for consideration. As detailed in the literature review in Chapter 3, geographical location does not appear to be a significant factor in working capital (Talonpoika *et al.,* 2016) and industry type does not appear to have a major influence on working capital performance either (Louw *et al*., 2016).

Working capital in organisations is impacted by various factors, including the political and economic setup of the country. Privately owned organisations have a

higher liquidity risk factor compared to state-owned enterprises which are backed by the government's fiscus (Ren *et al.*, 2019). This affects the pre-finance options available to suppliers to state-owned organisations. The economic cycle of a country also affects working capital performance, with downward spiralling economies impacting short-term liabilities. On the other hand, growing economies secure lenience from financing houses on loan agreements and funding to organisations.

Furthermore, the maturity of the financial sector and country also impact working capital. In Central Europe, where financial institutions are mature and plentiful, organisations hold less working capital compared to Northern Europe, where the financing sectors are slower and less plentiful (Zabolotnyy & Sipiläinen, 2020). This results in companies in Northern Europe needing more available funding for business cycles within organisations. Therefore, the location and maturity of the financial institution markets have a considerable effect on working capital requirements. This pertains to the contrast in the configuration of South Africa's rural and urban areas and the availability of banking facilities therein.

Culture has been identified as a factor impacting working capital requirements in India where the business sector is closely tied to cultural aspects of business physiology. As a result, businesses tend to follow a conservative approach to managing working capital and hold a larger amount of working capital from long-term rather than short-term sources (Farhan *et al*., 2021). However, payment terms for goods and services supplied to customers are not strictly adhered to, making cash forecasting difficult. Organisations operating in South Africa bear a cultural legacy shaped by the extensive historical economic and social transformations of recent years. As a result, it is crucial to consider these ideologies and apply what is most suitable for the organisation.

Profit-oriented organisations strategically plan the procurement of goods per the principles of the supply chain management process, as posited by Ilter (2019) and Kasozi (2017). Such organisations devote significant resources – both in terms of

time and finances – towards ensuring optimal transportation, appropriate inventory management and the ideal assortment of goods to meet all demand requirements. The swift implementation of advanced technology further bolsters operational efficiency, resulting in improved working capital management.

Another factor that impacts working capital management is the interest rate. Although low-interest rates may be expected to lead to better accounts payable turnover, studies have shown that in low-interest rate countries, accounts payable are slower and organisations borrow more to increase their working capital from a high borrowing and high accounts receivable perspective, resulting in higher levels of working capital within organisations (Gao *et al.,* 2021). The constantly changing repo rate in South Africa is a critical factor that impacts working capital policy and management.

7.2.2.2 Internal factors impacting working capital decision

Customer base and product type have an impact on the composition of working capital used within an organisation and the working capital makeup should reflect these characteristics to create the necessary working capital components. The adoption of either a cash-based or full accounts receivable model by an organisation is contingent upon the customer type (Li *et al*., 2020). For the latter model, a substantial amount of working capital is required to be allocated based on payment terms of 30, 60 or 90 days. This can affect the cash conversion cycle and increase working capital requirements (Urhoghide & Korolo, 2022).

The type of product being sold or manufactured is another crucial factor to consider. Perishable products move quickly in terms of sales but pose the risk of high obsolescence that an organisation must manage. To manufacture goods to supply to customers as needed, raw materials, semi-finished products and finished goods must be stored in warehouses. This business model necessitates a greater amount of working capital and inventory turnover has an impact on working capital performance (Conley *et al.*, 2019; Narain, 2022). Additionally, theoretical inventory models, such as JIT requirements, and lower buffer stock models can affect an

organisation's inventory management approach (Priniotakis & Argyropoulos, 2019).

Custom-built products are another inventory model that affects organisations. Some customers require customised products that are tailored to their specifications and the organisation must take a portion of the upfront payment to cover costs and reduce the risk of cancellation (Li *et al*., 2020). NPOs have customers seeking customised disability facilities or products such as wheelchairs or mobility carriers that must be customised to the individual's needs. These considerations must be considered when deciding on the working capital approach.

As observed in Dalci *et al.*'s (2019) investigation, firm size exerted a significant impact on the cash conversion cycle. Consequently, the interplay between organisational size and management approach assumes crucial significance when making working capital decisions.

In summary, based on the factors identified, it is clear that a conventional approach to working capital management is not suitable as each factor has a unique impact on working capital. Therefore, it is necessary to tailor the management approach to the specific characteristics of each organisation and compare the factors based on its business and service model. To illustrate, a theoretical model that incorporates these factors has been suggested in Figure 6.1. As working capital components change frequently, management needs to stay up to date with these changes and the associated dynamics of internal and external factors.

7.3 Conclusion and recommendations for each objective

This study evaluated the five components of working capital independently as each sector or industry might weigh them differently. Accordingly, the recommendations of this study are based on the triangulation of the literature reviewed in Chapter 2, the application of for-profit organisations' working capital policies and approaches discussed in Chapter 3 and the study's survey results presented in Chapter 6.

Organisations can adjust just one component or a combination of them to achieve a variation. As most organisations structure their policy per working capital component, it becomes easier to modify the policy that requires adjustment.

In this regard, the study evaluated the overall policies of the organisations and recommendations are provided based on the survey results obtained from welfare NPOs in South Africa. By examining the results, this study identified the areas that required changes or modifications to improve the working capital management of NPOs in South Africa. Therefore, the results of this study can provide valuable insights to NPOs for developing effective working capital management policies that align with their specific needs and requirements.

7.3.1 Policy recommendations

Organisations typically begin with an investment policy that leads to a financing policy and culminates in the overall policies managing each working capital component. The literature on investment and financing policies suggests that for-profit organisations adapt to changes in the economy, politics or markets based on their industry. Zimon (2019) and Zimon (2021) illustrate this by matching various types of working capital needs with available working capital financing options.

The research findings showed that the majority of NPOs (54.5% to 84.8%) applied a conservative to moderate approach to working capital management, with 82.8% implementing formal policies. However, despite having formal policies and following structural accounting practices, 64.9% of organisations faced liquidity challenges. The study revealed that policy reviews were conducted annually by 90.4% of the sample population, with 80.6% of organisations establishing policies through formal committees. Of the three working capital investment/financing types of the majority of the organisation follow a moderate type (91.9%), relaxed type was 6.3% and restrictive was only 1.8%. The moderate type is linked to the conservative approach since the financing option used is long-term and based on the results is an optimal choice. The analysis also showed that liquidity is a major

issue for welfare NPOs in South Africa, with two out of three organisations, irrespective of their size, facing challenges.

Furthermore, the investigation underscored that the intervals between policy reviews were excessively wide and did not adequately factor in the rate at which the economy was evolving. Monthly policy reviews showed that organisations achieved a liquidity ratio of over 2, while quarterly reviews resulted in a liquidity status between less than 2 and greater than 1 for 50% of the sampled organisations (Table 7.2). Half-yearly reviews achieved the same level of liquidity for 37.5% of organisations. Therefore, the study recommends that NPOs should conduct policy reviews more frequently to keep up with changing economic conditions to improve their liquidity status.

Table 7.2: Policy review compared to liquidity

			Liquidity_status		
			>2	<2 but >1	<.=1
Policy_review	Monthly	Row N %	100,0%	0,0%	0,0%
	Quarterly	Row N %	0,0%	50,0%	50,0%
	Half yearly	Row N %	37,5%	37,5%	25,0%
	Annually	Row N %	5,9%	29,1%	65,1%
	Whenever necessary	Row N %	7,7%	11,5%	80,8%

Specific objective 1 was to understand the type of working capital investment and financing policies used by NPOs and the impact these policies had on liquidity.

The outcome of specific objective 1 is as follows:

Organisations follow a moderate financing type which is coupled with the conservative working capital approach. According to the analysis, more frequent policy reviews have a positive effect on the liquidity position of welfare NPOs in South Africa.

The research analysis revealed that a higher frequency of policy reviews has a positive impact on the liquidity status of welfare NPOs in South Africa. Additionally, the study found a correlation between the working capital approach used and the liquidity status achieved. As shown in Table 7.3, 99.5% of sampled NPOs that

adopt a conservative approach achieve a liquidity rate of less than 1, while 53.5% of the sample that adopts an aggressive approach achieve a liquidity rate of greater than 2; those adopting a moderate approach, 75% of the sample, achieve a liquidity rate between 1 and 2. Furthermore, organisations that change their approach over time achieve a 100% liquidity rate of greater than 2.

Table 7.3: Working capital approach compared to liquidity

			Liquidity_status		
			>2	<2 but >1	<.=1
WC_policy	Conservative	Row N %	0,0%	0,5%	99,5%
	Aggressive	Row N %	53,5%	18,6%	27,9%
	Moderate	Row N %	2,9%	75,0%	22,1%
	Changes over time	Row N %	100,0%	0,0%	0,0%

According to the analysis in Chapter 5, the majority of welfare NPOs (54.5%) follow a conservative approach and 34.3% follow a moderate approach. This aligns with the statement that two out of three organisations face liquidity challenges but adopt a conservative to moderate approach to working capital management.

Only 10.9% of organisations follow an aggressive working capital approach and more than 72% of them achieve a liquidity status of greater than 1. With this approach, there is a reverse scenario, where two out of three welfare NPOs have a highly positive liquidity status. This suggests that the working capital approach applied, which ranges from conservative to moderate, should be adapted to aggressive to moderate to yield more positive liquidity results. This is also in line with the working capital framework that policy reviews need to be done more frequently, as a small number of organisations that change their working capital policy over time achieve a 100% liquidity status of greater than 2.

The purpose of specific objective 2 was to evaluate working capital to understand which theoretical model/approach/policy was used and its impact on liquidity.

The outcome of specific objective 2 is as follows:

***Of the three approaches, adopting an aggressive working capital approach, coupled with an effective policy management system that considers economic, political and market conditions, results in improved liquidity*.**

Through the analysis of welfare NPOs, it is evident that the frequency of policy reviews has a significant impact on the liquidity of welfare NPOs in South Africa. Therefore, this study recommends that the relationship between policy review frequency and liquidity should be considered by welfare NPOs. The conservative to moderate working capital approach does not yield a positive liquidity level. However, organisations that apply a high-frequency policy review and employ an aggressive to moderate approach achieve liquidity levels greater than 1 and as high as over 2.

These findings suggest that the approach to and frequency of policy reviews need to be considered when evaluating or making changes to policies for higher performance. Therefore, welfare NPOs in South Africa should consider the impact of policy review frequency on their liquidity status and make changes accordingly to achieve improved financial performance.

Overall conclusion highlights the importance of effective working capital management policies for welfare NPOs in South Africa and how policy review frequency can impact their financial performance. The review frequency applies to each component of working capital – cash, accounts receivable, inventory, accounts payable and short-term liabilities. Each component has its independent policy recommendations that can complement one another and collectively impact the overall working capital approach. These recommendations align with Objectives 3, 4 and 5 of the study.

7.3.2 Cash management recommendations

Cash management is a critical aspect of financial management because excess cash left idle reduces in value and fails to generate future returns. The literature review in Chapter 2 outlined several models, including Baumol, Miller-Orr, Beranek and Stone, which provide insights into the cost of holding the right amount of cash at the right time and investing surplus cash. Although financiers do not quote the specific models they apply, they follow the underlying principles strictly.

In a recent study by Gul and Sahin (2022), the pecking order theory, wherein businesses prioritise the sequential use of cash based on importance, is advocated for cash management. Additionally, Gao *et al.* (2021) underscore the importance of holding cash while considering associated costs based on risk and interest. For-profit organisations aim to consolidate their cash flow and bank facilities by creating rollup bank accounts that earn interest on ideal cash and invest surplus cash in investment accounts until needed.

NPOs recognise the significance of cash management but require better debtor forecasts to make the process more predictable. In this regard, the use of liquidity ratios assumes crucial importance and should form a part of monthly account management. **This recommendation is underscored by the fact that, although surplus cash has an importance level exceeding 50%, its opportunity cost must be considered. Hence, incorporating liquidity ratios in decision-making and future trend analysis is imperative.**

7.3.3 Accounts receivable recommendations

Effective management of accounts receivable is crucial for cash flow management as it impacts an organisation's ability to plan for operational expenses, inventory procurement and growth initiatives. The monitoring of accounts payable and the follow-up of non-payment is equally important. The study conducted by Urhoghide and Korolo (2022) on companies listed on the Nigerian Stock Exchange highlights

the need for effective policies and processes to collect receivables to minimise bad debts and optimise cash usage.

As revealed by responses from the study, similar challenges are experienced by welfare NPOs in South Africa. While there are numerous theoretical models on debtor collection, NPOs are only utilising collection period monitoring which limits their ability to forecast cash flow and plan for inventory procurement. **Therefore, the recommendation is for the implementation of debtor collection analytics and improved communication with customers. In addition, a better forecast model and trending analysis on income and cash flow should be employed to enable effective cash flow management.**

7.3.4 Inventory management recommendations

In the realm of inventory management, theories have shown that holding inventory is a costly and risky asset. As a result, models such as EOQ, JIT systems and ABC control methods have been developed to focus on cost management and control. For-profit organisations have effectively applied inventory theories as their development originated from various industrial and manufacturing sectors. However, in the case of NPOs, the focus on revenue as a driver for inventory replenishment is not economically efficient.

Afrifa *et al.* (2021) cite three motives for holding inventory – precautionary, speculative and transitionary; these have proven to be highly beneficial to organisations. NPOs must shift their focus from revenue to cost and adopt these motives as they are based on cost-holding inventory principles. By transitioning to this methodology and applying one motive at a time, organisations can adjust gradually.

In addition, organisations that have a computerised ERP system should consider implementing the EOQ system into their ERP system. Louw *et al*.'s (2016) study in the South African retail sector showed that aggressive inventory management maximised organisational performance. However, only 33.3% of NPOs reported

using a computerised control system for inventory replenishment. **The recommendation is ERP systems should be more widely applied and incorporate built-in cost management methodologies in NPO's**.

7.3.5 Accounts payable recommendations

Accounts payable, a critical component of working capital management, is based on commercial terms of agreement which vary across industries and retailers. These terms are typically discussed in the literature where payment before or after the discount period or payment after the credit period are popular norms. NPOs commonly use these methods for managing their working capital. However, NPOs often face challenges in obtaining credit terms and are not given preference despite the sector in which they operate.

A study by Poojitha (2019) found that prolonging payment can result in damaging an organisation's credit rating. In contrast, Ibrahim *et al.* (2021) found that protracted credit days can improve profitability. Therefore, it is crucial to use trade payables effectively to maintain healthy relationships between customers and suppliers. Prsa *et al.* (2022) suggest that a short delay in payment should not harm the supplier relationship and good communication is essential during times of delayed payment to enable suppliers to make alternative arrangements.

Another recommendation is to divide accounts payable into A, B and C listings and effect late payments in monthly sequences. The critical supplier should not be impacted by delays and payment management systems should be based on sequences rather than affecting all creditors. This system is more practical and effective for payment management rotation.

7.3.6 Short-term liability recommendations

The effective use of short-term borrowing has been established as an important aspect of financial management. However, the costs associated with such financing mechanisms must be carefully considered. Al-Zararee *et al*. (2021)

suggest that lengthening payment periods for customers can add to costs and result in unfavourable outcomes for organisations and benefits for financial institutions instead. Nicolas (2022) highlights that short-term finance serves as a buffer for working capital needs; this aligns with a conservative working capital approach.

NPOs have reported using short-term loans as part of their cyclical requirements – a good approach with less burden on the organisation. **However, with the adoption of an aggressive working capital management approach, the recommended use of short-term funding is likely to increase. Organisations need to consider costs, cash flow planning, interest rates and terms of borrowing carefully when utilising short-term borrowing mechanisms.**

The third specific objective was to evaluate the relevant causes of these liquidity problems so that theoretical models and corporate applications could be used to make corrective improvements.

The outcome of specific objective 3 is as follows:

The interdependent nature of the various components of working capital significantly influences an organisation's liquidity and overall performance. The cohesive implementation of working capital management practices plays a pivotal role in the achievement of organisational success. This is depicted in Figure 7.1.

7.3.7 Working capital components ranking

A specific objective of the research was to determine the degree of significance that respondents attributed to the various components of working capital. By doing so, the study could analyse this level of importance by comparing it to the findings of the for-profit organisations examined in Chapter 3 as well as the literature reviewed in Chapter 2. The ultimate goal of this analysis was to direct organisations to follow an effective and efficient cash conversion cycle. Table 7.4 presents the working capital components rankings.

Table 7.4: Working capital components rankings

Components	Not important	Important	Very important
Accounts receivable	**51,01%**	10,35%	38,64%
Inventory	30,05%	30,05%	**39,90%**
Bank/Cash	32,08%	20,45%	47,47%
Accounts payable	31,06%	20,96%	**47,98%**
Short-term liabilities	**55,81%**	18,18%	26,01%

According to Table 7.4, more than 51% of the respondents did not consider accounts receivable to be important. This was surprising, as accounts receivable is a crucial source of funding for organisations and should be considered the most important component of working capital. Similarly, inventory was deemed important by just over 39% of the respondents, which is lower than expected considering that it is one of the most expensive current assets and should be valued accordingly.

Bank/cash had a level of importance of just over 47%, which is a reasonable representation. The fact that accounts payable received a level of importance of over 47% is somewhat misguided as payments represent outflows of funds and this highlights a reversal of priorities between accounts receivable and accounts payable. Finally, short-term liabilities were deemed unimportant by over 55% of the respondents – a fair representation. However, if the approach shifts from conservative to aggressive, the level of importance for this component will be reversed.

The practical outcome of the study does not align with the prescribed theoretical and corporate practices for each component. According to these practices, accounts receivable should be collected quickly with active follow-ups on outstanding payments. Inventory levels should be kept low while still meeting demand and procurement of inventory should be based on cost and efficiency. Cash holdings should be based on usage, with any additional cash invested in interest-bearing opportunities. Accounts payable should be paid as late as possible with minimal impact on supplier relationships and, considering the interest costs,

short-term liabilities should only be considered after all internal options have been exhausted.

By following these management practices, organisations can achieve an effective cash collection cycle (Chang, 2018) that is actively managed daily. The collective use of a combination of liquidity monitoring tools, such as the 18 ratios described in Chapter 2, and the more recent Emery's Lambda index, is recommended.

Specific objective 4 was to determine ineffective working capital policies, working capital management components, ratios and liquidity by employing a survey questionnaire instrument to collect data to probe how the working capital management used by NPOs created liquidity problems.

The outcome of specific objective 4 is as follows:

The adjustment of working capital components must re-align the level of importance to accounts receivable and inventory when compared to accounts payable taking into consideration fluctuations in both internal and external factors impacting the organisation.

Based on the current state depicted in Figure 5.23, which emanated from the research study, an analysis was conducted by reviewing the theoretical literature, coupled with the outcome of Objective 3 and comparing it with literature from for-profit organisations. This led to the formulation of the recommended state of working capital management framework depicted in Figure 7.1 which presents the advantages of each component based on the recommended improvements. Figure 7.1 is part of study Objective 5 which presents the overall study recommendation.

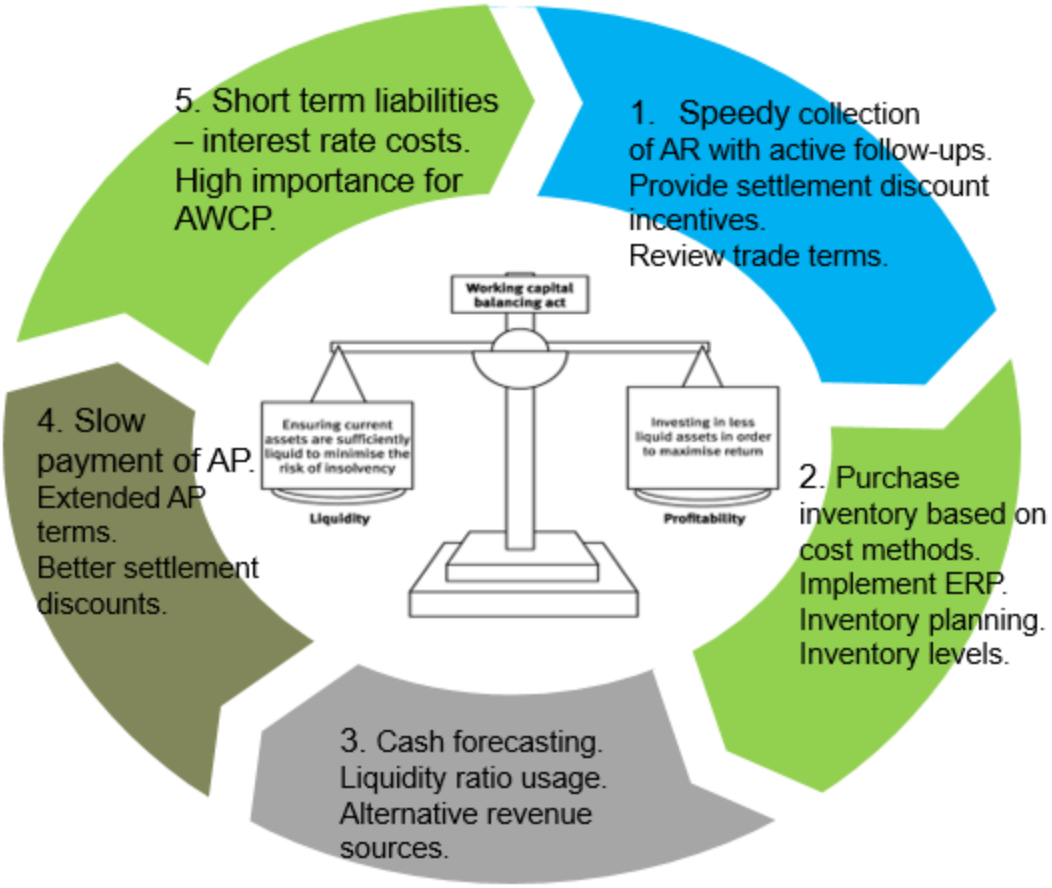

Figure 7.1: Recommended state of each working capital component

Specific objective 5 was to make a recommendation on how management can improve liquidity within NPOs so that they can function efficiently and maintain sustainable growth for the country.

The outcome of specific objective 5 is as follows:

Collecting accounts receivable efficiently and on time and the strategic and cost-effective procurement of inventory constitute crucial aspects of organisational management. Employing predictive ratio tools to manage cash flow and coupling these with the timely management of accounts payable serve as vital components of this process. Finally, managing short-

term liabilities proficiently plays an essential role in mitigating the working capital deficit.

7.3.8 Summary conclusion

Based on a detail review of each component of working capital and the application of the appropriate working capital approach below (Table 7.5) provides a summary of each component's application.

Table 7.5: Summary conclusion of each working capital component

Working capital components	Conclusion per component
Cash management	This recommendation is underscored by the fact that, although surplus cash has an importance level, its opportunity cost must be considered. Hence, incorporating liquidity ratios in decision-making and future trend analysis is imperative to manage cash within the organisation. Holding essential cash is key.
Accounts receivable	The recommendation is for the implementation of debtor collection analytics and improved communication with customers. In addition, a better forecast model and trending analysis on income and cash flow should be employed to enable effective cash flow management for welfare NPO's**.**
Inventory	The recommendation is ERP systems should be more widely applied and incorporate built-in cost management methodologies in welfare NPO's.
Accounts payable	The recommendation is to divide accounts payable into segments listings and effect late payments in monthly sequences. The critical supplier should not be impacted by delays and payment management systems should be based on sequences rather than

	affecting all creditors. This system is more practical and effective for payment management rotation.
Short-term liabilities	With the adoption of an aggressive-moderate working capital management approach, the recommended use of short-term funding is likely to increase. Organisations need to consider costs, cash flow planning, interest rates and terms of borrowing carefully when utilising short-term borrowing mechanisms.
Working Capital policies	The higher the frequency of reviews the higher the liquidity level (better performance)
Working Capital approach	Aggressive to moderate (based of working capital framework for welfare NPO's -Tabel 7.1)

The study's findings highlighted that having policies in place did not guarantee successful performance; rather, the active management of policies resulted in better liquidity performance. Additionally, the research established that organisations that adopted aggressive to moderate approaches achieved higher liquidity levels than those that followed a conservative approach. The study also revealed that working capital components were not managed effectively, thus, recommending a realignment of focus on working capital components.

Additionally, despite over 80% of the sample population having formal policies, the impact of these policies on liquidity was poor. Most of the sample population followed an approach that led to negative liquidity levels. Finally, the study proposed a framework for achieving higher liquidity by re-organising the components of working capital to change the approach and encourage the active management of working capital.

7.4 Approaches for further studies

The present study conducted a comprehensive review of the literature available on welfare NPOs in South Africa, with a particular focus on the finance area. The review revealed a narrow baseline, with little to no research on certain financial topics such as working capital and its components. As a result, this study identified gaps in the literature and provides a pathway for further research into working capital management and liquidity in NPOs in South Africa. Notably, this study did not aim to fill all the gaps but rather to open up areas for expansion by future studies.

One of the identified gaps in the literature is the need for a better understanding of NPOs' initial start-up investment and how they manage growth and expansion options. The advancements in the world of finance and banking facilities have provided more opportunities for NPOs and classic single-minded capital investment options may no longer apply. Governments have started forming agencies to facilitate advancement in declining areas and corporations have established various CSI initiatives for tax purposes. Additionally, the new phenomenon of philanthropy has become increasingly popular, providing individuals with opportunities to get involved in NPO start-ups or growth initiatives. Therefore, future research should investigate investment options and opportunities for NPOs in South Africa.

Another gap that was identified is the need for a study on adaptability to change within the NPO sector in South Africa. While for-profit organisations regularly make changes and consider external factors when making decisions, it remains unclear how well NPOs can adapt to changes in the economy, political environment and society. This study proposes investigating what motivates adaptability to change in NPOs and how this impacts organisational performance as this will provide a pathway for other organisations to follow and improve their methodology.

The study also acknowledges that the non-profit sector has been neglected in terms of research and analysis because it lacks a profit motive. However, this

sector provides social fulfilment and assists destitute people from various communities. Therefore, the advancement of research in this sector will build and grow it for the future.

In conclusion, this study has identified several gaps in the literature on the financial aspect of welfare NPOs in South Africa, highlighting the need for further research in investment options, adaptability to change and the sector's overall growth and sustainability. Addressing these gaps will provide a better understanding of NPOs in South Africa and contribute to improving their performance, thereby enhancing the sector's social impact.

7.5 Areas of further study

The broad objective of this research was to investigate the management of working capital in NPOs, with a specific focus on welfare organisations in South Africa –the largest sub-sector within the NPO domain. The significance of addressing this topic was motivated by the limited and fragmented coverage of the subject in South Africa and Africa, resulting in the closure of organisations and their consequent inability to serve the poorest communities. The research aimed to contribute towards detailing internal financial controls and their impact on liquidity, with the understanding that the research could not solve all the problems this sector faces.

This study's contribution to the literature is noteworthy as it is the foremost published research on working capital management, policies and liquidity in welfare NPOs in South Africa. As the first study to use a triangulated methodology combining research surveys, practical corporate studies and general theory, it found that the components of working capital were not aligned in terms of importance and value, resulting in an ineffective cash conversion cycle.

It is expected that this research will encourage more studies in this sector of the economy, which will add high value to social upliftment and progress. The research also emphasised the sector's importance and the need for increased attention to promoting more studies in this area. The feedback from the research respondents

highlighted the need for more focus on this area and the study served as an eye-opener.

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APPENDICES

Appendix 1: Covering Letter

How management of Working Capital is undertaken in NPO's

Cover Letter

1 November 2022

Dear Respondent,

You are being contacted for a research study on Non-profit organisations in South Africa
In accordance with Section 69 (2) a (ii) of the POPI Act, I am obligated to get your consent before we proceed.
By not responding to this email - I will not contact you or the organisation for study purposes.
Should you wish to participate we thank you and would like to explain the study and introduce you to the hyperlink that takes you to the study.

I would firstly like to take this opportunity in thanking you for taking your time in helping our PhD research endeavour. There have been 30 questions set out, of which 5 are general enquiry questions which aim at obtaining information about the respondent, the other 25 questions deals strategically with the research problem.

The aim of the research:
- is to understand how your organisation manages working capital.

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 and turbulent environment, in which we live and operate.

All information is **confidential** and strictly between the researcher, University and the organisations respondent. Your particiaption will remain anonymous.

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

Kindly bear in mind that the research aim is to uplift non-profit organisations, and in no way address direct problems within your organisation.
Your assistance is appreciated for the benefit of your organisation as well as the organisations within the country. This research will be published as a PhD study and made public.
This survey is voluntary and should at any time during the the survey you feel unconfortable and wish to withdraw you can do so by just closing the Google Form and all information will be deleted.
This survey is open for a 30 day duration.

Below is the link to the Survey:
https://docs.google.com/forms/d/e/1FAIpQLSfZjW8Vr5sBME0GCRvxPSNdvWxli2Dry1hwPfDEguDm8eieRA/viewform?usp=sf_link

I thank you.

Kind Regards

R.M Mohanlal
Student Researcher NWU

Appendix 2: Research Questionnaire from Google Forms

Research Questionnaire - North West University: How management of Working Capital is undertaken in NPO's within South Africa

*Required

1. In accordance with, the Protection of Personal Information Act, 2013 Section 69 (2) a ii. Do you provide permission for this study to continue with you being a participant? *

   Mark only one oval.

   - ◯ Yes
   - ◯ No

2. **PART A: General Section (Mark the appropriated option)** *
   1. Age ?

   Mark only one oval.

   - ◯ 20-30
   - ◯ 31-40
   - ◯ 41-50
   - ◯ 51-60
   - ◯ 61 >

3. 2. Current Occupation ? *

   Mark only one oval.

   - ◯ Finance Manager
   - ◯ Chief Finance Officer
   - ◯ Finance Controller
   - ◯ Chief Executive Officer
   - ◯ Volunteer/ Consultant
   - ◯ Other

4. 3.Your Qualification ? *

   Mark only one oval.

   - ◯ Matric/Diploma
   - ◯ Graduate
   - ◯ Post Graduate
   - ◯ Masters/Doctorate
   - ◯ Other

5. 4. Number of years involved with the organisation ? *

Mark only one oval.

- ◯ <=5
- ◯ 6-10
- ◯ 11-20
- ◯ 21-30
- ◯ 31>

6. 5. Which province is your organisation primary located in? *

Mark only one oval.

- ◯ Eastern Cape
- ◯ North Cape
- ◯ Western Cape
- ◯ Free State
- ◯ Limpopo
- ◯ Mpumalanga
- ◯ North West
- ◯ KwaZulu Natal
- ◯ Gauteng

7. **PART B: Working Capital Enquiry** *

6. Does your organisation have an overall policy for the management of its working capital ?

Mark only one oval.

- ◯ Formal policy
- ◯ No policy
- ◯ Informal policy

8. 7. Who is responsible for working capital policy setup in your organisation ? *

Mark only one oval.

- ◯ Board of Management
- ◯ President/ Chairman
- ◯ Finance Committee
- ◯ Treasurer
- ◯ Chief Financial Officer
- ◯ Chief Executive Officer

9. 8. How often is your organisations working capital policy reviewed ? *

Mark only one oval.

- ◯ Monthly
- ◯ Quarterly
- ◯ Half yearly
- ◯ Annually
- ◯ Whenever necessary

10. 9 a. What type of working capital management policy does your organisation follow? *

Mark only one oval.

- ◯ Cautious
- ◯ Aggressive
- ◯ Moderate
- ◯ Changes over time

11. 9 b. How would you describe your policy for working capital investment ? *

Mark only one oval.

- ◯ Relaxed
- ◯ Restrictive
- ◯ Moderate

12. 10. Based on the revenue of the last financial year how big is your organisation (SA: ZAR) ? *

Mark only one oval.

- ◯ <1 mil
- ◯ >1mil <25mil
- ◯ >25mil <100mil
- ◯ >100mil <200mil
- ◯ >200mil

13. **PART C: Managing Working Capital Components** *

Cash Management

11. Which of the below does your organisation experience ? (Choose the most applicable one)

Mark only one oval per row.

	Never	Rarely	Sometimes	Often	Always
Cash Surplus	◯	◯	◯	◯	◯
Prepare Cash Budgets/Forecasts	◯	◯	◯	◯	◯
Use liquidity ratio to manage cash	◯	◯	◯	◯	◯
Apply the principle : "Cash is King"	◯	◯	◯	◯	◯

14. 12. Which of the following describes the most appropriate planning for the use of cash ? (Rank according to importance by the use of numbers e.g. 1,2,3,4,5 - with 1 been the highest of importance) *

Mark only one oval per row.

	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	◯	◯	◯	◯	◯
To follow up with all debtors on timeous payment	◯	◯	◯	◯	◯

15. 13. What does your organisation do with surplus cash ? *

Mark only one oval.

- ◯ Leave in Current Account
- ◯ Deposit in Call/Money Market
- ◯ Invest for Fixed Term

16. 14. Is there a threshold of cash that you keep in the organisations bank accounts to address liquidity ? *

Mark only one oval.

- ◯ 1 months of operating expenses
- ◯ 2 months of operating expenses
- ◯ 3 months of operating expenses
- ◯ >3 months of operating expenses

17. **Accounts Receivable (Debtors)** *

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

Mark only one oval.

- ◯ Monitoring Income
- ◯ Collection period
- ◯ Ageing schedules
- ◯ Other

18. 16. Which of the below your organisation reviews ? *

Mark only one oval per row.

	Never	Rarely	Sometimes	Often	Always
Debtor overdue reviews	◯	◯	◯	◯	◯
Provision for bad debts reviews	◯	◯	◯	◯	◯
Review of debtors terms	◯	◯	◯	◯	◯
Use Debt management theories	◯	◯	◯	◯	◯
Providing early settlement discounts	◯	◯	◯	◯	◯

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

Mark only one oval.

- ◯ Cash on Delivery or 15 days
- ◯ 30 days
- ◯ > 60 days

20. **Inventory/ Stock** *

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

Mark only one oval.

- ◯ As and when required
- ◯ Re-order policy
- ◯ Cost balancing models
- ◯ Computerized controlled system
- ◯ Other

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

Mark only one oval.

- ◯ Level of inventory
- ◯ Effect of inventory costs
- ◯ Effect on organisations income
- ◯ Effect on the borrowing of the organisation

22. 20. How does your organisation responds to the below ? *

Mark only one oval per row.

	Never	Rarely	Sometimes	Often	Always
Review inventory levels					
Prepare inventory budgets					
Use inventory management theories					
Review of obsolete inventory					
Purchase inventory on discount					

23. **Accounts Payable (Creditors)** *

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

Mark only one oval.

- On delivery
- 30 days
- > 60 days

24. 22. How does your organisation address the below creditor terms ? *

Mark only one oval per row.

	Never	Rarely	Sometimes	Often	Always
Better payment terms from suppliers					
Credit limit covers purchases					
Suppliers are flexible to seasonal credit increase					
Review payment terms before purchases					
Supplier credit is easy to obtain					

25. 23. What is your policy/ practice with respect to cash discounts offered by your suppliers ? *

Mark only one oval.

- 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

26. 24. Do you believe that your organisation can negotiate more favourable terms of payment with your suppliers, since you are involved in the non-profit sector ? (Please mark the appropriate one) *

Mark only one oval.

- ◯ Stronly Disagree
- ◯ Disagree
- ◯ Neutral
- ◯ Agree
- ◯ Strongly Agree

27. 25. With respect to managing short-term loans (overdrafts, etc) from commercial banks, what is your primary use for those funds ? *

Mark only one oval.

- ◯ Regular and constant part of total organisations financing
- ◯ Cyclical part of total organisation financing
- ◯ Seasonal part of total organisation financing
- ◯ Non-spontaneous needs /(as the need arises)

28. 26. Which of the following best describes overall the short- term loans that you obtain from commercial banks ? *

Mark only one oval.

- ◯ Simple interest loans
- ◯ Discounted loans
- ◯ Open line of credit
- ◯ Loans with compensating balances
- ◯ Other

29. 27. Based on your last Audited Financial Statements what was your organisations liquidity status (Current Assets/Current Liabilities) ? *

Mark only one oval.

- ◯ >2
- ◯ <2 but >1
- ◯ =1
- ◯ <1

30. 27. How often does your organisation look at financial liquidity ratios ? *

Mark only one oval.

- ◯ Monthly
- ◯ Quarterly
- ◯ Half yearly
- ◯ Annually
- ◯ Whenever necessary

31. 29.What are the most important working capital actions for your organisation? (Rank according to importance by the use of numbers e.g. 1,2,3,4,5 - with 1 being the highest of importance) *

Mark only one oval per row.

	1	2	3	4	5
Speedy collection of receivables					
Minimizing investment in inventory					
Maximizing bank balances					
Slowing payment of payables					
Payment of short term loans					

32. 30. How is your organisations working capital financed ? (Rank according to importance by the use of numbers e.g. 1,2,3,4,5 - with 1 being the highest of importance) *

Mark only one oval per row.

	1	2	3	4	5
Part of initial start-up investment					
Borrowed by short-term funds					
Borrowed by long-term funds					
Obtained by Debtor Factoring/Inventory Bonding					
Adapted bases on requirements by costs cuts					

33. Thank you for taking the time to participate in this survey

This content is neither created nor endorsed by Google.

Google Forms

Appendix 3: Ethics Approval Confirmation

Private Bag X1290, Potchefstroom
South Africa 2520

Tel: 018 299-1111/2222
Fax: 018 299-4910
Web: http://www.nwu.ac.za

Senate Committee for Research Ethics
Tel: 018 299-484
Fezlwe.Mseleni@nwu.ac.za

21 November 2022

ETHICS APPROVAL LETTER OF STUDY

Based on approval by the **Economic and Management Sciences Research Ethics Committee (EMS-REC)** on 28/10/2022, Round Robin the Economic and Management Sciences Research Ethics Committee hereby **approves** your study as indicated below. This implies that the North-West University Senate Committee for Research Ethics (NWU-REC) grants its permission that, provided the special conditions specified below are met and pending any other authorisation that may be necessary, the study may be initiated, using the ethics number below.

Study title: The management of working capital policies and the effects on liquidity in Non-Profit Welfare Organizations in South Africa
Study Leader/Supervisor (Principal Investigator)/Researcher): Prof A Smit – PhD in Business Administration
Student: Mohanlal, R (44800339)

N	W	U	-	0	1	8	6	2	-	2	2	-	A	4
Institution				Study Number						Year			Status	

Status: S = Submission; R = Re-Submission; P = Provisional Authorisation; A = Authorisation

Application Type:
Commencement date: 21/11/2022 **Risk:** Low
Expiry date: 21/11/2023
Approval of the study is initially provided for a year, after which continuation of the study is dependent on receipt and review of the annual (or as otherwise stipulated) monitoring report and the concomitant issuing of a letter of continuation.

Special in process conditions of the research for approval (if applicable):

•

General conditions:

While this ethics approval is subject to all declarations, undertakings and agreements incorporated and signed in the application form, the following general terms and conditions will apply:

- *The study leader/supervisor (principle investigator)/researcher must report in the prescribed format to the EMS-REC:*
  - *annually (or as otherwise requested) on the monitoring of the study, whereby a letter of continuation will be provided, and upon completion of the study; and*
  - *without any delay in case of any adverse event or incident (or any matter that interrupts sound ethical principles) during the course of the study.*
- *The approval applies strictly to the proposal as stipulated in the application form. Should any amendments to the proposal be deemed necessary during the course of the study, the study leader/researcher must apply for approval of these amendments at the EMS-REC, prior to implementation. Should there be any deviations from the study proposal without the necessary approval of such amendments, the ethics approval is immediately and automatically forfeited.*

- *Annually a number of studies may be randomly selected for an external audit.*
- *The date of approval indicates the first date that the study may be started.*

n the interest of ethical responsibility, the NWU-SCRE and EMS-REC reserves the right to:

- *request access to any information or data at any time during the course or after completion of the study;*
- *to ask further questions, seek additional information, require further modification or monitor the conduct of your research or the informed consent process;*
- *withdraw or postpone approval if:*
  - *any unethical principles or practices of the study are revealed or suspected;*
  - *it becomes apparent that any relevant information was withheld from the EMS-REC or that information has been false or misrepresented;*
  - *submission of the annual (or otherwise stipulated) monitoring report, the required amendments, or reporting of adverse events or incidents was not done in a timely manner and accurately; and / or*
  - *new institutional rules, national legislation or international conventions deem it necessary.*

The EMS-REC would like to remain at your service as scientist and researcher, and wishes you well with your study. Please do not hesitate to contact the EMS-REC or the NWU-SCRE for any further enquiries or requests for assistance.

Yours sincerely,

Mark Rathbone

Digitally signed by Mark Rathbone
DN: cn=Mark Rathbone, o=North-West University, ou=Business management, email=mark.rathbone@nwu.ac.za, c=ZA
Date: 2022.11.22 07:25:30 +02'00'

Prof Mark Rathbone
Chairperson: NWU Economic and Management Sciences Research Ethics Committee

Appendix 4: Turnitin Report

44800339:PHD_10_April_2023_draft_1.1.doc

ORIGINALITY REPORT

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Appendix 5: Proof of Editing and Statistical Assistance

LET'S EDIT

EDITING CERTIFICATE

20 April 2023

TO WHOM IT MAY CONCERN

DECLARATION: Editing of PhD Thesis

I hereby declare that the Doctor of Philosophy (in Economic and Management Science with Business Management) thesis of **R. M. Mohanlal** entitled "**THE MANAGEMENT OF WORKING CAPITAL POLICIES EFFECTS ON LIQUIDITY IN WELFARE NON-PROFIT ORGANISATIONS IN SOUTH AFRICA**" has been edited. The scope of the editing engagement was from chapter 1 to chapter 7 and excluded editing of references in the list of references. It is the responsibility of the student to address any comments from the editor or supervisor. The editor shall not be responsible for any subsequent additions or deletions made by the student in their document. Additionally, it is the final responsibility of the student to make sure of the correctness of the thesis.

Edited by:

Shirley Wilson

Bachelor of Arts (in Education)

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Khomotso Bopape

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Liezel Korf Associates
ASSESSMENT • DEVELOPMENT • RESEARCH • STATISTICS

11 April 2023

TO WHOM IT MAY CONCERN

This is to certify that I have reviewed the statistic and its interpretation for the following document. It is the responsibility of the author to accept or reject the suggested changes manually and interact with the comments in order to finalise the document.

Author: R. M Mohanlal

Title: The management of working capital policies effects on liquidity in welfare non-profit organisations in South Africa.

Document: Doctor of Philosophy in Economic and Management Science with Business Management

Sincerely

Dr Liezel Korf
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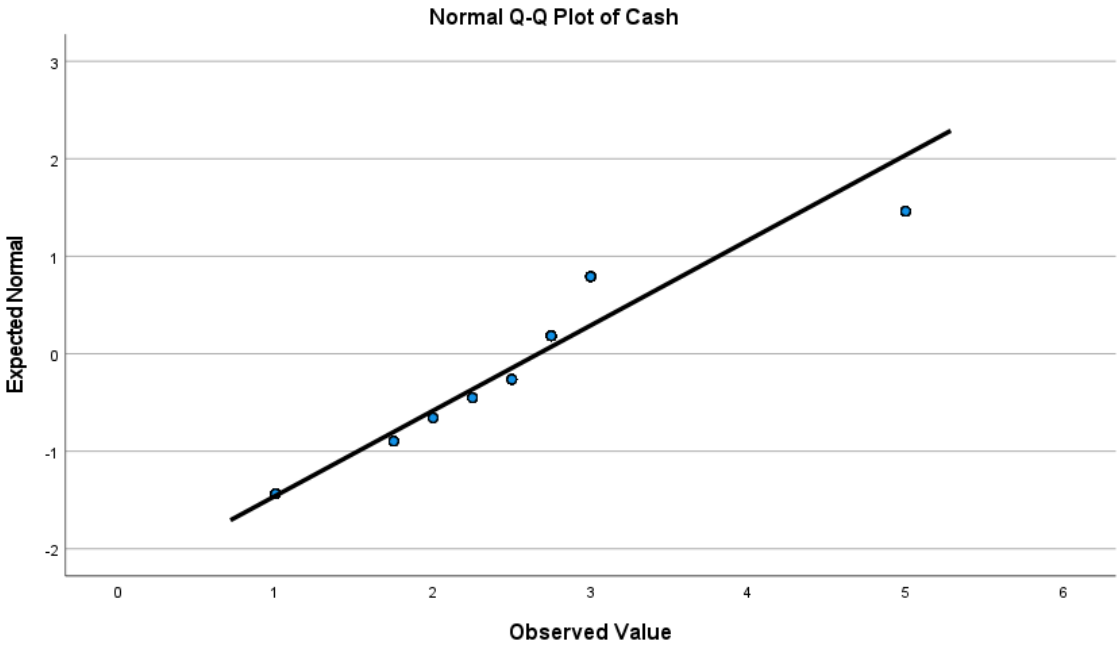
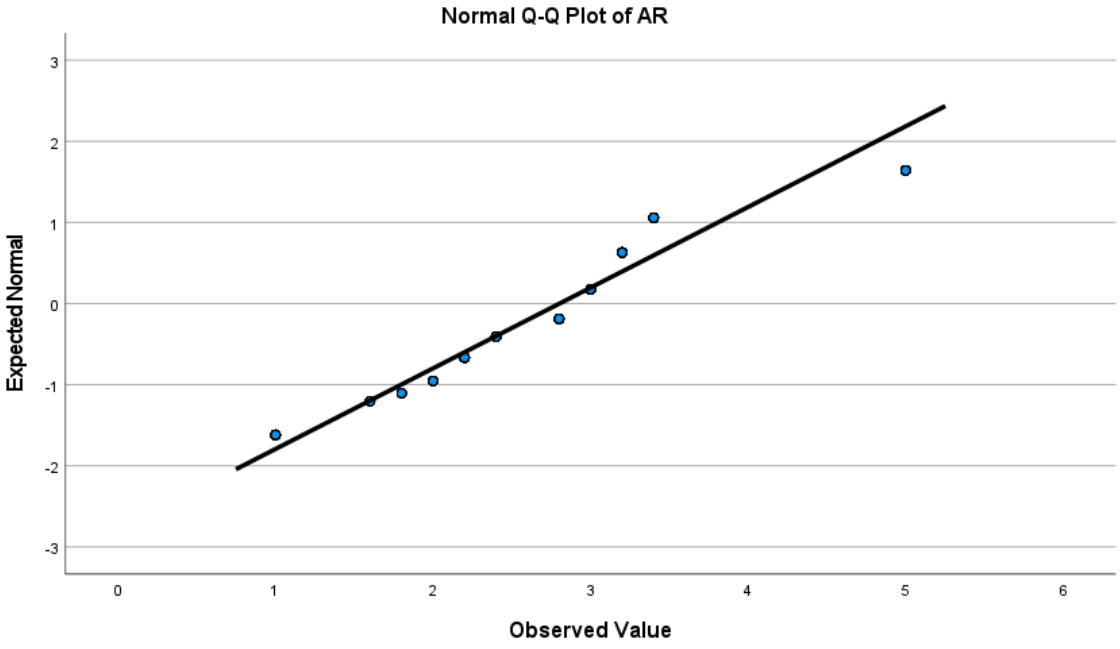
PhD, Research Psychologist & Independent Practice (Psychometry)

Appendix 6: Statistics Detail

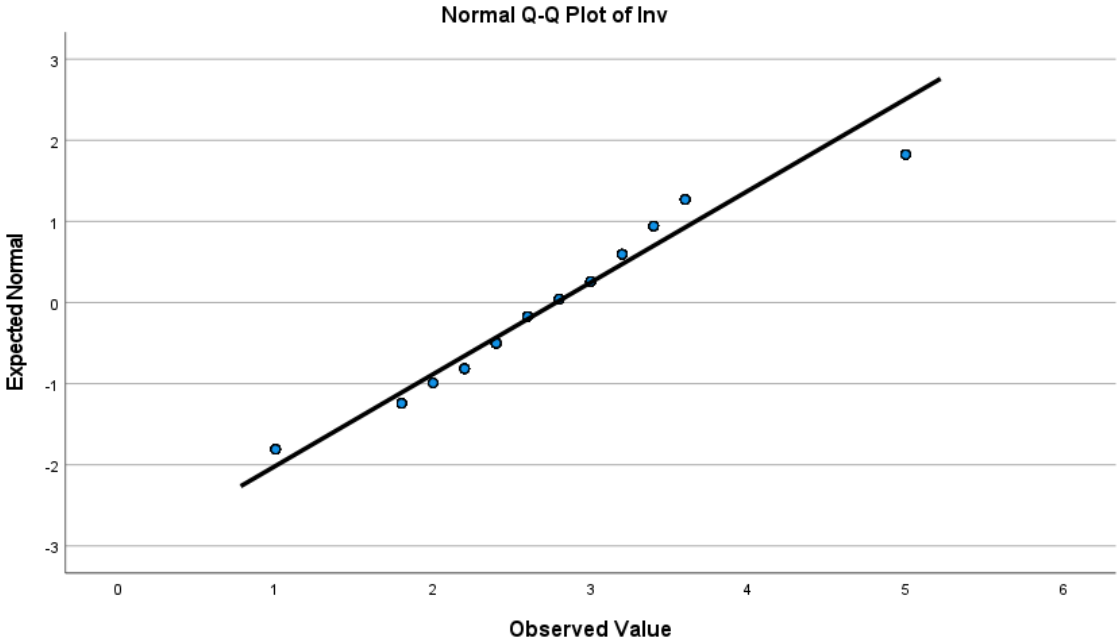
Cash data distribution:



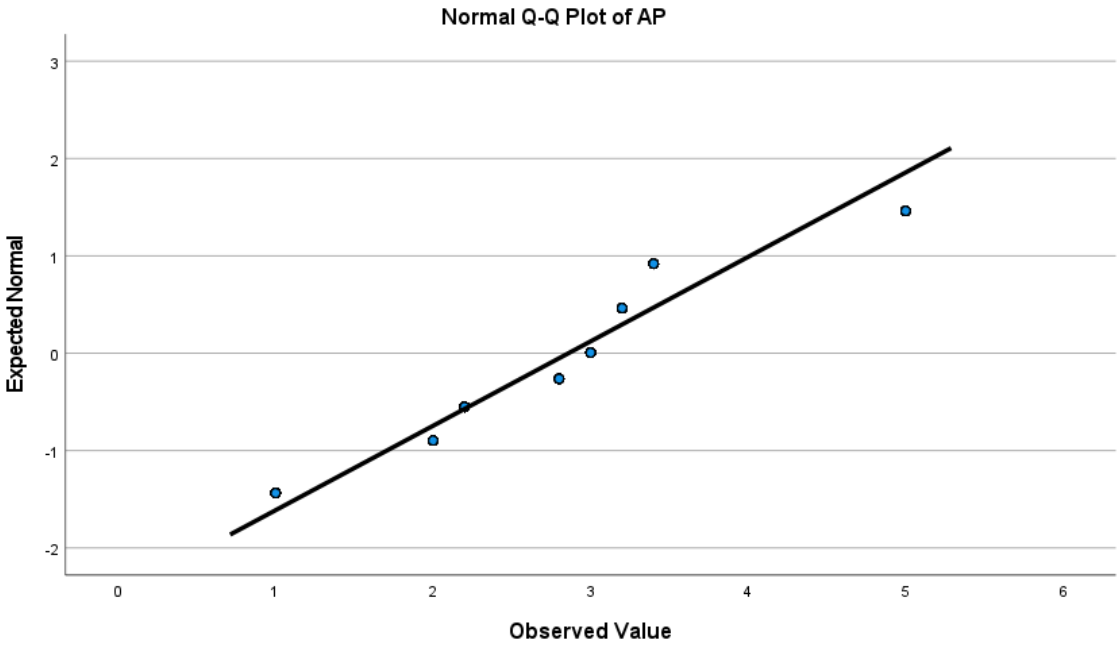
Accounts receivable data distribution:



Inventory data distribution:



Accounts payable data distribution:



Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation	Skewness		Kurtosis	
	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Std. Error
Respondent_Age	396	1	5	2.91	.917	.057	.123	-.178	.245
Respondent_Occupation	396	1	5	2.20	.697	.695	.123	1.572	.245
Qualification	396	1	4	2.65	.550	-.129	.123	-.564	.245
Work_experiance	396	1	5	2.41	.811	-.263	.123	-.484	.245
Respondent_Province	396	1	9	5.55	2.577	-.197	.123	-1.159	.245
Policy_Type	396	1	3	1.21	.492	2.334	.123	4.676	.245
Policy_setup	396	1	6	2.96	.866	.026	.123	2.707	.245
Policy_review	396	1	5	4.02	.389	-2.401	.123	23.001	.245
WC_policy	396	1	4	1.80	.929	.420	.123	-1.667	.245
WC_investment	396	1	3	2.86	.500	-3.319	.123	9.329	.245
Organisation_size	396	2	5	3.21	.983	-.302	.123	-1.679	.245
Cash_surplus	396	1	5	2.56	1.240	.633	.123	-.290	.245
Cash_budget_forecasts	396	1	5	2.84	1.412	.268	.123	-1.134	.245
Use_liquidity_ratio	396	1	5	2.70	1.389	.204	.123	-1.160	.245
Cash_is_king	396	1	5	2.56	1.546	.516	.123	-1.242	.245
Cash_Shortage_Surpluses	396	1	5	2.67	1.476	.384	.123	-1.214	.245
Alternative_income	396	1	5	3.50	1.252	-.677	.123	-.531	.245
Alternative_credit	396	1	5	2.88	1.371	.169	.123	-1.095	.245
Alternative_inventory	396	1	5	2.71	1.252	.260	.123	-1.011	.245
AR_payment_timeously	396	1	5	3.24	1.521	-.211	.123	-1.474	.245
Cash_surplus	396	1	3	2.00	.727	-.004	.123	-1.104	.245
Cash_threshold	396	1	3	2.04	.491	.095	.123	1.139	.245
AR_monitoring_measures	396	2	3	2.35	.479	.615	.123	-1.630	.245
AR_overdues	396	1	5	2.50	1.454	.596	.123	-1.025	.245
AR_provision_bad_debts	396	1	5	2.49	1.303	.448	.123	-.876	.245
AR_terms	396	1	5	2.65	1.220	.577	.123	-.407	.245
AR_mang_theories	396	1	5	2.79	1.289	.380	.123	-.800	.245
AR_settlement_discounts	396	1	5	3.58	1.350	-.637	.123	-.757	.245
AR_payment_terms	396	1	3	2.02	.288	.557	.123	9.061	.245
Inventory_replenishment_method	396	1	4	2.26	1.321	.391	.123	-1.625	.245
Inventory_policy	396	2	3	2.93	.257	-3.362	.123	9.352	.245
Inventory_levels	396	1	5	2.93	1.391	.150	.123	-1.146	.245
Inventory_budgets	396	1	5	2.71	1.164	.186	.123	-.863	.245
Inventory_mang_theories	396	1	5	2.12	1.064	1.079	.123	1.073	.245
Inventory_obsolete_review	396	1	5	2.75	1.359	.352	.123	-1.034	.245
Inventory_purch_discounts	396	1	5	3.39	1.218	-.463	.123	-.627	.245
AP_payment_terms	396	1	3	2.08	.358	1.052	.123	4.064	.245
AP_better_terms	396	1	5	2.56	1.546	.516	.123	-1.242	.245
AP_credit_limit	396	1	5	2.70	1.389	.204	.123	-1.160	.245
AP_seasonal_increase	396	1	5	2.56	1.240	.633	.123	-.290	.245
AP_review_terms	396	1	5	2.84	1.412	.268	.123	-1.134	.245
AP_easy_to_obtain	396	1	5	3.63	1.409	-.756	.123	-.733	.245
AP_discounts	396	1	4	1.26	.561	2.758	.123	9.349	.245
NPO_better_AP_terms	396	1	4	2.67	.943	-.511	.123	-.621	.245
STL_funds_usage	396	1	3	2.01	.439	.026	.123	2.253	.245
STL_from_banks_terms	396	1	4	1.97	1.067	.277	.123	-1.679	.245
Liquidity_status	396	0	2	.91	.885	.169	.123	-1.704	.245
Ratio_review	396	2	5	3.77	.934	-.234	.123	-.863	.245
WC_AR_speedy_collection	396	1	5	3.24	1.521	-.211	.123	-1.474	.245
WC_INV_min_investment	396	1	5	2.88	1.371	.169	.123	-1.095	.245
WC_bank_max_balance	396	1	5	2.77	1.262	.207	.123	-1.058	.245
WC_AP_slow_payments	396	1	5	2.73	1.456	.281	.123	-1.261	.245
WC_STL_payoff	396	1	5	3.38	1.334	-.514	.123	-.900	.245
WCF_startup_investment	396	1	5	2.74	1.323	.253	.123	-1.102	.245
WCF_ST_borrowed	396	1	5	3.29	1.495	-.291	.123	-1.393	.245
WCF_LT_borrowed	396	1	5	2.91	1.398	.153	.123	-1.186	.245
WCF_AR_INV	396	1	5	2.63	1.411	.413	.123	-1.092	.245
WCF_cost_cuts	396	1	5	3.42	1.274	-.561	.123	-.701	.245
Valid N (listwise)	396								