THE SIGNIFICANCE OF WORKING CAPITAL MANAGEMENT IN ENHANCING LIQUIDITY AND PROFITABILITY IN THE ELECTRICITY DISTRIBITION SECTOR IN NAMIBIA: A CASE STUDY OF CENTRAL NORTHERN ELECTRICITY DISTRIBUTION COMPANY (CENORED)

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ABSTRACT

The study focused on the significance of working capital management in enhancing liquidity and profitability in the electricity distribution sector in Namibia. The main motivator for the researcher to conduct the study was the fact that the electricity distribution sector has deteriorated sharply as the sector continues to be troubled by heavy gearing. This has been aggravated by mounting debt, resulting in financial stress. In this study, the positivism philosophy was adopted as well as the case study research design. In addition, questionnaires were used to collect the data. Descriptive statistics using the measures of central tendency and measures of variability namely: arithmetic means, variances and standard deviations were used to analyse the data. The study established that working capital management is significant to the electricity distribution sector. It is pivotal to the health, performance and value enhancement of business enterprises in the sector. In addition, it highlighted that the growth effect of working capital management is particularly important in the Namibian electricity distribution sector where demand is continually outstripping supply. Thus, the overall benefits of working capital management that are linked to improved liquidity, profitability and enhanced value creation and growth are indispensable to the electricity distribution sector in Namibia. This is also because they enable the sector to make critical infrastructural and technological investments to contain surging demand, and also to attract more investors in this highly capital-intensive sector. In addition, it was established that profit maximisation through working capital management enables a company to realise its ultimate objective of maximising shareholders' wealth. By so doing, one attracts more investors to make further capital investments that would enable the sector to contain the rising demand in electricity. This is also important because high levels of profitability play a vital role in bringing external finance to the business as creditors, investors and suppliers do not hesitate to invest in such a sector. In turn the enhanced resource utilisation brought about by working capital management also leads to value creation, thereby attracting more investors. Furthermore, the profitability enhancement impact of working capital management enables the sector to plough back its own profits into the required capital investments, thus reducing dependence on expensive debt financing. It can also be concluded that working capital management

guarantees business survival and continuity and this is key for the alleviation of power shortages in the country, and the revival of the economy at large.

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LIST OF ACRONYMS

CCC	**Cash Conversion Cycle**
ECB	**Electricity Control Board**
ESI	**Electricity Supply Industry**
GDP	**Gross Domestic Product**
NAMPOWER	**Namibia Power Co-Operation**
NDP III	**National Development Plan III**
QC	**Quality Control**
ROA	**Return on Assets**
ROE	**Return on Equity**
SME	**Small and Medium Enterprise**
SPSS	**Statistical Package for Social Science**
UAE	**United Arab Emirates**
USA	**United States of America**
WC	**Working Capital**
WCM	**Working Capital Management**
WCP	**Working Capital Policy**
WIP	**Work - in Progress**

DEDICATION

Firstly, I dedicate my dissertation work to my family and friends. I express special gratitude to my loving parents, Elina Nghifindaka and Alfred Shaningwa whose words of encouragement and push for tenacity ring in my ears.

Secondly, I am dedicating this thesis to my beloved late sister Amalia Shaningwa who meant a lot and continues to mean so much to me. Although she is no more, her memories continue to regulate my life.

Last but not least, I dedicate this work to my wife Paulina and my wonderful daughters Kimora and Kayla for being there for me throughout the entire MBA programme and for being the best cheer leaders.

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DECLARATION

I, ATANASIUS NGHIPANGWELWA SHANINGWA hereby declares that the work contained in this project is my own original work and has not previously in it's entirety or part been submitted to any institution of higher learning. All the sources used are listed in the references list.

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CHAPTER ONE

INTRODUCTION

1.1 Introduction

This chapter provides an insight on the significance of working capital management in enhancing liquidity and profitability in the electricity distribution sector in Namibia, focusing on the Central Northern Electricity Distribution Company (CENORED) (Pty) Ltd. It firstly highlights the background of the study, the statement of the problem, and also the research objectives. The study's significance and scope are outlined thereafter, followed by an outline of the thesis structure. The chapter is then concluded by a chapter summary.

1.2 The background of study

The question of state intervention through public enterprises has drawn incessant debate over the years in different socio-economic backgrounds (Basu, 2008). These debates have largely been enthused by mounting evidence revealing that most of these enterprises are failing to accomplish their key mandate of accelerating economic and social development (Rondinelli, 2008). Thus, as Van de Graaf and Colgan (2016), Bower (2017) and Burton (2010) allude, the electricity market in general has not been spared from these critical reviews as it recurrently draws international attention, forming a top agenda on the to-do menu of virtually all governments globally. In addition, the distribution of electricity in particular has also posed threats to national economic sustainability, development and growth (Department of Economic and Social Affairs, 2008, 2013), as increases in power supply are directly linked to job creation and national economic growth (Clarke, 2012). For example, the economic growth in Middle Eastern countries like the United Arab Emirates (UAE) and Qatar cannot be dissociated from

their electric power consumption per capita growth, and this has been the situation over the years (Qader, 2009).

Similarly, in the African context, Nigeria is facing extreme energy deficiencies despite being endowed with abundant gas, water and mineral resources (Tallapragada, 2009), which is blamed on the dearth of investment, nefarious policies, poor performance, deepening poverty, low human development indicators and lack of strategic planning in the sector. The World Bank (2011) and Elusakin (2013) further illuminate that this situation is typical of many developing countries that include Namibia.

It is vital to note that electricity distribution in numerous countries that include Namibia is usually carried out by various electricity distribution companies like the Central Northern Electricity Distribution Company (CENORED) (Pty) Ltd, a system that Eskom (2015) beholds as key in ensuring the smooth supply and consumption of electricity. Thus, Abdelhay and Malik (2011) describe electricity distribution as an important part of the three-stage delivery process of electric power, which also includes generation and transmission. With the world population steadily increasing from 6.8 billion people in 2011 to 7.4 billion in 2015, Ross (2015) recognises that the challenges faced by the electricity distribution industry are bound to increase. This is considering that the industry is plagued with poor infrastructure, wear and tear of distribution grids and climate change, which is further compounded by the rising demand for the commodity. Expounding on this: Bouttes 2011) and Munyoro (2016) underscored that these surges in power demand are attributed to rapid urbanisation. Hence, this also implies that the problems faced by electricity distribution companies around the world, though common, occur at different intensities in different countries, and Namibia is no exception. For

example, despite being a developed nation, the United Kingdom is equally distressed by electricity distribution, and they view this problem not only as a mechanical problem, but also as a managerial challenge (Watson *et al.,* 2001).

In response to the above-mentioned challenges, the government of India has recommended electricity distribution companies to be efficient, resilient, and financially robust to ensure growth and poverty reduction (Ministry of Power, 2005). However, almost all investment-climate surveys done so far in the sector point to poor availability and quality of electricity, which in turn pose critical constraints to commercial and manufacturing activities, as well as national competitiveness. However, despite the considerable progress realised in implementing efficient electricity distribution policies in Namibia over the past decade, the distribution segment continues to post significant losses and liquidity challenges. These challenges deter the country from meticulously accomplishing the electricity distribution sector goals. This explains why electricity distribution in the country has deteriorated sharply, as the sector continues to be weighed down by heavy borrowing and other mounting debts (Alagh, 2013). Moreover, these persistent losses have subjected the electricity distribution sector to further challenges that include limited access to modern infrastructure, inadequate power generating capacity, inefficient usage and ineffective regulation.

Furthermore, the sector incurs high technical losses from vandalism, lacks insufficient transmission and distribution facilities, has poorly trained manpower at its disposal, faces problems of inefficient use of electricity by consumers. It also lacks capital for investment that is coupled by a precipitous decline in creditworthiness (World Bank

Group Energy Sector Strategy, 2009). Consequently, the challenges associated with the highlighted electricity crisis, particularly the current subdued levels of electricity and energy consumption per capita that fall short of the recommended global development standards, and also the dismal state of socio-economic conditions in the Namibian economy, have led to high financial stress in the electricity distribution sector (Alagh, 2013). Accordingly, this study aims to ascertain the significance of working capital management in enhancing liquidity and profitability in the electricity distribution sector in Namibia, focusing on the Central Northern Electricity Distribution Company (CENORED) (Pty) Ltd.

1.3 The background of Central Northern Electricity Distribution Company CENORED (Pty) Ltd

The Central Northern Electricity Distribution Company CENORED (Pty) Ltd is the third licensed regional electricity distribution company to be established in Namibia, after NORED and Erongo RED that were established in 2002 and 2004 respectively (https://www.namibian.com.na,retrived,21/02/2016). CENORED's license area covers the Otjozondjupa and Kunene regions, and it commands a customer base of 40 000 people, distributing electricity to various towns and settlement areas of central and northern Namibia over an area of approximately 120 000 square kilometres (www.thevillager.com.na). CENORED was established in 2002 by the local and regional authorities in its area of operation as well as the Namibia Power Co-operation (NAMPOWER), all of which are shareholders in the company. CENORED's specific

areas of operation include Tsumeb, Grootfontein, Otavi, Otjiwarongo, Outjo, Khorixas, Kamanjab, Okahandja and Gobabis (www.cenored.com.na).

1.4 Statement of the problem

Despite registering considerable progress in implementing efficient electricity distribution policies in Namibia over the past two decades, the distribution segment continues to post significant losses and utility finance challenges that deter it from meticulously accomplishing its goals (Sadelec, 2000; EMCON Consulting Group, 2002; Ljung, 2007; Kapika and Eberhard, 2013). Consequently, electricity distribution has deteriorated sharply as the sector continues to be troubled by heavy gearing, that is also aggravated by mounting debts (World Bank, 2011; Namnewsnetwork, 2015; africanenergyresources.com). These, continuous losses have exposed the electricity distribution sector to a myriad of challenges that include: limited access to infrastructure, inadequate power generating capacity, inefficient usage capacity, ineffective regulation, high technical losses and vandalism.

Moreover, the sector is also subjected to insufficient transmission and distribution facilities, poorly trained manpower, inappropriate industries and market structures, inefficient use of electricity by consumers, lack of capital for investment and a precipitous decline in the creditworthiness of the sector (World Bank, 2011) Consequently, these challenges, particularly the current subdued level of electricity and energy consumption per capita that falls short of recommended global development standards, an coupled with the dismal state of socio-economic conditions in the Namibian economy, have resulted in high financial stress in the sector (http://www.mme.gov.na, retrieved, 21/02/2016).

This study aims to ascertain the significance of working capital management in enhancing liquidity and profitability in the electricity distribution sector in Namibia, focusing on Central Northern Electricity Distribution Company (CENORED) (Pty) Ltd.

1.5 Objectives of the study

The study aims to fulfil the following objectives:

i) To establish the significance of working capital management to the electricity distribution in Namibia.
ii) To evaluate the impact of working capital management on the liquidity and profitability of the electricity distribution in Namibia.
iii) To provide recommendations to all stakeholders.

1.6 Hypothesis

The study also seeks to test the following hypothesis:

> $\boldsymbol{H_0}$**:** Working capital management is not significant to the enhancement of liquidity and profitability of the electricity distribution sector in Namibia.
> $\boldsymbol{H_1}$**:** Working capital management is significant to the enhancement of liquidity and profitability of the electricity distribution sector in Namibia.

1.7 Significance of the Study

This research intends to help the electricity distribution sector to determine if working capital management is significant to the enhancement of liquidity and the profitability of the electricity distribution sector in Namibia. The study will focus on the Central Northern Electricity Distribution Company (CENORED) (Pty) Ltd of Namibia. Furthermore, the research provides a platform on which electricity distribution companies are benefiting from working capital management, especially on how working

capital management is affecting the liquidity and profitability in the electricity distribution sector in Namibia and how best this can be addressed by the relevant authorities.

Likewise, the Namibian government will benefit from this study through obtaining ideas on how to address the resource constraints being faced by the electricity distribution sector in Namibia and the region at large. The study will also serve as a platform of reference for other researchers. Furthermore, the research will increase the University of Namibia's body of knowledge, thus augmenting its usefulness as a reference point by various scholars locally and internationally.

1.8 Scope of the Research

The research will concentrate on the significance of working capital management on the liquidity and profitability of the electricity distribution companies in Namibia, focusing on the Central Northern Electricity Distribution Company (CENORED) (Pty) Ltd.

1.9 Limitation of the study

The researcher is limiting the study only to Central Northern Electricity Distribution Company CENORED (Pty) Ltd and not all regional electricity distribution companies in Namibia within the same industry. The limitation is based on time constraint and financial resources allocated for the study.

1.10 Thesis Structure

This research document is made up of five chapters. The first chapter introduces the background of the study, the research problem and the significance of the research. It also highlights the study's scope, objectives and the research questions to be answered to

fulfil the set objectives. Chapter two encompasses the review of literature on the study area through both theoretical and empirical evidence. The third chapter outlines the research methodology employed in carrying out the research, whilst chapter four looks at the presentation, analysis and interpretation of the data collected in the research. Chapter five, the last chapter of the research highlights the conclusions drawn from the research findings, provides recommendations to all stakeholders and also recommends the areas for further study.

1.11 Chapter Summary

This chapter highlighted the background of the electricity distribution industry in Namibia, shedding light on the prevailing electricity distribution financing gap in the country. It also revealed the challenges faced in the distribution of electricity. The research objectives and subsequent questions were also outlined in the chapter, further highlighting the significance and scope of the research, and ultimately the thesis structure. The next chapter will focus on a review of literature related to the study.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter focused on the reviewing of literature from various sources related to the subjects of working capital management, profitability and liquidity. It initially highlighted the background of the study, and subsequently provided the theoretical and empirical evidence on the study's focus areas. The conceptual framework was similarly provided and the research gap clearly specified. The chapter concluded with the chapter summary, highlighting all the issues that would have been covered in the body of the chapter.

2.2 Background of the Study

The issue of electricity distribution has generally been a very delicate issue that has habitually attracted international attention in recent years, justifying why it formed a top agenda on the to-do menu of virtually all governments globally (Burton, 2010; Van de Graaf and Colgan, 2016; Bower, 2017). Consequently, concerned policy makers in various governments are having sleepless nights (Department of Economic and Social Affairs, 2008) because this issue of electricity distribution is directly linked to economic sustainability and development (Department of Economic and Social Affairs, 2013). This is supported by Clarke (2012), who suggests that the increase in power supply is perceived as a strategic way of creating jobs and improving national economic growth. However, African countries like Cameroon and Nigeria have been facing huge energy deficiencies, yet they are endowed with substantial energy resources in the form of gas,

water and minerals (Tallapragada, 2009). These serious shortages of electricity in developing countries that also include Namibia (World Bank, 2011) have generally been blamed on various factors that include the lack of investment, nefarious policies, poor performance, deepening poverty, low human development indicators and lack of strategic planning in the electricity distribution sector.

It is key in this study to note that electricity distribution in various countries is usually carried out by different electricity distribution companies. For example, in Namibia, the Central Northern Electricity Distribution Company (CENORED) (Pty) Ltd is one of the companies that distribute the electricity commodity in the country. Although the role that these companies play is crucial in balancing the supply and consumption of electricity (Eskom, 2015), they are mostly besieged by underfunding problems that make it difficult for them to meet their operation costs as well as demand. This is further aggravated by the fact that electricity distribution companies' costs tend to surpass their revenues, a situation that is ascribed to the fact that electricity tends to be subsidised in most countries. Notwithstanding the highlighted challenges faced by the electricity distribution sector, Abdelhay and Malik (2011) endorse the electricity distribution function as an important stage in the three-stage delivery of electric power, which also includes generation and transmission.

Thus, in the face of the increasing world population, Ross (2015) stresses that the challenges being faced by the electricity distribution industry are bound to multiply, as the sector continues to be hounded by poor infrastructure, the wear out of distribution grids and climate change, which is also compounded by the increase in the demand for electricity. Moreover, as noted by Bouttes *et al.*, (2011), the increase in power demand

is also attributed to rapid urbanisation that is being caused by the movement of people from rural areas to urban areas (Munyoro *et al.*, 2016). Hence, this infers that the problems being faced by the electricity distribution sector around the world, even though common, occur at different intensities in different countries, and Namibia is no exception. For example, the United Kingdom is equally facing these electricity distribution challenges, and its policy makers perceive the problem not only as a mechanical problem, but also as a managerial challenge as highlighted by (Watson *et al.*, 2001).

In response to the above-mentioned challenges, the government of India has highlighted on the need for the electricity distribution sector to be efficient, resilient, and financially robust in order to ensure sustainability that is essential for economic growth and poverty reduction (Ministry of Power, 2005). This is not surprising given that almost all investment-climate surveys done so far point to poor availability and quality of electricity as the critical constraints to commercial and manufacturing activity, as well as national competitiveness. Thus, despite all the considerable progress registered in implementing efficient electricity distribution policies in Namibia over the past decade, the electricity distribution sector in the country continues to be inundated by significant losses and utility finance challenges that inhibit it from realizing the electricity distribution sector goals. According to Alagh (2013), these challenges have led to the massive deterioration of electricity distribution, which is worsened by the fact that the sector continues to rely on heavy borrowing.

Consequently, the electricity distribution sector has been subjected to additional challenges that include limited access to infrastructure, inadequate power generating capacity, inefficient capacity utilization, ineffective regulation, high technical losses and vandalism. Moreover, the sector encounters problems of insufficient transmission and distribution facilities, poorly trained manpower, inappropriate industries and market structure, inefficient use of electricity by consumers, lack of capital for investment and a precipitous decline in creditworthiness (https://www.worldbank.org,retrived, 22/02/2016). Thus, as Alagh (2013) alludes, these challenges that have led to an acute electricity crisis in Namibia, have also resulted in a severe financial strain in the sector at large. Hence the need to ascertain the significance of working capital management in enhancing the liquidity and profitability of the electricity distribution sector in Namibia. Working capital management is an activity that is espoused as an indispensable element in the analysis of a firm's performance while conducting day to day operations. The study will specifically focus on the Central Northern Electricity Distribution Company (CENORED) (Pty) Ltd.

2.3 The Electricity Market Function.

Alagh (2013) suggests that an electricity market is an arrangement to transfer electric energy from producers to consumers. According to Watson *et al.,* (2001), this transmission of electric energy requires special infrastructure that is commonly known as a power system. Elusakin (2013) further confers that this electricity market consists of a few producers, who are the owners and operators of the power plants, and also possess the liberty to sell electricity to local consumers, power pools or anyone. In this same

market, there are also retailers and traders whose role is to buy and sell electricity from producers or other retailers to consumers or other retailers. According to Abdelhay and Malik (2011), these retailers can provide a price insurance to the consumers and simultaneously increase competition in the electricity market, although they are exposed to large economic risks (Elusakin, 2013). At the bottom of the electricity market hierarchy, there are consumers who are the end users of electricity, and also have the liberty to buy from local power companies or power pools since they vary in size. The electricity market is summarized in Figure 2.1 below, which illustrates the relationships between various players in the market.

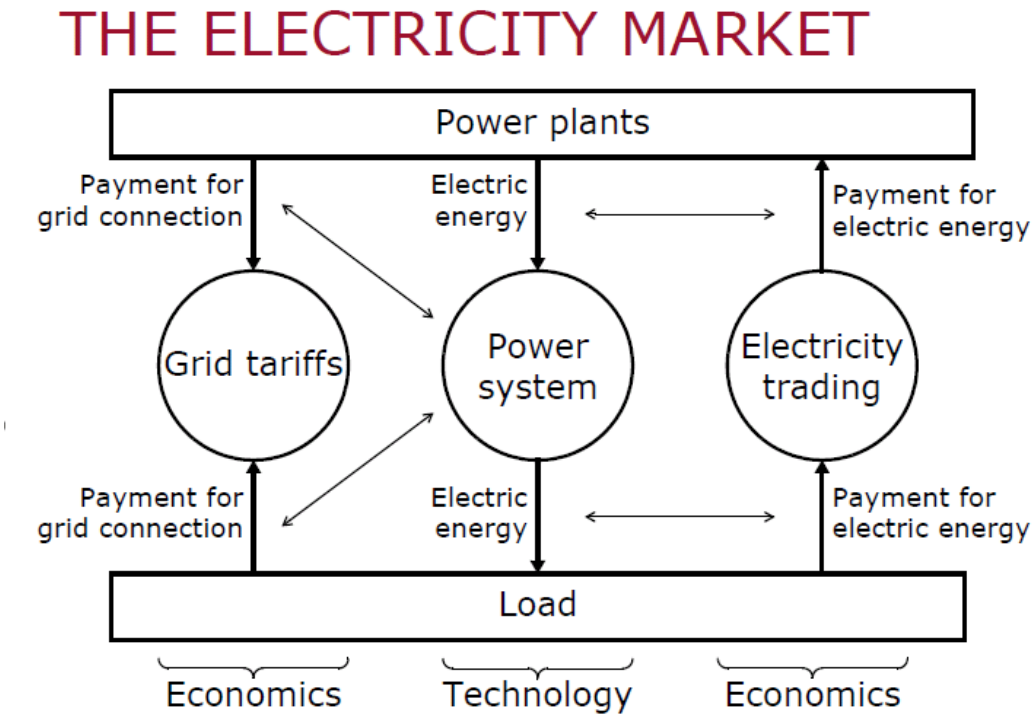

Figure 2.1: The Electricity Market

Source: Author and ceremics.enpc.fr

2.4 The Electricity Distribution Concept

The evolution of electrical transmission and distribution systems in recent years has evolved into something smarter, and has been conceptualized as the smart grid (Elusakin 2013). According to Watson *et al.,* (2001), this smart grid can be seen as a programme for making the grid more economical, efficient, resilient and sustainable in the long term under dynamic scenarios. Moreover, of importance to note is the fact that electricity cannot be stored, hence the need to come up with a framework that caters for generation and distribution needs of the electricity.

As suggested by Abdelhay and Malik (2011), in order to assess the potential of smart grid innovations, models of varying complexes and scale need to be designed and tested under multiple scenarios. Some of the cross-domain processes and mechanisms that could be modelled include the dynamic response of demand to price signals, transmission pricing and congestion management, technology adoption under subsidized regimes, active network management under high penetration of distributed generation, market reforms and new trading strategies (Watson *et al.,* 2001). However, traditional equation-based and statistical modelling methods present limitations when it comes to representing the complex real world with interactions that are typically dynamic, non-linear, history dependent, multi-scale and multidimensional in nature. This is especially as entities involved do not only interact amongst themselves, but also with their environment (Elusakin 2013). In addition, these entities may be heterogeneous and evolving with time to make their own intelligent decisions to maximize payoffs.

2.5 The History of Electricity Distribution in Namibia

Namibia was under the German rule before attaining independence in 1990 (https://www.Nytimes.com;https://www.bbc.com;https://www.sahistory,org.za; https://www.britannica.com),retrived on 22/07/2016. It was during this colonial era that the country suffered racial ills such as energy imbalances that denied over 80% of the population from accessing electricity (helda.helsinki.fi; https://www.kas.de; www.theguardian.com),retrived on 35/03/2016. With such a setup, there was a better match for electricity supply and demand. As years progressed, the government of Namibia then came up with an assortment of policies that were earmarked for improving the electricity situation in the country (www.the-eis.com; www.mme.gov.na),retrived on 27/03/2016. These policies are noted in Table 2.1.

Table 2.1: Namibian Policies for Improving the Electricity Situation

Policy	Major action areas
Vision 2030 (2004)	Namibia's Vision 2030 envisages the transformation of Namibia into an industrialized nation with a viable natural resources-based export sector, and increased size of skills-based industrial and service sectors, and market-oriented production [Vision 2030, 2004]. Rapid industrialization will place significant pressure on the Namibian electricity supply industry, and challenges its growth and ability to deliver electrical energy on demand. The opportunity to strategically incorporate the development of the nation's energy sector in general, and its electricity sector in particular – as key economic drivers of cross-sectoral significance and importance – was missed in the preparation of Vision 2030. Yet, adequately powering the nation comes with many challenges, economic trade-offs and long-term commitments, all of which need to be taken into account if the Vision is to have a realistic chance of being accomplished.
White Paper on	Namibia's White Paper on Energy Policy of 1998 states the following broad energy policy goals: effective governance, security of supply, social upliftment,

Energy Policy (1998)	investment and growth, economic competitiveness and efficiency, and sustainability. The Policy also recognises the importance of renewable energies, and their potential role in realising the country's energy-related goals and aspirations. The White Paper identifies the sector's challenges – which remain as relevant today as they were more than 10 years ago – namely: high dependence on imports, a large number of supply authorities with widely differing competence and practices, a host of technical, financial and institutional problems relating to rural electricity supply, electricity prices that in many instances are not cost-reflective, and unclear institutional structures and arrangements.
Electricity Act (2007)	In September 2007, the Namibian President signed the Electricity Act, 2007 [Electricity, 2007]. The Act establishes the Electricity Control Board (ECB) as the country's electricity sector regulator, and formulates guidelines for electricity sector governance2 [ECB, 2009]. The ECB is responsible to control and regulate the provision, use and consumption of electricity in Namibia, to oversee the efficient functioning and development of the industry, and security of electricity provision, to ensure that a competitive environment in the electricity industry is maintained, and to promote private sector investment in the electricity industry. The Act describes the requirements, conditions and obligations for obtaining licences to generate, trade in, transmit, distribute, import and export electricity. Amongst others, the ECB has developed guidelines to set cost-reflective tariffs, and implement an Independent Power Producer regime in Namibia.
Cabinet Directive (2007)	A Cabinet directive in June 2007 approved the implementation of the Off-grid Energisation Master Plan, and also directed that the hot water supply to all Government and parastatal buildings is to be met by solar water heaters only [MME, 2008]. As a demand side management measure, and potential stimulant of the solar water manufacturing industry in the country, the latter directive is significant.
National Development Plan III (2008)	The National Development Plan 3 – NDP III of 2008 – recognises that the energy sub-sector plays a pivotal role in the country's economy and national development" [NDP III, 2008]. It states that although electricity supply has improved since 2001, the vast majority of Namibian households still have no access to electricity, particularly in the Northern Regions. Fuel wood is still dominant as an energy source putting severe pressure on the natural environment. This situation requires enormous efforts to realise Vision 2030. NDP III further states that the sub-sectors' goal is adequate, secure and efficient supply of energy that is environment friendly and leads to a reduction

	in the country's reliance on energy imports.

Source: Author and https://www.mme.gov.na

However, by the year 2008, the maximum demand of electricity in Namibia was 533 MW, which is substantially more than the maximum internal electricity generation capacity of 393MW that Namibia has at its disposal. This electricity was being generated from 3 major power stations namely Ruacana, Van Eck and Paratus power stations. The Van Eck power station was commissioned in 1972, and today it is expensive to operate. Thus, to cover this shortage, Namibia imports electrical energy that is generated mainly in South Africa and Zimbabwe, using NamPower's extensive transmission networks.

2.6 The Meaning of Working Capital

The Annual Survey of Industries (1961) highlights that working capital signifies the circulating capital that is required to meet the day-to-day operations of any business firm. In approval, Kennedy and McMullen (1968) also equally contend that working capital is the circulating capital involving those assets that are easily converted with relative speed from one form to another. Expanding on this, Weston & Brigham (1994) allege that the working capital process mainly encompasses a firm's investment activities and decisions in short term assets such as cash, receivables and inventories. Mead *et al.,* (2002) on the other hand simply defines working capital as a firm's current assets. However, the accounting terminology recognises working capital as the difference between the inflow and outflow of funds.

In recognition of the above accounting terminology, Tagduan & Nicolaescu (2011) define working capital as the percentage of permanent capital used to finance company's current assets. Similarly, Aravindam & Ramanathan (2013) also define working capital as the cash invested in company's daily operations. Consequently, Guthman (1953) upholds working capital as the lifeblood of any business as it constitutes cyclically flowing streams of funds through the business. In agreement, Too *et al.*, (2016) further explain that working capital is commonly used for the capital required for day-to-day working in a business concern, such as for purchasing raw materials, for meeting day-today expenditure on salaries, wages, rents rates and advertising among others.

Basically, there are two concepts of working capital which are quantitative and qualitative, with some people defining the two concepts as gross and net concepts (Guthman 1953). Smith (1937) termed the quantitative concept as circulating capital, which perceives working capital as the total of current assets that are also regarded as gross working capital. On the other hand, the qualitative concept gives an idea regarding source of financing capital, and views working capital as the excess of current assets over current liabilities.

Guthman (1953) agrees with the qualitative concept as he perceives working capital as the excess of current assets over current liabilities, although he specifically refers to it as net working capital. Thus, in the qualitative concept, net working capital represents the amount of current assets that would remain if all the current liabilities are paid. In addition, Weston and Bingham (1994) confer that these concepts of working capital have their unique points of importance. Hence, they argue that if the objective is to measure the size and extent to which current assets are being used, the gross concept is

useful, whilst the net concept is pertinent and preferable when evaluating the liquidity position of an undertaking.

Aravindan & Ramanathan (2013) confer that by calculating working capital through establishing the difference between current assets and currents liabilities, a firm is granted the possibility to acknowledge the amount of capital which is allocated to operating needs. Moreover, obtaining working capital through the difference between permanent capitals (equity and non-current liabilities) and non-current assets enables a firm to ascertain if it uses the excess of permanent capitals to finance its current assets. Thus, if the difference is negative, it signifies that a percentage of the non-current assets is being financed by the short period financing, which consequently enhances the company's bankruptcy risk (Mota, 2013). Hence, Martins *et al.,* (2009) recommend companies to have the same maturity for capitals used to finance assets and for the assets themselves, as the transformation of the assets into cash takes more time than is previously forecasted, which obliges the company to need a positive working capital at all times.

Furthermore, Kennedy and McMullen (1968) postulate that current assets have a short life span, implying that they can easily be converted into cash within a twelve-month financial period. On the other hand, current liabilities are short-term obligations that are also payable within an accounting cycle such as accounts opened with suppliers of raw materials. According to Caballero *et al.,* (2010), it is also important to highlight that in order to find the "perfect" level of working capital for a determined company, several factors have to be taken into account, which include the type of business, the company's dimension, the suppliers' relation, the market where the company acts, the growth

opportunities that the company could have and the operations' seasonality. Having said that, it is also essential to highlight a business' working capital tends to vary as time progresses due to external factors such as demand and economic changes.

As depicted in Figure 2.2, businesses tend to have fixed working capital and fluctuating working capital. Fluctuating working capital is usually short term in nature, for example a short-term bank loan (Kennedy and McMullen, 1968), whilst fixed working capital is long term. Likewise, such fluctuations exist in the electricity industry and hence, the levels of working capital required in the business vary all the time. Of great importance to also note is the availability and delivery of this working capital to a business in need, because failure to adhere to these variables may negatively affect the business. Subsequently, Kavitha (2007) states that the cheapest and best sources of cash exist as working capital right within a business, and also emphasizes that the good management of working capital will generate cash, which will help to improve the business and reduce risks. Thus, as Bei & Wijewardana (2012) and Gill & Biger (2013) propound, both inadequate and excess working capital affect firm profitability, and thus effective working capital management (WCM) and working capital policy (WCP) are critical to business success.

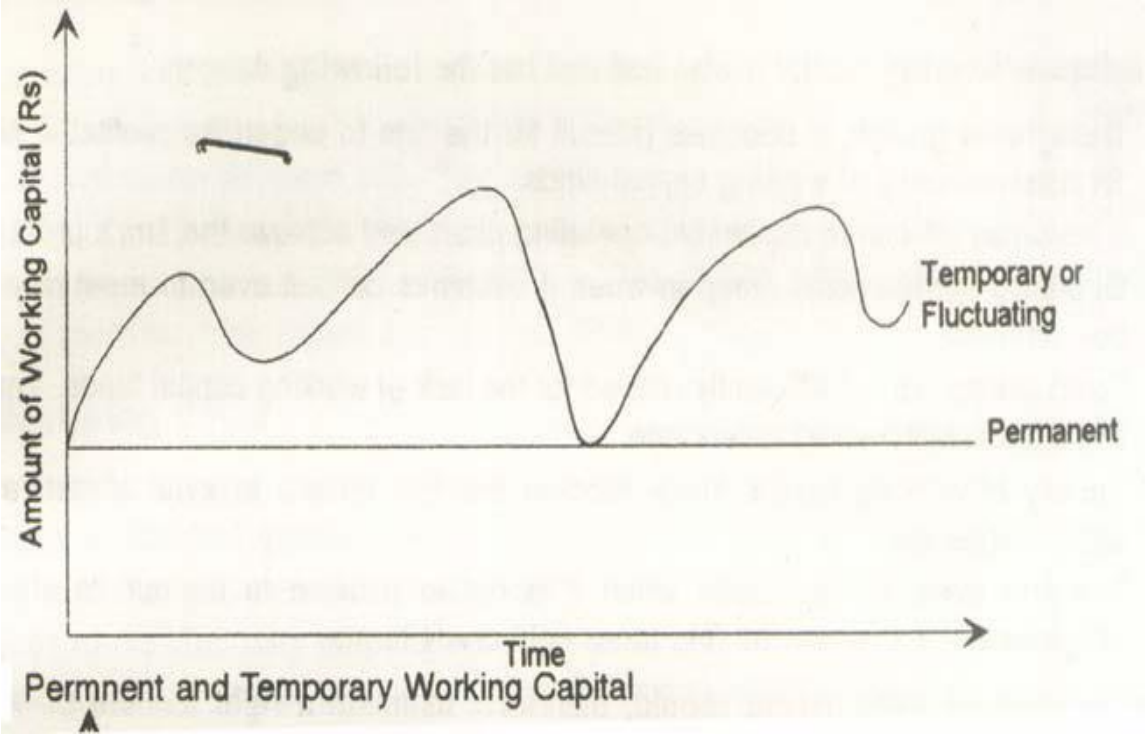

Figure 2.2 Business Working Capital Classification

Source: Author

2.7 The impact of working capital on organisation performance

One of the key elements in the study objectives(s) is to analyse the impact of Working Capital on an organisation's performance. According to Banos-Caballero, Garcia-Terfel and Martinez-Solano (2013), writing on the impact of Working Capital on organisational performance in their study on non-financial UK companies, there are various explanations for the incentives of firms to hold positive Working Capital. Firstly, a higher investment in extended trade credit and inventories might increase corporate performance for several reasons: larger inventories can reduce supply costs and price fluctuations and prevent interruptions in the production process and loss of business due

to scarcity of products. They also allow firms better service for their customers and avoid high production costs arising from high fluctuations in production.

Secondly, granting trade credit, on the other hand, might also increase a firm's sales, because it can serve as an effective price cut, it encourages customers to acquire merchandise at times of low demand; it strengthens long-term supplier-customer relationship; it allows buyers to verify product and services quality prior to payment. It also reduces the asymmetric information between buyer and seller.

Also, Deloof (2003), on the impact of Working Capital and organisational performance, suggest that, trade credit is an important supplier selection criterion when it is hard to differentiate products. Trade credit is more profitable short-term investment than marketable securities Working Capital may also act as a stock precautionary liquidity, providing insurance against future short falls in cash and demonstrate that a firm may obtain important discounts for early payments when it reduces it supplier financing.

Again, Banos-Caballero *et al.,* (2013), on possible adverse effect of investment in Working Capital Management which may lead to a negative impact on firm value and (performance) at certain Working Capital levels. Firstly, keeping stock available supposes costs such as warehouse rent, insurance and security expenses, which tend to rise as the level of inventory increases. Secondly, since a greater Working Capital level indicates a need for additional Capital, which firms must finance, if involves financing costs and opportunity costs. On the one hand, companies that hold a higher Working Capital level also face more interest expenses as a result and, therefore, more credit risk.

Similarly, Kieschnick, Laplante and Moussawi, (2013), on the adverse effects of Working Capital Management on organisational performance, said that, as Working Capital increases, it is more likely that firms will experience financial distress and face the threat of bankruptcy. This gives firms with high investment in Working Capital incentives to reduce Working Capital levels and minimise the risk of financial distress and costly bankruptcy. On the other hand, keeping high Working Capital levels means that money is locked up in Working Capital.

Besides, Alipour (2011), found that on Working Capital Management and corporate profitability sales and profit of a company is significantly in advance by WCM owing to inefficient WCM, organisation may be unable to pay its obligations on time. The study showed a significant relationship between and profitability of an organisation. However, there is a negative relationship between cash conversion cycle, average collection period, inventory turnover in days and profitability.

According to UKaegbu (2013) writing on the significance of Working Capital Management in determining firm profitability: Evidence from developing economies in Africa, where the focused in Egypt, Kenya, establish that on positive side and value for shareholder by reducing the days customers settle their accounts, ensuring that they sell off their inventories as quickly as possible and delaying the payments to their suppliers, as long as this does not affect their credit rating. On the other hand, on the impact of Working Capital Management on organisation performance, the study reveals that there is a strong negative relationship between profitability, measured through net operating profit and cash conversion cycles across different industrialization typologies. The

negative association implies that, when the cash conversion cycle increases, the profitability of the firm declines.

Also, Organdie (2012), an analysis of Nigerian companies showed that, a well designed and implemented WCM is expected to contribute positively to the creation of organisations value.

2.8 The relationship between working capital management and financial performance

Nwankwo and Osho (2010) contented that in this context of (the relationship between Working Capital Management and financial performance) an efficient Working Capital Management (WCM) plays a significant role in the overall corporate strategy in order to increase shareholder value by determining the composition and level of investments on current assets, the level, sources and mix of short-term debts.

Similarly, Filbeck and Krueger (2005), emphasized that, an efficient WCM primarily aims to ensure an optimum balance between profitability and risk. This objective can be achieved by continuous monitoring of Working Capital Components such as accounts receivable, inventory and accounts payable. The success of a firm heavily depends on the effective skills of financial managers.

Besides, Van Horne and Wachowicz (2004) argue that, excessive levels of current assets may have a negative effect on the firm's profitability whereas a low level of current assets may lead to lower level of liquidity and stock outs, resulting in difficulties maintaining smooth operations. This assertion does not provide an accurate concept of corporate liquidity because the components of WC have different levels of liquidity, as

some of the components (for example cash investment in marketable securities and treasury bills) have financial essence with a high liquidity. Other components have non – financial essence with a low liquidity (for example receivable, payable accounts and inventory).

The above sources are significant to this study as various authors from their findings in different continents and countries helped the researcher to construct the questionnaire. This helped to establish if these elements supported the case for and against submissions on the impact of Working Capital Management on organisational performance in CENORED in Namibia.

2.9 The Working Capital Management Concept

Too *et al.,* (2016) highlight that working capital management is primarily concerned with the management of current assets, and by extension, the current liabilities of a business. Moreover, they indicate that it also concerns the business' decision on the amount and composition of current assets and the financing of these assets, and the planning and control of the current assets and current liabilities in a manner that strikes a balance between liquidity and profitability. Similarly, Harris (2005) illuminates that working capital management is a simple and straightforward concept of ensuring the ability of the firm to fund the difference between the short-term assets and short-term liabilities. Expounding further, Afza and Nasir (2007) contend that current assets and liabilities are important components of total assets, hence the need to be carefully analysed through working capital management.

Moreover, Smith (1980) equally argues that because of their importance, a careful and systematic investigation of these assets is necessary as they play a vital role in the profitability of firms, its risk and value. Thus, Too *et al.,* (2016) accentuate that the goal of the working capital management process is to ensure that a firm is able to continue its operations with sufficient cash flow to satisfy both maturing and short-term debts, and also upcoming operational expenses. Its decisions are purportedly based on cash flows and profitability. Lamberson (1995) also equally propagates that working capital management involves the planning and controlling of current assets and liabilities in a manner that eliminates the risk of inability to meet short-term obligations and avoid excessive investments in assets.

Ching *et al.,* (2011) exhibit the importance of working capital management by declaring that when implemented efficiently and effectively, it can create a business' true competitive advantage. Arguing likewise, Joshi (1994) proclaims that working capital management is a sensitive area in the field of financial management, as in line with Horne and Wachowicz (2000)'s opinions, if it is not enough, shortages and problems in the day-to-day operations may arise. Furthermore, Too *et al.,* (2016) correspondingly contend that working capital management is a very important component of corporate finance because it directly affects the liquidity, profitability and growth of a business. Moreover, Atrill (2006) stresses that working capital management is also important to the financial health of businesses of all sizes, as the amounts invested in working capital are often high in proportion to the total assets employed.

This management of short-term assets is regarded as important as the management of long-term financial assets, since it directly contributes to the maximization of a business

profitability, liquidity and total performance. Moreover, several researchers like Padachi (2006) and Kotut (2003) established that the efficient management of working capital is pivotal to the health and performance of all business enterprises, hence, they recommend firms to employ the use of efficient working capital management practices as a strategy of improving their value.

According to Too *et al.,* (2016), the investigation on the working capital management practice is focused on four paradigms that include cash management practices, receivables management practices, inventory management practices and the management of current liabilities. Hence, Duah (2015) alludes that the key to understanding a company's working capital cycle is to know where payments are collected and made, and to identify areas where the cycle is stretched and can potentially be reduced. Since most studies have generally dwelt on the importance of working capital management in enhancing company profitability and liquidity, these concepts are elaborated on further.

2.10 The Liquidity Concept

Liquidity can be understood in terms of cashflows as opposed to stocks, and thus, it refers to the unhindered cashflows among the agents of the financial system, with a particular focus on cashflows among the central bank, commercial banks and markets. However, Williamson (2008) views liquidity as the ability to realize these cashflows. Also, the Farlex Financial Dictionary (2012) defines liquidity as a large position in cash or in assets that are easily convertible to cash. Priya and Nimalathasan (2014) perceive liquidity from a purely accounting perspective, and state that it means how quickly an

asset can be transformed into cash. When referring to company liquidity, it signifies its ability to meet its current liabilities, and is usually measured by different financial ratios (www.investorwords.com). Bhunia (2010) consequently highlights that the study of liquidity is of major importance to both the internal and the external analysts because of its close relationship with day-to-day operations of a business.

Ware (2015) equally contends that liquidity is a necessity for the survival of the firm, further underscoring that in the contentious comparison of liquidity with profitability, liquidity gets higher priority because no firm will continue to exist if it has no liquidity. Thus, as Agarwal and Mishra (2007) allude, firms which do not make profit may be treated as under par but not having liquidity may cease to operate over a period. According to Panigrahi (2013), when there is a poor management of working capital, funds may be unnecessarily tied up in idle assets, consequently reducing the liquidity of the company and the inability to invest in productive assets like plant and machinery. Thus, the existence of an adequate liquidity and its careful management can make substantial difference between the success and failure of an enterprise. Bhunia (2010) similarly stresses that liquidity plays a significant role in the successful functioning of a business firm, which should thus ensure that it does not suffer from lack-of or excess liquidity to meet its short-term compulsions.

According to Brealey (2012), liquidity can be expressed in terms of liquidity ratios namely current ratio, quick (acid test) ratio and cash ratio. Current ratio is the ratio of the current assets to the current liabilities, which measures the margin of liquidity. The rapid

decreases in the current ratio sometimes signify trouble, but can also be misleading. Ngwili (2013) and Brealey (2012) also identify another liquidity ratio, the quick (acid test) ratio, which is an indicator of a company's short-term liquidity and is calculated as current assets net of inventories divided by current liabilities. Thus, it measures a company's ability to meet its short-term obligations with its most liquid assets that exclude inventories. Ngwili (2013) further highlights that the higher the quick ratio, the better the company's liquidity position and vice versa.

Another liquidity ratio identified by Brealey (2012) is the cash ratio, which is the ratio of a company's total cash and cash equivalents to its current liabilities. The cash ratio is most commonly used as a measure of company liquidity. Ngwili (2013) alleges that a company's most liquid assets are its holdings of cash and marketable securities, and that is why analysts also look at the cash ratio to determine how quickly it can repay its short-term debt. Thus, a strong cash ratio is useful to creditors when deciding how much debt, if any, they would be willing to extend to the asking party.

2.11 Central bank liquidity

Central bank liquidity is the ability of the central bank to supply the liquidity needed to the financial system. Bindseil (2005) underscores that it is usually measured as the liquidity supplied to the economy by the central bank, specifically the cash flows of monetary base from the central bank to the financial system. It relates to the central bank's operations liquidity, which refers to the amount of liquidity provided through central bank auctions to the money market according to the monetary policy stance. Therefore, the central bank provides liquidity equal to the sum of the autonomous

factors plus the reserves. Also, the central bank manages its market operations so that the inter-bank short-term lending rates remain closely aligned to the target policy rate.

2.12 The Profitability Concept

According to Nimalathasan (2009), profit is the primary objective of a business, which is an absolute measure of earning capacity. Profit is defined as the excess of return over outlay (Iyer, 1995). In point of view of the heavy investment which is obligatory for the success of most enterprises, profit in the accounting sense tends to become a long-term objective which measures not only the success of the product, but also of the development of the market for it (Nishanthini and Nimalathasan, 2013). Profit is determined by matching revenue against cost associated with it, and only those costs are placed against revenue. Nimalathasan (2009) also promulgates that additional profit is the report card of the past, and the inventive gold star for the future.

Profitability is also regarded as the ability of a given investment to earn a return from its use, and is the relative measure of earning capacity (Nishanthini and Nimalathasan, 2013; Nimalathasan, 2009). It thus provides evidence concerning the earnings potential of a company and how effectively a firm is being managed. If the firm fails to make profit, the capital invested is eroded, and if this situation is prolonged the enterprise ultimately ceases to exist. Consequently, Bindseil (2005) suggests that profitability shows how efficiently management can make profits by using resources availed to them in the market. Moreover, Harvard & Upton (2001) highlight that profitability is the ability of a given investment to earn a return from its use. However, Smith (1953) is of the view that profitability is not synonymous with efficiency, but rather an index of

efficiency, which is thus regarded as a measure of efficiency and management's guide to greater efficiency. Profitability measures profit generated from the business and is measured in percentage terms, for example as a percentage of investments, sales, or assets. According to Gitman (2002), high percentages of profitability play a vital role in bringing external finance to the business because creditors, investors and suppliers do not hesitate to invest in such a company. Also, enhanced resources utilization leads to value creation, which is pursued by most investors.

Profitability is measured through profitability ratios, and according to Brealey (2012), they include the Net profit margin, Return On Assets (ROA), Return On Equity (ROE) and pay-out ratio. The net profit margin calculated as net income divided by revenues, or net profits divided by sales measures the proportion of sales that finds its way into profits. Ngwili (2013) highlights that profit margin is very useful when comparing companies in similar industries, as a higher profit margin indicates a more profitable company that has better control over its costs compared to its competitors. Furthermore, the return on assets ratio is calculated by dividing a company's annual earnings by its total assets, which measures the performance of the firm and also an indicator of how profitable a company is relative to its total assets (Brealey, 2012). According to Ngwili (2013), ROA gives an idea as to how efficient management is at using its assets to generate earnings. Thus, the higher the ROA number, the better, because the company is earning more money on less investment.

According to Brealey (2012), the Return on equity ratio is calculated as net income divided by shareholders equity, measuring a corporation's profitability by revealing how

much profit a company generates with the money shareholders have invested. Ngwili (2013) further underscores that ROE is useful for comparing the profitability of a company to that of other firms in the same industry. The other important profitability ratio is the Pay-out ratio, which is calculated as dividends divided by earnings, measuring the proportion of earnings that are paid out as dividends. Ngwili (2013) further notes that the pay-out ratio is a key financial metric used to determine the sustainability of a company's dividend payments, as a lower pay-out ratio is generally preferable to a higher pay-out ratio. Managers don't like to cut dividends if there is a shortfall in earnings.

2.13 Working Capital Management Models

There are several working capital management theories that form part of available literature, and these are discussed in detail below.

i) The Trade-Off Model

Too *et al.,* (2016) assert that the Trade-off model demonstrates that firms decide their optimal level of cash holding by comparing the marginal cost and benefits of holding cash. Thus, any change in working capital management in a business will influence either liquidity or profitability. This is observed by Harvard& Upton (2001), who contend that working capital management is a razor edge exercise for financial managers of an enterprise, as they have to take decisions carefully to ensure that the firm's twin objectives of profitability and solvency are not affected. In addition, Bindseil (2005) notes that if a firm maintains a huge amount of current assets, its profitability will be affected although it protects its liquidity, which is also the case if a firm maintains low current assets that weaken liquidity whilst enhancing profitability. Echoing, Van Horne

and Wachowicz (2000) emphasize that excessive levels of current assets can easily result in a firm realizing a substandard return on investment, whilst firms with too few current assets may incur shortages and difficulties in maintaining smooth operations. Also reinforcing these arguments, Too *et al.,* (2016) promulgate that preserving liquidity and profitability of the firm is an important objective, as increasing profit at the expense of liquidity can bring serious problems to the firm and vice-versa.

Consequently, Too *et al.,* (2016) further recommend firms to diligently invest in working capital management as it directly affects the liquidity and profitability of a firm. Moreover, since the ultimate objective of any firm is to maximize shareholders wealth, which can be achieved through profit maximization, a firm that wishes to accomplish this goal must strike a balance between current assets and current liabilities, thus keeping abreast of the liquidity and profitability trade-off (Too *et al.,* 2016). This trade-off between liquidity and profitability is shown in Figure 2.3. In short, if a company does not care about profit, it cannot survive for a longer period, whilst if it does not care about liquidity, it may face the problem of insolvency or bankruptcy. However, for some scholars, liquidity plays a more important role because a company with low liquidity purportedly has a better capacity to serve the economy than a company without liquidity (Chatterjee, 2012)

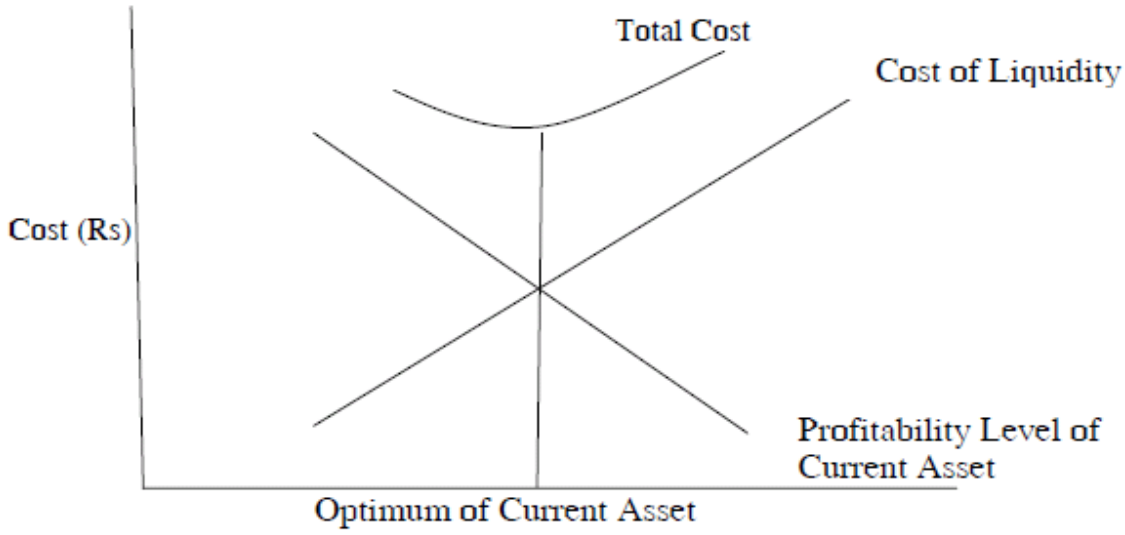

Figure 2.3: The Liquidity-Profitability Trade-Off

Source: Primary source

ii) The Keynesian Liquidity Preference Theory

Another theory that supports the study of working capital management is the Keynesian liquidity preference theory that was coined by John Keynes in 1936. It argues that when all other things are kept constant, investors prefer liquid investments to illiquid ones, and will always demand a premium for investments that have longer maturity periods. Thus, according to this theory, people hold cash or inventory for transaction, speculative, precaution, and compensation motives (Too *et al.*, 2016). This therefore justifies the need for working capital to run the day-to-day business activities, and can therefore not be ignored. Pandey (2010) thus compels entities to invest enough of their available funds in current assets to ensure the success of its operations.

iii) The Aggressive Theory

According to Too *et al.,* (2016), the aggressive theory is applied where the firm plans to assume high risk, and also where short term funds are used to a very high degree to finance current and fixed assets. This approach is purportedly characterized by low interest rates. However, Too *et al.,* (2016) further proclaims that it is important to note that that the risk associated with short term debt is higher than long term debt, which applies mostly to companies/ firms operating in a stable economy and is quite certain about future cash flows. Thus, a company with an aggressive working capital policy offers short credit periods to customers, holds minimal inventory and has a small amount of cash in hand. This policy in the end increases the risk of defaulting due to the fact that a company might face lack of resources to meet its short-term liabilities, but however gives a high return as it is associated with high risk.

Robles (2016) also highlights that in the aggressive working capital policy, the working capital management policy assumes more risk, implying a lower investment in working capital accounts which also means lower levels of inventories, the shortening of trade credit to customers and also the postpone payment to suppliers. This policy thus means greater profitability and also a greater risk for companies. This inverse relationship between working capital management and profitability is proved through the studies of Hager (1976), where the researcher postulates that firms holding lower levels of working capital accounts tend to reduce the cost of holding unproductive assets, such as marketable securities. In a contrary direction, these firms allegedly tend to increase their payables, thus reducing the company's financing needs.

iv) The Agency Cost of Free Cash Flow Theory

The agency cost of free cash flow theory was put forth by Michael Jensen in 1986, and brings out the fact that organisations suffer agency costs as a result of free cash flow as managers are always tempted to pile up cash under their control and make investment decisions which might not be in the best interest of shareholders (Too *et al.*, 2016). These corporate managers are regarded as the agents of shareholders, a relationship that is often weighed down by conflicting interests. Jensen (1986) thus highlights that free cashflow is cash in excess of that required to fund all projects that have positive net present values when discounted at relevant cost of capital. Thus, efficient working capital management is essential in order to avoid situations whereby managers mismanage the resources of the organisation for their own interests (Too *et al.*, (2016).

2.14 Conceptual Framework

In light of the highlighted challenges being faced in the Namibian electricity distribution sector that include poor infrastructural investments, low industry capacity utilisation and the general shortage of the commodity which leads to reliance on imports, among others, the study has adopted a conceptual framework that is explained henceforth and diagrammatically illustrated in Figure2.4. By employing the working capital management practices of cash management, inventory management, receivables management and payables management, CENORED (Pty) Ltd will realise improvements in its cashflows, that is liquidity. Improved liquidity will enable the company to smoothen its operations as it will be able to timeously honour its obligations to creditors. The ability to promptly pay obligations like loan interests to banks will help the company to create a good reputation for itself, and hence become more creditworthy.

Moreover, maintaining good relations with other suppliers will enable the company to be granted favourable terms of payment that will be essential in improving its liquidity. Also, the ability to negotiate favourable terms for its payables will improve its liquidity further.

Working capital management also stresses on the adoption of receivables management techniques that include the aggressive management of debtors. This effective management of debtors will enable CENORED to timeously collect payments from its debtors, which will improve its liquidity. Moreover, working capital management encourages companies to shorten their collection periods, which is also an excellent technique for improving company liquidity. Hence, the ability of the company to invest in further essential infrastructure and also in improving the capabilities of its workforce will enable CENORED to improve its capacity utilisation, and consequently its sales. A competitive workforce will also be able to explore new markets for the company to serve, thus increasing revenues further.

Improved sales will also mean improved profits for CENORED, which essentially equates to improved shareholder value and more capital available for further investments into the company, particularly innovations like the smart grid and smart meters highlighted elsewhere in the chapter. This will enable the company to conveniently serve today's sophisticated customers, who are particular about tailor made services will make CENORED an electricity supplier of choice. Moreover, the ability of the company to create value for its customers will enable it to attract more investors for further growth.

As CENORED's performance improves as highlighted above, its success will spill over into the Namibian economy at large. For example, the industry has purportedly been

affected by electricity shortages, thus its improved availability will mean increased capacity utilisation. This will also mean more jobs for the citizens and their improved livelihoods. Also, increased electricity production capacity also implies that the nation will cease to rely on imports, thus correcting the balance of trade position. This is also the same with increased production in industry, which means that the country will become more self-reliant in production, and able to export an assortment of excess products to other countries.

The presence of a thriving industry in Namibia also means that the economy will earn more from corporate taxes, thus improving its fiscal position. Furthermore, critical sector that are heavily reliant on electricity like health will also thrive, thus improving the population's livelihoods in general. This, coupled with reduced unemployment levels as the people get access to more jobs will also result in improved GDP per capita, that improve the country's economic position at regional and international level.

2.15 Empirical Evidence.

On theoretical framework and empirical studies on Work Capital Management in organization(s) Van Horne and Wachowicz (2004) said that, firms manage Working Capital using three approaches: conservative Aggressive and Moderate models. The conservative approach is where firm tends to use mostly long-term sources of finance for its operations and use short-terms sources in urgent circumstances. On the other hand, the aggressive approach is having fewer current assets- for example, cash, inventories and trade receivables in proportion of total assets. This may lead to liquidity.

Again, Van Horne and Wachowicz (2004), a moderate approach trends between the aggressive and conservative approaches a moderate approach makes a distinction between fluctuating current assets and permanent current assets with the suggestion that short term sources of finance should be used to finance fluctuating current assets. Likewise, long –term source of finance should be used to finance should be used to finance permanent current assets. However, it is important to note that working capital management policies need to consider the nature of the company because different businesses will have different Working Capital Management requirements.

Mona (2012) investigated the impact of aggressive and conservative policies on 57 Jordanian firms' profitability and value between 2001 and 2009. Measuring conservative policy as the level of current assets relative to total assets, he found the ration to be 0.49 and the regression method of estimation that follow an aggressive investment policy using long-term investment have a negative effect on firm profitability and value. Although their sample size was small, similar findings were found by Afza and Nazir (2007).

Again, Afza and (2007) investigated the relationship between the aggressive and conservative Working Capital policies for 17 industrial groups and a large sample of 263 public limited companies listed on the Karachi Stock Exchange (KSE) using cross-sectional data for the period 1998-2003. Using analysis of Variance (ANOVA) and the least significant difference (LSD) test, the study found significant differences among their Working Capital investment and financial policies across different industries moreover, rank order correlation confirmed that these insignificant differences were remarkably stable over the six-year study period. Finally, ordinary least regression analysis indicated a negative relationship between the profitability measures of firms and the degree of aggressiveness of Working Capital investment and financing policies. The implication of the two studies is that firms should pay greater attention to their liquidity position. This involves having sufficient cash because poor cash management may land a firm in financial trouble as it will not be able to pay its current bills and eventually the firm may face technical insolvency in the short run. In the long run, bankruptcy may result if poor cash management persists.

Also, Ukaegbu (2013) investigated, 102 firms in Africa specifically firm Egypt, Nigeria, Kenya and South Africa 20 each from 3 countries and 42 from South Africa. The most recent period for this investigation is 2005-2009. This selection was based on indications, African countries are divided into five groups: forerunners; achievers; catching up: falling-behind and infant stage according to UNCTAD (2011). The chosen countries are classified as: forerunners (Egypt); achievers (South Africa); and falling behind (Kenya and Nigeria) respectively.

The study using moderate model, the independent working capital variables include number of days accounts payable, number of day inventories, the number of days accounts receivables and cash conversion cycle. Taking accounts payable as a proxy to determine the firms' payment policy to its suppliers. It is computed as (accounts payable X 360)/ cost of sales. Also we take number of days inventories to determine the firms' inventory policy. It is calculated as (inventories X 360) / cost of sales. In addition, the study determined the firms' collection policy as a proxy of the number of days accounts receivable. It is computed as (accounts receivable X 360)/ turnover. Besides, in order to check whether one regression is sufficient for each country, chow test to test for structural stability across the four countries. There is no suggestion of any presence of structural break or instability.

The results showed that with descriptive statistics of 102 non-financial firms across Egypt, Kenya, Nigeria and South Africa for a period of five years from 2005 to 2009, it reveals firms in Kenya are more profitable, with a mean of 40% then the peer firms in other countries in our sample. This is despite the fact that Kenya is ranked behind South Africa and Egypt in terms of industrialisation level. However, there are some firms in South Africa and Egypt which more profitable with a maximum gross operating profit of 68% and 56% respectively. Finally, the findings established that, 13-day Cash Conversion Cycle for firms in Kenya which indicates how efficient they are managing Working Capital compared with firms in Egypt.

The study intended to establish the Working Capital Managements impact in an organization. The empirical evidence from various countries including Africa states is

significant to the study as; the issues raised in the findings are Occurrences in CENORED in Namibia, which was used as a cased study.

2.16 Research Gap

The Namibian government has put in place various policies such as the white paper on energy (1998), ESI restructuring (2000), Single buyer market design (2002), Electricity Act (2007) and the National development plan (2008) to eliminate electricity supply gaps. However, these policies are failing to address the persistent electricity scarcity, which according to Robinson (2013) can be attributed to lack of generation capacity to supply power to grid-connected regions, the absence of proper grid infrastructure to deliver this power and also regulatory impediments to providing steady revenue to maintain and invest in new generation capacity. Thus, as Alagh (2013) alludes, these challenges that have led to an acute electricity crisis in Namibia, have also resulted in a severe financial strain in the sector at large. Also, the highlighted challenges, coupled with the lack of systematic planning in the power distribution sector have resulted in a system with high transmission and distribution losses (averaging 18%), implying that the sector cannot be viable and self-sustaining (Davidson and Mwakasonda, 2003).

Considering the above, the researcher proposes the adoption of working capital management, an activity that is espoused as an indispensable element in the analysis of a firm's performance while conducting day-to-day operations. Moreover, researchers like Padachi (2006) and Kotut (2003) established that the efficient management of working capital is pivotal to the health and performance of all business enterprises, hence, they recommended for firms to employ the use of efficient working capital management practices as a strategy of improving their value. However, the study of working capital

management has generally been overlooking the public utilities sector, as the majority of available studies mainly focused on listed companies (for example Nyakundi, 2003; Mathuva, 2009; Gill, Biger and Mathur, 2010; Zawaira and Mutenheri, 2014) and manufacturing companies (for example Ghosh and Maji, 2003; Singh and Pandey, 2008; Ngendakumana *et al.,* 2015).

Moreover, there are a few studies that focus on the impact of working capital management on the performance of the electricity distribution sector, in particular, for example Leon (2013); Azhar (2015); Dilli *et al.,* (2016) among others, that reveal a conspicuous scarcity of literature on the Namibian electricity distribution sector's practice of working capital management. Available studies on the Namibian electricity distribution sector have mainly focused on sector reforms, for example World Bank (2005), Anderson (2006), USAID (2018); energy development (PWC, 2013; Rama, 2014; Manyando, 2016). However, providing a closer research to this study, an Econ One Research (2002) looked at the Namibian electricity distribution sector focusing on Northern Electricity Distribution Company's role on rural infrastructure development. Also providing another almost similar study, Amadhila (2017) focused on the impact of working capital management on Namibian state-owned enterprises in general. Therefore, no available study has specifically focused on the impact of working capital management on the CENORED (Pty) Ltd.'s liquidity and profitability. This is the gap that the study aims to fill.

2.17 Chapter Summary

The chapter provided literature of past studies by various researchers on the study's subject area. The background of the study, theoretical and empirical evidence and also the conceptual framework was highlighted and the research gap was identified. The next chapter will focus on the Research Methodology employed in conducting the study.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter covers a discussion on the research methods and strategies that were used in carrying out this study. This covered the research philosophy, research design, research population, sample techniques, sample size, research instrument and issues such as validity of the research and ethics among other issues. It also covered the justification for the study and beneficiaries of the study. The chapter concludes by presenting the chapter summary.

3.2 Research Philosophy

The research philosophy used in this chapter was the positivism philosophy. Likewise, the research philosophy is defined as the belief regarding the way data in the study was gathered, analysed and used by the researcher as noted by Zikmund *et al.,* (2013). In fact, positivism philosophy states that knowledge is based on natural phenomena and their properties and relations. Thus, positivism research philosophy is popular and widely used in studies that have causal relationship analysis according to Bryman & Bell (2015). Consequently, this study is more inclined to the positivism philosophy, hence the reason why positivism was incorporated in this study. Similarly, the researcher used positivism philosophy because he was seeking facts (positivism) from the target respondents on the significance of working capital management with the study focusing on Central Northern Electricity Distribution Company (CENORED) (Pty) Ltd of

Namibia. Furthermore, the philosophy of positivism was used in this study because it requires that the researcher assumes the position of a natural scientist who develops hypotheses that will be tested and confirmed, making use of facts instead of impressions (Saunders *et al.,* 2009). For that reason, the researcher developed a hypothesis which was tested using factual collected data from the officials of Central Northern Electricity Distribution Company (CENORED) (Pty) Ltd. In addition, the literature, further show that positivists take a controlled and structural approach in conducting research (Churchill, 1996; Carson *et al.,*, 2001; Kaboub, 2008) by identifying a clear research topic as was the case in this study, constructing appropriate hypotheses and by adopting a suitable research methodology which was accordingly done efficaciously in this study as noted by Churchill (1996), Carson *et al.*, (2001) and Kaboub (2008).

3.3 Research Design

A case study research design was used in conducting this study. Thus, a research design is a master plan of the research that specifies how the study will be carried out and it indicates the methods that were used to collect and analyse data during a research (Bryman & Bell, 2015). Furthermore, Burns and Grove (2003) define a research design as a blueprint for conducting a study with maximum control over factors that may interfere with the validity of the findings. In addition, Parahoo (1997), Sharjahan (2005) and Saunders *et al.,* (2007) indicate that a research design is an operation or plan that stipulates the kind of information that is to be collected, from what source, using what kind of procedure and also how it will be analysed. Additionally, Polit *et al.,* (2001) posit that a research design is the researcher's overall strategy that enables him or her to

answer the research question or testing the research hypothesis, whilst Denzin and Lincoln (2011) simply recognize it as a strategy of inquiry.

George and Bennet (2005); Yin (2009); Rose *et al.,* (2015) view the case study research design that was used to conduct this study as an empirical inquiry that investigates a contemporary phenomenon within its real-life. The case study approach facilitated the investigation of contract farming within the Zimbabwean context (Munyoro *et al.,* 2017), to enable the establishment of its contribution to agricultural development. Cresswell (2014), additionally, indicates that case studies are a design of inquiry found in many fields especially evaluation, in which the researcher develops an in-depth analysis of a case, often a program, event, activity, process, or one or more individuals. Accordingly, working capital management was the program that was evaluated in this study through the in-depth analysis of the significance of working capital management in the Central Northern Electricity Distribution Company (CENORED) Pty Ltd of Namibia.

Furthermore, the case study design enabled the incorporation of the views of the officials of the Central Northern Electricity Distribution Company (CENORED) (Pty) Ltd of Namibia without the researcher influencing their attitudes, whilst permitting the exploration of behavioural patterns as argued by Yin (2009). Additionally, the case study design through the explanatory strategy offered in-depth details and understanding of the various impacts of independent variables to dependent variables in the study (Ihuah and Eaton, 2013).

3.4 Population

In carrying out a research, the researcher must be able to define the study population before sampling can be done (Cooper, *et al.,* 2006). The reason for this is that the characteristics of the population determines the sample size, sampling frame and sampling methods to be employed in drawing the sample for study. For example, census can be used where the population is too small to use a sample. The reason for the need to have a better understanding of the population is to make sure that the sample that will be used in a research is a true representation of the population. Thus, Parahoo (1997) defines population as the total number of units from which data can be collected such as individuals, artefacts, events or organisations. Whereas, Burns and Grove (2003) define population as all the elements that meet the criteria for inclusion in a study.

Furthermore, a research population is seen as the totality of elements relevant to the study (Cooper, *et al.,* 2006), from which a sample can be drawn. Therefore, this study's population could be well-defined as all officials from the Central Northern Electricity Distribution Company (CENORED) (Pty) Ltd of Namibia. In this case the population for this study was made up of 101 officials. This comprised of staff from the following units: Technical and Engineering (63), Corporate Services (15), Finance (20) and Office of the Chief Executive Officer (3).

3.5 Sample size

A sample is defined as a finite part of a statistical population whose properties are studied to gain information regarding the whole environment Webster (1985). Furthermore, Polit *et al.,* (2001) and Tailor (2005) basically deduced a sample as a fraction or subgroup of a population indicated above, whereas Fridah (2002) regards it

as a set of respondents selected from a larger population for the purpose of an investigation, in this case the Central Northern Electricity Distribution Company (CENORED) (Pty) Ltd of Namibia. Consequently, this study's sample is made up of a collection of appropriate respondents from the Central Northern Electricity Distribution Company (CENORED) (Pty) Ltd of Namibia. Thus, the sample was made up of up of 50 officials and in the following manner: Technical and Engineering (10), Corporate Services (29), Finance (9) and Office of the Chief Executive Office (2).

The population was delimited to a sample size of 50 people who were selected from officials from CENORED (Pty) Ltd by using convenient sampling method. The sample size was then calculated and given below.

$$\boldsymbol{n_0 = \frac{K^2\, p\, q}{E^2}}$$

Where;

K = the desired level of confidence, this case 95% level of confidence is desired, hence K = 1.96

P = the proportion of the variable of the study, in this study looked at the opinion of staff members, hence maximized sample at proportion = 50 %

q = 1- p

E = Is the desired margin of error and its set at 10%

$$n_0 = \frac{1.96^2\ (0.5)\ (0.5)}{0.1^2}$$

n_0 = 96.04

Adjusting the sample to the population size 170 staff members

$n = n_0 \left(\frac{N}{N+n_0}\right)$

$n = 96.04 \left(\frac{101}{101+96.04}\right)$

$n = 49.22$

Therefore, the sample size is 50 persons

3.6 Sampling Procedure

Sampling is defined as the act, process, or technique of selecting a suitable sample, or a representative part of a population for the purpose of determining parameters or characteristics of the whole population as noted by Fridah (2009). This study adopted the convenience sampling method, a non-probability sampling technique that is used on the basis of convenience due to time, cost and other resource constraints as argued by Dornyei (2007). Besides, convenience sampling also involves respondents who are willing to participate in a study besides involving the drawing of samples that are easily accessible (Teddlie and Yu, 2009), hence in this study, the choice of respondents was based largely on their accessibility and willingness to participate in the study. Additionally, the convenience sampling technique enabled the researcher to concentrate on reachable, supportive and accommodating officials of the Central Northern Electricity Distribution Company (CENORED) (Pty) Ltd of Namibia in order to complete the study within the time limit stipulated in the university regulations.

3.7 Research Instruments

A research instrument is a tool used to collect data, which is designed to measure knowledge, attitude and skills of respondents as noted by Parahoo (2007). This study made use of questionnaires in collecting data from the officials of the Central Northern Electricity Distribution Company (CENORED) (Pty) Ltd of Namibia. Accordingly, a questionnaire is defined as a pre-formulated set of questions designed to gather information from respondents to accomplish the goals of a research study as argued by Sekaran and Bougie (2012). Additionally, a questionnaire is regarded as a data collection instrument, which consists of a series of questions for the purpose of gathering data from respondents (Abuwi, 2013). For the purpose of effectiveness, semi-structured questionnaires that included both structured and non-structured questions were used in this study. Saunders *et al.,* (2009) and Cresswell (2014) suggest that the reason for using non-structured questions was to further explain the phenomenon that were limited by structured questions. Furthermore, questionnaires are seen as a very convenient way of collecting useful and effective data from a large number of individuals with limited effort and time which can produce valid and significant results if the questions are clear, precise and are asked consistently across all respondents as suggested by Mathers *et al.,* (2009) and Sekaran and Bougie (2012). Furthermore, questionnaires handle the issue of anonymity well, thus allowing respondents to give unbiased answers without fear of victimization (Cresswell and Clark, 2011). It is important to note that the researcher did test the questionnaire before it was used to improve its reliability.

3.8 Sources of Data

There are two main sources of data collection in research namely: primary and secondary sources (Zikmund, *et al.*, 2013). A primary data source is that data that the researcher gets as first hand from the study units. It is also defined as the source used by the researcher for the specific purpose of the study and not for any other purposes. On the other hand, secondary is data collected by the researcher that was initially collected by other persons and for other purposes such as books, journals and articles. This study made use of both primary and secondary sources of data. Primary data was collected from the selected respondents. Secondary data was collected from textbooks, journals, company records and various websites and this was used mainly in compiling the study's literature review.

3.9 Data Collection Procedure

In summary, the following is how the researcher collected the data for analysis in this study and primary and secondary sources of data were used. Challenges and background information was researched with published literature and this took into consideration peer-reviewed articles, case studies and company reports. Secondary data was used to analyse and evaluate the significance of working capital management in the Central Northern Electricity Distribution Company (CENORED) Pty Ltd of Namibia. Quantitative data was collected using structured questions in a questionnaire. Qualitative information was collected through the non-structured questions of the questionnaire, thus allowing for the study to take a mixed-methods approach to the research methods and design even though it was biased towards positivism approach. The questionnaire

was distributed to the officials of the Central Northern Electricity Distribution Company (CENORED) Pty Ltd of Namibia.

The researcher developed one questionnaire for all the officials from the Central Northern Electricity Distribution Company (CENORED) Pty Ltd of Namibia. The questions covered all the topics on the significance of working capital management in the Central Northern Electricity Distribution Company (CENORED) Pty Ltd of Namibia. In order to achieve a high response rate, the researcher administered the questionnaire personally by hand delivering all the questionnaires. The researcher collected the data for analysis after a 2-week period.

3.10 Data Analysis Techniques and Procedure

Two main data analysis processes were conducted on the quantitative data. Descriptive statistics using the measures of central tendency and measures of variability, namely: arithmetic means, variances and standard deviations were used. Correlation analysis and regression analysis were also used to examine the significance of working capital management in the Central Northern Electricity Distribution Company (CENORED) Pty Ltd of Namibia. Statistical Package for the Social Sciences (SPSS) was used to analyse quantitative data. Qualitative data was categorised according to a qualitative question in the questionnaire and involved an iterative process in order to emerge with themes (Seidel, 1998; Munyoro, 2014). The responses were coded in terms of certain subjects and themes (Seidel, 1998; Gibbs, 2002; Munyoro, 2014). The researcher analysed the meaning of the responses that were given in non-structured questions and linked them to

the research objectives and literature (Seidel, 1998; Gibbs, 2002; Munyoro, 2014). Each research question was generated from the literature.

3. 11 Validity

Validity is a term that describes the extent to which an instrument measures what it purports to measure (Zikmund *et al.,* 2010). In short, legitimation is essential in any study and refers to the difficulty in obtaining findings or making inferences that are credible, trustworthy, dependable, transferable or confirmable as noted by Kimberlin and Winterstein (2008) and Copper and Schindler (2011). Thus, in this study, the employment of positivism was used to increase the confidence in the results that were obtained (Abowitz and Toole, 2010) from the collection of the study. Consequently, the use of short and straightforward questions that were strictly linked to the study's objectives, including crosschecking and verification and were also aimed at enhancing the validity of findings of this study.

3. 12 Reliability

Reliability is the extent to which data collection techniques yield consistent results overtime, implying that if the research instrument is used repeatedly it should yield the same results (Saunders, 2009) and (Golafshani, 2003). In this study Cronbach's Alpha co-efficient was used to authenticate the questionnaire's reliability. This scale measurement tool is used to determine the internal consistency factor within and among study variables (Hair *et al.,* 2003). This study attained a 0.890 score which is above the 0.70 acceptable score.

3. 13 Ethical Considerations

This study was carried out under stringent ethical considerations. Research ethics are referred to as the appropriateness of the behavior of the researcher in connection with the rights of the enlisted respondents, subjects and those affected by the research work (Saunders *et al.*, 2009). Thus, research ethics includes the protection of participants from any harm, informed consent, the right to privacy and confidentiality and also professional conduct as noted by Choga and Njaya (2011). In this regard, the researcher explained the purpose of the study to the respondents before handing over the questionnaires and conducting focus group interviews, indicating that participation was voluntary and that participants had the right to withdraw anytime they deemed fit as suggested by Munyoro (2014) and respondents were assured of confidentiality and anonymity (Creswell, 2009).

3.14 Chapter Summary

In this chapter, the researcher discussed the research methodology that was used in this study. Particular attention was given to the research design, research philosophy, research population and sampling methods that were used in this study. The chapter also discusses ethical considerations that were observed in this study. In the following chapter, the researcher presents the findings of the study.

CHAPTER FOUR

RESULTS AND DISCUSSION

4.1 Introduction

This chapter concentrated on presentation of data gathered in chapter 3. Data collected was both quantitative and qualitative. The researcher used SPSS to analyse the quantitative data. Presentation was done by means of tables, charts and graphs. Results collected in this chapter were then used in chapter 5 to draw conclusion and recommendations.

4.2 Questionnaire responses

A total of 50 questionnaires were distributed across various departments as follows:

Table 4.1: Questionnaire responses

Department	**Questionnaires distributed**	**Questionnaires returned**
Technical & engineering	10	7
Corporate services	29	27
Finance	9	9
C.E.O. office	2	2
Total	50	45

Primary Source

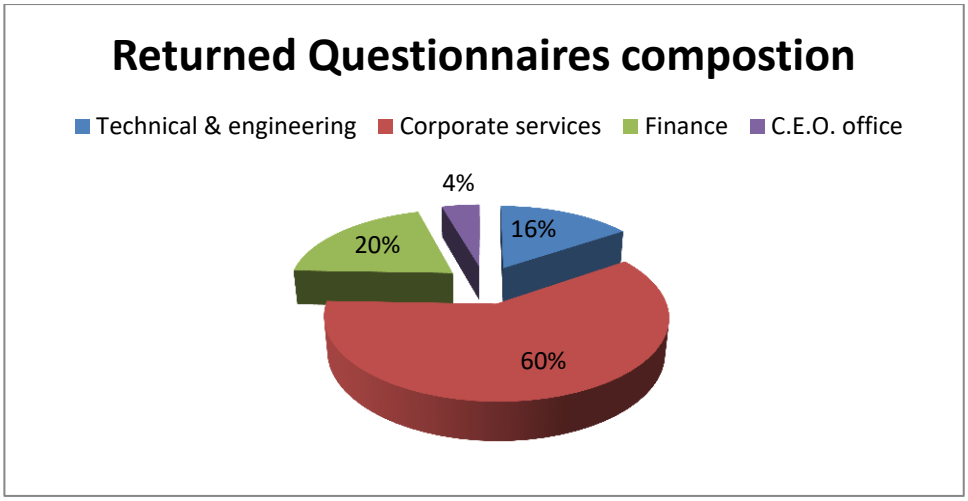

Figure 4.1: Returned Questionnaires Composition

Primary Source

The response rate in this study was at 90% which according to Saunders (2009) is a good response rate for any study.

4.3 Reliability

The research adopted qualitative and quantitative data collection techniques hence there was need to assess reliability of the data and in this study Cronbach's Alpha was used to do the reliability test. According to Wixom and Watson (2001) the minimum acceptable value will be an alpha score of 0.7 while George and Malley (2003) resorted to a guide which stated that an alpha value of less than 0.5 is unacceptable, between 0.5 and 0.6 is poor, between 0.6 and 0.7 is questionable, between 0.7 and 0.8 is acceptable, between 0.8 and 09 good and above 0.9 is excellent.

Table 4.3: Reliability Statistics

Cronbach's Alpha	N of Items
0.862	45

Primary Source

From the table above, it is clear that the data collected in chapter three was deemed reliable as the Cronbach's Alpha test produced a score of 0.862.

4.4 Age

In this study the majority of the respondents were between 25 and 34 years who accounted for 40% of the study followed by the age group of 34-44years which had 30% representation. The table and diagram below give finer details on age demographics:

Table 4.4: Age Demographics

		Percent	Valid Percent	Cumulative Percent
Valid	<25years	20.0	20.0	20.0
	25-34years	40.0	40.0	60.0
	35-44years	30.0	30.0	90.0
	45-54years	10.0	10.0	100
	Total	100	100	

Primary Source

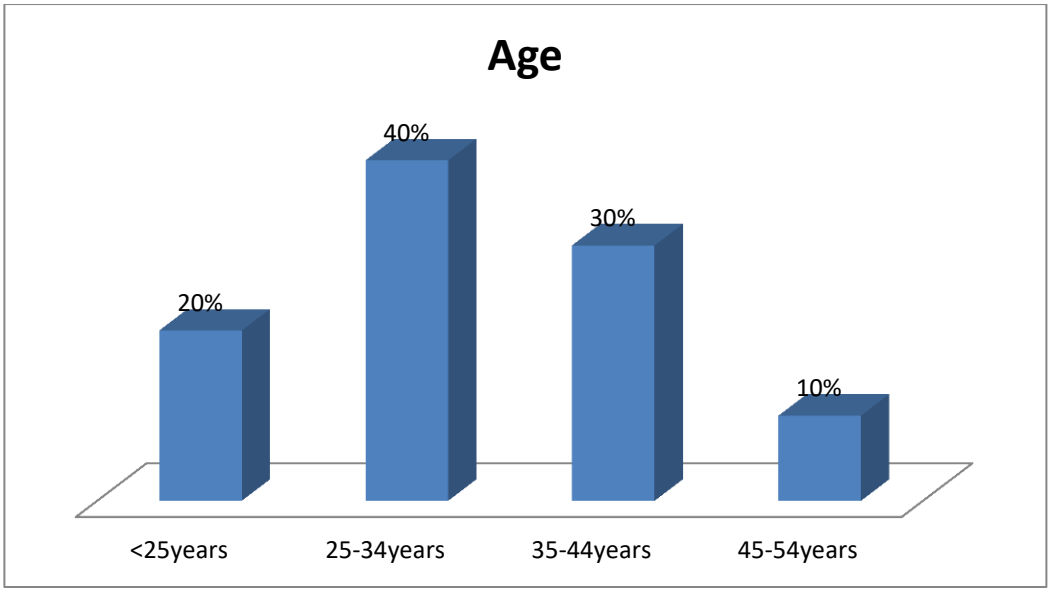

Figure 4.2: Age Percentages

Primary Source

4.5 Education

In terms of education the majority of the respondents (50%) attained a degree with diploma and PhD candidates accounting for 20% each as shown below.

Table 4.5: Level of Education

		Percent	Valid Percent	Cumulative Percent
Valid	secondary	10.0	10.0	10.0
	diploma	20.0	20.0	30.0
	degree	50.0	50.0	80.0
	Masters/PhD	20.0	20.0	100.0
	Total	100.0	100.0	

Primary Source

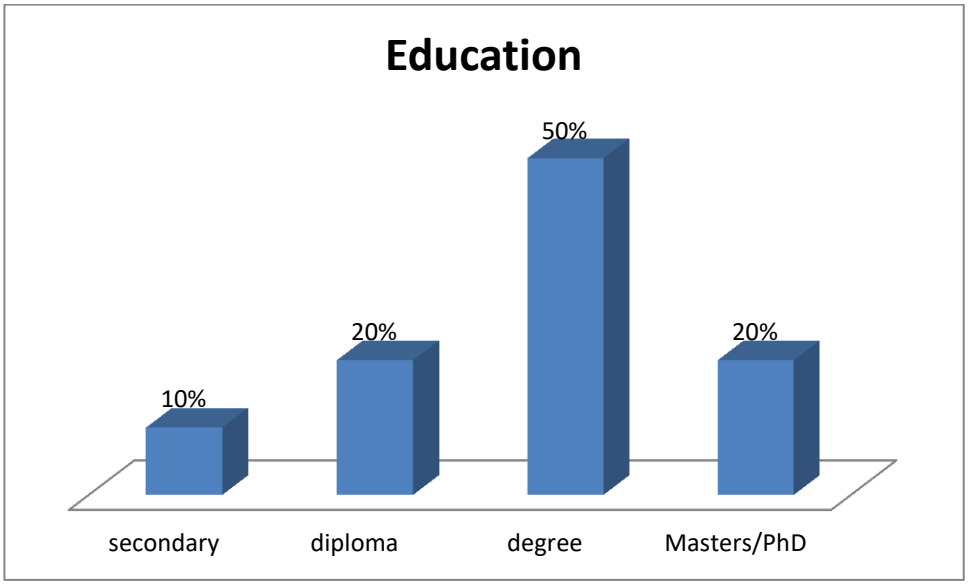

Figure 4.3: Level of Education

Primary Source

4.6 Experience at CENORED PTY LTD

This study also revealed that the majority of the respondents had spent between 5 to 10 years in the organisation as they accounted for 60% of the total respondents while those in the age groups 11-15 years and less than 5 years accounted for 30% and 10% respectively.

Table 4.6: Experience at CENORED (Pty) Ltd

		Percent	Valid Percent	Cumulative Percent
Valid	<5years	10.0	10.0	10.0
	5-10years	60.0	60.0	70.0
	11-15years	30.0	30.0	100.0
	Total	100.0	100.0	

Primary Source

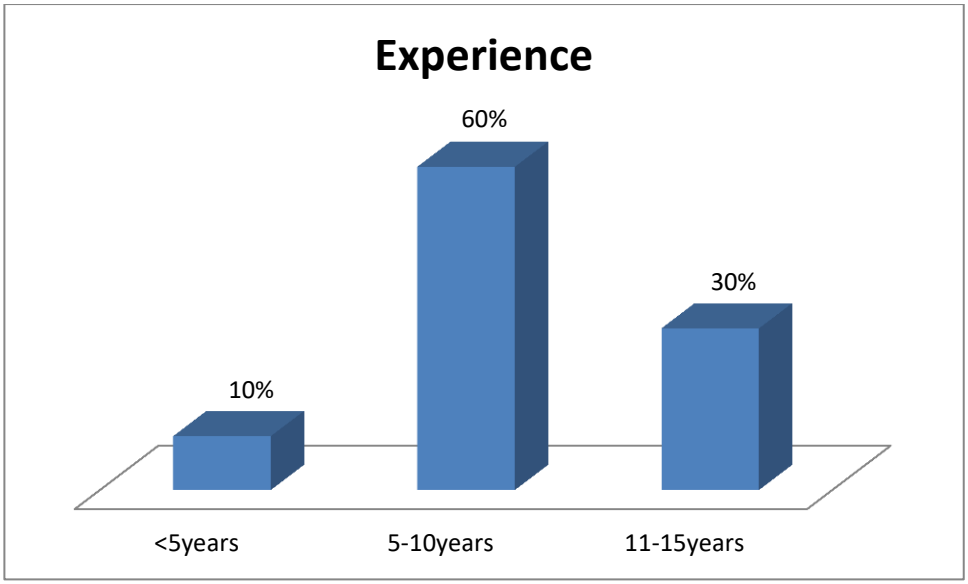

Figure 4.4: Experience at Cenored (Pty) Ltd

Primary Source

4.7 Years in department

The table below shows the number of years respondents have stayed in their departments and reveals that 40% of the respondents have spent between 6 to 10 years in one department. More statistical information is provided below:

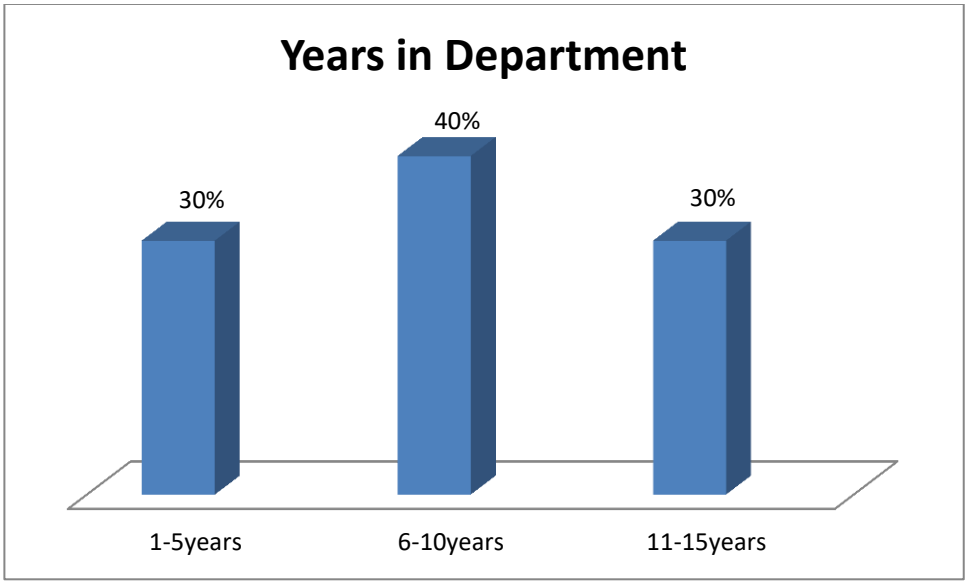

Figure 4.5 Year in Department

Primary Source

Table 4.7: Year in Department Analysis

		Percent	Valid Percent	Cumulative Percent
Valid	1-5years	30.0	30.0	30.0
	6-10years	40.0	40.0	70.0
	11-15years	30.0	30.0	100.0
	Total	100.0	100.0	

Primary Source

4.8 Factor Analysis

In this study the research sought to understand the major determinant to how respondents answered questionnaires and to this regard a Kaiser's stopping method was used. This tool considers factors with an Eigen value above one and in this study the results from this method are shown in the table below:

Table 4.8: Factor Analysis

Component	Initial Eigen values			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	1.253	12.534	12.534	1.933	19.335	19.335
2	1.600	16.005	35.340	1.600	16.005	35.340
3	1.306	13.056	48.396	1.306	13.056	48.396
4	1.933	19.335	60.929	1.253	12.534	60.929
5	1.020	10.197	71.127	1.020	10.197	71.127
6	.870	8.695	79.822			
7	.309	3.090	100.000			

Primary Source

After carrying out the factor analysis it is clear that number of years in department was the major determent factor to the way CENORED employees responded to the questionnaires as it had the highest Eigen value of 1.933 as compared to age, education and years in the organisation which had Eigen scores of 1.25, 1.6 and 1.3 respectively. After being figured to be the main determinant in this study years in department was then used to carry out the analysis of variance (ANOVA) test and the table below shows the ANOVA test values.

4.9 Variance analysis

In this study the researcher sought to establish the perceptions of respondents on various issues which could not be answered by a simple yes or no hence resorted to using a Likert scale. The Likert scales used was as follows: 1=strongly agree, 2=agree, 3=neutral, 4=disagree and 5= strongly disagree. Therefore, any mean below 3 indicated agreement while a mean above 3 meant disagreement.

Table 4.9: Variance analysis

Statement	**Mean**	**Std. dev**	**ANOVA p- value**
Working capital management enhances liquidity and profitability	1.3	0.94	0.23
There is better access to markets when you enhance liquidity in the organisation	1.9	0.88	0.08
Working capital management enhances production.	1.6	1.01	0.31
Working capital management improves profits.	2.1	0.93	0.06
Working capital management enables savings and investments.	2.3	0.84	0.13
Working capital management guarantees business survival and continuity.	1.4	0.97	0.34

Working capital management ensures better performance of the organisation.	2.9	1.1	0.42
Working capital management creates more business and employment opportunities.	3.0	1.0	0.04
Working capital management enhances training and efficiency	2.6	0.79	0.22
Working capital management creates infrastructure	2.3	0.95	0.41
Working capital management is significant to electricity distribution sector	1.4	0.92	0.53

Primary Source

i) Working capital management enhances liquidity and profitability

In this study it was revealed that Working capital management enhances liquidity and profitability as mean score of 1.3 was recorded with a standard deviation of 0.94 showing that this was not a result achieved by accident. A further Anova p-value of 0.23 shows that this notation was significant to the study.

ii) There is better access to markets when you enhance liquidity in the organisation

Market access was attributed to the availability of working capital with a mean score of 1.9 being observed together with a standard deviation of 0.88. An Anova p-value of 0.08 indicated that this result was of importance to the study.

iii) **Working capital management enhances production**.

This study also revealed that working capital management enhanced production. This was supported by a mean score of 1.6 which signalled agreement to the notion and a standard deviation of 1.01 showed that the opinions of the respondents did not vary that much. An ANOVA p-value of 0.31 showed that this notion was important to the study.

iv) **Working capital management improves profits**.

Working capital was also observed to improve profits within an organisation as a mean score of 2.1 was recorded with a standard deviation of 0.93 showing that the responses were in the same range. A further ANOVA p-value of 0.06 indicated that this notion was important to the study.

v) Working capital management enables savings and investments

Also, in this study working capital was deemed to enable savings and investments. This was supported by a mean score of 2.3 and a standard deviation of 0.84 while an ANOVA p- value of 0.13 iced the cake by showing the importance of this notion to the study.

vi) **Working capital management guarantees business survival and continuity**.

From the data gathered in this data in can be concluded that working capital management guarantees business survival and continuity. As seen in the analysis of variance, a mean score of 1.4 and a standard deviation of 0.97 were recorded. Furthermore, an ANOVA p-value of 0.34 indicated the significance of this notion to the study at hand.

vii) Working capital management ensures better performance of the organisation

On this notion a mean score of 2.9 was recorded indicating that the respondents were in agreement to this notion while a standard deviation of 1.1 showed that the responses varied widely from the mean. However, an ANOVA p-value of 0.42 showed that this notion was important to the study.

viii) Working capital management creates more business and employment opportunities

This study revealed that respondents were undecided on whether working capital management creates more business and employment opportunities or not. This is supported by a mean score of 3 and a standard deviation of 1 showing that the majority of the respondents were of the same view. However, an ANOVA p-value of 0.04 suggested that this notion was not important to the topic under discussion.

ix) Working capital management enhances training and efficiency

Working capital was noted to enhance training and efficiency as a mean score of 2.6 was recorded and supported by a standard deviation of 0.79. Furthermore, an ANOVA p-value of 0.22 indicated that this notion was of great significance to the study at hand.

x) Working capital management creates infrastructure

Also, in this study it was observed that working capital management helped in creation of infrastructure. This was supported by a mean score of 2.3 and a standard deviation of 0.95 while an ANOVA p-value of 0.41 highlighted the significance of this notion to the study at hand.

xi) Working capital management is significant to electricity distribution sector

Having carried out a thorough assessment of the data gathered this research concluded that working capital management was significant to electricity distribution sector as indicated by a mean score of 1.4 and a standard deviation of 0.92 enforcing that this result was not a mere coincident but rather a true reflection of the opinions of the respondents. In addition, an ANOVA p-value of 0.53 proved that this notion was important to the study at hand.

4.10 Major findings

Having carried out a thorough assessment of the data gathered, the research established major findings that are discussed henceforth.

i) Working capital management is significant to the electricity distribution sector

The research concluded that working capital management is significant to the electricity distribution sector, as indicated by a mean score of 1.4 and a standard deviation of 0.92. These scores enforce that the established result was not a mere coincidence, but rather a true reflection of the opinions of the respondents. In addition, an ANOVA p-value of 0.53 proved that this notion was important to the study at hand. Supporting these findings, Ching *et al.,* (2011) declared that working capital can create a business' competitive advantage, whilst Too *et al.,* (2016) congruently contend that it directly affects the liquidity, profitability and growth of a business. Also corroborating, Kotut (2003), Atrill (2006) and Padachi (2006) highlighted that working capital management is pivotal to the health, performance and value enhancement of all business enterprises.

The highlighted growth effect of working capital management is particularly important in the Namibian electricity distribution sector where demand is continually outstripping supply as demonstrated by NamPower (2012), which reveals that the units of electrical energy sold in Namibia between 1990 and 2010 grew by an average of 3.0% per year, whilst the system maximum demand (excluding the Skorpion Mine) grew by an average of 4.1% per year between 1999 and 2012. Similarly, Rama (2013) promulgates a 5.6% annual consumption growth and a corresponding insignificant growth in supply. This

current power challenge is also stressed by the NamPower managing director Paulinus Shilamba (2014), who declared that Namibia will continue to face power supply deficits until the year 2018 when new projects, particularly the Kudu will be commissioned. Moreover, the need for company driven initiatives to grow through internal strategies like working capital management are also prompted by the fact that Namibia continues to depend on imports from countries like Zimbabwe and South Africa, that are also grappling with their own electricity power supply challenges, implying that depending on them is not sustainable in the long run (Oertzen, 2012).

Thus, the overall benefits of working capital management that are linked to improved liquidity, profitability and enhanced value creation and growth are indispensable to CENORED (Pty) Ltd and the electricity distribution sector at large in Namibia, as they enable these companies to make critical infrastructural and technological investments to contain the surging demand, and also to attract more investors in this highly capital-intensive sector. In this respect, the Namibian Electricity Control Board (2005) underscored that almost all of the nation's distributors are financially incapable of making these necessary large investment requirements in the short to medium term as most of the distribution infrastructure that was developed in the 1960's and 1970's has a lifetime of about 30 years. Hence, the board argues that the time has come for replacing these assets at a very high cost and in time, to ensure that the quality of supply does not continue to deteriorate.

ii) Working capital management enhances liquidity and profitability

In this study it was revealed that working capital management enhances liquidity and profitability, as a mean score of 1.3 was recorded with a standard deviation of 0.94,

showing that this was not a result achieved by accident. A further ANOVA p-value of 0.23 also shows that this notation was significant to the study. This positive effect of working capital management on company profitability is confirmed by several researchers (for example Gentry *et al.*,1990; Jose *et al.*,1996; Shin and Soenen,1998; and Farris and Hutchison, 2003), who provided evidence of a significant relationship between working capital management and profitability in public listed companies in the United States of America. Thapa (2013)'s study of food and beverages industries in the USA and Canada also similarly revealed that working capital management was positively related to profitability and cash flow (liquidity). Also reinforcing these findings, Ngendakumana *et al.,* (2015)'s Zimbabwean study established that as a company's working capital management efficiency improved, its profitability equally improved.

Hence, as Too *et al.,* (2015) highlight, profit maximisation through working capital management enables a company to realise its ultimate objective of maximizing shareholders wealth. This is very important in Namibian electricity distribution companies like CENORED (Pty) Ltd, which as highlighted earlier on needs to attract more investors in order to make further capital investments to be able to contain the rising demand in electricity. This need is illuminated by the Namibian Electricity Control Board (2005), which highlighted that significant capitalization funds are required to ensure that electricity distribution companies like CENORED (Pvt) Ltd will be able to conduct its operations effectively. In this respect, Gitman (2002) also underscores that high percentages of profitability play a vital role in bringing external finance to the business because creditors, investors and suppliers do not hesitate to

invest in such a company, whilst the enhanced resource utilization that is upheld by working capital management also leads to value creation that is pursued by most investors. Furthermore, the profitability enhancement impact of working capital management enables CENORED (Pty) Ltd to plough back its own profits into the required capital investments, thus reducing dependence on expensive debt financing.

The management of CENORED (Pty) Ltd.'s liquidity through working capital management is also critical for attracting the indispensable financial investment, as Bhunia (2010) consistently highlights that the examination of liquidity is of major importance to both the internal and the external analysts because of its close relationship with day-to-day operations of a business. Banks, for example critically analyse business cash flows to ascertain the potential borrower's capability to repay advanced loans adequately and promptly as per agreed terms. Moreover, this enhancement of liquidity through working capital management in a company like CENORED (Pty) Ltd is stamped by Ware (2015) as a necessity for survival, whilst Panigrahi (2013) equally promulgates that it ensures that funds are not unnecessarily tied up in idle assets, thus enabling it to invest in productive assets like plant and machinery. The investment in productive assets by CENORED (Pty) Ltd will be indispensable in its quest for further growth as it will be able to serve a wider customer base in light of the ever-increasing demand for electricity in the Namibian economy.

iii) **Working capital management guarantees business survival and continuity**.

From the data gathered in this study, it can also be concluded that working capital management guarantees business survival and continuity. As seen in the analysis of variance, a mean score of 1.4 and a standard deviation of 0.97 were recorded. Furthermore, an ANOVA p-value of 0.34 indicated the significance of this notion to the study at hand. These findings coincide with Bhunia (2010)'s argument that the positive impact of working capital management on liquidity empowers companies to avoid insolvency or bankruptcy, which normally leads to the premature closure of companies. Chatterjee (2012) also equally contends that this also affords a business an enhanced capacity to serve the economy. The enhanced survival prospects of companies in the Namibian electricity distribution sector through working capital management are key for the alleviation of the previously highlighted power shortages in the country, and the revival of the entire economy at large.

4.11 Summary

This chapter provided a detailed analysis of data gathered in chapter three. The data was then put into meaningful information by means of graphs, charts and tables. These results will be used in chapter 5 to come up with major conclusions and provide recommendations to various stakeholders.

CHAPTER FIVE

CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

This chapter concludes the research by providing a narrative of the findings of the whole research. The chapter will provide major conclusions with regards to this study, before providing recommendations to various relevant stakeholders in the electricity distribution industry.

5.2 Recommendations

The following recommendations are prescribed to various concerned stakeholders in the Namibian electricity distribution sector:

i) Electricity distribution companies

There is need for electricity distribution companies to come up with smart grid networks in their distribution of electricity so that there is simultaneous production and consumption of the product. This is because electricity cannot be stored, and hence, all generated electricity should have ready consumers in order to avoid load losses. Moreover, there is need for the companies to effectively manage their receivables and payables in a manner that is recommended by the working capital management practice that is to shorten collection periods and delay payments as much as possible. This was proven to be effective by Deloof (2003)'s study in Belgium, where the empirical results concluded that profitability can increase by reducing the length of the accounts receivable period, whilst waiting longer to honour payables.

ii) Government

The government should revise the regulation policy on electricity distribution and transmission to also accommodate the producers of electricity. This is mainly because electricity has been heavily subsidised at the expense of generation and distribution companies who in time are finding it difficult to meet the financial demands of the sector. Thus, there is need for government intervention to cushion operators on the financing of the sector.

iii) Researchers

To future researchers, there is need to also look into other variables affecting the electricity distribution sector such as government policies, industrial growth and consumption of various sources of energy, such that a comparison can be made in the future to see which factor most affects or is significant to the electricity distribution sector.

5.4 Conclusion

This chapter provided a narrative of the findings of the whole study coming up with the conclusion that working capital management is significant in enhancing liquidity and profitability in the electricity distribution sector. This chapter further provided recommendations to key stakeholders who are relevant to the topic under study.

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APPENDICES

APPENDIX 1: QUESTIONNAIRE

The significance of working capital management in enhancing liquidity and profitability in the electricity distribution sector in Namibia: A Case Study of Central Northern Electricity Distribution Company (CENORED) (Pty) Ltd.

May you kindly complete the following questionnaire by ticking the response that you think is the most appropriate. Any further comments can be added at the end of the questionnaire. Please note that the purpose of this research is purely academic and the responses will be treated as private and confidential.

1. Age: <25years……. 25-34years……. 35-44years……. 45-54years …….. >55years……

2. Education Level: Secondary School…….. Diploma…..... Degree…….. MSc/PhD……...

3. Number of years in the CENORED (Pty) Ltd: <5 years…. 5-10 years… 11-15 years…..More than 15 years…….

4. Number of years under your department: 1-5 years……..6-10 years……. 11-15 years……More than 15 years

5. What is your department: Technical and Engineering…. Corporate Services…. Finance….Office of the Chief Executive ……

Statement	**Strongly Agree**	**Agree**	**Neutral**	**Disagree**	**Strongly Disagree**
6. Working capital management enhances liquidity and profitability					
7. There is better access to markets when you enhance liquidity in the organisation					

8. Working capital management enhances production.					
9. Working capital management improves profits.					
10. Working capital management enables savings and investments.					
11. Working capital management guarantees business survival and continuity.					
12. Working capital management ensures better performance of the organisation.					
13. Working capital management creates more business and employment opportunities.					
14. Working capital management enhances training and efficiency					
15. Working capital management creates infrastructure					
16. Working capital management is significant to electricity					

distribution sector					

Comments……
……
……
……

Thank you for your cooperation.

APPENDIX 2: CONSENT LETTER

NBS
NAMIBIA BUSINESS SCHOOL
UNIVERSITY OF NAMIBIA

01 December 2016

TO WHOM IT MAY CONCERN

Mr Atanasius N Shaningwa of Student Number: 200241931 is registered for a Master in Business Administration – Finance at the University of Namibia through the Namibia Business School.

This letter serves to inform you that his research proposal was reviewed and successfully met the University of Namibia requirements.

The student has been granted permission to carry out postgraduate studies research. The University of Namibia has approved the research to be carried out by the student for purposes of fulfilling the requirements of the degree being pursued.

If you have any queries please do not hesitate to contact the Business School at the University of Namibia.

Thank you so much in advance and many regards.

Yours sincerely

NAMIBIA BUSINESS SCHOOL NBS 01-12-2016 UNIVERSITY OF NAMIBIA Minds & Shaping the Future

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APPENDIX 3: LANGUAGE & COPY –EDITING CERTIFICATE

Dr.GM

The Rev. Dr. Greenfield Mwakipesile
LID MBA FBS | mwakipg@outlook.com

CONTACT

PO Box 40529,
Ausspannplatz,
Windhoek,
Namibia

LANGUAGE & COPY-EDITING CERTIFICATE

19th January 2019

RE: LANGUAGE, COPYEDITING AND PROOFREADING OF ATANASIUS NGHIPANGELWA SHANINGWA's THESIS FOR THE MASTER OF BUSINESS ADMINISTRATION DEGREE OF THE NAMIBIA BUSINESS SCHOOL OF THE UNIVERSITY OF NAMIBIA

This certificate serves to confirm that I copyedited and proofread **ATANASIUS NGHIPANGELWA SHANINGWA's** Thesis for the **MASTER OF BUSINESS ADMINISTRATION DEGREE** entitled: **SIGNIFICANCE OF WORKING CAPITAL MANAGEMENT IN ENHANCING LIQUIDITY AND PROFITABILITY IN THE ELECTRICITY DISTRIBITION SECTOR IN NAMIBIA: A CASE STUDY OF CENTRAL NORTHERN ELECTRICITY DISTRIBUTION COMPANY (CENORED)**

I declare that I professionally copyedited and proofread the thesis and removed mistakes and errors in spelling, grammar, and punctuation. In some cases, I improved sentence construction without changing the content provided by the student. I also removed some typographical errors from the thesis and formatted the thesis so that it complies with the University of Namibia's guidelines.

I am a trained language and copy editor and have edited many Postgraduate Diploma, Masters' Thesis, Dissertations and Doctoral Dissertations for students studying with universities in Namibia, Zimbabwe, eSwatini, South Africa and abroad. I have also copy-edited company documents for companies in the region and abroad.

Please feel free to contact me should the need arise.

Yours Sincerely,

The Rev. Dr. Greenfield Mwakipesile

greenfield.mwakipesile @mwakipg +264813301701 Dr. Greenfield Mwakipesile