

**Gordon Institute
of Business Science**
University of Pretoria

*“Investigating distress cognition for farm businesses as a precursor to
turnaround in the South-African context”*

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Abstract

The global economic turbulent environment, financial market instability, food security, land appropriation and natural disasters has significantly transformed the agricultural landscape over the past few decades. These negative environmental forces has changed the way in which farmers had to adapt to their approach to managing their farm businesses and change their actions taken in response to these complex challenges posed. Managerial cognition is understood to be an important lever that farmers have that can influence the growth or decline of their operations and should there be a decline in the farm business how they go about turning the decline around. Organizational turnaround is often referred to as a process dedicated to corporate renewal by saving organizations from bankruptcy and turning them into agile and sustainable businesses.

Due to the limited information available on how to effectively manage these risks and to take informative actions while having no control over the external context, farmer's internal management perceptions and awareness are of great importance and can ultimately be the difference between financial success and failure.

Although literature confirms that these factors have significant rippling effect on both farm businesses and agribusinesses, there are very little literature referring to how farmers can transform their actions taken in the agricultural context and drilling even further down to the unique South African context. In order to understand this business phenomena we need to understand how South African farmers perceive these complex contexts and how they respond to them from a managerial cognition perspective and the way this influences turnaround should they become financially distressed.

The study was conducted through an exploratory qualitative approach. Insights into the factors that influence distress cognition were investigated and how this effects organizational decline and turnaround in farm businesses in South Africa. A total of 12 semi-structured interviews were conducted with agricultural experts, financial marketers and farmers who are considered successful in their farming operations. Thematic content analyses was used to analyze the data obtained throughout the interview process.

Key Words

Financial distress, turnaround, managerial cognition, agriculture

Declaration

I declare that this research project is my own work. It is submitted in partial fulfillment of the research requirements for the degree of Master of Business Administration at the Gordon Institute of Business Science, University of Pretoria. It has not been submitted before for any degree or examination in any other University. I further declare that I have obtained the necessary authorization and consent to carry out this research.

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Jan-Hendrik Human

6 November 2017

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Chapter 1: Introduction to the research problem

1.1 Introduction to the context of the research problem

Across various industries, organizations and contexts, the ongoing churn of volatility, uncertainty, complexity and ambiguity (VUCA) and the significance of the issue thereof within the environment has been raised (Bennett & Lemoine, 2014). Introduced by the United States' War College to describe the continued changing landscape in which war was fought during the Cold War, the term VUCA emphasises the turmoil, stress and constant change that causes organisational trauma that leads to a decline in performance (Tran, 2017).

Highlights of a VUCA environment over the past decade include the Global Financial Crisis in 2008 (Crotty, 2009), the oil price crash of late 2014 (Kilian, 2014), steady decline in demand from China (Eichengreen, Park, & Shin, 2012) and more recently the referendum where the United Kingdom decided to exit the European Union are just some of the major events that emphasizes the effect that one country or event can have and cause commodity prices to tumble to a decade low (Inglehart & Norris, 2016).

The South African agricultural landscape has not been left unscarred and is almost unrecognisable from only a few decades ago (Louw et al., 2017). In addition to the challenges created by this environmental instabilities, from an agricultural perspective large surplus producing export nations has been confronted with severe droughts (Kingwell & Xayavong, 2017), outbreak of disease in animals such as Bird Flu (Lakoff, 2017), Mad Cow Disease (S. Lim, Berry, & Lee, 2016) and Foot and Mouth Disease (Delgado et al., 2016) also plants has been affected by pests such as Commando Worms (Louw et al., 2017) and Citrus Black Spot (Grower, 2013) and led to markets being closed down for trade in agricultural produce. This has seen farm businesses and agribusinesses finding themselves stretched as a result of this continuous threats.

Although it is perceived that the agricultural industry only contributes a modest 2.5% to the South African Gross Domestic Product (GDP) it is important to see the contribution in context of the total industry and a definitive distinction needs to be made between farm business and agribusiness (Louw et al., 2017).

These businesses are not necessarily interchangeable although they are linked and forms part of the industry as a whole. The following definition of agribusiness provides a valuable starting point to distinguish between the two enterprises (Davis & Goldberg, 1957). Davis and Goldberg (1957) defines agribusiness as follows:

“...the sum total of all operations involved in the manufacture and distribution of farm supplies; production operations on the farm; and the storage, processing and distribution of farm commodities and the items made from it...”

This definition confirms that these two businesses are different but not mutually exclusive due to the interdependence between agribusinesses and farm businesses. Both are exposed to the same external environment as well as their dependence on each other's performance (Ng & Siebert, 2009). Agribusinesses are involved in all activities in the agricultural supply chain preceding the retail level and the farm business is only involved in the primary production level.

To illustrate the importance of this dependency of these two businesses, farm businesses not only contribute the modest 2.5% to GDP as reported, but in actual fact taking the total agribusiness supply chain including farm businesses into account the compounded contribution is between 15 -18% of the total GDP, giving the agricultural industry a considerable footprint in the contribution to the South African economy (Louw et al., 2017) and plays a pivotal role in job creation, economic development and food sustainability in the country (Stulpinienė & Mazūre, 2013).

Velez-Castrillon and Angert (2015) argues that most companies are likely to face organisational decline at least once in their business life cycle. Continuous trading in a weak global economy increases the probability of such a decline and it is therefore highly relevant that managers are capable of implementing and managing a turnaround process (Trahms, Ndofor, & Sirmon, 2013). Turnaround management stands as a highly relatable concept of strategic management (Velez-Castrillon & Angert, 2015) however the concerns and challenges are unique and distinct from improving performance of a non-declining organization (Trahms et al., 2013).

Organizational decline is influenced by two factors namely internal and external changes (Trahms et al., 2013). External factors include environmental jolts and sudden changes in the competitive landscape (Short, Ketchen, Palmer, & Hult, 2007) and internal factors such as ineffective resource management and operational inefficiencies (Morrow,

Sirmon, Hitt, & Holcomb, 2007) have been identified as just some variables that causes organizational decline.

Turnaround actions are required when organisations suffers from declining performance for an extended period of time and the performance level as declined so much that the survival of the organisation is threatened unless serious actions are taken to improve performance (Panicker, 2011). Panicker (2011) also argues that different organizations adopt different strategies to bring about a successful turnaround and that a special skillset is required to transform the organization for a fresh lease of life.

1.2 Overview of the research problem

Agriculture is a risky industry, particularly in developing countries (Ullah, Shivakoti, Zulfiqar, & Kamran, 2016). Agricultural activities are subject to a wide range of risks due to the variable biophysical and economic environment in which it operates. The impacts are heightened by time due to long lags of the biological process that dictates the production process of all agricultural produce, including crops and livestock (Vercammen et al., 2012).

Given the importance of the agricultural industry and its contribution to economic development and serves as a major source of livelihood for many people within the rural community it is important to understand these risks and uncertainties that influence the industry as a whole but also the influence these risks have on the individual farm business and how farmers mitigate the impacts of these risks on their respective farm businesses. (Ullah et al., 2016). Ullah et al. (2016) further goes on and explain that uncertainty is defined as imperfect knowledge and risks is the exposure to unfavourable economic consequences. Uncertainty has more to do with the probability of a negative situation and risks has more to do with the potential negative impact these risks will have on a farm businesses' welfare.

The South African agricultural industry is currently facing a mixed bag of emotions, while all-time record harvests are achieved within the field crop sector, such as maize and soybeans, the full recovery process from 2015/2016 season drought will take an estimate of three years (BFAP, 2017). This is especially true to the livestock sector where the rebuilding of quality pasture and herd numbers takes time (Ullah et al., 2016).

South Africa is also under pressure from global production figures as the USA and South America has flooded the market with grain and oilseed as a result of higher yields and

increased acreage. This also created an over-supply and caused commodity prices to tumble to a 10 year low, combined with subsidies that farmers outside of South Africa receive and a weaker Rand, South African farmers find it more difficult to compete on a global scale (BFAP, 2017; Louw et al., 2017).

1.3 Significance of the study

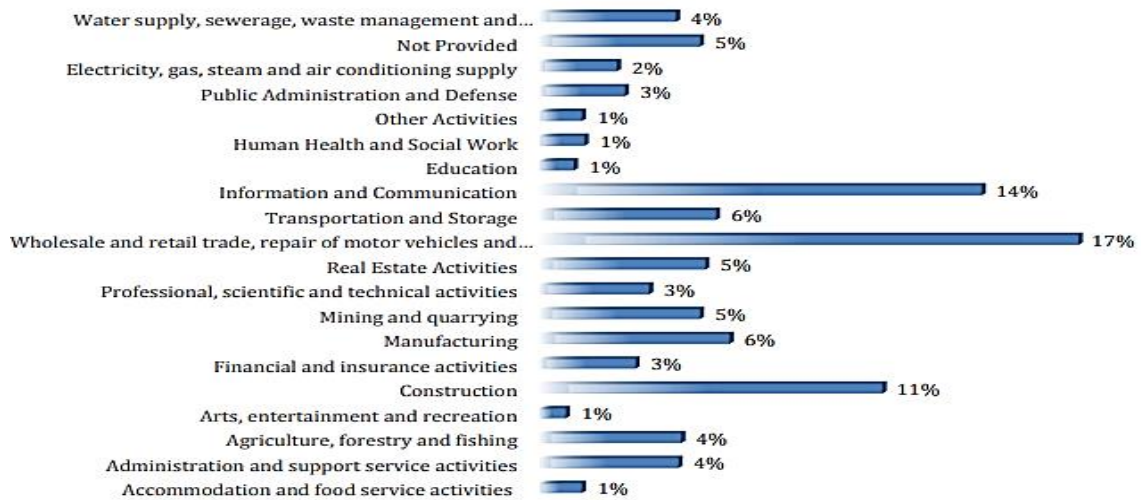
The preceding paragraphs emphasises the importance of the South African agricultural sector and the risks they face that can ultimately land them in financial distress. Just like these preceding studies, significant developments were made in the study of root causes of agricultural decline, bankruptcy and organizational turnaround (Vercammen et al., 2012) within the agriculture environment, however further research on a precursor model that farmers can use to measure Early Warning Signs (EWS) as decline and financial distress are underdeveloped (Stulpinienė & Mazūre, 2013).

Although current literature and evidence of the existence of such a model as well as financial management relating to farming activities are fairly limited, there is a growing interest in this topic as farming is as much a business today as any other.

Since the inauguration of business rescue in South Africa in May 2011, there has been a total of 2 422 cases opened with 1 103 open proceedings still under the business rescue administration, between the 2016 and 2017 financial year 296 new cases has been filed (“Status of Business Rescue Proceedings in South Africa,” 2016).

The below chart gives an overview of the total proceedings opened per industry for business rescue:

Figure 1: Business Proceedings Started per Industry



Source: (CIPC, 2016)

According to the Companies and Intellectual Property Commission (CIPC) (2016), between 2015 and 2016 there was a 400% increase in businesses in the agriculture, forestry and fisheries industry that registered for business rescue (“Status of Business Rescue Proceedings in South Africa”, 2016). This statistics indicates that the agricultural industry feels the effect of current economic challenges as well as pressure from external factors such as economic uncertainty, climate change and political instability.

The estimated total exposure of South African farmers’ debt is around R125 Billion. The exposure of financial stakeholders into the South African agriculture is as follows:

Table 1: Farm Business Exposure across South African lenders:

Institution	Percentage	Amount (Rand-)
Commercial Banks	56%	R70 billion
Land and Agricultural Bank of South Africa (Land bank)	30%	R37,5 billion
Agricultural Cooperatives and Agribusinesses	9%	R11,25 billion
Private Creditors	3%	R3,75 billion
Other	2%	R2,5 billion
TOTAL:	100%	R125 billion

Source: (DAFF Annual Report, 2016)

The purpose of this study is to establish whether farmers acknowledge when they find themselves in financial distress and if they have the cognitive capacity to understand how to turn their farming operations around should they find themselves in financial difficulty. This research study should also enable farmers with a precursor model that they can benchmark their farming operations with industry, so that awareness can be created for farmers facing these devastating effects of economic uncertainty, climate change and political instability.

1.4 Research Motivation

Once in your life you need a doctor, a lawyer, a policeman and a preacher, but every day, three times a day you need a farmer- Brenda Schoepp

Significant developments have been made concerning the research field of organizational- decline, turnaround, managerial cognition and financial distress, however research on how managers and academics actually refer to these concepts presents enormous challenges as most research on the topic relate is underdeveloped (Pretorius, 2009; Trahms, Ndofo, & Sirmon, 2013; Velez-Castrillon & Angert, 2015).

Current literature do point out limited evidence in the area of distress cognition, despite growing interest in the field of study (Heine & Rindfleisch, 2013; Inglehart & Norris, 2016; Lim, Berry, & Lee, 2016; Trahms, Ndofo, & Sirmon, 2013). Pretorius (2009) also indicate a gap in the interpretation of the definitions of these topics and how managers actually perceive these different phenomena's.

It is not uncommon for farm businesses to find themselves in financial distress at this point of their life cycle as various global and economic factors are hard felt throughout the South African economy (Botha, 2016). Botha (2016) also argues that it is estimated that bankruptcy amongst companies will increase by 53% in the second quarter of the year with most of them being agricultural of nature.

This study responds to calls for future research in the field of distress cognition (Pretorius, 2014; Trahms et al., 2013) and explores it through the agricultural industry

which is highly specialized and complex with very little literature guiding the current South African context of farming.

After considering the current challenges faced in the agricultural sector, the study followed an exploratory qualitative approach where propositions are identified. The research objectives must enable farmers to understand, recognise and act accordingly to create a desired financial cognitive awareness and what to consider when analysing their farming activities from a financial perspective. The expected findings will be that farmers neglect their financial monitoring management strategy despite participating in a highly risky and volatile industry and that they do not understand the financial repercussions of actions taken during the planning, operations and decisions that have been made. These expected results will also indicate that farmers that is successful in their operations not only understand the repercussions of certain factors panning out but also are very proactive and agile in their responses to certain factors that may lead to organizational decline or distress Successful farmers will be innovative, diverse and proactive rather than just continuing through the motions that has been passed over from generation to generation.

Chapter 2: Theory and Literature Review

2.1 Introduction

In the preceding chapter an overview and context of the field of study was introduced and background to the research problem was argued and justified. Chapter one also demonstrated the aim of this study and how it contributes to the field of financial distress, managerial cognition and organizational turnaround within the agricultural industry. In this chapter the academic contribution and theoretical basis of this field of study are examined and reviewed.

This chapter introduces theories to understand how distress cognition can act as a precursor on determining organizational decline. The literature review attempts to provide a concise overview of themes and theories relating to the context of financial distress. By incorporating financial distress and managerial cognition to use as a precursor in determining organizational decline. Subsequently the specific context in which this phenomenon's exist must be understood and existing theories concerning managerial cognition and the relevant actions being taken that can lead to organizational decline are discussed and critiqued.

2.2 Organizational decline and turnaround

2.2.1 Organizational Decline

Organizational decline and turnaround dates back to the 1970's where Schendel and Patton (1976) first reported that one third of companies in the SP500 experienced decline (Schendel, Patton, & Riggs, 1976). During 2010 nearly half of the organizations in the SP500 experienced decline of three or more consecutive years (Ndofor, Vanevenhoven, & Barker, 2013).

Various studies (listed in next paragraph) have produced inconsistent findings of the reversal of organizational decline through managerial actions (Ndofor, Vanevenhoven, & Barker, 2013). Pretorius (2009) argues that this is due to researchers using wrong definitions of failure and manipulating the definitions to suit their data. Financial distress has therefore an extensive range of definitions and researchers use these definitions to fit their own study purpose rather than to understand the underlying definition and context in which this failure occur (Pretorius, 2009).

These studies that have been conducted has defined organizational decline in different contexts and through different lenses and is therefore important to differentiate the perceptions the researchers adopted when these findings were reported (Ndofor et al., 2013). Financial failure has been perceived by some studies as organizations filing for bankruptcy (Altman, 1968; Lin, Ansel, & Andreeva, 2017; Ohlson, 1980; Zvarikova, Spuchlakova, & Sopkova, 2017) and others have perceived financial distress as consecutive periods of declining performance and even downscaling or a combination thereof (Agarwal & Taffler, 2008; Balcaen, Manigart, Buyze, & Ooghe, 2012; Beaver, 1966; Maricica & Georgeta, 2012). These different views and non-consensus of this phenomenon has significant limitations to the study of financial distress and turnaround.

This non-consensus leaves significant confusion and different perceptions of financial distress. To clarify this confusion Pretorius (2009) categorized organizational failure into three different universal constructs each underlined by different characteristics that determine what the meaning of each construct is to better understand the perspectives in which each construct should be used. The three constructs identified and defined below by (Pretorius, 2009):

Decline – “... A venture is in decline when its performance worsens (decreasing resource slack) over consecutive periods and its experiences distress in continuing operations. Decline is a natural precursor in the process to failure ...”

Failure – “...A venture fails when it involuntarily becomes unable to attract new debt or equity funding to reverse decline; consequently, it cannot continue to operate under the current ownership and management. Failure is the endpoint at discountenance (bankruptcy) and when it is reached, operations cease and judicial proceedings take effect ...”

Turnaround – “... A venture has been turned around when it has recovered from a (“decline that threatened its existence”) to resume normal operations and achieve performance acceptable to its stakeholders (constituents) through reorientation of positioning, strategy, structure, control systems and power distribution. Return to positive cash flow is associated with achievement of (“normal operations”).

From these definitions the assumptions can be made that a declining firm can be turned around, while a firm that has failed has gone beyond turnaround capabilities. Heine & Rindfleish (2013) refers to this as organizational death and the existence of the

organization ends. Pretorius (2009) argues that although decline and failure are often used interchangeably it is essential to distinguish between them.

Despite all these differences and confusion, it is widely agreed that organizational decline is part of an organizations natural life cycle (Ndofo et al., 2013; Pretorius, 2009; Rockwell, 2016; Trahms, Ndofo, & Sirmon, 2013) and thus managers will at some point in time have to adopt a turnaround strategy. These turnaround actions are associated more with declining organizations and the purpose of these turnaround strategies are to bring sick organizations back to health (Panicker, 2011).

2.2.2 Organizational Turnaround

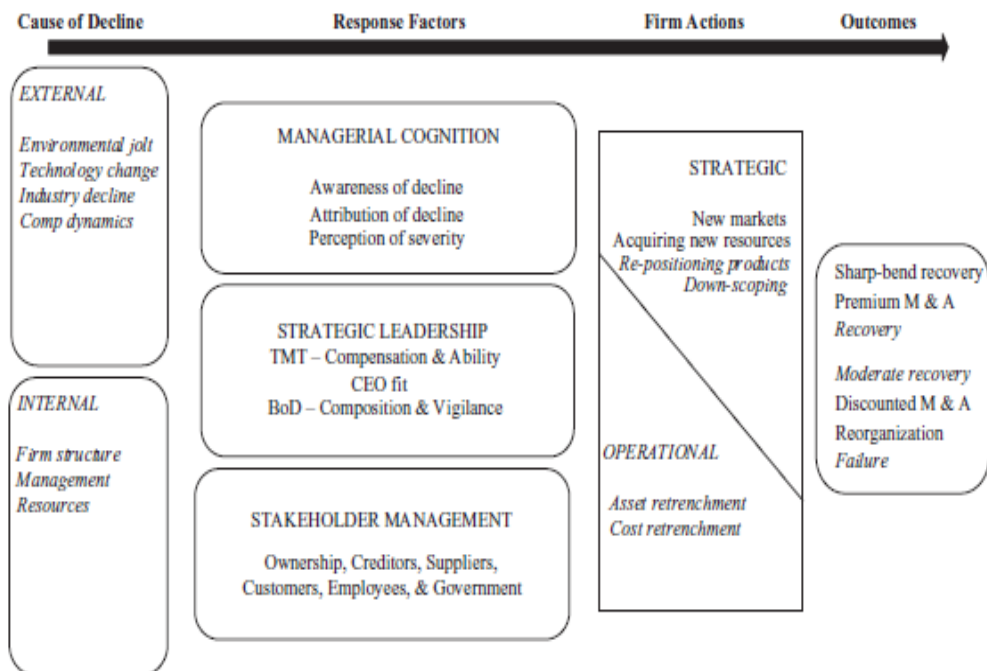
In the study conducted by Trahms et al. (2013) they found that research has expanded dramatically over the past decade, the phenomenon of organizational decline and turnaround remains fragmented both theoretically and empirically. Turnaround is described as the situation where an organization has declining financial performance over an extended time to such an extent that the organizations survival are threatened if serious efforts are not made to improve the financial performance (Panicker, 2011).

Literature describes the aim of turnaround strategies to make organisations sustainable into the future with leadership enabling both the turnaround efforts and the financial sustainability of the organization (Pearce & Robbins, 1993; Pretorius, 2009; Rockwell, 2016; Velez-Castrillon & Angert, 2015). Retrenchment and strategic actions are highlighted and promoted as the key drivers to promote turnaround during this study (Pearce & Robbins, 1993; Trahms et al., 2013; Velez-Castrillon & Angert, 2015). Although the two-staged turnaround model was widely criticized especially for their retrenchments actions, these actions also include cost and asset retrenchment and not only retrenchment and replacement of management (Trahms, Ndofo, & Sirmon, 2013). Panicker (2011) states that business turnaround happens at two levels, firstly bringing a company from the negative financial outlook to breakeven and the second level bringing the company from breakeven to a positive financial outlook.

In a study review of a period of 20 years' research of organisational decline and turnaround found that research has dramatically expanded since the Pearce and Robbins two-staged model was developed in 1993. Although this model was very influential the narrow scope and the determinants of the implementation of the model was criticised and a new model had to be created from a turnaround perspective (Trahms

et al., 2013). During this study an expanded model of the two-staged model was developed.

Figure 2: Extended Model of Organizational Decline and Turnaround



Source: (Trahms et al., 2013)

Figure 2 above represents the extended model proposed by Trahms et al (2013) based on empirical findings of more than 40 articles over a 20 year time frame. Trahms et al. (2013) emphasizes that although the model flows from left to right, the process of organizational turnaround stays in interactive process.

This model identifies the various elements of the turnaround process such as cause of decline, response factors, firm actions and possible outcomes during the process. Special acknowledgement is also made to managerial cognition during the turnaround process and the significant impact that this has on the final outcome of the turnaround process (Trahms, Ndofor, & Sirmon, 2013).

A closer investigation into the model, it becomes very clear that high quality, value added management team whom understands the importance of their decisions and actions is essential. In addition top management as well as CEO “fit” can be an impediment factor to turnaround. Top management and board compensation also have a positive correlation with strategic leadership and are vital in the alignment of these managers’

motivation and dedication (Burbank, 2017; Trahms et al., 2013). Burbank (2017) supports a longstanding generalised argument from Hofer (1980) and argues that top management should be replaced for a turnaround to be successful.

Velez-Castrillon & Angert (2015) agrees with Trahms et al. (2013) that there is two broad types of organizational turnaround that exists for organizations facing decline, whether it is as a result of internal or external factors. There is also a general consensus that that performance measures should at least exceed the risk free rate of return to constitute to a successful recovery (Panicker, 2011; Pretorius, 2009; Rockwell, 2016; Velez-Castrillon & Angert, 2015).

Several analysis needs to be performed prior to performing any turnaround efforts (Velez-Castrillon & Angert, 2015). Hofer (1980) guides management and emphasizes the importance of the first few steps in the turnaround process to follow. The first important step is to establish the firms value as a going concern and must make sure that it is more than its liquidation value. This requires assessing the organizations operating and strategic health (Hofer, 1980). The organizations operational health is based on its financial measures, its market and technological positions, and its production capabilities. (Hofer, 1980; Trahms, Ndofor, & Sirmon, 2013; Velez-Castrillon & Angert, 2015). The organizations strategic health is based on ots position on product/market matrix, its technological and production competencies and its financial capabilities (Hofer, 1980; Panicker, 2011; Velez-Castrillon & Angert, 2015).

In order to terminate this decline, the second step involves identifying and addressing the cause of decline (Hofer, 1980; Pretorius, 2008). Correcting the organizations present troubled course requires developing support among all stakeholders including employees, suppliers, creditors, stabilizing the internal environment and re-evaluating the decision making process on actions to be taken. These actions may require a change in the top management team, as rallying the stakeholders around the new strategies or to transform the dysfunctional culture and process that led to the decline in the first place (Burbank, 2017; Hofer, 1980; Trahms et al., 2013; Velez-Castrillon & Angert, 2015).

Velez-Castrillon and Angert (2015) also supports the argument of strategic and operational turnaround actions required in the turnaround efforts of management to revive a company and developed the following summary with practical examples what can be done in the event of a turnaround. .

Figure 3: Types of Turnaround

TYPE	SUBTYPE	EXAMPLE OF TACTIC
STRATEGIC or ENTREPRENEURIAL Relevant when the firm's operations are not in crisis, but it has lost its strategic position.	Concentration	<ul style="list-style-type: none"> • Increase investment in one or more core SBUs to dominate or improve market share. • Invest in product diversification. • Sell or spin-off non-core SBUs. • Horizontal integration.
	Diversification	<ul style="list-style-type: none"> • Vertical integration. • Acquire unrelated business.
OPERATIONAL Used when a firm has a moderate or strong strategic position but weak operations.	Cost-Cutting	<ul style="list-style-type: none"> • Collect receivables and stretch payables. • Cut inventories. • Decrease waste.
	Revenue-Generating	<ul style="list-style-type: none"> • Focus on the current line of products and/or reintroduce past products through reductions in prices and increases in advertising or direct sales. • Try a variety of revenue-generating actions, including selling products that the firm may not plan to sell again in the future. • Keep R&D expenditures and staffing at moderate to low levels.
	Asset-Reducing	<ul style="list-style-type: none"> • Sell assets that will not be used within the next 1 or 2 years. • Divest assets according to the firm's long-term potential.
	Combination	<ul style="list-style-type: none"> • Pursue a mix of cost-reducing, revenue-generating, and asset-reducing strategies.

Source: (Velez-Castrillon & Angert, 2015)

In 2008 South-Africa was not left unscarred by the devastating effect of the global financial crisis. Some of these challenges faced was currency pressure, lower commodity prices and inconsistent supply of electricity and water as well as market demand constraints and the idea for a new financial architecture was demanded (Crotty, 2009). All these factors directly affected industries across South-Africa including the agricultural industry.

Globally large companies whom have dominated markets for centuries have failed, these companies include Lehman Brothers, Washington Mutual, General Motors and Chrysler (Scheafer, 2011). Agriculture has been one of the industries also hit by the global financial crisis causing robust demand for food and biofuels to decrease, the demand for livestock and feed also weakened the industry further. In more recent times in South-Africa an overall weaker Rand, drought of 2016 and alien rodents such as the recent plague of army worms had a devastating effect on farmers and their production capabilities leading to a general downturn in the industry (Botha, 2016).

2.2.2.1 Business Rescue

Business rescue was first introduced to South-Africa under the Companies Act of 2008, in May 2011. Although there was a decrease in the firms declared bankrupt with subsequent liquidation, there was an increase in the number of organizations applying for business rescue. (Bowman Gilfillan, 2012). Since 2014, 46 proceedings were registered and opened under Agriculture, forestry and fisheries, this amounts to 5% of total cases opened by the end of December 2016. The biggest increase in registrations was during the 2015 to 2016 period with an increase of 400% only in this industry (“Status of Business Rescue Proceedings in South Africa,” 2016).

Business rescue is a formal and legal process (Republic of South Africa, 2008) where a turnaround strategy are only informal efforts to turn the business around. Business rescue appoints a rescue practitioner that aims to facilitate the rehabilitation process of financially distressed companies placing them under supervision with regard to their management, business and asset affairs. During this period an organization is protected from creditors that want to act against the organization until the organizations restructuring and turnaround strategies has been approved, implemented and completed (Republic of South Africa, 2008).

In total 2 422 private companies and closed corporations has applied for business rescue in the past five years (CIPC, 2017). CIPC statistics also indicate that at the end of December 2016, there was still 1 103 cases of business rescue active in South-Africa. When a practitioner is appointed, this practitioner must determine whether there is reasonable prospect for the organization to be rehabilitated, reasonable prospect refers to the chance that an organization can be rescued from their financial distress (Republic of South Africa, 2008).

2.3 Organizational Actions

During a study by Pearce and Robbins (1993) a review of nine articles where analysed to develop a two-stage response model for organizations implementing a turnaround strategy during decline. This model emphasised the importance of retrenchment (including both costs and assets) as the one stage and implementing strategic actions to enhance the turnaround, this includes improvement of operational efficiencies, investment into new product, services and markets. These are all referred to as actions taken in the turnaround process (Pearce & Robbins, 1993; Trahms et al., 2013).

During this study it is suggested that when there's an operational cause of decline, the adjustment should be operational and vice versa with strategic causes of decline (Pearce & Robbins, 1993), the study also furthers advocates that retrenchment actions are essential to turnaround, when the savings from cost retrenchment does not meet the organizations short term obligations, the organization will be obligated to commence with asset retrenchment to achieve turnaround, however the combination of both actions result in the greatest turnaround performance (Pearce & Robbins, 1993).

Despite the significant influence of the two-staged model, retrenchment actions used synonymously used with operational actions was widely criticized for its narrow scope deterministic nature (D'aveni, 1989; S. Lim, Berry, & Lee, 2016). Both these critiques alluded to complexities and challenges of synchronizing resource-based actions during turnaround. Due to these critics the role of governance of top management structures as well as the contingencies of both actions has to be included (D'aveni, 1989; Trahms, Ndofor, & Sirmon, 2013).

Trahms et al. (2013) formulated an extended model of the two-staged model as described in figure 1. This extended model also agrees that before turning an organization around, both strategic and operational actions needs to be implemented in order to reverse organizational decline. Velez-Castrillion and Angert (2015) also supports the argument of strategic and operational actions that can be implemented in a later study where they analysed the fall of Sony Corporation and the subsequent revival in a post-mortem study evaluating key assumptions and learnings during the turnaround efforts made to revive the organization.

2.3.1 Strategic Actions

Strategic actions are argued "*the true driver of long term performance gains after a decline*" (Trahms et al., 2013) although the limiting factor of strategic action is referred to as organizational slack (Balcaen, Manigart, Buyze, & Ooghe, 2012; Schmitt & Raisch, 2013; Trahms, Ndofor, & Sirmon, 2013). Organizational slack is defined as "*the cushion of actual or potential resources which allows an organization to adapt successfully to internal pressures for adjustment or to external pressures for change in policy, as well as to initiate changes in strategy with regard to the external environment*" (Bourgeois, 1981; Marlin & Geiger, 2015).

Declining organizations that ultimately file for bankruptcy due to financial performance are likely to behave differently than successful organizations within the same industry (Guha, 2016). It is also common sense that an organization filing for bankruptcy during declining conditions behave differently than successful organizations and that they respond differently or inappropriately (Bourgeois, 1981; Guha, 2016; Marlin & Geiger, 2015; Trahms et al., 2013; Velez-Castrillon & Angert, 2015).

Literature research also identifies three different types of slack that clarifies the potential reasons why organizations enter bankruptcy although their peers are surviving.

- **Available Slack** – Available slack identifies the amount of resources that are unutilized and readily available to the organization. Typically measured as liquidity and in the form of ratios such as current and quick ratios. Marlin & Geiger (2015) argues that available slack is internal of nature and allows managers the ability to take many actions and experiment with initiatives while a safety net exists (Bourgeois, 1981; Francis & Desai, 2005; Marlin & Geiger, 2015; Smith & Graves, 2005). Available slack should have a positive impact on organizations and provide managers with different options when actions are required.
- **Recoverable slack** – Generally used dividing selling and general administrative expenses divided by sales. This measure identifies the amount of excess costs embedded within an organizations that potentially be reduced and recovered during financially difficult times (Marlin & Geiger, 2015). Although recoverable slack is different from available slack, this is also a form of internal slack and the same logic applies for example more employees are employed than really needed.
- **Potential slack** – Potential slack has lastly been operationalized leverage variables such as a firm's debt to equity ratio. This slack is external of nature and represents the ability to secure capital from outside the organization such as debt financing. Marlin & Geiger (2015) and Bourgeois (1981) argues that this encourages innovation due to the risks of experimenting are buffered when outside resources are accessed and positive relationships exist between potential slack and innovation (Bourgeois, 1981; Francis & Desai, 2005; Marlin & Geiger, 2015; Smith & Graves, 2005). However, unlike the nature of internal slack

this component has the ability to be misused and may be used to acquire resources that will be unutilized by the organization.

Guha (2016) argues through empirical findings that levels of available slack are lower in declining organizations than in successful organizations; further Guha finds that recoverable slack in both declining and successful organizations do not differ. The findings on potential slack is especially relevant in the context of the agricultural process as the ability to raise funding post decline is seen as fundamental to the success of the turnaround.

2.3.2 Operational Actions

Corporate turnarounds are dynamic processes comprising of a sequence of actions that leads organizations from decline to a period of sustained success and away from failure (Pretorius, 2009; Schmitt & Raisch, 2013; Trahms et al., 2013). Although Pretorius (2009) clarifies the concept of turnarounds, the common idea of organizations engaging in retrenchment and recovery actions during the turnaround process are shared (Pearce & Robbins, 1993; Pretorius, 2009; Schmitt & Raisch, 2013; Trahms et al., 2013; Velez-Castrillon & Angert, 2015).

Retrenchment actions has been defined as deliberately eliminating assets or costs as a means to increase an organizations efficiency and financial wealth (Lim, Nikhil, Morse, & Rowe, 2013). Distinguished by asset retrenchment (Morrow, Sirmon, Hitt, & Holcomb, 2007; Trahms et al., 2013) including closing plants, divesting equity such as sell-offs, spin-offs and carve outs as well as reducing property, plant and equipment and inventory. Cost retrenchment on the other hand include down scoping whereby operational costs are reduced through layoffs and process improvements such as general and administrative expenses (Schmitt & Raisch, 2013). These expenses include R&D costs, currency adjustments, commissions, salaries, insurance plans, leases and all other indirect costs. Retrenchment and recovery used to be described as contradictory and pursuing these actions simultaneously were highly discouraged (Hofer, 1980; Pearce & Robbins, 1993; Schendel, Patton, & Riggs, 1976). More recent turnaround models indicate that pursuing them concurrently, depending on the cause of decline always include both actions (Schmitt & Raisch, 2013).

Initially described by Robbins and Pearce (1992), the sequential perspective has two clear stages: “The retrenchment phase was considered to extend from the start of the turnaround phase and until asset and cost retrenchment were ceased” and whereas the “recovery phase was considered to extend from the retrenchment of assets and costs”. These retrenchment actions creates perhaps only short term performance outcomes although it can create momentum and confidence required for successful turnaround (Schmitt & Raisch, 2013).

The declining organizations stakeholders need to see increased performance and continues profits in order to continue supporting the turnaround actions and recovery strategies employed by management (Lim, Nikhil, Morse, & Rowe, 2013; Morrow, Sirmon, Hitt, & Holcomb, 2007). Organizational tension arise from competing structures and processes where retrenchment and recovery compete to achieve different outcomes for different stakeholders throughout the turnaround process (Lim, Nikhil, Morse, & Rowe, 2013; Schmitt & Raisch, 2013).

2.4 Distress Cognition

2.4.1 Financial Distress

Financial distress has been researched extensively over the past decades (Altman, 1968; Beaver, 1966; Ohlson, 1980) as well as in more recent times (Balcaen & Ooghe, 2006; Grice & Ingram, 2001; Hotchkiss, Carroll, College, & Smith, 2014; Stulpiniené & Mazūre, 2013).

Beaver (1966) and Altman (1968) are two of the most widely referenced and earliest academics to develop studies in financial distress, bankruptcy, liquidation and insolvency and argue that financial distress implies that the organization faces bankruptcy, defaulting on scheduled debt payments and missing preferred dividend payments to shareholders as the first major red flag for a company facing financial distress. These pioneers tried to predict bankruptcy through accounting turnaround frameworks that include cash flows and liquidity of assets using financial ratios as the base of their study. Beaver (1966) concluded that the most accurate predictor was the cash flow to debt ratio, scoring a 78% accuracy over five years before bankruptcy. Sun et al. (2014) agrees that financial distress is not necessarily a company facing bankruptcy but rather the inability to pay debts and corresponding creditors as well as preferred dividends.

Financial distress is clearly defined in Chapter 6 of the Companies Act and identifies two criteria's of Financial Distress. Organizations that are unable to pay debts and those heading to insolvency are classified as financially distressed, the Act also adds an important timeframe of six months to the definition (Republic of South Africa, 2008). Section 128 (f) under Chapter 6 in the Companies Act defines financial distress as follow:

- (I) "It appears to be reasonably unlikely that the company will be able to pay all of its debts as they fall due and payable within the immediately ensuing six months; or
- (II) It appears to be reasonably likely that the company will become insolvent within the immediate ensuing six months."

An organization that finds themselves in financial distress according to the definitions above, may file for business rescue under the same Chapter 6 under section 129 (7) (Republic of South Africa, 2008). If the company fall outside of the reasonable prospect of business rescue the organization will fail.

As mentioned in section 2.2.1 most studies use different metrics to measure financial distress. Organizations filing for bankruptcy or liquidation are most commonly used, filing for such frameworks including business recue and classified as a legal process affecting financiers and creditors attempting recovery of outstanding debt (Muller, Steyn-Bruwer, & Hamman, 2009). This legislation is designed to keep companies as going concerns, this is also international practise in the United States (Muller et al., 2009).

This will give companies a life-line when an organizations historically healthy financial positions gets eradicated due to external factors such as "act of God" (Balcaen, Manigart, Buyze, & Ooghe, 2012). These phenomenon's are quite common in the agricultural sector. Financial positions and health can be viewed on a continuum and not a dichotomous dataset, which in many studies fails to acknowledge and incorporate the multi-dimensions of the reality of financial distress (Balcaen et al., 2012; Cybinski, 2001).

Pearce and Robbins' (1993) two-stage model states that companies facing financial decline is either because of internal or external factors. General environmental jolts, technology change, industry decline and competitive dynamics (external) or as a result of firm structures, management and resource allocations (internal) factors (Trahms et al., 2013).

Managerial cognition refers to the way managers perceive declining factors and their bias to indicators leading to organizational decline (Trahms et al., 2013). Trahms et al. (2013) also indicates the three elements of managerial cognition that influence turnaround actions: awareness of decline, attribution of decline and lastly the severity of the decline.

2.4.2 Managerial Cognition

The rapidly changing organizational landscape from certainty and uncertainty have prompted more focus on cognitive styles and intuitive actions (Rockwell, 2016). Trahms et al. (2013) introduces these styles as managerial cognition and describes the perception and interpretations of managers towards organizational decline. Trahms et al (2013) argue that managerial cognition together with strategic leadership and stakeholders management forms part of the response factors to organizational decline (Panicker, Sunitha; Manimala, 2015; Trahms, Ndofor, & Sirmon, 2013). Turnaround success is improved when management recognize problems early on and then take immediate action (Panicker, Sunitha; Manimala, 2015).

Uncertainty in organizations is seen to arise from triggers of constant change and these triggers contain various factors from consideration of markets, technology, people, costs, schedules, and information (Rockwell, 2016). Many managers find themselves in an environment where decisions and actions are required, these decisions require management's attitude towards the decline and may include certain biases towards the decline (Vercammen et al., 2012).

Managerial cognition is argued by Trahms et al. (2013) the first step in the turnaround process and has a significant effect of the subsequent turnaround. Building on the two-staged model by Pearce and Robbins (1992) managerial cognition has three cognitive factors that have an effect towards organizational turnaround. The three factors of managerial cognition as identified by Trahms et al. (2013):

- **Awareness of Decline** – This refers to the manager's formal recognition that the organization is in decline. The timing of the awareness of the decline is central to triggering actions and so doing initiating the decline (Pretorius, 2014; Trahms, Ndofor, & Sirmon, 2013). Although such awareness is not always rapid and reduces the chances of successful turnaround (Balcaen, Manigart, Buyze, & Ooghe, 2012; Guha, 2016).

- **Attribution of decline** – Attribution refers to the casual factors management identifies as responsible for the decline. Managers from declining organizations are often blamed and used as scapegoats for the decline (Trahms et al., 2013), they also blame shift again the problem elsewhere. Lim et al. (2015) argues that managers with less experience will more likely contribute to decline.
- **Severity of decline** – An accurate perception of the severity of the decline is essential in assessing restricting and turnaround performance measurements (Barker, 2016). Barker (2016) also argues that managerial characteristics influences these perceptions and argues that executive age, experience, control and background increase the perception of decline severity and increases the extent of retrenchment (Vercammen et al., 2012).

Although literature illustrates the importance of managerial cognition on turnaround, theory is still widely scattered to which extend factors such as retrenchment and resource orchestration interplays with each other and what the effect of these factors influence perceptions towards decline and turnaround behaviour (Barker, 2016; Vercammen et al., 2012).

2.5 Agriculture in South-Africa

Sagar (2012) states that the agricultural industry are the primary source of livelihood and a significant contributor to the GDP of most developing countries around the world, including the many rural areas within the African continent. Although agriculture contributes only 2.5% to the total GDP of South-Africa (DAFF Annual Report, 2016) it still remains a crucial industry for job creation, economic development and food security within South-Africa.

Sagar (2012) also argues that agriculture remains vulnerable to various risks that spread widely over time impacting a farmer's ability to produce crops sustainably with the farmer ultimately facing decline. Climate change (heavy rainfall, drought, wind and hail), biological risks (diseases, rodents), natural disasters (earthquakes, volcano's and cyclones), market based (price volatility, imports, exports and quality standards) and man-made (labor, financial crisis and human error) are described as the biggest risks in the agricultural sector (Meena, Gogoi, & Kumar, 2016)

Financial distress normally starts with default payments on debt due dates and there after the delaying payment to other creditors (Stulpinienė & Mazūre, 2013). This distress

is normally due to economic circumstances and/or bad farm management (Sagar, 2012) and can be linked to the internal and external factors that lead to organizational decline as described in the study of 2013 (Trahms et al., 2013).

Agricultural farms are mostly family owned (Lowder, Skoet, & Singh, 2014), and this brings new dynamics forward such as embeddedness of relationships not only in the organizational environment but also in the family context (Cater & Schwab, 2008). Family firms also display a high rate of failure and therefore a deeper understanding of these firms and turnaround within these dynamics are important (Cater & Schwab, 2008).

2.5.1 Dimensions of farm businesses in South-Africa

Louw (2017) argues that there are four distinct dimensions of farm businesses that can be identified in South Africa.

- **Field Crops** – Field crops are seen as South Africa’s most important contributor to the agricultural industry as it occupies about 60% of the total cultivated land in the country. Some of the most prominent crops produced is maize, soybeans, sunflower, barley, sorghum and beans.
- **Horticulture** – Horticulture is part of garden farming that deals with crops such as fruits, nuts, vegetables, culinary herbs and spices, beverage crops and medicinal as well as ornament plants.
- **Livestock Farming** – Livestock are domesticated animals raised in an agricultural environment that produce commodities such as meat, milk, leather and wool.
- **Game Farming** – Game farming has dramatically increased over the past decade and saw huge financial investment into the sector over the past few years, although collapsing to an extent, the industry is designed to privatize and domesticate wild animals to own and raise them for profit from selling them as a whole or for meat.

2.5.2 Key disruptors and drivers in agricultural management

In chapter one reference has been made towards the agricultural industry being unrecognizable from only a few decades ago, the technological and communications advancements which rendered the agricultural operating environment can only be seen as fantasies of just half a century ago.

Louw et al. (2017) has identified trends and developments likely to drive the agricultural industry in the coming years and enable farm and agribusinesses to align their strategies to position themselves for these drivers and disruptors that might have a profound influence of the operating environment. Taken into consideration South Africa's strategic position within the broader African food supply context, these drivers has been developed (Louw et al., 2017).

2.5.2.1 Driver 1: Increased demand for food and fibre to satisfy a wealthier and growing population

World population is rapidly growing and it is projected that is 2050 the world population will be around 10 billion with the vast majority growth comes from developing countries with Africa being the fastest growing at 2.55% growth per annum (Lutz et al., 2015). Lutz et al. (2015) argues that the wealth gap between rich and poor will continue to widen, there will be an increase in the middle class individuals that is neither rich nor poor but will have increased access and information to products and food.

These trends taken together, increase demand for food, therefor more sophisticated supply chain networks and improved infrastructure are required with countries with limited resources to produce food will have increased imports to sustain their population (Louw et al., 2017).

2.5.2.2 Driver 2: Consumer driven sustainability for a growing middle class

The availability of information has led to growing awareness amongst consumers that are applied in the agricultural produce of the modern market arena. This growth of both consumer awareness and the middle class has resulted in a shift in consumer behaviour towards more sustainable products and ethical produce manners (Lakoff, 2017; Stulpinienė & Mazūre, 2013).

2.5.2.3 Driver 3: Population demographics

The world population is mainly characterized by two traits, firstly life expectancy of societies have increased due to the advances in medicine and improved nutrition and secondly by declining fertility rates. Although developing countries and especially Africa shows the opposite many woman joined the labour force as just one of many factors influencing this phenomenon (Lutz et al., 2015).

This issue is important to consider due to the significant growing working age demographic which has the potential to drive consumption demand led economic growth. Countries like Taiwan and South Korea are examples of such countries while Africa struggle to create jobs for its youth as they have the highest unemployment rate in the world (Louw et al., 2017).

2.5.2.4 Driver 4: The corporatisation and industrialisation of the farm business

The traditional organizational structure of farm businesses has and is continuing to change. Family firms that was the norm in recent decades are less prevalent and transformed into larger consolidated operations. Louw (2017) describes these operations as factories in the sense that all processes on the farm are planned, monitored and managed on a large scale. These organizations are able to live of low margins due to the size of their output and efficiency of their operations.

2.5.2.5 Driver 5: Transformation in the agri-food business system and the emergence of value chain networks

The growth in the middle class population characterized by relatively higher disposable income and access to information has led the move away from traditional commodities towards differentiated products. The emergence of a new type of customer with new trends such as healthier foods, food quality and the natural environment (Lutz et al., 2015).

Value chains in agriculture ensures that farm produce are transported to the place needed at the lowest cost and quickest time. Vertical integration is one of the systems developed by operational organizations to coordinate actions and adds a certain value to the product. In future these vertical integration operations will become more common

in future through mergers and acquisitions of participants in this value chain (Louw et al., 2017).

2.5.2.6 Driver 6: Technological and bio-technological advancements

Technological advancements in the past few decades has transformed the agricultural landscape and its development significantly. Precise farming methods combined with larger and more efficient mechanical equipment such as tractors, planters and harvesters made cultivating more economically viable at a fraction of the time and costs on larger geographical farming areas (Louw et al., 2017).

Genetic editing and biotechnology enables farmers also to plant seeds that can resist harsher and extreme weather conditions such as drought and produce higher yields in areas where unreliable rainfall exists and water is a scarce resource.

2.5.2.7 Driver 7: A world of climatic extremes

Despite different views on climate change the fact that the global climate has become more extreme and volatile than any point in recorded history, it is sensible that recent experiences have shown trends over time that can be predicted (Kingwell & Xayavong, 2017). The past decade has recorded the ten warmest years since the recording started 20 years ago and will result in more frequent weather extremes and farm businesses will have to plan and innovate their approaches to farming with this continuous trend of uncertain weather conditions that will result in heightened food security (Sagar, 2012).

2.5.2.8 Driver 8: African agricultural development

Africa's context are defined by two characteristics, firstly Africa has the largest extent of unused high-potential cultivatable land in the world, and secondly Africa has the highest projected population growth rate with a population growth of more than two billion people by 2050 (Lutz et al., 2015). It is clear that population growth will only be sustained by an increase in food production across the globe and not only in Africa. Although technology in the production of food has increased the potential significantly, there is an upper limit of what can be produced given various factors that influence the production cycle.

African agriculture will have to enter a new phase of development to realise the gains in production required to feed its growing population. This will not happen overnight and

will take investment from various stakeholders such as private sector, government, agribusinesses and politicians (Louw et al., 2017)

2.5.2.9 Driver 9: The growth in the bio-energy sector

Fossil fuels is one product of the world trends moving towards green energy, the source converts agricultural produce such as grains and sugarcane into ethanol and other combustible liquids (Kilian, 2014). Although criticized as only having a limited time frame as energy resources are developed and the failure to launch these biofuels successfully this has been the result of the global financial crisis as well as the damper this puts on an already vulnerable food security prospect and destabilized food prices (Louw et al., 2017; Lutz et al., 2015).

Chapter 3: Research Questions and Hypothesis

3.1 Introduction

The literature study has confirmed that managerial cognition is the first step in the turnaround process and illustrates how managers perceives and interprets financial decline and its cause (Panicker, Sunitha; Manimala, 2015). Managerial cognition therefor is a useful variable to measure financial distress. Literature also illustrate the relationships between financial measurement and financial performance where key financial analytic tools such as ratio's can also act as a precursor to help identify distress and an overall healthy financial position (Altman, 1968; Beaver, 1966; Maricica & Georgeta, 2012; Ohlson, 1980).

Literature also urges the development of new theory and models as well as the absence of literature in the agricultural industry and South-Africa indicate that more investigation needs to be done. Turnaround frameworks such as business rescue that is still a relatively new concept in South-Africa and the lack of other turnaround models are also an indicator that much work still needs to be done in this business dimension.

3.2 Research Propositions

The data gathering process followed a qualitative design. Due to investigative nature of this design and the use of inductive methods to develop theory to reach a final conclusion and answer the research questions and identify key constructs from this study. The following research propositions were identified to reach final conclusions.

3.2.1 Research Proposition 1: Farmers monitor both internal and external factors leading to organisational decline equally well.

This research proposition objective was to identify whether farmers monitor the internal factors causing financial distress the same way that they monitor the external factors such as weather patterns, economical environment etc.

3.2.2 Research Proposition 2: Farmers' emotional bias distorts managerial cognition and leads to financial distress.

This research proposition objective was to identify whether a farmer is biased due to his sentimental value that he has towards being a farmer and the farm itself. It is assumed that farming is more a lifestyle than a career.

3.2.3 Research Proposition 3: Farmers understand the value drivers towards their farm businesses and the repercussions of their actions taken.

This research proposition objective was to identify whether farmers truly understand their business operations aspects in the context of which their farm businesses operate and the repercussions of their actions taken or do they only take actions due to the conventional way they were taught though previous generations.

Chapter 4: Research Methodology and Design

4.1 Introduction

In this chapter the concepts that shaped the previous chapters from an academic designed framework was measured against individual interpretations, perceptions, views and beliefs formed through knowledge and experience achieved through reality and practise obtained in the agricultural industry to achieve the research objectives of this study.

The aim of this chapter is to contribute to (Panicker, 2011; Pretorius, 2014; Trahms, Ndofor, & Sirmon, 2013) encouragement to build on research of managerial cognition and to illustrate the effect it has to a farmer's perceptions of financial distress, insights to the background for selecting the relevant research design, methods, and data gathering process as well as the process of the empirical data analyses will be explained and rationalized.

4.2 Choice of Methodology

The research that has been done in this study was out of a pragmatic stance, using a qualitative research design, the views and arguments used for justifying only a single method of research was due to its exploratory nature as the agricultural industry is not widely researched in the turnaround literature and even more so the South African context as it has many unique attributes compared to other countries.

Creswell (2014) also argues that it is not uncommon practise as each individual research design approach has its own limitation. The study was done as a qualitative study and therefore took an inductive approach where the researcher had 10 semi-structured interviews to develop theoretical and practical constructs and collect views, opinions and positions regarding financial distress from experts that is highly involved in the agricultural industry with in depth knowledge and experience.

In the study approach the researcher tried to understand the way farm businesses monitor the context in which they do business, to investigate any biases they may have and also to get a deeper insight into how these farmers perceive and understand the context in which they farm every day. A qualitative approach was also more flexible to

different types of farming structures and compilations where farmers may farm dryland versus a farmer that farms under irrigation and farmers that farms crops versus a farmer that farms livestock or game.

From existing literature a descriptive study was conducted and for this the researcher did not want to describe financial situations or in what environment the agriculture currently operates only. Saunders and Lewis (2012) argues that an exploratory study should dig deeper and look for explanations on what farmers cognitive perceptions and attitudes are towards organizational decline, financial distress, turnarounds and the overall state of the economic environment in which they operate. This study adopted a more descriptive approach from the literature and moved more towards an exploratory approach during the data collection phase. To better understand how financial distress, bankruptcy, turnaround and managerial cognition is perceived by the participants of this study.

The strategy that was used, enabled the researcher to answer the research questions and help obtain research objectives (Saunders & Lewis, 2012). Ground theory was developed through semi-structured interviews to establish themes and subthemes during the data gathering process.

Therefore a qualitative study provided an in-depth insight into the research phenomenon (Saunders & Lewis, 2012). The exploratory design was used to provide the researcher with an opportunity to conduct in-depth interviews in search of answers and explanations where clarity was sought on a topic. The research questions were designed such that an exploratory method was appropriate and relevant in answering the research questions (Saunders & Lewis, 2012).

Due to time constraints experienced by the researcher to complete the study, data was collected through a cross-sectional design. Data was collected from various groups of experts that formed part of the credit committee, financial marketers as well as non-distressed farmers. This study will be limited to organizational decline, financial distress, bankruptcy, business turnaround and managerial cognition.

4.3 Scope of the Research

The scope of the research was limited to one of South Africa's largest irrigation cooperatives and a registered Financial Service Provider (FSP) with a debtor's book

exceeding the R3 billion exposure mark made up of more than 2 000 accounts and 700 farmers.

For the purpose of the study focus on farmers with carry over and arrear accounts were focused on. The research study included farmers with production facilities, term loans and hire purchases. Light was shed on farmer's accounts that was identified as distressed and whom are unlikely to pay their accounts within the next six months.

Selection of this organisation was based on the convenience and access the organizations database of farmers who received credit and to stay in line with literature and the topic of South-African based farmers that has exposed credit facilities. This organisation is also a major stakeholder and are exposed to major risks should a farmer experience financial distress and play a key role should turnaround actions be demanded. The organization benefit from this study to identify early warning signs into the managerial cognition constructs identified in this study.

4.4 Research Methodology and Design

4.4.1 Population

According to the Companies Act of 2008 (2011) financially distressed companies are clearly outlined as a company that has a reasonable chance to have a shortfall in paying their debts within six months or companies that may find it difficult to make their debt payments and find themselves in an insolvent position within the next six months.

Although the identified cooperative has a book of more than R3 billion exposure the carry over debt and arrears accounts is standing at R269 million. This accounts to 8.99% and is above the 5% industry norm. This should still be seen in the context of the VUCA macro environment that these farmers operate in and was exposed the last two years to severe drought, diminished commodity prices, high inflation rates, a volatile exchange rate and various other natural threats such as commando worm and bird flu only to mention a few.

In this study of distress cognition the population and sampling frame was focused on farmers with arrear accounts and carry over debt and found themselves in a decline phase or in an already financial difficult position.

Further filtering through the population of this study farmers that are key decision makers or "jockeys" who on a daily basis has to make decisions on actions that needs to be

taken on both operational and strategic departments. For this reason only commercial farmers with no additional income stream was considered and all other businesses with exposure to agriculture was excluded. The management level was limited to self-owned farm businesses and entity structures were not limited.

4.4.2 Unit of Analysis

The sample unit for the interviews were selected to gain in depth knowledge into the key financial decision makers in the agricultural environment from a financial perspective. It was therefor decided that a representative sample be identified and represented in the unit of analysis. Three sample groups where identified to represent a fair sample and maximum coverage of the perceptions of each group, four representatives were identified from each category.

The three categories identified for the interviews was as follow:

Table 2: Unit of Analysis Categories

Group	General Qualifications	Experience	Reason for selection
Expert	Bachelor's Degree and higher. NQF 7-8	More than 10 years	The expert group has been identified as senior members from the credit committee and has more than 10 years' experience. They also have major influence on credit applications being approved and the management of riskier accounts.
Financial Marketer	Matric with a few post certificates. NQF 6-7	More than 3 years	The financial marketer group is individuals working on ground level with

					farmers and is the contact person between the farmer and the credit committee. Their job is to manage both accounts and the relationship between the farmers.
Successful Farmers	No	Qualifications	More than 15	years	This group are the farmers themselves, who are considered successful in their operations and have a healthy financial position. They are also perceived as those farmers running their farming operations as a business.

Source: Authors Own

Certain control measures could have been included to accurately compare farms with each other. These measures could include that farmers with the same diversifications, size of farms, geographical segmentation and turnover could have been included accurately compare data segments with each other. This was not the objective in the study but rather than to gain knowledge on how financial distress are perceived and managed.

4.4.3 Sampling Method and Size

This study will be covered over 10 semi structured interviews and a qualitative approach was adopted. A purposive non-probability sampling method was used and semi-structured interviews was held as part of the qualitative research design. The sample

size of the interviews will be held with a combination of people across three categories and consist of members from the credit committee, financial and field marketers as well as farmers.

The semi structured interviews formed part of non-probable sample and was identified and chosen solely on the researcher's judgement. Four interviews was held with experts of the credit committee, four interviews with financial marketers and four interviews with farmers that has been identified out of the non-financially stressed category. This gave the researcher a more direct approach and the benefit of face-to-face interactions to clarify any information that was not clearly answered in the questions (Saunders & Lewis, 2012).

The objective of these interviews was to allow the researcher to gather expert knowledge, ways of thinking and tap into experience from different experts in the field of financial economics and agriculture as well as explore major current trends and constructs that represents the cognitive behaviour of clients facing financial difficulty. In this interviews, variances and factors that contributed to their perception of financial distress as well as turnaround action plans was accessed.

The sample size of 10 interviews was deemed sufficient for the purpose of this study and for the qualitative phase of the project. The sample size of the interviews proved sufficient to reach saturation and all constructs was identified without new constructs added after the last interview. Saunders and Lewis (2012) describes this phenomenon as data saturation.

Saunders and Lewis (2012) also states that purposive sampling is the most common and frequently used type of non-probability sampling as this suggests as it was unclear to the researcher what the probability of each member of the population had of being selected.

4.4.4 Measurement Instrument

One measurement instruments where used during the research. Semi structured face to face interviews were held with the 10 participants for the qualitative research method. This measurement instrument are most commonly used when qualitative research are conducted (Saunders & Lewis, 2012; Saunders, Lewis, & Thornhill, 2008).

The purpose of the semi-structured interviews was held first to develop consistencies and perceptions and to clarify any misunderstandings the researcher may have had towards distress cognition and turnaround in farm businesses. This instrument tested individual's perceptions and thoughts that they have gained from experience inside the industry.

The structure of these interviews were designed to gain insights into the proposed research propositions. The interview questions were divided into two sections. The first section focused on more demographic aspects of the participant, this was also used to put the participant at ease when it came to the next phase of the interviews. The second section of the interviews focussed on the research propositions identified in Chapter 3. Nominal data was collected and grouped into categories or data sets that have no specific order (Saunders & Lewis, 2012).

The interview guideline was designed to allow easy engagement and opened dialogue while keeping participants open to easily answer the questions posed to them (Saunders et al., 2008). Related concepts and constructs were only explained and forward if it was required during the interview.

The measurement instruments were pilot tested with colleagues from work as well as other people from different departments to ensure that the instruments were easy to understand and answer. The researcher also gained confidence in the process of data collection and to get to know the content of the measurement instrument better.

4.5 Data Gathering and analysis

The data gathering process commenced once ethical clearance as presented in appendix 6 were obtained. Interviews were conducted in person with all the respondents at head office of the identified FSP. All interviews were recorded with the consent of the participants and transcribed after the interviews were held. The estimated interview duration was 30 minutes each. The skills and techniques of the researcher has direct impacts on the quality and the research results (Vaismoradi, Turunen, & Bondas, 2013). The researcher was very mindful of this skill to conduct interviews and approached the interviews cautiously while adopting careful listening and consideration of responses to questions.

The researcher adopted certain standard procedures during the interviews which included the following:

- Participants were thanked for their willingness to participate at the start of the interview. Confidentiality of data and voluntary participation was explained and the required consent signed. An overview of the concepts and research objectives of the study were explained.
- Interviews were recorded using the researcher's iPhone and permission to record were requested prior to the start of the interview. Notes were also taken during each interview to note down key constructs and possible responses to answers.
- After the interview was concluded the participant was thanked once again for their time and willingness to participate in the study. Each participant was also thanked with an email within one week after the interview.
- Each interview and notes were noted into electronic format and transcribed.

The qualitative data can be grouped into text and non-text data components (Saunders & Lewis, 2012). The data gathered from the interview process can include both audio recordings as well as the researcher's notes for the analyses purpose of the data. This non-text data of the audio recordings was stored electronically by the researcher.

Braun and Clarke (2006) suggests that an accessible and theoretical but yet flexible approach should be considered when analysing qualitative data. This approach argues that thematic or patterned analyses of the methodology should be considered and identifies a six step guideline to assist in the process of the analyses during qualitative research. This analyses method are widely used and provides a clear guideline to the researcher that wants to analyse his data gathered. The below table identifies these steps and analyses approach (Braun & Clarke, 2006):

Table 3: Six steps of Thematic Analysis.

Steps		Process
1.	Familiarizing yourself with the data	Transcribe data and read through it while making notes
2.	Generating initial codes	Systematically coding data across the data set
3.	Theme Searching	Collate the data into relevant and potential themes
4.	Reviewing Themes	Generate a thematic map and ensure that themes are coded into relation with other data
5.	Defining and naming themes	The continues analysis to refine themes into specific categories and define each category clearly and naming it
6.	Producing the report	The final step in the process, selection of extract and examples and relate back to the research proposal and literature. This should be reported in the research report

Source: (Braun & Clarke, 2006)

Data was managed through the Atlas.ti programme and is designed to handle large qualitative data sets in a logical way. The programme assists in ordering and coding the data for analyses. The purpose of the results for the analyses was to provide confirmation of the research proposals and to identify key constructs that would be used to in the questionnaire sent out to farmers.

4.6 Limitations

The potential limitations for the study will include the following:

- Respondents may not be honest in the process of completing the measurement instruments (M Saunders & Lewis, 2012) because they might feel nervous or intimidated by completing the measurement instrument. .
- Due to limiting the population to the credit book of only one cooperative within the industry, the risk of creating a generalisation and perceptions of farmers

across South Africa and not include a more representative sample of other farmers across the industry.

- Conducting research on a cross-sectional timeframe, only a specific time in the industry is measured and recent trends such as climate change, economic uncertainty and political instability may affect the outcome of the study.
- Although the fields of financial distress, bankruptcy, organizational turnaround, business rescue and managerial cognition is widely researched, literature does not fully describe the South-African context of these phenomena in the agricultural context of South Africa.
- Due to the researcher having relationships with participants in a business environment, caution needs to be taken to draw definitive conclusion or excluding data due to biases from the researcher.
- Purposive Non-probability sampling may have excluded key decision makers in the process of identifying the population. In order to ensure that this was not the case, the researcher chose the three different categories of participants for the interviews.
- Due to the fact of time constraints the researcher had the possibility the data gathering method may have been neglected.

4.7 Conclusion

Saunders and Lewis (2012) also urges researchers to disclose their personal bias towards the context of the research and that may have an influence on the outcome of the research. Therefore it is important to acknowledge that the researcher is an employee of the cooperative and has business relationships with all participants in this study.

Chapter 5 – Results

5.1 Introduction

In this Chapter the findings of the data collected during one-on-one, semi-structured interviews are presented with the aim to confirm the three research propositions that was formulated in Chapter 3. To ensure alignment between research questions, literature review and the data collection method, common themes and constructs were identified and analysed through thematic analyses.

5.2 Respondent Profiles

Non probability sampling was used to ensure the selected sample represents the characteristics of the population (Saunders & Lewis, 2012). The aim of the study was to obtain three different perspectives across the Financial Service Sector. A Total of 12 interviews were conducted across three different stakeholder groups from one organization, eight participants working in the organization and four being farmers and clients of the company.

All participants met the prescribed criteria in terms of experience in agriculture and experience ranged from 4 to 38 years each with different expertise within the field of agriculture. The various participants also represents four of the nine geographical provinces of South Africa, giving the study a reasonable geographical representation across all the different dimensions of agriculture.

Contact interviews were conducted with seven of the twelve participants and the other five participants were conducted through telephonic interviews. However this was not the optimal choice to interview, it was the only viable solution to accommodate both the researcher and participants. The contact interviews were all held at the participant's office, where they were comfortable and could more easily speak their mind.

Once the interviews were concluded, the audio files was transcribed into text and analysed using the thematic analysis approach where relevant themes and codes were identified. The table below describes the sample demographics:

Table 4: Sample Demographics

Group		Gender	Age	Job Title	Region	Field of Speciality	Qualification	Years Experience
Grouping	Participants							
Agricultural Experts	Participant 2	Male	49	Financial Marketer Manager	North-West	Finance, Credit & Field Crops	Post Graduate	25
	Participant 4	Male	47	Manager: Product and Strategic Developer	Gauteng	Finance, Hedging & Permanent Crops	Post Graduate	24
	Participant 5	Male	29	Business Manager	Limpopo	Finance & Sales	Post Graduate	7
	Participant 6	Male	47	Business Manager	Limpopo	Cattle	Post Graduate	30
Financial Marketers	Participant 1	Male	30	Financial Marketer	Limpopo	Finance & Sales	Post Graduate	4
	Participant 3	Male	57	Financial Marketer	Mpumalanga	Finance & Hedging	Graduate	31
	Participant 7	Male	61	Financial Marketer	Limpopo	Financial Planning	Graduate	38
	Participant 12	Male		Financial Marketer	North-West	Finance & Poultry	Graduate	
Farmers	Participant 8	Male	54	Farmer: Owner	Limpopo	Cotton, Citrus & Field Crops	Graduate	33
	Participant 9	Male	35	Farmer: Owner	Limpopo	Tobacco, Potatoes & Vegetables	Matric	17
	Participant 10	Male	48	Farmer: Owner	Limpopo	Vegetables & Field Crops	Matric	12
	Participant 11	Male		Farmer: Owner	Limpopo	Vegetables & Field Crops	Matric	

5.3 Themes presented from the findings

The research process consisted of semi-structured interviews with 12 participants from the agricultural sector and the subsequent analyses of the qualitative data collected during these interviews. The interviews tapped into the insights, knowledge and perceptions of participants that has experience within the agricultural sector and the various facets of farm business decline and turnaround.

5.3.1 Research Proposition 1: Farmers monitor both internal and external factors leading to organisational decline equally well.

5.3.1.1 Finding 1.1: Farm business decline

Respondents were questioned on whether farmers monitor risks within their various operations they implement and whether these mitigations of risks prevent the event of farm business decline and failure.

All respondents are in agreement that decline in the agriculture are due to internal and external factors and that these factors lead to the decline in farm businesses.

Respondent 1: *“I believe so, most of the farmers I work with do monitor the risks in their various operations. It also differs from farmer to farmer, but in today’s time I would say that farmers do monitor some kind of risk. “*

Respondent 7: *“I personally, have made some notes before our meeting and I have a feeling that I would say on a relationship 60% yes and 40% no. I think the informed farmers such as Farmer X is relatively on standard with the monitoring of that risk.”*

Three main constructs has been identified as external factors that influence a farm business and has the potential to cause decline in the business. External factors are generally revered to as the risks that a business encounter and has no control over. These constructs has identified as climate change, market conditions and political landscapes. The responses contributed to divide these main themes into sub-themes and the following table represents responses per participant into identifying these subthemes.

Table 5: External factors influencing a farm business

Themes	R	R	R	R	R	R	R	R	R	R	R	R
	1	2	3	4	5	6	7	8	9	10	11	12
Hail						X		X	X	X		
Drought	X				X		X	X	X	X		
Flooding									X	X		
Temperature							X	X				
Pricing				X	X	X	X	X				
Pesticides	X											
Input Costs	X	X	X	X			X					
Inflation				X			X					
Policies	X				X		X			X		
Land Appropriation										X		
Farm Murders												

Respondent 2: *"I think this varies from season to season, this year was external factors and other years it can be internal factors, but I think the one that plays the biggest role, at this point in time is the external factors"*

Respondent 3: *"A very big area I work in is dryland, unfortunately there is a mono-culture, so you have a summer crop that you plant, so you have either a maize or soybean crop and here and there sunflower. So these farmers don't have much of a choice. Despite from price fluctuations & over-productions, what do you do when you are in such a position?"*

In Table 5 a total of 11 sub themes has been identified by the 12 respondents interviewed. A clear indication that three important sub themes stand out and identified is drought, pricing fluctuations and input costs. These three sub themes was the most concerned contributing factor to financial decline.

The purpose of asking about internal factors was to identify themes that farmers do have control over and what they can control. Two major themes was identified in terms of risk mitigation and financial planning.

Table 6: Internal Risks influencing a farm business

Themes	R	R	R	R	R	R	R	R	R	R	R	R
	1	2	3	4	5	6	7	8	9	10	11	12
Insurance		X			X		X					
Crop Insurance	X											
Hedging	X	X	X		X		X					
Labour									X			
Cash Flow Management		X				X	X					

Respondent 5: “What they try and do is to articulate trends such as El-Nino and those type of stuff, monitoring political issues like before and after an election, these striking seasons etc.”

Risks that influence farm business’ financial health can be mitigated through the management through internal management such as general risk mitigation and financial planning. These mitigation management is the responsibility of the “Jockey” or CEO and top management. These two constructs also has subthemes as described in the table above.

5.3.1.2 Finding 1.2: Farm business mitigation options

Participants were questioned whether in their opinion risks was monitored throughout farm businesses. Respondents were not convinced that this was happening on a satisfactory level and mentioned that risk monitoring are more prominent in more successful farm businesses and that there is a trend that farm businesses in distress don’t monitor risks as efficient and on the scale that successful farm businesses do.

Table 7: Risk Monitoring in farm businesses

Themes	R	R	R	R	R	R	R	R	R	R	R	R
	1	2	3	4	5	6	7	8	9	10	11	12
Yes, all of them					X							
No, not one of them												
Majority	X					X						
Minority		X	X	X			X	X	X	X		

Respondent 3: *“I think we must be honest, you get farmers that do it very good, it is also more the younger more professional farmer and he monitors everything. He monitors and measures this against a budget. ”*

Respondent 7: *“I personally feel the farmers that do monitor and manage risk is by far the minority and there is very few farmers that do financial planning, hedging and insurance, they only plant a harvest with the hope that it will be big enough to cover all costs.”*

Many of the respondents highlighted the fact that not all farmers monitor risks equally well and that farmers who tend to be more successful normally has more discipline in monitoring the risks than farmers that find themselves in financial difficulty.

Despite all of the participants that stated that only some farmers monitor their risks, all participants are in an agreement that monitoring risks where farmers are exposed to certain risks that can lead to financial decline tend to be the more successful and profitable farmers.

Respondent 7: *“The most of the farmers when questioned about their financial position you can realize that they start putting effort into their management. But I am not so sure that the majority of the farmers are on standard with their financial skills. More successful farmers tend to be more knowledgeable on their financial and technical knowledge than the majority.”*

5.3.2 Research Proposition 2: Farmers’ emotional bias distorts managerial cognition and leads to financial distress.

5.3.2.1 Finding 2.1: Changes over the last 20 years in agriculture

The objective of research question 2 was to identify the development and change that reshaped the agricultural industry and how farmers has made the mind shift from farming being a lifestyle to farming becoming a business and what biases are still present in farmers’ way of thinking and how this effects their decisions and actions taken.

Table 8: Agricultural Change over the past 20 years.

Themes	R	R	R	R	R	R	R	R	R	R	R	R
	1	2	3	4	5	6	7	8	9	10	11	12
Technology						X	X			X		
Margins		X	X			X	X	X	X	X		
Professionalism	X		X	X			X		X			
Diversifications	X						X		X			
Branding					X							
Land Prices			X									
Markets						X		X	X			

Participant 3: *“Definitely not, there’s a few things that changed, firstly the pressure on margins has increased significantly, you will easily hear that someone would say his dad harvested three tons per hectare and he could still buy a bakkie and tractor, today that three tons will not even pay your input costs.”*

Participant 10: *“A lot more technological, input costs, you had to plant yourself and you have so many diversifications these days that require your attention.”*

Participant 6: *“Technology has changed significantly, there is so much technology available which I think is still underutilized today, I’m just thinking of irrigation scheduling technology. With margins, margins definitely shrunk, input cost has increased sharply and 20 years ago we didn’t compete on a global level.”*

Participants point out various changes that has significantly changed over the last 20 years. When analysing Table 8, margins, professionalism and technology has been raised as the most proponent changes over the past two decades. Many participants has more than 20 years’ experience and experienced first-hand how these changes affected both farm businesses and the industry in total.

5.3.2.2 Finding 3.3: Emotional Biases

During the interviews participants were asked whether farmers have an emotional “blind-side” when certain actions was needed and why they think despite these changes over the past two decades they are still emotional and what drives this emotion inside of them.

Table 9: Emotional influence on farmer's actions

Themes	R	R	R	R	R	R	R	R	R	R	R	R
	1	2	3	4	5	6	7	8	9	10	11	12
Inheritance	X		X		X	X		X	X			
Lifestyle										X		
Yes	X	X	X				X		X			
No												
Business												

Participant 2: *“Yes, I think if most farmers are still emotional but in the last couple of years the mega farmers and larger scale farmers this is starting to disappear. So I would say within the next five to ten years this will disappear but for now most farmers are still very sentimental towards their farms.”*

Respondent 3: *“Yes, undoubtedly. Inherited land especially, they (the farmers) are very sentimental.”*

Respondent 6: *“Definitely, especially when the farm business goes into a decline, they would rather keep low potential land that they inherited and sell of high producing potential land to repay their debts.”*

Respondents were absolutely sure and very confident that these biases still exist amongst farmers and that this still has significant influences in their actions and decisions they make despite moving into a global competitive landscape.

5.3.2.3 Finding 2.3: Transformation from a lifestyle to a business

Table 10: Lifestyle vs. Business

Themes	R	R	R	R	R	R	R	R	R	R	R	R
	1	2	3	4	5	6	7	8	9	10	11	12
Lifestyle	X											
Business		X					X	X		X		
Combination			X	X	X	X			X			

Respondent 2: *“I think over the last 10/20 years, it has drastically changed. More and more farmers has started seeing this as a business. The only farmers that still see it as a lifestyle is older farmers and farmers with a small debt ratio.”*

Respondent 4: *“I think there are still farmers who see it as a lifestyle and that its his passion and then make the business part of it. The successful farmers has a balance between the lifestyle and business.”*

Respondent 5: *“it is a mixture of both, I think more people see it as a business, but if you don’t see the lifestyle for the business, it will not work. So it is not to say that if you are a businessmen, you will be a successful farmer.”*

This question was asked to the participants in order to establish how farmers see the business and whether they still see farming as a lifestyle where the farmer sat on the porch, smoking his pipe and stare into the open where his cattle was grazing or is it an intensive business where you need to be hands on at all time.

Participants made it clear that there is a strong movement towards farming being an intensive business but that most farmers still combine the lifestyle with the business. Farmers that see it as a lifestyle are decreasing.

5.3.3 Research Proposition 3: Farmers understand the value drivers towards their farm businesses and the repercussions of their actions taken.

5.3.3.1 Finding 3.1: Farmers and their business acumen

The objective with research question three was to identify that farmers understand the value drivers towards their farm businesses and the repercussions of their actions taken. For this we need to know whether farmers are good businessmen and do they understand both the technical side of agriculture and the business principles that will drive value in their farm businesses.

Table 11: Farmers as businessmen

Themes	R	R	R	R	R	R	R	R	R	R	R	R
	1	2	3	4	5	6	7	8	9	10	11	12
Yes, Both					X				X			
Yes, Minority	X	X	X	X			X	X				
No, Only one												
No, Need experts						X						

Participant 1: *“I think like I said, probably some of the younger farmers are better businessmen than some of the older farmers but I suppose that like in every sector in the economy you will get good businessmen and not so good businessmen, so I would say the farmers that is still flourishing even in hard times are good businessmen.”*

Participant 3: *“in general no, but you do get the farmers that’s successful and outperform the rest due to the fact that they have very good technical knowledge as well as business savvy.”*

Participant 4: *“It depends if you want to generalize or not. There is definitely farmers that embraced certain business skills and accepted the fact that they need to adapt. These farmers also run there farm businesses on these principles and are very successful, on the other hand those farmers that don’t do it, find themselves stretched financially”*

One of the participants also mentioned that huge turnovers are realized in farming but with very small margins, and if you do not have the correct business skills and knowledge it becomes very dangerous for these farmers and very likely that they will end up in financial distress.

5.3.3.2 Finding 3.2: Farmers’ approach to decline and financial distress

Table 12: Pro-Active and Re-Active approaches

Themes	R	R	R	R	R	R	R	R	R	R	R	R
	1	2	3	4	5	6	7	8	9	10	11	12
Pro-Active												
Re-Active	X		X	X	X			X	X	X		

Respondent 5: *“Risks and events are managed where the farmers experience the highest amount of pressure, so if the weather exposes him to a certain risk he will focus on that, if his cash flow pressures him he will focus there.”...“Farmers are certainly more reactive than proactive.”*

Respondent 7: *“Very, very few of the farmers plan ahead.”*

Respondent 1: *“I think farmers are more reactive, you could have seen it the past year in the maize yields were not as high as this year but the prices was high, so an overproduction realised and now the maize prices are low, so I would say more reactive than proactive.”*

It is important to know whether farmers are more reactive than proactive and because this will determine their turnaround framework. Because farmers are reactive an operational approach will need to be taken.

5.3.3.3 Finding 2.2: Strategic and Operational Actions

Table 13: Turnaround actions sub-themes

Themes	R	R	R	R	R	R	R	R	R	R	R	R
	1	2	3	4	5	6	7	8	9	10	11	12
Financial Planning	X		X					X	X	X		
General Technical Knowledge					X		X	X	X			
Pro-Active				X				X				
Inherit	X											
Risk Management									X			
Employ Experts			X	X			X					
Cost Retrenchment						X		X	X	X		
Asset Retrenchment						X		X		X		

Respondent 1: *“If you look from a financial side, there are very few farmers that do financial planning and even fewer farmers really know what their farm true expenses is every month, season and year. They will just hope that the harvest will be large enough to cover all expenses.”*

Respondent 9: *“Financial planning is important, although I think some people do it better than other.”*

Respondent 7: *“Many of the farmers has fantastic technical skills, but very few of them has the knowledge of financial management and the responsibility towards their financial positions. They will often spend a half a million Rand on something that contributes nothing to the cash flow.”*

In Table 13 above, actions was identified that can help farmers to turn distressed farm businesses around. These actions include pro-active and re-active responses from farmers that will enable them to turn their farm business around, should they find themselves in financial distress.

5.4 Summary

This Chapter presented all results that were gathered and analyses in response to each participant on the research propositions outlined in this study and will further be discussed in Chapter 6.

Chapter 6 – Discussion of Results

6.1 Introduction

In the preceding chapter, the impact off financial distress, managerial cognition and farm business turnaround was discussed out of the lens of explorative qualitative approach through semi structured interviews throughout three different stakeholder groups within an agricultural cooperative in South Africa. The aim of Chapter 6 is to review the results through the combining both theory and discussions of the results presented in chapter 5 and literature presented in chapter 2.

6.2 Context of the findings

As stated in Chapter 1 since the global economic financial crisis the term VUCA has been a widely used term to describe the economic environment over the past decade (Bennett & Lemoine, 2014; Tran, 2017). The South African agricultural industry has also faced its own individual challenges over the past decade with severe drought, various disease outbreaks, bird-flu, Citrus Black Spot and Army worm plagues that spread across the country contributed to multi-million Rand losses within the industry (Delgado et al., 2016; Grower, 2013; Lim, Nikhil, Morse, & Rowe, 2013; Louw et al., 2017). This all while South African farmers struggle to balance their books and keep their operations sustainable. Although these circumstances is known as external factors over which very little control is in the hand of the farmer, this study investigates whether these farmers also see this phenomenon in the same serious light as other stakeholders in the agricultural sector see them.

6.3 Discussion of results for Research Proposition 1

Research Proposition 1: Farmers monitor both internal and external factors leading to organisational decline equally well.

The objective of Proposition 1 was to identify whether farmers monitor both external internal risks with the same intensity. This information was verified by the researcher across three different stakeholder groups including four successful farmers themselves through semi-structured interviews. The results obtained was debated by various

participants of the study with mixed views on which is more important than the other and what has the bigger impact on the farm business' sustainability and financial position. However, all respondents acknowledged that both factors has influence on the performance of the farm business, the internally focus was more based on how to manage these external risks with ensuring the growth of the farm business. Constructs were identified in both external and external constructs that influenced the farm business. External constructs identified was climate change, market risks and the political environment.

In Table 8 the results per participant reflect that climate change (which includes natural disasters such as flooding, rainfall, hail, temperatures, extreme weather conditions and drought) was identified as the main contributing factor that lead to financial decline in farm businesses. Climate change is interrelated with agriculture. Despite advances made regarding the management of climate change with various new technologies, biotechnology and irrigation systems as mentioned by participant 6 and in literature (Ullah, Shivakoti, Zulfiqar, & Kamran, 2016). Hence the huge impact these factors has on yield potential and financial implications it is one of the most important external factors a farmer has to manage. Climate change is also argued to be at its most extreme in any point in history (Kingwell & Xayavong, 2017).

The past decade has recorded the ten warmest years since the recording started 20 years ago and will result in more frequent weather extremes and farm businesses will have to plan and innovate their approaches to farming with this continuous trend of uncertain weather conditions that will result in heightened food security (Sagar, 2012).

Climate change not only refers to weather patterns but also has rippling effects with longer warmer days and makes it the ideal breeding ground for rodents and pesticides that flourish in warmer weather and also has the potential to influence yields and harvests (Grower, 2013).

Another construct identified was market risk factors including inflation, margins and input costs. Respondent 3 states that a few years ago with a yield of three tons maize per hectare, a farmer was able to pay all his debt and buy either a bakkie or tractor. Nowadays three tons per hectare does not even pay back your input costs and production loans.

These decreases in margins sends a very strong signal that farmers needs to give extra attention to their cash flows and manage their expenses with much more accuracy. Respondent two also states that farmers does not know what their farm business expenses are in a month. Literature also states that cash flow management is one of the most important factors that should be managed once an organization shows signs of decline (Almamy, Aston, & Ngwa, 2016). In a rapidly changing financial world, the ability to manage the unexpected is just as important as entrepreneurship and business skills for the farmer.

Margins is one of the key sub-themes that came out of the data collected and emphasises the decreased margins over the past few decades that farmers receive. These days turnover of farm businesses are massive but yet margins are becoming all smaller and smaller and poses a great threat for farmers whose financial planning skills are not yet mastered. Managing price risk is one of the biggest challenges for grain producers especially during a time of high volatility (Kilian, 2014). Derivative markets offer farm businesses instruments to manage risks.

Input Costs also ranked high and mainly highlighted by financial marketers that work closely with both suppliers and the farmer on ground level. Also noted as an interesting fact is that there is a correlation between marketers and farmers answers and may indicate a possible disconnect from experts that may sit in an office and may lose touch with what really happens on the farms.

Farmers don't have any control over the prices of commodities, whether it is fertilizer, diesel, chemicals or even the commodities produced. According to the World Trade Organization (WTO) agricultural agreement, commodity prices are derived from international prices and implies that commodities have price ceilings and floors and cannot exceed import parity prices. Domestic prices therefore will trade close to import parity if there is local shortages. Rising input costs however still remain one big challenge for producers together with increased labour costs. In recent years input costs has have increased faster than prices for output commodities (DAFF, 2015).

Another external risk that was identified although not widely mentioned across all interviews was the influence of politics in the agriculture environment especially in the South African context. Although very controversial with many different views and perceptions on the political influence in the sector it is both sensitive and debatable.

Themes that was identified was land appropriation, farm murders and policies & regulation.

These regulations and policies affect agriculture and farm business profitability will typically happen when legislation are introduced such as rules of a certain pesticide being used on crops or medication for livestock that may influence cost of production. These regulations are also identified in the treatment of black spot in citrus food and foot and mouth disease in cattle (DAFF, 2015; Delgado et al., 2016; Grower, 2013).

In the preceding paragraphs it is clear that external factors are factors that has direct influence on a farmer's survival and the farmer has no control over these factors. So the question must be raised what should a farmer do to minimize these risks to protect himself and his business from becoming just another victim of the cruel and unforgiving environment.

Managerial cognition refers to the way managers perceive declining factors and their bias to indicators leading to organizational decline (Trahms et al., 2013). Trahms et al. (2013) also indicates the three elements of managerial cognition that influence turnaround actions: awareness of decline, attribution of decline and lastly the severity of the decline.

The study found that two main recurring themes from an internal factor point of view was identified. These two themes was risk mitigation and financial planning. Participants were also frank about farmers not monitoring and planning from an internal perspective the relevant factors required by a CEO of top management member of a business (Panicker, 2011; Vercammen et al., 2012).

Some risks are unique to agriculture such as external factors mentioned in the preceding paragraphs, but other risks are common in all businesses and add to the farm business risk profile and can be managed through good management. Financial risk can be managed by passing the risk on to insurance companies. Many different products is available for farm businesses, the general problem with farm businesses and insurance is that a high liquidity risk is that they normally can't afford the premiums associated, for instance tobacco crop instalment is 25% of the total crop value.

Hedging is another way of mitigating market price risk for farm businesses and can protect themselves from negative price movements.

The crux of proposition 1 probably lies in the next topic which was identified by respondent as a significant theme and one of the most important topics in farm business decline and turnaround and that is financial planning (Pretorius, 2014; Trahms, Ndofo, & Sirmon, 2013; Velez-Castrillon & Angert, 2015; Yih, 2017). Louw (2017) also argues that most businesses fail due to inadequate financial planning. Financial projections must guide the management team and also inform prospective investors. Documents that form part of this planning process includes financial statements, budgets, projections, management statements and cash flow projections.

6.4 Discussion of results for Research Proposition 2

Research Proposition 2: Farmers' emotional bias distorts managerial cognition and leads to financial distress.

The objective of this research proposition was to establish how the agricultural industry has changed over the past 20 years and how these developments has shaped the thinking of farm business owners and whether their management styles and biases has transformed at the same pace as the rest of the industry has developed. With this research proposition there is also one important assumption made and that is that farming is still a lifestyle rather than a business. The stigma of the farmer sitting on the porch drinking tea and smoking his pipe and starrng at his cattle grazing in the open field or has that also changed to a more hands on business.

The results of the total sample presented in Table 8 on p. 44 showed that seven sub-themes has been identified in change over the past 20 years. Once again margins comes out on top, this financial indicator once again shows that farmers are financially under pressure and that the margin for error in farm businesses are minimal.

The participants also indicated that major change that has been evident in the past 20 years was in the technology division, diversification, professionalism and branding. The participants also noted that the majority of farmers has failed to adapt to the changing environment and is still stuck in an outdated mind-set. Although the perception is that the majority farmers are still using outdated systems and management styles, they do acknowledge that successful farmers has been able to make these mind shifts and has adapted their practises to that of a more innovative, agile and diverse operations.

Participants mentioned that technology has made huge advances in the move to producing food for a growing world and enabling one farmer to feed much more people on a daily basis than two or three decades ago. This technology has developed on two fronts and both gets mentioned in interviews with various participants throughout the data collection process. One of these technologies are the machinery and equipment has advanced significantly and machinery has changed the way farming operations are run today that it is almost unimaginable how a farm operated without certain tractors and implements. These machinery has increased productivity and efficiencies on farms by significantly and taking out the human factor almost entirely. One of these examples is with cotton farming where many people was used to harvest cotton, today you get harvesters that are much faster and efficient than those days at a fraction of the cost (Short, Ketchen, Palmer, & Hult, 2007).

The other technology introduced is the biotechnology, this technology includes a range of tools such as breeding techniques that alter living organisms, modifying products and improvement of plants and animal development for specific agricultural uses. These tools and techniques also has significant impacts on genetic engineering where plants are able to resist more harsh environments such as drought and increased yields in staple crops to ensure food security for a growing population (Louw et al., 2017; Ullah, Shivakoti, Zulfiqar, & Kamran, 2016; Vink & Rooyen, 2009).

Table 8 on p. 44 also indicates another sub-theme that was identified by respondents was both professionalism and diversification. Diversification is an inhibiting factor and is supported by a one of Louw's (2017) value drivers who noted that it is a very important role in the growth and sustainability strategies of many farm businesses. Such trends are identified as farmer's diversifying into new global markets. Such events is seen daily on farms where famers started producing crops that can compete international and the farm business start earning foreign currency as income. Such diversification include the trend of planting more permanent crops such as nuts, citrus and grapes

With farm businesses competing on a global scale with their exports farmers had to become more professional and adapt their strategies to become and stay competitive. With these adaptations farm businesses was started to be run as a business and farms are seen as factories in the sense that all processes on the farm are planned, monitored and managed on a large scale (Louw et al., 2017).

With these industrialization of farms and expansions at rapid pace, these farm businesses has grown tremendously and another agricultural trend is that they create economies of scale and these farm businesses are only getting bigger and bigger and the small farm business eventually sells of to these large farm businesses as they cannot compete at that scale (Lowder, Skoet, & Singh, 2014). This has also brought about professionalism into the agricultural sector and farmers still farming with older mind-sets and emotional biases tend to create a damper on growth of these farm businesses.

When questioned on the emotional bias of farmers there was a strong sense that many farmers were still emotional to their business and a strong correlation could be made to farmers that inherited land or farms on land that has been in the family for many generations. Participant 2 also stated that this emotional feelings and biases it creates are less dominant in mega farmers and that it will phase out within the next five to ten years. Participant 6 also made a comment that these farmers influenced by their emotion will rather sell of high productive land to keep marginal land with lower yield potential due to this emotional bias that they have towards this land being in the family for generations.

Table 9 on p. 45 indicate the responses confirms these emotions and biases that can influence these decisions that they make and that it is not always in the best interest of the farm business but rather in his best interest or that of his families emotional feelings towards this land.

Table 10 on p.45 also confirms that there is a strong evidence that there is still a lifestyle aspect to living on a farm and that most respondents argue that many farmers manage it as a combination of both a lifestyle and business and try to balance these two aspects.

6.5 Discussion of results for Research Proposition 3

Research Proposition 3: Farmers understand the value drivers towards their farm businesses and the repercussions of their actions taken.

The objective of this research proposition was to identify whether farmers understand the value drivers towards their farm businesses and the repercussions of their actions taken when focus are displaced from this. For this we needed to know whether farmers are good businessmen and do they understand both the technical side of agriculture and the business principles that will drive value in their farm businesses.

Panicker et al. (2015) argues that another cause of decline is the mismanagement in several functional areas of the organization. The results obtained in research proposition three on whether farmers are good businessmen and whether they understand the value drivers that drives the agricultural sector and their farm businesses. The majority of the respondents felt that farmers are not necessarily good businessmen as they lack the technical knowledge of both the agricultural expertise that required to be good farmers and the acumen to be a good businessman. Many farmers tend to have a good feel for one of these attributes but very rarely they poses both of them. Respondents also mentioned that in the case were a farmer has both attributes, he would most likely be successful in his operations. Table 11 on p. 47 confirms the argument that these farmers are in the minority and that most farmers are very good farmers but lack the knowledge of financial planning and other business skills.

When asked the question whether farmers are more reactive than proactive Table 12 on p. 47 clearly indicates that farmers are reactive and that not a lot of planning takes place in farming practises. Organizational decline is often the result of poor management and planning which is ironic because management has direct control over all of the identified functions such as financial planning, cash flow and balance sheet management. The seriousness of the decline should also be considered before turnaround actions are implemented.

Turnaround strategies are divided into two groups of actions, strategic actions and operational actions. Trahms et al. (2013) argues that managerial cognition has three stages namely: awareness of decline, attribution of decline and lastly the severity of the decline.

Velez-Castrillion et al. (2015) justifies two clear actions that can be taken when organizations find themselves in financial distress. Participants clearly states in Table 12 on p. 46 that farmers are reactive and that proactive turnaround strategies will in most cases would not work, these actions are also described namely strategic and operational actions. When farmers find themselves in financial distress, they would probably have to be reactive in their turnaround actions as well. Operational actions that include cost and asset retrenchment would be the most successful turnaround actions that can be taken once a farm business finds themselves in distress. The severity of the decline be less problematic pro-active strategies could be implemented. When time and slack is available. Organizational slack revers to the amount of leverage is available in an organization (Marlin & Geiger, 2015). When no organizational slack is available farmers will need to adapt to the fast changing environments and adapt their management practises to become more pro-active than re-active managers. Should this fall out of their capabilities, someone should be appointed to handle these to actions that they can do. By looking closely to this turnaround model, strategic actions include looking for new markets, acquire new resources and repositioning or diversification. When you are reactive of nature, you will not be able to implement these strategies as you are already in financial distress and these turnaround options will take time and money, both things you don't have. This means you need to revert to operational actions and either implement on of the two retrenchment options namely cost- or asset retrenchment.

Chapter 7 – Conclusion

7.1 Introduction

The purpose of Chapter 7 is to draw final conclusions by revisiting the research objectives identified at the beginning of the study and evaluating the results and discussion from Chapter 5 and Chapter 6. The main findings are highlighted and recommendations are made. Limitations and future research suggestions are also made.

7.2 Research Objectives

Given the importance of the agricultural industry and its contribution to economic development and serves as a major source of livelihood for many people within the rural community (Ullah, Shivakoti, Zulfiqar, & Kamran, 2016) it is important to understand and gain insights into the turnaround process within the agricultural sector, particularly the concept of distress cognition from an internal management perspective (Burbank, 2017; Panicker, Sunitha; Manimala, 2015; Trahms, Ndofor, & Sirmon, 2013; Velez-Castrillon & Angert, 2015) and how farmers can manage the economic decline and turnaround of their respective farm businesses. The context in which the agricultural environment currently operates in is described as volatile, uncertain, complex and ambiguous (Bennett & Lemoine, 2014). The South African agricultural industry is currently facing a mixed bag of emotions, plagued by various challenges such as extreme droughts, low commodity prices, animal diseases, rodents in plants and grass and various other extremist actions such as land appropriation and farm murders but at the same time reporting all-time record harvests achieved within the field crop sector, such as maize and soybeans.

7.3 Main Findings

Based on the findings, the interplay between internal and external factors that contribute to organizational decline and the continuous challenge to balance the management of these factors and reach a viable turnaround strategy across all stakeholders of the organization. During this study four main findings were identified and has significant impacts on the turnaround process of a farm business. These four main findings are discussed

<p>Main Finding 1</p>	<p>The “Jockey” or management plays a pivotal role in the turnaround process.</p>
<p>Findings from this study confirmed that farm businesses operates in a dual pressured environment. These farm businesses, as most businesses are not immune to economic turbulent environments and uncertainty. However throughout this study and combined with literature these farm businesses are heavily influenced by managerial decision making and actions. These factors are effected by the CEO and top management’s suitability for the operating contexts (Panicker, Sunitha; Manimala, 2015). However this is quite a dilemma in a family owned farm business as the CEO or top management cannot be replaced as they are the owners in most cases.</p> <p>In these circumstances, the leadership of the farm business who cling to recollections of past successes and who can’t change their cognitive structures and unlearn them, places enormous pressure on the turnaround process. Successful farmers experiment and innovative (within reasonable measures) with circumstances and deviate from standard practise.</p> <p>Management also acts as a “filter” for the organisation. The management sets the organizations strategy using their interpretations of the environment in which the organization operates and how it positioned within the environment. It is therefore inconceivable that misinterpretations by the management could lead to organizations into distress (Panicker, Sunitha; Manimala, 2015; Trahms, Ndofor, & Sirmon, 2013).</p>	
<p>Recommendation</p>	<p>Although farmers has no control over external factors that influence their operations, they do have control over certain decisions and actions. Farmers associated with successful operations are believed to make quick decisions and implement actions strategy to mitigate external risks. However there is still a significant amount of farmers that need coaching, training and mentors to enable them to be agile and precise in managing these risks.</p>

Main Finding 2	Financial planning is the roadmap to how the turnaround process should be implemented.
<p>This study emphasised the importance of financial planning for the longevity of farm businesses and are particularly important during the decline and turnaround period. The general absence of financial planning hinders the development of financial wealth and success (Vink & Rooyen, 2009).</p> <p>Consequences of projects without the appropriate financial planning has no potential to be successful. Farmers are encouraged to take a more active approach to their finances and implement the right strategies to ensure their future on the farm.</p> <p>Yih (2017) compared financial planning with a roadmap. A roadmap always has a starting point and destination, the same applies to your finances where you start at a project and where or what you want to achieve at the end. The essence lies in how you get from start to finish. The directions, intersections and where you can change direction needs to be planned to make the road less uncertain and often you find yourself achieving the destination much sooner with planning (Yih, 2017).</p> <p>Burbank (2005) suggests a classical five step turnaround process namely, situation analysis, management change, emergency action, business restructuring and finally return to normalcy.</p>	
Recommendation	For farmers to improve their financial positions, they have to develop a comprehensive and long-term financial plan that includes various aspects of both their farm business and finance such as estate planning, investment, cash flow, debt, insurance and continuity planning such as successors, insurances and savings.

<p>Main Finding 3</p>	<p>Operational actions (Cost & Asset Retrenchment) are the only viable turnaround actions that can turn a farm businesses around in a re-active environment.</p>
<p>Although the study highlighted the uniqueness of the agricultural industry, literature in the form of the expanded turnaround model of Trahms et al. (2012) shows that turnaround are influenced by actions taken. These actions can either be strategic or operational. Veez-Castrillion et al. (2015) confirms the two different actions that can be used to turn financial distressed organizations around.</p> <p>The study also highlighted that farmers are more re-active than pro-active in their operations and therefore only operational actions can be taken with Cost- and Asset retrenchment being the only viable turnaround action that can be used in their farming operations.</p>	
<p>Recommendation</p>	<p>It is recommended that farm businesses setup a mid- to long term business plan and become more pro-active in their efforts to grow and create a sustainable business. These business plans will focus on both strategic and operational actions and will include diversification, acquire new technologies and re-positioning their businesses for future growth.</p>

7.4 Limitations to this study

The following research limitations were identified:

- The researcher employed purposive sampling and may have influenced his bias towards the study. Although the researcher put all measures in place to eliminate bias, other sampling methods may have been more appropriate.
- This study was conducted with only respondents between stakeholders of one company. This implies that certain views could have been influenced by company culture and policies. Should the sample have been taken from various companies, it could possibly provide an even deeper understanding of issues like organizational decline and turnaround
- Due to the unavailability of some mega farmers, a number of interviews had to be done with farmers that is still considered successful although farming on a much smaller scale.
- The study was conducted mainly in North West, Mpumalanga and Limpopo region focussing on irrigation farm businesses and not including big dryland farming areas such as the Free State and Western Cape was not included in the study.

7.5 Recommendation to future research

The result of the findings from this study were based on a relatively small sample of farm businesses and only one agribusiness within the South African context. Despite the narrow scope of this research, the following recommendations for future research has been identified:

- A quantitative study following this study by validating the results from these interviews.
- The transition of family owned farm businesses into large non family owned enterprises.

- The economic viability of smart farms and introduction to developing countries.
- The issue of land reform and the impact on food security within the South African context.
- Recapitalization of current land and development of Broad-Based Black Empowerment in the agricultural sector.

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Appendix 1: Consistency Matrix

Research Proposition	Literature Review	Data Collection Tools	Analysis
<p>Research Proposition 1: Farmers monitor both internal and external factors leading to organisational decline equally well.</p>	<p>(Guha, 2016) (Ndofor et al., 2013) (Velez-Castrillion., 2015) (Pretorius, 2009) (Trahms et al., 2013) (Francis, Desai, 2005) (D'aveni, 1999) (Altman et al., 2014)</p>	<p>Interview 5-8</p> <p>Schedule:</p>	<p>Content Analyses of open ended questions</p>
<p>Research Proposition 2: Farmers' emotional bias distorts managerial cognition and leads to financial distress.</p>	<p>(Balcaen et al., 2012) (Panicker., 2011) (Lim et al., 2013) (Ng, Siebert, 2009) (Pretorius, 2014) (Schmitt et al., 2013) (Botha, 2016)</p>	<p>Interview 9-12</p> <p>Schedule:</p>	<p>Content Analyses of open ended questions</p>

<p>Research Proposition 3: Farmers understand the value drivers towards their farm businesses and the repercussions of their actions taken.</p>	<p>(Meena et al., 2016) (Ullah et al., 2016) (Kingwell., 2017) (Vink, van Rooyen, 2009) (Veccaman, 2007) (Sagar, 2012)</p>	<p>Interview Schedule: 13-16</p>	<p>Content Analyses of open ended questions</p>
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Appendix 2: Participation and Consent Letter

**Gordon Institute
of Business Science**
University of Pretoria

“Investigating distress cognition for farm businesses as a precursor to turnaround within the South-African context.”

Interview Consent form

I have been fully informed and presented with the detail of the study *“Investigating distress cognition for farmers as a precursor to turnaround in the South-African context”*. The researcher provided me with the opportunity to request any additional information about the study and I have received satisfactory responses to my questions.

I am aware that my interview will be audio recorded to ensure the accurate documentation of my responses. I am also aware that quotes from my interview may be included in the publication derived from this research, with the understanding that thesis publications will be anonymous.

I was also informed that I may withdraw at any time without penalty by advising the researcher. Finally I agree out of my own free will to participate in this study.

.....

Participant Signature

.....

Date

.....

Researcher: Jan-Hendrik Human

.....

Date

Appendix 3: Interview Schedule

**Gordon Institute
of Business Science**
University of Pretoria

“Investigating distress cognition for farm businesses as a precursor to turnaround in the South-African context”

Interview Schedule- Researcher: Jan-Hendrik Human

Firstly thank participant for his/her time.

Demographical Questions:

1. For the record, please state your gender and age and hometown.
2. What is your occupational role?
3. Describe briefly how long have you been working in the agricultural sector?
4. Why would you classify yourself as an expert in the field of agriculture?

Research Proposition 1: Farmers monitor both internal and external factors leading to organisational decline equally well.

‘This research proposition objective was to identify whether farmers monitor the internal factors causing financial distress the same way that they monitor the external factors such as weather patterns, economical environment etc.’

1. Would you say that farmers monitor risks in their various operations? (**WHY**)
2. What would you say is external risks that has an effect on farmers’ financial position?
3. What would you say can farmers do internally to address these risks?

4. Does Farmers access these risks both internal and external equally well? **(WHY)**

Research Proposition 2: Farmers' emotional bias distorts managerial cognition and leads to financial distress.

"This research proposition objective was to identify whether a farmer is biased due to his sentimental value that he has towards being a farmer and the farm itself. It is assumed that farming is more a lifestyle than a career."

1. Is farming the same as 20 years ago?
2. Would you describe farming as a lifestyle or has it become more a business today?
3. Would you say farmers are emotionally bound to their farms?
4. Why would farmers sometimes turn a "blind eye" towards possible risks?

Research Proposition 3: Farmers understand the value drivers towards their farm businesses and the repercussions of their actions taken.

"This research proposition objective was to identify whether farmers truly understand their business operations aspects in the context of which their farm businesses operate and the repercussions of their actions taken or do they only take actions due to the conventional way they were taught though previous generations."

1. Is farmers good businessmen? **(WHY)**
2. Do farmers understand why they need to do certain things? (Like setup a cash flow, hedge?)
3. Do farmers plan ahead?
4. What differentiates successful farmers and farmers ending up in financial difficulty?

Appendix 4: Interview Coding List

Research Question	Interview Question	Indicator	Codes	Main Themes	Sub-Themes
1	5	External Factors influencing agriculture	CC1	Climate Change	Drought
			CC2		Hail
			CC3		Warmer Climate
			MC1	Market Conditions	Price Volatility
			MC2		Input Costs
			MC3		Inflation
			MC4	Political	Policies
			MC5		Land Appropriation
	MC6	Farm Murders			
	6	Internal Factors influencing agriculture	RM1	Risk Mitigation	Insurance
			RM2		Crop Insurance
			RM3		Hedging
			RM4	Financial Planning	Cash Flow Management
			RM5		Financial Measurement
			RM6		Balance Sheet Management
	8 & 14	Financial Planning is present in farm businesses	FP1	Yes	Yes, all do financial planning
			FP2		Yes, Majority do financial planning
			FP3	No	No, they don't do financial planning
			FP4		No, the minority do financial planning
2	9	How much have changed over the last 20 years in agriculture	AC1	Yes	Technology
			AC2		Margins
			AC3		Professionalism

	10	Sentimental value influence on actions	AC4		Diversification	
			AC5	No		
			SV1	Yes	Cause them to make bad decisions	
	11	Agriculture is more a lifestyle than business	SV2		Inheritance	
			SV3	No	No, Farmers are more professional	
			LB1	Yes	Farming is a Lifestyle	
			LB2		Combination of Business and Lifestyle	
	12	Biases are created by emotions of farmers	LB3	No	Farming is a Business	
			LB4		Combination of Business and Lifestyle	
			EB1	Yes	Yes it these factors influence Operations	
			EB2		Yes, it only influences the majority	
	3	13	Jockey is both good farmer and businessmen	EB3	No	No, this has no effect
				EB4		No, this influences only minority
				GFB1	Yes	Yes, only successful farmers
				GFB2		Yes, only minority falls in this category
	15	Differentiation between successful farmers and financial distressed farmers	GFB3	No	No, farmers are only one of them	
GFB4				No, farmers employ expertize		
SF1			Successful Farmers	Financial Planning		
SF2				General Knowledge		
SF3				Pro-Active		
SF4				Luck		
SF5				Risk Management		
SF5			Financial Distressed	No Planning		
SF6	Stuck in their ways					
SF7	Good at only one dimension					

			SF8		Lack of business insights
	16	Strategic vs Operational Actions	SOA1	Pro-Active	New Markets
			SOA2		Diversification
			SOA3		Value added
			SOA4		Technology Expansion
			SOA5	Re-Active	Cost Retrenchment
			SOA6		Asset Retrenchment

Appendix 5: Participant Summary

Group		Gender	Age	Job Title	Region	Field Speciality	of	Qualification	Years' Experience
Grouping	Participants								
Agricultural Experts	Participant 2	Male	49	Financial Marketer Manager	North-West	Finance, Credit & Field Crops		Post Graduate	25
	Participant 4	Male	47	Manager: Product and Strategic Developer	Gauteng	Finance, Hedging & Permanent Crops		Post Graduate	24
	Participant 5	Male	29	Business Manager	Limpopo	Finance Sales &		Post Graduate	7
	Participant 6	Male	47	Business Manager	Limpopo	Cattle		Post Graduate	30
Financial Marketers	Participant 1	Male	30	Financial Marketer	Limpopo	Finance Sales &		Post Graduate	4
	Participant 3	Male	57	Financial Marketer	Mpumalanga	Finance Hedging &		Graduate	31
	Participant 7	Male	61	Financial Marketer	Limpopo	Financial Planning		Graduate	38
	Participant 12	Male		Financial Marketer	North-West	Finance Poultry &		Graduate	
Farmers	Participant 8	Male	54	Farmer: Owner	Limpopo	Cotton, Citrus & Field Crops		Graduate	33

	Participant 9	Male	35	Farmer: Owner	Limpopo	Tobacco, Potatoes Vegetables	&	Matric	17
	Participant 10	Male	48	Farmer: Owner	Limpopo	Vegetables Field Crops	&	Matric	12
	Participant 11	Male		Farmer: Owner	Limpopo	Vegetables Field Crops	&	Matric	

Appendix 6: Ethical Clearance

**Gordon
Institute
of Business
Science**
University
of Pretoria

Dear Jan-Hendrik,

Please be advised that your application for Ethical Clearance has been approved.

You are therefore allowed to continue collecting your data.

We wish you everything of the best for the rest of the project.

Kind Regards

GIBS MBA Research Ethical Clearance Committee