The value added to stakeholders from the implementation of risk management driven through regulation

A research project submitted to the Gordon Institute of Business Science, University of Pretoria, in partial fulfilment of the requirements for the degree of Master of Business Administration.

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Abstract

This research aims to determine the value added to stakeholders from the implementation of risk management driven through regulation. An initiative to introduce risk management regulations to insurance companies in South Africa started in 2009.

The cost of implementing risk management is material and therefore, value must be derived to justify the costs. However, literature shows that regulation may not always be effective at achieving its intended purpose and may result in unintended consequences.

The financial results of South African insurance companies before and after the implementation of risk management were compared. Statistical testing showed that there was no significant change to the financial results, even though significant costs have been incurred. It seems that risk management may have been implemented as a symbolic gesture to meet the requirements of the Regulator, but was not necessarily seen to be adding value.

The inappropriate implementation of risk management may have unintended negative consequences from the high costs incurred, to employees and management in terms of job security and compensation; to investors in terms of the attractiveness of the insurance industry; to customers in terms of higher premiums; and to the Regulator in terms of reduced sustainability and stability of the industry.

Declaration

I declare that this research project is my own work. It is submitted in partial fulfilment of the 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 authorisation and consent to carry out this research.

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Table of Contents

1. Introduction to the Research Problem

1.1. Research Title

The value added to stakeholders from the implementation of risk management driven through regulation.

1.2. The Research Problem

The research objective was to understand whether the implementation of risk management driven through regulation had been effective in adding value to stakeholders. The researcher assessed the potential impact on stakeholders, if costs were incurred to implement risk management, but no value was added to the business.

A project to introduce risk management regulations to insurance companies in South Africa started in 2009 and since then, insurance companies have put in tremendous effort in improving the risk management within their businesses (Financial Services Board, 2017). Between 2009 and 2015, the average expense ratios of companies in the short-term insurance industry has steadily increased, while the profit margins reduced.

A survey was conducted by PwC in 2012, in which interviews were conducted with the managing directors and senior executives of 29 insurance companies in South Africa. A number of questions relating to the risk management regulations were put to the participants. Regarding the cost of implementation, participants indicated that they were expecting to incur costs starting from R25 million up to possibly R300 million. The participants were also asked what benefits they were expecting to see from implementing the risk regulations. Most participants responded that they were expecting to see benefits, however expected this to be at a significant cost. A few participants felt that even though the regulation would be at a significant cost, there would be no benefits (Metcalfe, 2012).

In addition, participants were asked whether they agreed or disagreed with certain statements relating to regulation in the insurance industry. The following figures show the results of the questions asked.

Concerns about the burden of regulation are dampening risk appetite and stifling growth

Agree
Disagree
Neither

Twenty-one of the 28 respondents believe that the heavy burden of regulations is dampening risk appetite and stifling growth.

Regulatory considerations are slowing the pace of international expansion

Agree
Disagree
Neither

The burden of regulation is also believed to be slowing the pace of international expansion. Twenty participants agreed with this statement.

Regulation is creating a fairer playing field for institutions to achieve their growth targets

Agree
Disagree
Neither

Two-thirds of participants disagreed with this statement. Smaller insurers believe that regulation is a formidable burden that is more efficiently handled by the larger companies. One direct insurer suggested that with SAM they may be able to reduce their capital requirement.

Figure 1: Responses from PWC Survey
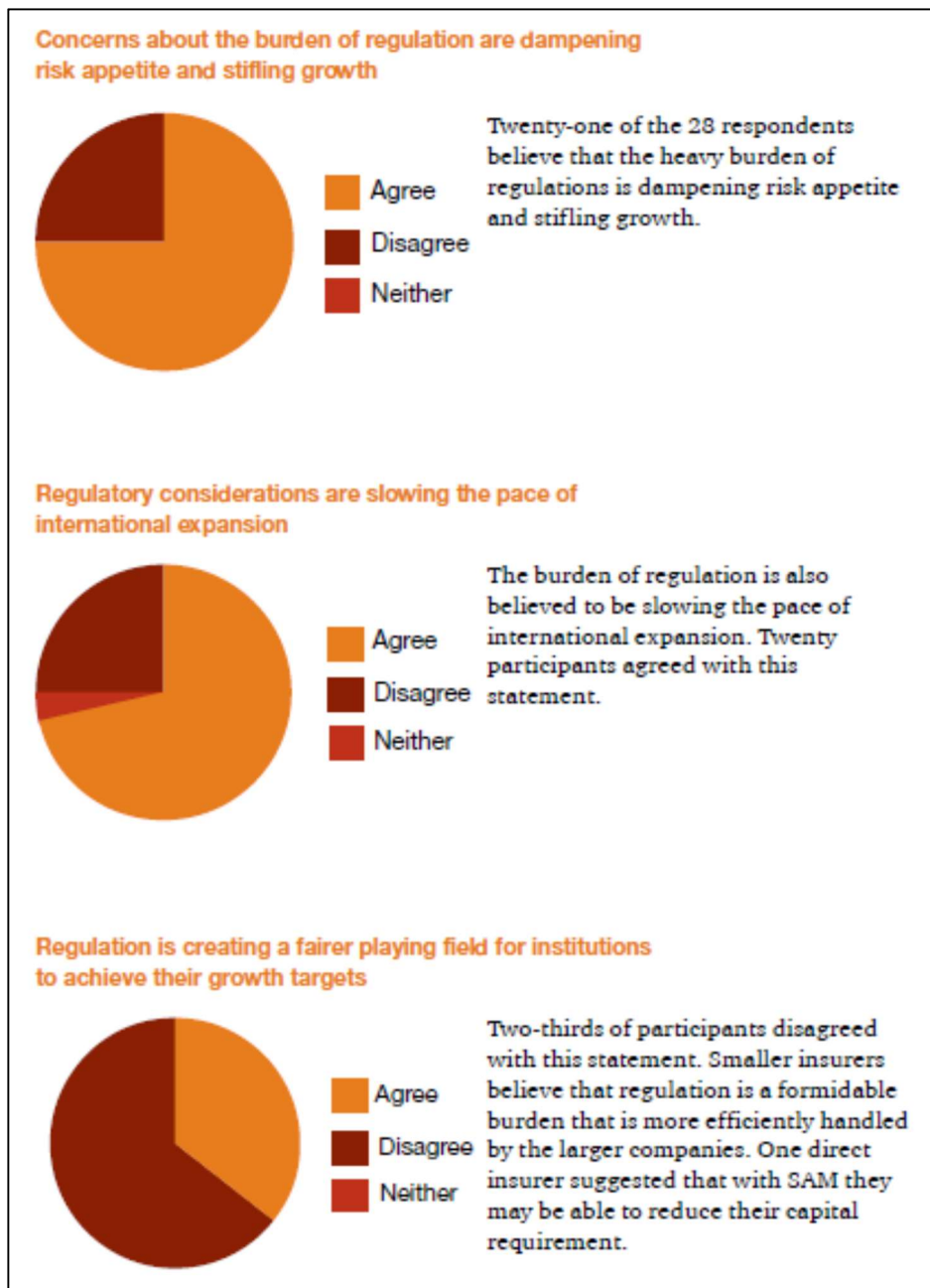
Source: (Metcalfe, 2012)

The majority of participants felt that regulation was constraining risk appetite, stifling growth and slowing the pace of expansion internationally. Participants also felt that regulations were a formidable burden for the smaller insurers and generally felt that it did not necessarily create a fairer playing field in the industry (Metcalfe, 2012).

According to KPMG (2016), if the implementation of risk management regulation is treated as a compliance exercise, then there is a danger that it will add no value and result in a waste of money that could threaten the sustainability of the business.

The research topic covered in this study is relevant because companies have generally experienced that the implementation of risk management systems can add value to organisations (Farrell & Gallagher, 2015). According to Bromiley, McShane, Nair, and Rustambekov (2015), Regulators have been encouraging a new approach to risk management. Therefore, it is likely that there will be more risk related regulation being adopted world-wide. However, to date, studies have not been done to determine whether the implementation of risk management, which is driven through regulation, has been effective at adding value to businesses.

1.3. Purpose Statement

The purpose of the study was to understand whether the implementation of risk management regulations adds value to the different stakeholders in the business. This has not specifically been assessed in literature to date.

The research is important because the costs of implementing risk management can be quite material and therefore value must be derived to justify the costs (Farrell & Gallagher, 2015). However, according to Parker (2002) and a study done by Law, Lau, Kerrigan, and Ekstrom (2014), government regulation may not always be effective at achieving its intended purpose and may result in unintended consequences.

A number of studies have been undertaken to determine the value added through risk management. These studies generally attempted to segregate a dataset of businesses into those that had implemented risk management compared to businesses that had not implemented risk management. In contrast, this study does not segregate the dataset in this way. This is a longitudinal study which compares the financial results of companies at two different points in time – before compared to after the implementation of risk management.

The journal sources to date discussed the effectiveness of risk management in a business context, but did not specifically assess the effectiveness of risk management, if implemented for the purpose of regulatory compliance. In addition, previous studies did not consider the impact of the implementation of risk management on the different key stakeholders of the business.

The need for this research had been identified in a number of recent studies, including the following:

- A study by Beasley, Branson, and Pagach (2015) indicated that research capturing information about the length of time taken for risk management to be implemented, may give more insights into how time and experience affect the value derived from risk management;
- A study by Bromiley, McShane, Nair, and Rustambekov (2015) indicated the need for more studies in the field of risk management to demonstrate the consistent benefits of risk management;
- According to Farrell and Gallagher (2015), self-reporting in the field of risk management is subject to bias and therefore they recommended more studies to provide independent measures of risk management.

This research will contribute to the much-needed additional research into the benefits of risk management. As this study is quantitative in nature, using industry data, it will provide an independent measure for the value added from the implementation of risk management. There are a number of new dimensions introduced in this research that has not been seen in other studies to date:

- This study incorporates a <u>time</u> dimension, where financial results are compared at two different points in time, this has not been seen in other research to date;
- Introducing the element of risk management driven through <u>regulation</u> has also not been seen in research to date;
- Finally, assessing the impact of risk management regulation on different <u>stakeholders</u> has not yet been covered by existing research.

1.4.   Scope of the Research

In 2009, the process of introducing risk management regulations in the South African insurance industry began. Prior to the start of the process, risk management in the South African insurance sector had been relatively immature. In fact, a few years into the implementation, in 2012, a self-assessment was conducted, and almost half the insurance industry rated their risk management capabilities as either weak or needing improvement. Therefore, this presented an opportunity to use the South African insurance industry as an example to gain an understanding of what value could be added by risk management, starting from a relatively immature state and being driven through regulation.

The population for the study comprised the full list of short-term insurance companies in South Africa. The insurance industry specifically was chosen as risk-based regulations were recently adopted by the insurance industry in South Africa. Short-term insurance companies were specifically chosen as their insurance contracts are short-term in nature and the business model is more flexible compared to long-term insurance contracts. Therefore, any changes or improvements to the risk environment may be seen quicker in short-term insurance companies compared to long-term insurance companies.

1.5. Document Scope

The document will be structured as follows:

- In Chapter 1 the research question is introduced, along with the context of the research, the research problem and the research objective;
- Chapter 2 is the literature review which highlights pertinent issues found in literature relating to the research question;
- Chapter 3 defines the hypotheses used to answer the research question;
- In Chapter 4 the research methodology is outlined and motivated;
- The results of the statistical testing are presented in Chapter 5;
- In Chapter 6, the learnings from the literature review are considered in conjunction with the results of the statistical tests to determine the key findings from the study;
- Chapter 7 concludes the research by highlighting the main findings, discusses the implications for management, notes the limitations of the research and makes recommendations for further research.

A summary of each of these chapters follows.

1.5.1. Literature Review

A wide range of theories relating to regulation, risk management and stakeholders will be discussed in the literature review chapter.

The aim of the literature review was to understand the purpose of regulation, the importance of risk management, how investments in risk management should add value, and finally the impact of risk management regulations to the key stakeholders of the business.

The literature review was structured into three sections as follows:

- The primary aspects the study had to answer were:

    - Why is regulation necessary?
    - Why is risk management important?
    - Investing in risk management to add value.

- The approach to risk management in the South African insurance industry and its relevance to this study will then be discussed;

- The final section of the literature review discusses the key stakeholders in the insurance industry that will be impacted by the risk management regulations. Their expectations with respect to the insurance company will also be discussed.

The aim of the literature review was to understand the purpose of regulation, the importance of risk management, how investments in risk management should add value, and finally the impact of risk management regulations to the key stakeholders of the business.

The purpose of regulation as discussed was to promote social and economic good (Parker & Nielsen, 2011) and level the playing field between the strong and the weak (Braithwaite & Drahos, 2000). However, according to Parker, 2002) and a study done by Law, Lau, Kerrigan, and Ekstrom (2014), government regulations may not always be as effective at achieving their intended purpose and may result in unintended consequences.

Some research showed that the implementation of risk management had significant positive impacts on businesses, while other research showed that the opposite holds true, as discussed in the literature review. However, Farrell and Gallagher (2015) highlighted that the costs of implementing risk management was material and therefore value must be derived to justify the

For the purposes of this study, the key stakeholder groups relevant to the insurance industry in South Africa that were impacted by the risk management regulations had been defined as follows:

6

- Management;
- Shareholders;
- Customers;
- Regulator.

The value drivers and expectations of each stakeholder was researched to determine a single key expectation for each stakeholder. A research hypothesis was then derived for each stakeholder, in relation to their key expectation.

1.5.2. Research Hypotheses

Four hypotheses were defined, each relating to one of the four key stakeholders identified for the insurance industry, as shown below:
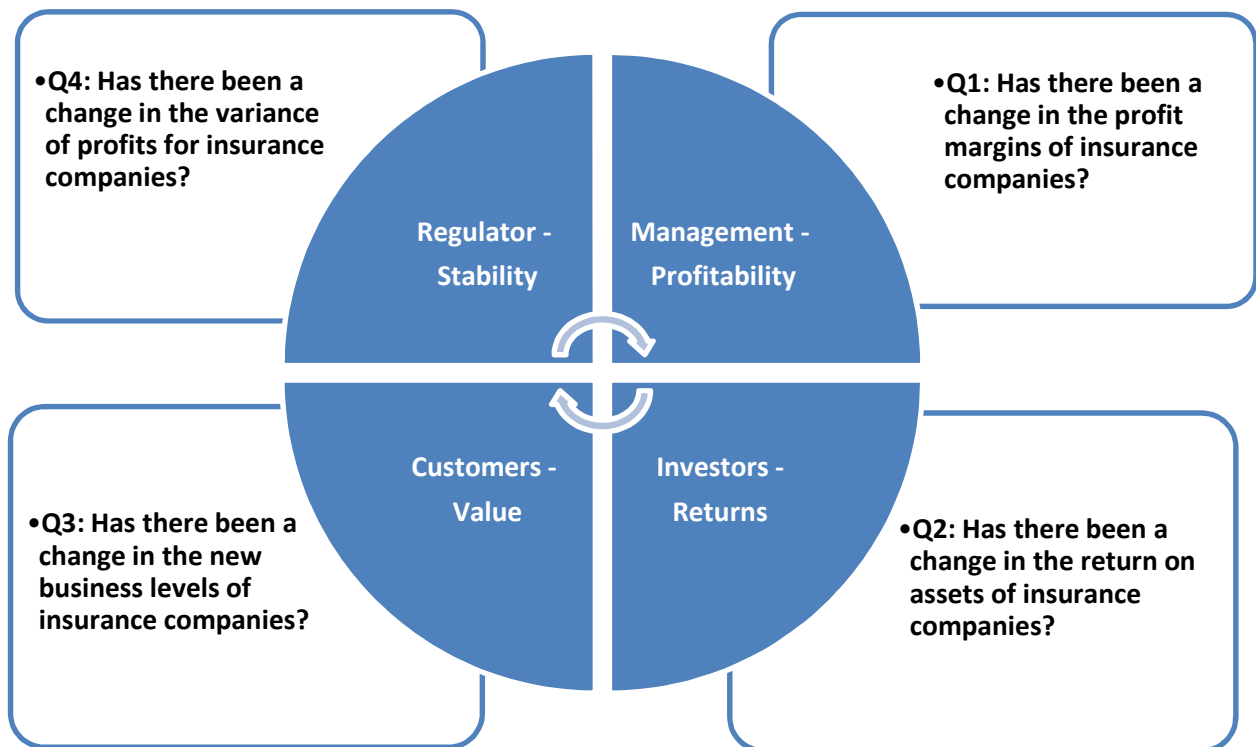

Figure 2: Key Stakeholders, their expectations and the related research hypotheses

Source: Own Research

1.5.3. Research Methodology

The financial results of companies before and after the implementation of risk management regulations were compared to ascertain whether the implementation of risk management driven through regulation had been effective in adding value to the key stakeholders in the business.

The previous studies from the literature review showed that the authors first had to make an assessment as to whether or not risk management was implemented in each business, and the extent of such implementation. Tests were then conducted to compare the value of businesses that had implemented risk management to the value of businesses that had not implemented risk management.

The research methodology adopted in this paper was unique in that the researcher already knew that risk management had been adopted by all companies in this sector and this allowed the researcher to conduct a longitudinal test of the short-term insurance industry to determine whether or not there had been any significant difference comparing certain variables before and after risk management was implemented.

Quantitative data was used to give an objective view of the financial impact on insurance companies resulting from the risk management regulations.

Data was available for two related samples – financial information of insurance companies before compared to after the implementation of risk management regulation. For this purpose, a test of differences was most relevant, and the paired t-test was used to compare differences in the means of the matched-pairs samples.

There were certain limitations to using a quantitative secondary data set (as explained later in Chapter 4); however, these were not felt to be material. The results of the analyses were expected to be reliable.

1.5.4. Results and Discussion

Chapters 5 and 6 contain the results of the statistical testing and provides a discussion of the results.

The results of statistical tests show that there was no significant change to the chosen financial results of companies before compared to after risk management regulations were implemented. This implies that the short-term insurance industry incurred costs for compliance,

but did not necessarily see any real value add in terms of improved or enhanced financial results.

The results of the hypotheses testing, combined with the key learnings from the literature review, provided key insights which are summarised below.

It seems that risk management had been implemented as a symbolic gesture without substantive intent to meet the requirements of the Regulator, but not necessarily adding value to the various stakeholders of the business. This is aligned with institutional theory.

In addition to not providing added value, the inappropriate implementation of risk management may have unintended negative consequences from the high costs incurred:

- To employees and management in terms of job security and possibly compensation;
- To investors in terms of the attractiveness of the insurance industry;
- To customers in terms higher premiums resulting in lower sales of products that could offer them financial protection against unforeseen accidents and incidents; and
- To the Regulator in terms of reduced sustainability and stability of the industry.

These results and conclusions are further discussed in Chapters 5 and 6.

2. Literature Review

2.1. Introduction

The purpose of this study was to understand the value added to stakeholders through the implementation of risk management that had been driven through regulation.

A wide range of theory relating to regulation, risk management and stakeholders will be discussed in this chapter.

The aim of the literature review is to understand the purpose of regulation, the importance of risk management, how investments in risk management should add value, and finally the impact of risk management regulations to the key stakeholders of the business.

The literature review will be structured into three sections (Purpose, Approach and Impact) as follows:

- It was important to understand the primary questions that were part of the purpose of the study:

    o   Why is regulation necessary?
    o   Why is risk management important?
    o   Investing in risk management to add value?

- The approach to risk management in the South African insurance industry and its relevance to this study;

- The final section of the literature review discusses the key stakeholders in the insurance industry that will be impacted by the risk management regulations. Their expectations with respect to the insurance company will also be discussed.

2.2. Why Regulate

This section of the literature review focuses on the purpose and effectiveness of regulations, to answer the question "why regulate".

2.2.1. The purpose of regulation

According to Parker and Nielsen (2011), governments and society use regulation to promote social and economic good. Braithwaite and Drahos (2000) stated that the purpose of regulation is to level the playing field in terms of access to knowledge between the strong and weak, and the rich and poor.

According to Norman (2012), regulations arise as a result of the following factors:

- Negative externalities resulting in unexpected costs to third parties, for example, pollution, dangerous products, and so forth;
- Asymmetric information, where one party is at an advantage because they have more information than the other party;
- Market power, where a few dominant players can extract unfair gains.

2.2.2. Types of regulation and effectiveness

Steurer (2013) provided a more detailed view of the different types of regulation:

Government Regulation	• Regulation is through laws and policies with potential sanctions and penalties for non-compliance
Self-Regulation	• Businesses and industries are self-regulated through standards, codes of conduct and voluntary agreements

Figure 3: Types of Regulation
Source: (Steurer, 2013)

It was suggested that in dealing with irresponsible business practices, government regulation may be useful. However, in other cases self-regulation may work better (Norman, 2012).

According to Parker (2002), the complexity and inflexibility of regulations may result in costs to the business that unjustifiably decrease competitiveness. A proposal was put forward by Parker, that self-regulation could be used to steer business towards public goals without negatively impacting on the competitiveness and profitability of the business.

A study done in the US (Law, Lau, Kerrigan, & Ekstrom, 2014) found that the amount and complexity of regulations may be detrimental to business. Further, regulations from different entities can overlap and there may be inconsistencies, which are difficult to manage. These vast and overlapping regulations have a major impact on smaller businesses that may not have the resources or expertise to properly understand and comply with the conflicting regulations.

While there is a clear purpose for regulation, government regulations may not always be effective in achieving that purpose. Regulations can also result in other unintended consequences.

In the context of this research, government regulations were used to enforce improved risk management in the insurance industry in South Africa.

2.2.3. Compliance with regulation

In order for regulations to be effective, they have to be complied with in the first place. The following key themes were considered by Parker and Nielsen (2011) when explaining compliance with regulations.

- Motivation to comply can either be fear of punishment, reputational damage should they be seen to be non-compliant or a sense of duty to comply with regulations;
- Different businesses have different capacities in their response to regulation which is impacted by the size of a business, the internal support for compliance initiatives and a history of engagement with external parties;
- Regulatory enforcement strategies and styles have been shown to have an impact on the behaviour of businesses with regard to regulation;
- The social and economic environment also has an impact on whether regulations are complied with.

In the context of this study, there was significant effort by insurance companies in South Africa to ensure that they were compliant with regulations (Financial Services Board, 2017). This may have been as a result of a combination of the factors listed above.

2.2.4. The three theories

According to Beasley, Branson, and Pagach (2015), there are three theories that could describe the way in which risk management is implemented in a business:

- The first theory – Institutional theory, suggests that risk implementation occurs as a result of external requirements and is adopted merely to align with generally accepted practice. Organisations may feel pressured to implement the regulations to meet external expectations. In this instance, risk implementation will meet minimum compliance levels, will show minimum levels of maturity and provide limited value to the business. In this sense, risk management will be adopted as a symbolic gesture without substantive intent;
- The second theory – Agency theory, suggests that risk maturity occurs in order to better manage risks resulting from the agency relationship – a relationship, which exists between the shareholder and management, referring to the ownership of the business and the day-to-day management of the business;
- The third theory – Resource Dependence Theory, suggests that risk implementation should provide strategic value to the business and should assist boards to be more

13

proactive in detecting, understanding and managing risks that could prevent the business from meeting strategic objectives (Beasley, Branson, & Pagach, 2015).

In order for risk management to add value to a business, if compared with the costs of implementation, then a business should adopt risk management for reasons aligned with the resource dependency theory.

It would be important to understand whether risk implementation in the South African insurance industry aligns with institutional theory, agency theory or resource dependence theory and therefore, how effective regulation is in ensuring effective risk management in businesses.

2.3. The Importance of Risk Management

This section of the literature review focuses on the purpose and importance of risk management, to understand why it is necessary for businesses to implement risk management.

A number of studies have shown that risk management is effective at adding value to businesses. A study was conducted by Hoyt and Liebenberg (2015), which provided persuasive evidence that risk management can be used to add value to insurance companies.

A study undertaken by Baxter, Bedard, Hoitash, and Yezegel (2013) found that higher risk ratings result in higher accounting performance, there is positive market reaction to signs of enhanced management control and a stronger response to earnings surprises.

However, it is not known whether companies that are forced to implement risk management systems in order to comply with regulations, derive similar value from the risk management systems. Research specific to this area was not located.

Some authors noted that the comprehensive implementation of a management framework will be subject to material costs (Farrell & Gallagher, 2015). These costs could be monetary or in terms of other opportunities sacrificed. The costs versus benefits should be assessed to ensure that true and meaningful value is added and that the implementation of the framework is justified.

2.4. Investing to Add Value

This section of the literature review considers previous studies that have measured the value added to businesses from the adoption of risk management.

2.4.1. Evidence of value added from risk management adoption

A study was carried out to measure the extent of risk implementation amongst US insurers (Hoyt & Liebenberg, 2011). At that time, a number of US insurers had implemented risk management programmes, while others had not. Among the businesses that were deemed to have implemented risk management programmes, it was found that there was a positive increase in the value of the business by roughly 20%.

According to a later study done by these authors, focusing on publicly traded US companies, there was a strong positive correlation between corporate adoptions of risk management and measures of value and effective management (Hoyt & Liebenberg, 2015). The study identified 23 insurers out of 117 that had adopted risk management programmes between 1998 and 2005, and these insurers showed a 20% business value enhancement. At that stage, only a few insurers had adopted risk management as it was not uniformly regulated. In this instance, risk management had been implemented as best practice and not necessarily to comply with regulation.

Another study, conducted by Farrell and Gallagher (2015), found that businesses with mature levels of risk management exhibit a higher business value to the magnitude of 25%.

Other research (Beasley, Branson, & Pagach, 2015) analysed the risk maturity of businesses in the financial services industry compared to the non-financial services industry. Businesses in the financial services industry were considered to be more highly regulated than businesses in the non-financial services industry. However, a significant difference was observed, with the non-financial services businesses demonstrating a higher risk maturity compared to the financial services businesses. This may indicate that businesses that are not forced to implement risk management through regulations, reach a higher level of risk maturity and derive more value from their risk initiatives.

Beasley, Branson, and Pagach (2015) suggested that boards of non-financial services businesses had moved past the implementation of risk management merely for the sake of implementation, to an implementation that actively engages in risk management oversight. This aligns more with agency theory instead of institutional theory. However, the study also showed that the boards of financial services businesses tended to implement risk management for the sake of compliance, in alignment with institutional theory.

It is for this reason that the insurance industry, part of the financial services industry, which is more highly regulated from a risk perspective, was chosen for this study. This highly regulated industry allows us to assess the value added from risk management driven through regulation.

2.4.2. When risk management has not added value

Bromiley, McShane, Nair, and Rustambekov (2015) noted that a number of external bodies including rating agencies, legislative bodies, regulators, stock exchanges, and so forth, had encouraged businesses to adopt risk management. As a result, certain leading financial services businesses took a proactive approach to risk management adoption. However, the financial crisis of 2008 cast doubt about the effectiveness of risk management adopted by leading financial services businesses.

The study by Bromiley, McShane, Nair, and Rustambekov (2015) further noted that the risk management field had taken a naive view of organisational change, with the literature assuming that appropriate incentives or objectives would result in appropriate risk practices. However, management research recognised that organisational remedies, if not applied appropriately, can worsen situations that they were supposed to have fixed. An example of this was the 2008 financial crisis. In this instance, risk management may have been part of the problem. As a result, Bromiley, McShane, Nair, and Rustambekov (2015) concluded that

"simple-minded attempts at organisational change often result in complex, unforeseen dynamics".

Lin, Wen, and Yu (2012) found that risk management lowers insurers' value and return on assets. They also observed that stock markets reacted negatively to risk implementation within businesses. This may indicate that investors were unable to decipher the value of risk management adoption and viewed it as a costly programme, with the costs difficult to justify. The study concluded that a poorly implemented risk management programme is detrimental to the business.

A study was also conducted by McShane, Nair, and Rustambekov (2011), which investigated the relationship between risk management and business value. Standard & Poor (S&P) had rated businesses into one of five categories to describe the maturity of risk management in the business – weak, adequate, adequate with a positive trend, strong and excellent. The results of the study showed that business value increased as a business moved from the "weak" category to the "adequate with a positive trend" category, but did not increase further afterwards. This indicates that a business with a strong or excellent rating in terms of risk management does not increase their value further. A key question would thus be, whether a strong risk culture constrains business growth instead of enabling it.

Other authors (Pagach & Warr, 2010) aimed to understand the effect of risk management adoption on a business's long-term performance. The results of their study showed that generally, there was little impact from risk management adoption on a wide range of business variables. This raises the question of whether risk management actually is achieving its stated goal of value creation.

2.5. The Approach

This section of the literature review discusses the approach taken by the Regulator in introducing risk management regulations to the insurance industry in South Africa.
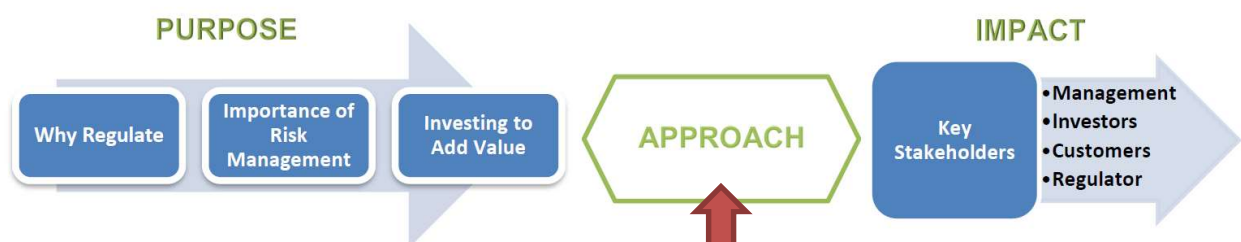
2.5.1. A focus on the insurance industry in South Africa and timelines

The project to introduce risk management regulations to insurance companies in South Africa started in 2009 (Financial Services Board, 2017). Since then, insurance companies have put in tremendous effort in improving the risk management within their businesses. In 2014, the Regulator released regulations dealing with governance and risk management issues. This regulation was shared and discussed with the industry before it was released; and the majority of the work in the risk management space was done by the industry before the regulation was released. It was intended that insurance companies would be fully compliant with the regulation by 1 April 2015.

In June 2012, the Financial Services Board conducted a survey of all insurance companies in South Africa. The purpose of the survey was to determine the extent of work done by the industry to prepare themselves for the risk management regulations and assess the readiness of insurance companies for the new risk management regulations (Financial Services Board, 2012).

They asked insurance companies to assess themselves in terms of their overall risk management in the business (Financial Services Board, 2015). This survey was then repeated in February 2014.
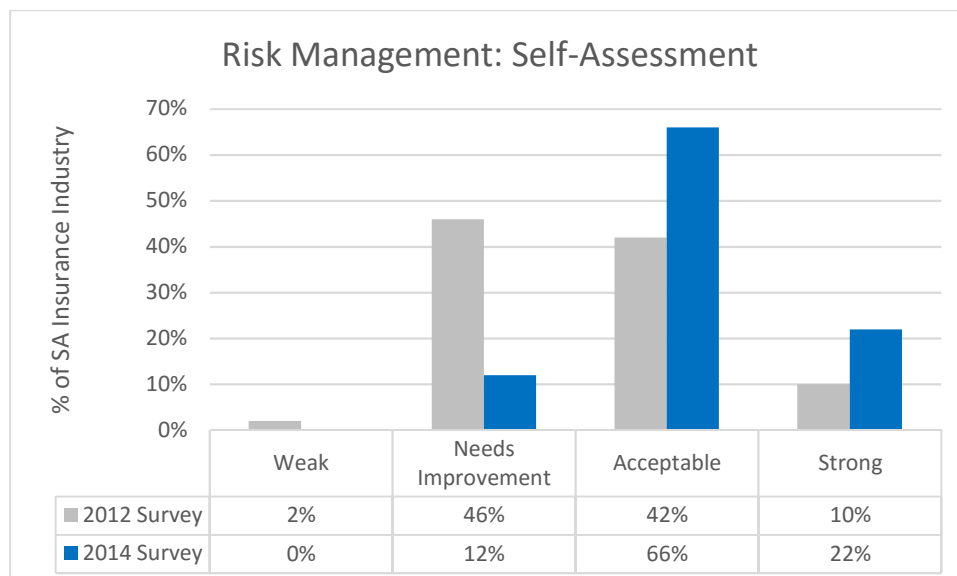
The results from both surveys were as follows:

Figure 4: Self-assessment of risk management capabilities of the SA insurance industry
Source: Own research, adapted from (Financial Services Board, 2015)

This figure shows that there was a significant improvement in the industry in terms of risk management over the two years from 2012 to 2014. The number of companies that rated themselves as "Weak" or "Needs Improvement" reduced from 48% in 2012 down to 12% in 2014. In addition, the number of companies that rated themselves as "Acceptable" or "Strong" improved significantly from 52% in 2012 to 88% in 2014. Therefore, while in 2012, just under half the insurance companies rated themselves as "Weak" or "Needs Improvement", by 2014, the majority of the insurance companies rated themselves as either "Acceptable" or "Strong". This indicates that there had been a significant improvement in the insurance industry in terms of risk management implementation between 2012 and 2014.

This result formed the basis for this study, where the researcher aimed to understand what actual improvements are present in the industry as a result of the implementation of risk management.

Choosing a single industry to focus on provides a homogenous sample of businesses to compare, which should also produce more valid results (Grace, Leverty, Phillips, & Shimpi, 2014). Hence, the insurance industry in South Africa was chosen.

Table 1: Timeline of events related to the introduction of risk management regulations

Compare the state of the insurance industry before and after the surveys were done

2009	2010	2011	2012	2013	2014	2015
The journey towards risk-based regulation begins			Industry survey is conducted by the regulator - almost half of the insurers in SA rate their risk management as "Needs Improvement"		Follow up industry survey is conducted by the regulator - majority of insurers rate their risk management as either "Adequate" or "Strong" Risk management regulations released and the regulator expects the industry to be fully compliant by 1 April 2015	

Source: Own research, adapted from (Financial Services Board, 2017)

2.5.2. The elements of risk management specified in the SA regulation

Many different studies had been conducted to understand which elements in a risk management programme add the most value. This will be compared to the SA regulations, to determine whether these key elements were included in the regulations.

A regulatory regime that does not include the key elements deemed to add value in a risk management programme may not be as effective and may give a false sense of security in terms of risk management in the business.

The SA regulations released in 2014 cover the following aspects from a risk management perspective for the insurance industry (Financial Services Board, 2014):

- **The Board:** The Board is responsible for effective risk management. It must consist of an adequate number and mix of people to ensure that there are sufficient skills, knowledge and expertise related to risk management. The Board must provide oversight over the design and implementation of risk management in the business and the relevant risk management policies. The Board must have appropriate policies and procedures in place to oversee that management promote a sound risk management culture and that management provide the Board with appropriate information to enable it to monitor and review the risk exposures of the business;

- **The Risk Committee:** Insurance companies must establish a risk committee, which is a sub-committee of the Board and it must have an independent chairperson. The risk committee must perform these functions:
  o Evaluation and enhancement of the adequacy and effectiveness of the risk management system;
  o Identification, monitoring, measurement, communication and reporting of risks;
  o Establishment of an independent risk management function within the business;

- **The Risk Management System:** An effective risk management system must be established and maintained. The risk management system should consist of the strategies, policies and procedures necessary to identify, assess, monitor, manage and report on current and emerging risks. The risk management system must:
  o Support the Board with its responsibilities in terms of risk management;
  o Be embedded into the operations and structures of the business;
  o Be reviewed regularly to ensure that it remains effective;

- Be approved by the Board;

- **The Risk Management Policy:** Insurers must develop and regularly review a risk management policy, which includes the following:
  - Definition and categorisation of all risks in the business;
  - Approach used by the insurer in identifying, assessing, monitoring, measuring, managing and reporting on all risks;
  - How risk management responsibilities will be allocated across the business;

- **Other Policies:** At least the following additional policies should be in place: Fit and Proper, Remuneration, Asset-Liability Management, Investment, Underwriting, Reinsurance, Liquidity Risk, Concentration Risk Management, Operational Risk Management and Insurance Fraud Risk Management;

- **Risk Management Control Function:** The risk management control function should be structured so that it has the appropriate authority, resources and expertise. It should also have direct access to the Board, staff and all necessary information. It must provide for regular monitoring of controls to serve as an independent check in the business, provide an objective perspective on strategies and other issues, and monitor implementation of actions. The function must be regularly reviewed by internal audit and the Board. A Head of the Risk Management Control Function should be appointed, and the selection of the person must be approved by the Board. This role may not be outsourced;

- **Risk Management Function:** The risk management function must have appropriate mechanisms and activities in place to:
  - Assist the Board and management to meet their risk-related responsibilities;
  - Identify, assess, aggregate, monitor and manage risks effectively;
  - Determine the risk profile of the business;
  - Assess the internal and external environment to timeously identify potential future risks;
  - Consider risks arising from remuneration or incentive structures;
  - Conduct stress testing and scenario analyses regularly;
  - Regularly assess the effectiveness of the risk management function;
  - Regularly report to management and the Board on the risk profile, risk exposures and mitigation actions and any material changes to the risk profile, risk management system or the risk management function.

2.5.3. The elements of risk management that provide greatest value-added benefits

A study conducted by Beasley, Branson, and Pagach (2015) found that organisations with greater risk maturity are significantly more likely to be associated with the following activities in respect of the Board:

- The Board exhibits more formal and explicit Board engagement in risk oversight;
- The Board has formally assigned risk management responsibilities to a committee of the Board;
- The Board receives a formal report at least annually from management detailing the top risk exposures;
- The Board has defined a risk appetite for risks in the context of strategic planning.

The study also identified further areas that were associated with greater risk management maturity in respect of management's internal risk management processes:

- A number of explicit internal risk management processes have been designed and implemented;
- A formal risk management policy is in place;
- Risk management training has been provided for senior executives and key business unit leaders;
- There is a management-level risk committee in place, consisting of senior executives;
- The risk committee provides guidance to businesses to help them assess the impact of a risk event;
- There are more frequent processes in place to update inventories of key risks.

The findings from this study (Beasley, Branson, & Pagach, 2015) suggested that explicit processes that engage the Board and management in risk oversight leadership contribute to the overall risk management maturity of businesses. The authors also found that leadership, culture and governance are important factors.

Grace, Leverty, Phillips, and Shimpi (2014) investigated, which aspects of risk management added value to business performance. The results of the study were as follows:

- A simple economic capital model (ECM) is in place – The study found that there was no added value in the short run to investing in a more advanced or sophisticated economic capital model;

- A dedicated risk manager who reports to the Board or CEO increases efficiency and ROA;
- Insurers with a dedicated entity responsible for business-wide risk management seem to experience a higher level of efficiency and returns on assets;
- Investing in market value-based financial metrics;
- Incorporating risk management into incentive compensation;
- A business that is confident that risks are reflected in their business decisions is related to greater efficiency and returns on assets.

A study conducted by Farrell and Gallagher (2015) found that businesses with mature levels of risk management exhibit a higher business value to the magnitude of 25%. This was further analysed. It was found that the most important aspects from a risk management perspective are:

- The level of top–down executive engagement;
- The cascade of risk culture throughout the business;
- Successful integration of the risk process into strategic activities and daily practices;
- The following individual attributes were also important:
  - Ongoing performance management;
  - Process management;
  - A corporate approach to risk management;
  - Root cause discipline;
  - The efficacy of uncovering risks.

Another study (Baxter, Bedard, Hoitash, & Yezegel, 2013) found that higher risk management ratings are associated with the following:

- Greater complexity;
- Less resource constraint;
- Better corporate governance;
- High quality controls;
- Integration of risk management efforts across the business.

In summary, taking findings from the various studies mentioned in this section, the following attributes are important factors in developing risk management programmes:

- Board: Formal engagement, explicit risk oversight and a Board committee assigned to risk management, regular risk reports to the Board, and a formal risk appetite has been defined in the context of strategic planning;
- Management: Explicit internal risk management processes, frequent processes to update inventories of key risks, formal risk management policy, risk management training and a management-level risk committee that provides explicit guidance to business unit leaders to help them assess the impact of a risk event;
- A simple economic capital model (ECM) is in place;
- A dedicated risk manager who reports to the Board or CEO;
- Incorporating risk management into incentive compensation;
- The cascade of risk culture throughout the business;
- Successful integration of the risk process into strategic activities and daily practices;
- The following individual attributes:
  - Ongoing performance management;
  - Process management;
  - A corporate approach to risk management;
  - Root cause discipline;
  - The efficacy of uncovering risks;
- Fewer resource constraints;
- High quality controls;
- Integration of risk management efforts across the business.

2.5.4. The elements of risk management that provide greatest value-added benefits compared to SA risk regulations

The factors that were specifically defined in the SA regulations were compared to the best practice list of elements in the previous section, to understand whether any key elements relating to effective risk implementation were omitted in the regulatory regime.

Table 2: Factors specifically defined in the SA regulations compared to best practice

	Best Practice Risk Management Elements that Add the Greatest Value	Risk Management Elements Covered in the SA Regulation
1	Board engagement	Covered in the SA regulation under the section relating to the Board and the Risk Committee
2	Management processes to incorporate risk management	Covered in the SA regulation under the section relating to the Risk Management System and the Risk Management Function

3	Simple economic capital model	Covered in the SA regulation under the section relating to the Risk Management Function which requires management to determine the risk profile and risk exposures using a model
4	Dedicated risk manager	Covered in the SA regulation under the section relating to the Risk Management Control Function
5	Risk management incorporated into incentive compensation	Covered in the SA regulation under the section relating to the Risk Management Function and the Remuneration Policy
6	Cascading of a risk culture	Covered in the SA regulation under the section relating to the Board
7	Integration of risk management into strategic activities and daily practices	Covered in the SA regulation under the section relating to the Risk Management System and the Risk Management Function
8	Ongoing performance and process management	Covered in the SA regulation under the section relating to the Risk Management Function
9	Reduced resource constraints	Covered in the SA regulation under the section relating to the Risk Management Control Function
10	High quality controls	Covered in the SA regulation under the section relating to the Risk Management Control Function

Source: Own research

All of the best practice risk management elements discussed above have been incorporated into the SA risk management regulations. However, the way these elements are implemented in practice, will determine whether or not they are effective in adding value for the business.

2.6. The Key Stakeholders

In this section, the key stakeholders were defined using stakeholder theory, which is discussed in section 2.6.1 below. The key stakeholders in the insurance industry who will be impacted by the risk management regulations were then determined. This is followed by a discussion of the key expectations of each stakeholder.

2.6.1. Stakeholder Theory

According to Freeman (2001), corporate stakeholders are "groups and individuals who benefit from or are harmed by, and whose rights are violated or respected by, corporate actions". Freeman went on to define six key categories of stakeholders in the modern corporation, and articulated what their stake within the corporation was and their expectations with respect to the corporation (Freeman, 2001)

Figure 5: Key Stakeholder Categories and Stakeholder Expectations
Source: Own research, Adapted from (Freeman, 2001)

According to Freeman, 2001, this basic theory can be extended to include competitors and government, as shown below:
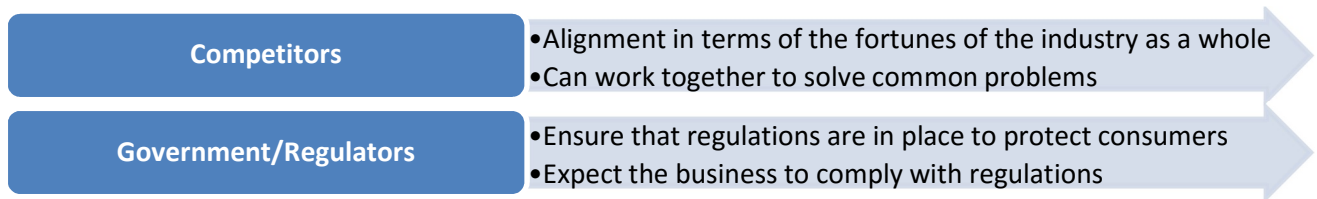
| Competitors | •Alignment in terms of the fortunes of the industry as a whole
•Can work together to solve common problems |
| Government/Regulators | •Ensure that regulations are in place to protect consumers
•Expect the business to comply with regulations |

Figure 6: Extended Stakeholder Categories and Stakeholder Expectations
Source: Own research, Adapted from (Freeman, 2001)

Different stakeholders have different needs that should be balanced by the management of the company. For example, owners would want higher financial returns, but customers want more money spent on R&D; employees want higher wages and better benefits, but the local community wants better infrastructure (Freeman, 2001).

Harrison, Bosse, and Phillips (2010) believed that businesses need to consider the needs of all stakeholders to achieve high performance. This article identified management, employees, customers, suppliers and owners as the key stakeholders. This is the same as the key stakeholders defined by Freeman (2001), with the exception that the local community had been excluded.

Harrison, Bosse, and Phillips (2010) suggested that each stakeholder will have different preferences. Understanding the factors that drive their preferences and the weighting that they place on each of these factors can allow the business to refine their strategies and tactics to increase the welfare for their stakeholders. For example, understanding how price-sensitive customers are, whether employees would prefer a salary increase or other benefits, and so forth.

Therefore, it is important for a business to understand who their key stakeholders are, and which factors are important to them.

2.6.2. The interests of different stakeholders

Business is about how the different stakeholders interact to create value and how their interests are traded off against each other (Freeman, 2010). The author also noted that one stakeholder should not get priority over the other stakeholders. It is important that all stakeholders' needs are balanced to ensure that the business can operate effectively over the long term.

Freeman (2010) identified two important interconnected ideas when thinking about stakeholder theory in the context of this research:

Figure 7: Interconnected ideas in stakeholder theory
Source: Own research, adapted from (Freeman, 2010)

This research document identifies the different stakeholders and attempts to understand their different needs. In the situation of the implementation of risk management regulation, we try to understand the impact on each of the key stakeholders in turn and then determine whether this has balanced the needs of the different stakeholders and whether it ensures that the business can operate effectively over the long term.

2.6.3. Key stakeholders in the insurance industry

According to Tantalo and Priem (2016), different stakeholder groups are interested in both economic (such as salaries, benefits, and so forth) and non-economic (such as work-life balance, type of work, and so forth) factors. Therefore, both economic and non-economic factors can be used to balance the needs of different stakeholders. Tantalo and Priem (2016) defined five key stakeholder groups, similar to the groups defined by Freeman (2001), with the exception that management and employees were combined. For each of these stakeholder groups, Tantalo and Priem (2016) determined a set of value drivers.
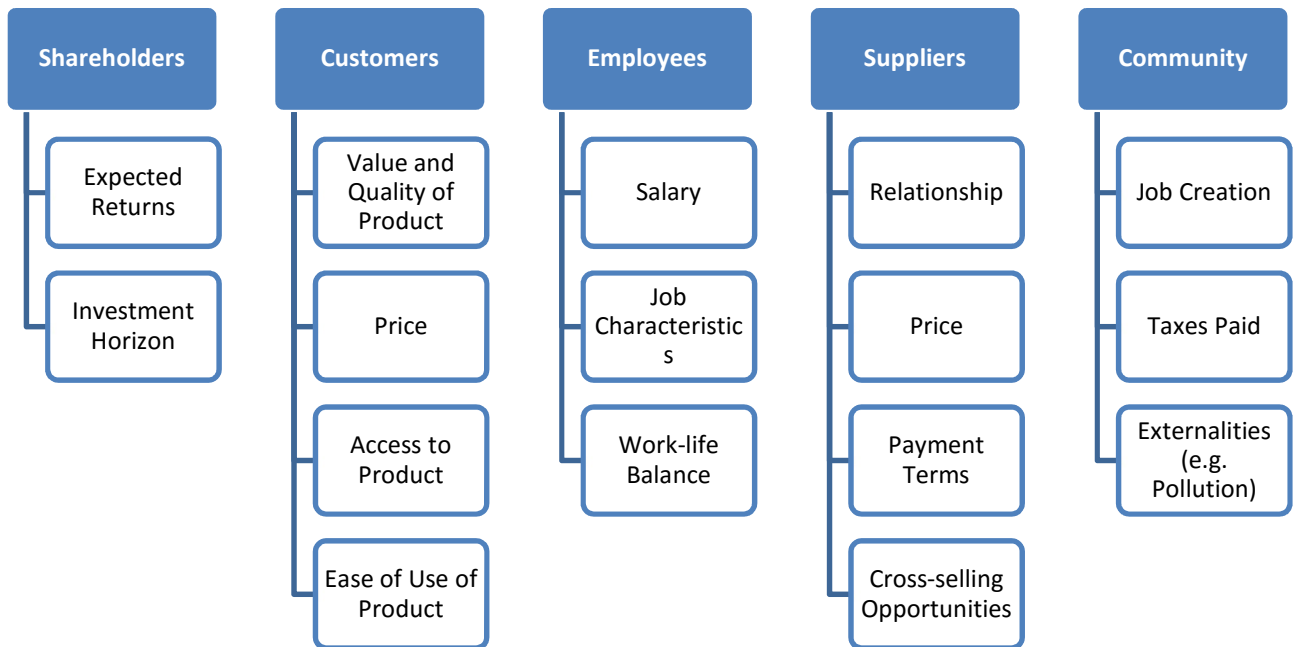
These value drivers are summarised below:

Shareholders	Customers	Employees	Suppliers	Community
Expected Returns	Value and Quality of Product	Salary	Relationship	Job Creation
Investment Horizon	Price	Job Characteristics	Price	Taxes Paid
	Access to Product	Work-life Balance	Payment Terms	Externalities (e.g. Pollution)
	Ease of Use of Product		Cross-selling Opportunities	

Figure 8: Key stakeholders and their value drivers
Source: Own research, adapted from (Tantalo & Priem, 2016)

According to Bridoux and Stoelhorst (2014), who did a study on the micro-foundations of stakeholder theory, primary stakeholders add value by either performing activities or providing resources. They identified four primary stakeholder groups – investors, employees, customers and suppliers. This is similar to Freeman (2001), except that management and employees were combined and the community excluded (Bridoux & Stoelhorst, 2014).

29

For the purposes of this study, the researcher took a similar approach to Bridoux and Stoelhorst (2014), and Tantalo and Priem (2016), grouping employees together with the management stakeholder group.

Freeman (2001) also included regulators and competitors as an extended set of stakeholders. For the purposes of this study, the "Regulator" stakeholder group is important to consider.

Similar to Bridoux and Stoelhorst (2014), the researcher excluded the community stakeholder group for the purposes of this study, but their needs were considered through the "Regulator" stakeholder group.

Further, in the context of the insurance industry, which provides a service and not a product, the researcher also excluded suppliers as a key stakeholder.

Therefore, for the purposes of this study, the key stakeholder groups were as follows:

- Management (which includes employees);
- Investors;
- Customers;
- Regulator.

The basic needs of employees within a business include training and compensation (Piening, Baluch, & Ridder, 2014). Employees also seek career opportunities and value feedback (Ok & Vandenberghe, 2016).

Investors expect returns pursuant with the amount of risk that they are exposed to (Lee, Rosenthal, Veld, & Ve, 2015).

Customers value choices and options. They demand products which meet or exceed their needs at the lowest price possible. In addition, there is an expectation for excellent quality and product performance (Pandya, 2014).

The main objectives of the regulator in introducing the risk management regulations to the insurance industry in SA is to provide better protection for policyholders and their beneficiaries as well as to improve the financial stability of the industry (Financial Services Board, 2017).

Considering the value drivers of each stakeholder group (Tantalo & Priem, 2016) as well as the expectations of each stakeholder group discussed above, the researcher defined the key interests of each stakeholder group in the insurance industry as follows:
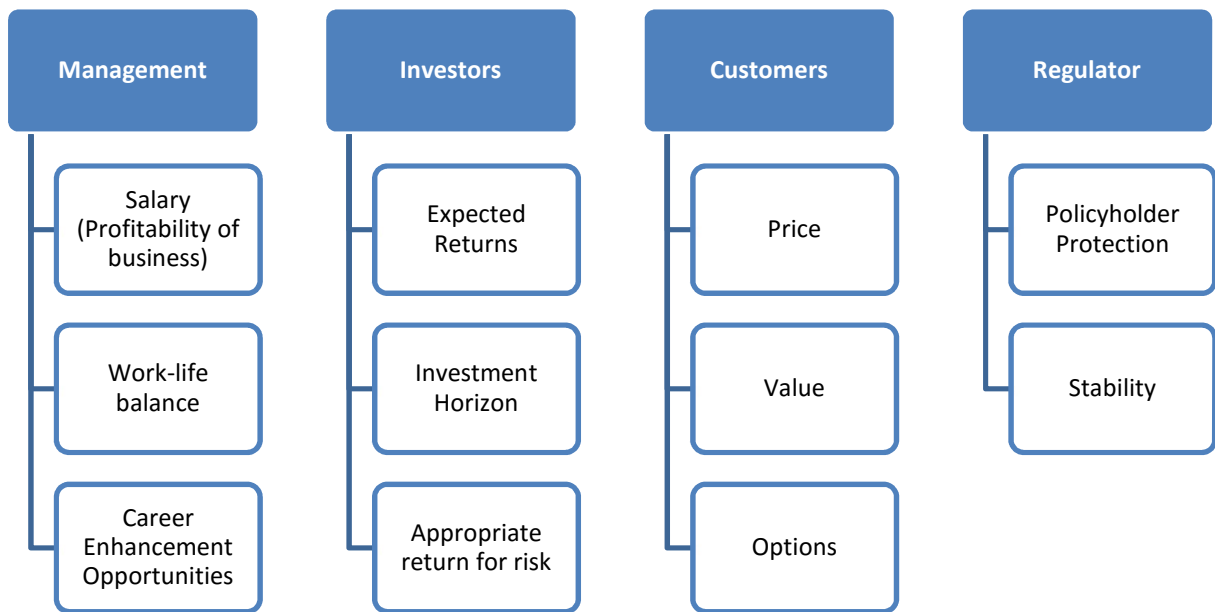
Figure 9: Key stakeholders and their key interests
Source: Own research

The researcher reviewed the key interests of each stakeholder group and derived one key expectation for each stakeholder group as follows:

- Management (including employees) – profitability was chosen as the key expectation
- Investors – expected returns was chosen as the key expectation
- Customers – value was chosen as the key expectation
- Regulator – stability was chosen as the key expectation

Key expectations were chosen with regard to available financial data that can be tested quantitatively as a proxy to understand whether expectations of the stakeholder group have been met.

2.6.4. Stakeholder attributes

According to Mitchell, Agle, and Wood (1997), stakeholders can be identified as those possessing one or more of the following three attributes in relation to the business:

- **Power** – A stakeholder group that is able to impose its will on the other in a relationship is considered to possess the attribute of power;
- **Legitimacy** – Stakeholder groups with a valid or legal claim on the business;
- **Urgency** – Relationships or claims that are both time sensitive and important; and therefore, require immediate action.

Mitchell, Agle, and Wood (1997) proposed that analysing the three attributes above provides a more comprehensive view of which group of stakeholders are important and what is important to these stakeholder groups. The study also noted that possession of the attributes is not static and changes over time and in different contexts.

These stakeholders can possess one or more of these three attributes (Mitchell, Agle, & Wood, 1997):
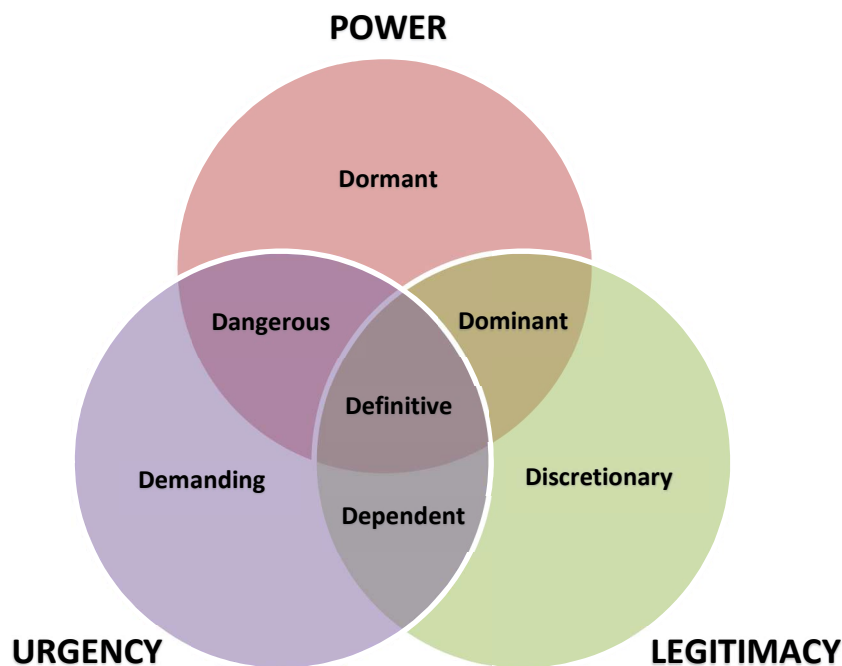

Figure 10: Stakeholder Attributes

Source: Own research, adapted from (Mitchell, Agle, & Wood, 1997):

The attributes were combined in the following way to create seven different types of stakeholders:

1. Dormant – Possess power, but because they do not have a legitimate relationship or an urgent claim, their power cannot be used, and they are therefore dormant stakeholders;
2. Discretionary – Possess the attribute of legitimacy, but have no power and no urgent claim on the business, therefore the business has discretion on whether or not to actively engage with these stakeholders;
3. Demanding – Stakeholders with urgent claims, but have no power or legitimacy over the business, they can be demanding to the business; however, they do not warrant any significant management attention;
4. Dominant – Stakeholders with both power and legitimacy have a valid claim on the business and the power to act on that claim; as such, they have a significant influence on the business and are considered to be dominant stakeholders;
5. Dependent – Stakeholders, who have urgent and legitimate claims on the business, but no power to act on it are considered dependent stakeholders, as they rely on other stakeholders with the relevant power to act on their will;
6. Dangerous – Stakeholders, who have urgency and power, but lack legitimacy may be categorised as dangerous stakeholders due to their illegitimacy and possibly unlawful behaviour;
7. Definitive – Stakeholder groups with all three attributes – power, legitimacy and urgency are considered to be definitive stakeholders. They are of high importance to a business and will be given priority.

According to Mitchell, Agle, and Wood (1997), the more attributes a stakeholder possesses, the more important that stakeholder is to the business. Stakeholders with only one attribute (dormant, discretionary and demanding stakeholders) are of lower importance; those with two attributes (dominant, dependent and dangerous stakeholders) are of moderate importance; while those with all three attributes (definitive stakeholders) are of high importance.

Using this framework, the four key stakeholder groups that had been defined for this study can be categorised as follows in the context of this study:
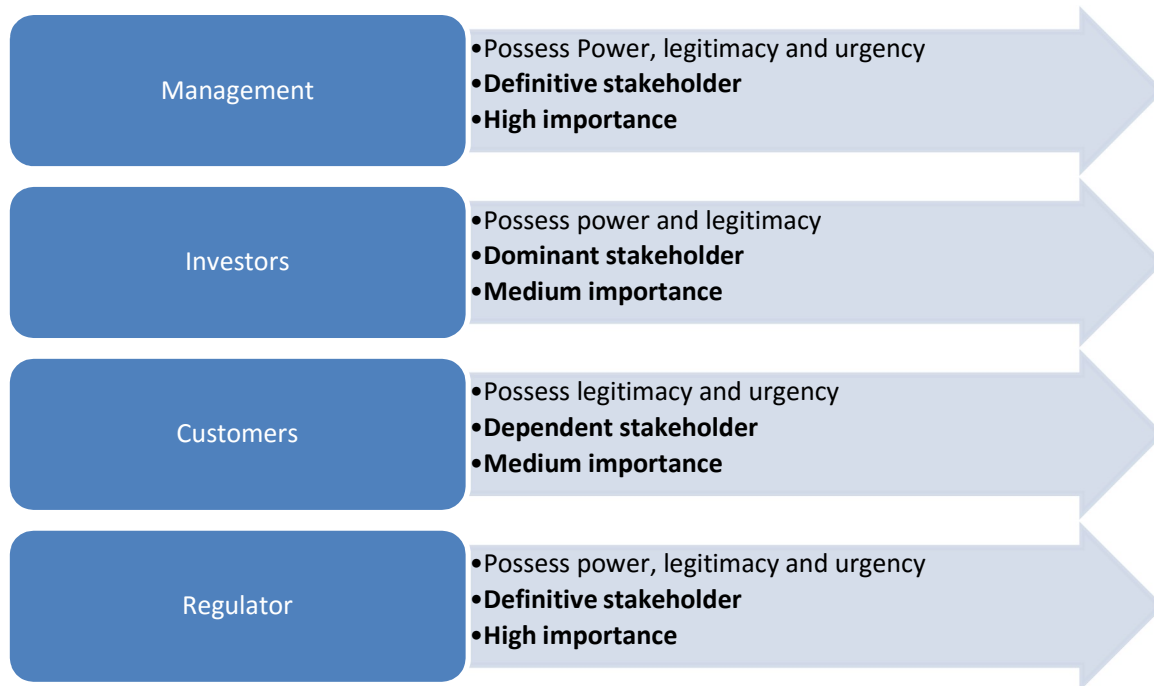
Management	•Possess Power, legitimacy and urgency •**Definitive stakeholder** •**High importance**
Investors	•Possess power and legitimacy •**Dominant stakeholder** •**Medium importance**
Customers	•Possess legitimacy and urgency •**Dependent stakeholder** •**Medium importance**
Regulator	•Possess power, legitimacy and urgency •**Definitive stakeholder** •**High importance**

Figure 11: Stakeholder Type

Source: Own research

Both, the Regulator and management can be considered as definitive stakeholders and therefore will be given priority. Investors are considered dominant stakeholders as they possess both power and legitimacy over the business. Customers are considered to be dependent stakeholders as they may have legitimacy and urgency, but lack power within the business.

In trying to balance the needs of all stakeholders, it was important to consider that the Regulator has a higher priority when compared to investors and customers, and therefore may demand that their needs are met, even if this is at the expense of investors and customers.

2.7. Conclusion

The aim of the literature review was to understand the purpose of regulation, the importance of risk management, how investments in risk management should add value, and finally the impact of risk management regulations to the key stakeholders of the business.

In the context of this research, government regulation was used to enforce the implementation of risk management in the insurance industry in South Africa. Some research showed that the implementation of risk management has had significant positive impacts on businesses, while other research showed that the opposite holds true. However, research had not yet been conducted to understand the value added to businesses from the implementation of risk management driven through regulation.

The purpose of regulation was to promote social and economic good (Parker & Nielsen, 2011) and level the playing field between the strong and the weak (Braithwaite & Drahos, 2000).

However, according to Parker (2002) and a study done by Law, Lau, Kerrigan, and Ekstrom (2014), government regulation may not always be effective at achieving its intended purpose and may result in unintended consequences.

A number of studies have shown that risk management is effective at adding value to businesses. A study was conducted by Hoyt and Liebenberg (2015) during the early stages of risk management development, which provided persuasive evidence that risk management can be used to increase the value of insurance companies.

However, some authors noted that the costs of implementing risk management was material and therefore value must be derived to justify the costs (Farrell & Gallagher, 2015).

According to Beasley, Branson, and Pagach (2015), there are three theories that could describe the way in which risk management is implemented in a business. Institutional theory suggests that risk will be implemented as a symbolic gesture without substantive intent, in order to meet external requirements. Agency theory suggests that risk maturity occurs in order to better manage risks resulting from the relationship, which exists between the shareholder and management. Resource dependence theory suggests that risk implementation should provide strategic value to the business and should assist boards to be more proactive in detecting, understanding and managing risks that could prevent the business from meeting strategic objectives.

In order for risk management to add value to the business, when compared with the costs of implementation, a business should implement risk management for reasons aligned with resource dependency theory.

Other research (Beasley, Branson, & Pagach, 2015) analysed the risk maturity of businesses in the financial services industry compared to the non-financial services industry. Businesses in the financial services industry were considered to be more highly regulated than businesses in the non-financial services industry. However, a significant difference was observed, with the non-financial services businesses demonstrating a higher risk maturity compared to the financial services businesses. This may indicate that businesses that are not forced to implement risk management through regulations, reach a higher level of risk maturity and derive more value from their risk initiatives.

According to a study done by Hoyt and Liebenberg (2015), insurers that had implemented risk management were valued as much as 20% higher than other insurers. In addition, a study conducted by Farrell and Gallagher (2015) found that businesses with mature levels of risk implementation exhibit a higher business value to the magnitude of 25%. This was at a time when there were no specific risk management regulations driving the implementation of risk management in a uniform manner across the industry. Certain businesses took a decision to implement more mature risk management and it was seen that these businesses were valued higher than businesses that had not implemented risk management.

McShane, Nair, and Rustambekov (2011) showed that business value increases as a business moves from the "weak" category to the "adequate with a positive trend" category, but does not increase further afterwards. This indicated that a business with a strong or excellent rating in terms of risk management does not increase business value beyond a certain point. A key question therefore arose as to whether a strong risk culture constrains business growth instead of enabling it. However, in contrast, a study conducted by Pagach and Warr (2010) showed that generally, there was little impact from risk implementation on a wide range of business variables.

A study conducted by Bromiley, McShane, Nair, and Rustambekov (2015) noted that the 2008 financial crisis cast doubt on the effectiveness of risk management adopted by leading financial services businesses. The study further noted that if risk management was not applied appropriately, it worsened situations that it was meant to fix.

Lin, Wen, and Yu (2012) found that the implementation of risk management lowers insurers' value and return on assets. They observed that stock markets reacted negatively to risk

36

implementation within businesses, indicating that investors may not see the value of risk implementation in comparison to the costs incurred.

For the purposes of this study, the key stakeholder groups in the South African insurance industry who will be impacted by the risk management regulations were defined as follows:

- Management (including employees);
- Shareholders;
- Customers;
- Regulator.

The value drivers and expectations of each stakeholder was researched to determine a single key expectation for each stakeholder. A research hypothesis was then derived for each stakeholder, in relation to their key expectation.
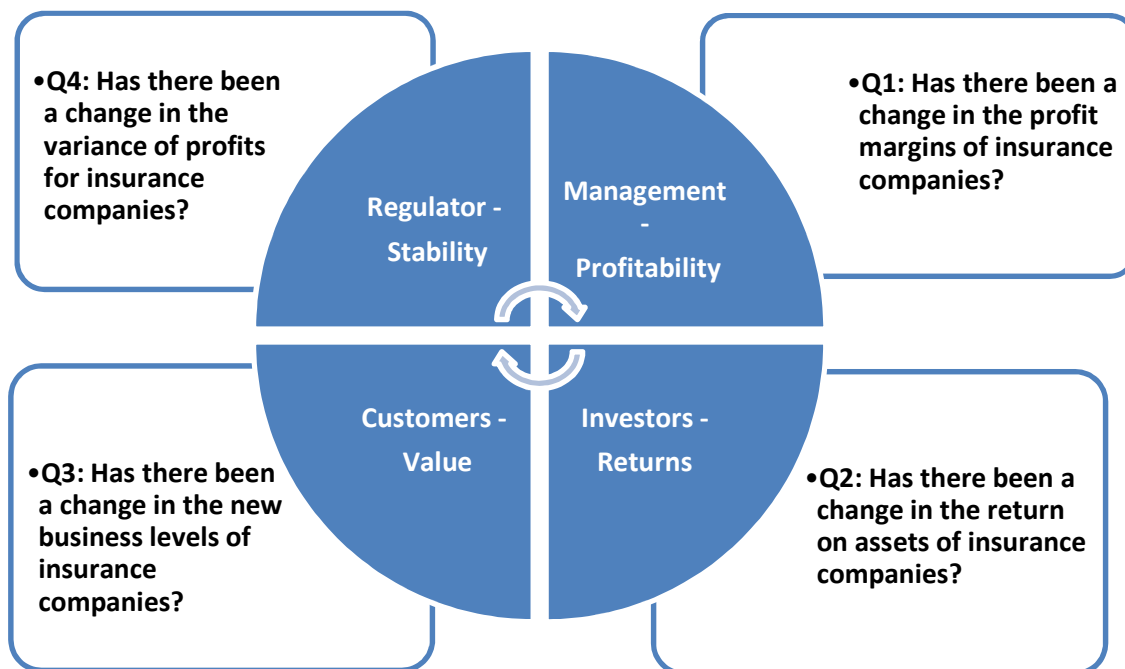

Figure 12: Key Stakeholders, their expectations and the related research hypotheses
Source: Own research

In the next section, the hypotheses will be defined, based on the questions above.

3. Research Hypotheses

3.1.   Introduction

This section discusses the questions and hypotheses that the research aims to answer. Four questions were defined, each relating to one of the four key stakeholders identified for the insurance industry and their key expectations.

3.2.   Management – Profitability

The first question relates to the management of the business who are concerned with the profitability of the business. The question that the research aimed to answer is as follows:

> ➢ **Has there been a change in the profit margins of insurance companies after the implementation of the risk management regulations?**

The hypotheses that were tested were as follows:

H_0: The mean difference between the profit margins before and after the implementation of the risk management regulations is equal to zero.

H_1: The mean difference between the profit margins before and after the implementation of the risk management regulations is not equal to zero.

3.3.   Investors – Returns

The second question relates to the investors of the business who are concerned with the returns from the business. The question that the research aimed to answer is as follows:

> ➢ **Has there been a change in the return on assets of insurance companies after the implementation of the risk management regulations?**

The hypotheses that were tested were as follows:

H_0: The mean difference between the return on assets before and after the implementation of the risk management regulations is equal to zero.

H_1: The mean difference between the return on assets before and after the implementation of the risk management regulations is not equal to zero.

3.4. Customers – Value

The third question relates to the customers of the business who are concerned with receiving value from the business. The question that the research aimed to answer is as follows:

➢ **Has there been a change in the new business levels of insurance companies after the implementation of the risk management regulations?**

The hypotheses that were tested were as follows:

H_0: The mean difference between the new business levels before and after the implementation of the risk management regulations is equal to zero.

H_1: The mean difference between the new business levels before and after the implementation of the risk management regulations is not equal to zero.

3.5. Regulator – Stability

The fourth question relates to the regulators of the business who are concerned with the stability of the industry. The question that the research aimed to answer is as follows:

➢ **Has there been a change in the variance of profits of insurance companies after the implementation of the risk management regulations?**

The hypotheses that were tested were as follows:

H_0: The variance difference between the profit margins before and after the implementation of the risk management regulations is equal to zero.

H_1: The variance difference between the profit margins before and after the implementation of the risk management regulations is not equal to zero.

3.6. Conclusion

The four questions discussed above aimed to give a view of the impact on the different stakeholders in an insurance business as a result of the implementation of risk management regulations.

In the next section, the research methodology used to answer the hypotheses defined above will be discussed.

4. Research Methodology

4.1.   Introduction

The topic for research was an assessment of whether the implementation of risk management driven through regulation had been effective in adding value to the key stakeholders in the business. The financial results of companies before and after the implementation of risk management were compared to ascertain whether the implementation of risk management driven through regulation had been effective in adding value to the key stakeholders in the business.

Four hypotheses were defined, one relating to each key stakeholder of the business, based on their expectations with regard to the insurance business.

4.2.   The Research Process

A pragmatic research philosophy had been adopted for this research study. The definition of pragmatism, according to Saunders and Lewis (2012:107), is "a research philosophy, which argues that the most important determinant of the research philosophy adopted are the research question(s) and objectives".

The research approach adopted was deductive because it involved the testing of a theoretical proposition (Saunders & Lewis, 2012). The research strategy adopted was archival research as administrative records and documents were used as the principal source of data (Saunders & Lewis, 2012).

A longitudinal study was conducted to compare results of insurance companies before and after the implementation of the risk-based regulations.

A mono method using secondary data, which was quantitative in nature, was used. The secondary data were multiple source as data from individual companies were combined to create the data set that was used. Quantitative data was used to give an objective view of the financial impact on insurance companies resulting from the risk management regulations.

4.3.   Population, Unit of Analysis and Sample

The population for the study comprised the full list of short-term insurance companies in South Africa. The insurance industry was chosen as risk-based regulations were recently adopted by

the insurance industry in South Africa. Short-term insurance companies were specifically chosen as their insurance contracts are short-term in nature and therefore more flexible compared to long-term insurance contracts. Therefore, any changes or improvements to the risk environment may be seen quicker in short-term insurance companies compared to long-term insurance companies.

The full list of short-term insurance companies licenced in South Africa was the sampling frame for this study. The unit of analysis for the study was the financial results of short-term insurance companies before compared to after the implementation of risk management driven through regulation.

The full set of data for short-term insurance companies in South Africa was available and therefore sampling was not necessary. The variables of interest within the data set was quantitative, numeric and continuous.

4.4.   Data Gathering Process

On an annual basis, the Regulator requests that all insurance companies submit certain financial information in a predetermined format. Before this information is provided to the Regulator, there is a requirement that the company's external auditor reviews and signs off on the accuracy of the information submitted. This ensures that all information submitted is accurate, complete and relevant for the Regulator.

The Regulator then consolidates all the information from the different insurance companies and makes the consolidated information available to the public. These data were used to compare the financial results of short-term insurance companies before compared to after the implementation of risk management driven through regulation.

Quantitative data were used instead of qualitative data as the researcher aimed to <u>objectively</u> measure the impact on the industry before compared to after the implementation of the risk management regulations.

The data used were referred to as macro data.

> "Macrodata are aggregated to a country or regional level, as opposed to microdata, which are usually survey or questionnaire data sets collected from individuals, households or businesses. Macrodata can be presented in the form of time series at monthly, or longer, frequency. They are typically collected by a national statistical office, administrative agencies or sectoral ministries" (Carter, Noble, Russell & Swanson, 2011).

41

4.5. Data Analysis Process

The financial results of insurance companies were analysed before and after the implementation of risk management driven through regulation.

According to Smith, Ayanian,Covinsky, Landon, McCarthy, Wee, and Steinman (2011), there are four steps to successful research using large databases:

- Define the research topic and question by starting with the literature review and allow for flexibility to adapt the question based on the strengths or limitations of the dataset;
- Select the dataset considering resources available and the complexity of the dataset;
- Get to know the dataset by understanding how it was prepared and by whom, validating information, where possible and doing in-depth data analysis on the figures;
- Structure the analysis and presentation of findings in a way that is meaningful.

The steps followed during the data analysis process for this research were as follows:

An idea for a research topic relating to risk management and regulation was considered. Literature review was used to explore the topic and define the research question as well as hypotheses.

There were a few data sources available that could assist to answer the research question - industry data from the Regulator, information from annual financial statements of companies and information from the stock exchange.

The industry data from the Reglator was selected as the data set for this research. All information necessary to answer the research question was contained in this data set. It detailed financial information for all insurance companies in South Africa, therefore covering the entire population.

Information in this data set was independently validated by external auditors and all information was in a standardised format across a number of years.

An analysis was done to determine the source of the information and the rules dictating how the information was prepared to ensure that relevant information was chosen in answering the hypotheses.

Data checks were then performed on the data set as an additonal control to ensure that the information made sense.

A descriptive analysis was first performed to understand the data and trends over time and to get a view as to how financial results may have been impacted by the introduction of risk management regulation.

Where a change could be seen visually, this was tested for statistical significance using a paired samples t-test.

Figure 13: Data Analysis Process

Source: Own research

4.6. Statistical Test

During the literature review, a number of papers were found, where the authors tested the value added to businesses by risk management. These authors performed the following statistical tests:

- In the study conducted by McShane, Nair, and Rustambekov (2011), the relationship between the value of a business and the degree of risk implementation was tested using Pearson correlation coefficients;
- In the study conducted by Hoyt and Liebenberg (2015), a regression model was used to test the value of a business against the level of risk management implementation of that business;
- In the study conducted by Lin, Wen, and Yu (2012), the authors applied a two-stage treatment-effect model to investigate whether risk management implementation increases the value of businesses;
- In the study conducted by Pagach and Warr (2010), a matched sample and logit model were used to determine, if there are differences between businesses that had hired a Chief Risk Officer (a proxy that risk management has been implemented) and businesses that had not hired a Chief Risk Officer.

For all of these studies, the authors first had to make an assessment as to whether or not risk management was implemented in each business, and the extent of the implementation. Tests were then carried out to compare the value of businesses that had implemented risk management to the value of businesses that had not implemented risk management.

The research methodology adopted in this paper was unique in that the researcher already knew that risk management had largely been adopted by all companies and this allowed the researcher to do a longitudinal test of the short-term insurance industry to determine whether or not there had been any significant difference comparing certain financial variables before compared to after risk management was implemented.

A univariate technique was used to do the statistical testing of the hypotheses. Metric data was available for two related samples – financial information of insurance companies before compared to after the implementation of risk management driven through regulation.

For this purpose, a test of differences was most relevant. According to Wegner (2016), if data for a specific variable are recorded at two different points in time, then this data is considered to be dependent and the data is referred to as matched-pairs samples. The paired t-test is used to compare differences in the means of the matched-pairs samples.

When using the t-test, the following assumptions need to hold – the dependant variable should be continuous, the matched-pairs samples should consist of the same variable, which is measured at different points in time, there should be no significant outliers and the distribution of the differences of the matched-pairs samples should be approximately normally distributed (Wegner, 2016).

These assumptions were validated as follows:

- The dependant variables in the data set were all continuous variables;
- The matched-pairs samples consisted of the same set of companies, where a measurement was done at two separate time periods. Where a company appeared in the data set for one period, but not the other (either a new company or a company that is no longer in existence), that company was removed from the analysis;
- The differences between the matched-pairs samples was analysed. Significant outliers were removed;
- The data should be tested for approximate normality. However, as the sample is greater than 40, the violation of the normality assumption should not cause major problems (Pallant, 2007) and therefore the test was not necessary.

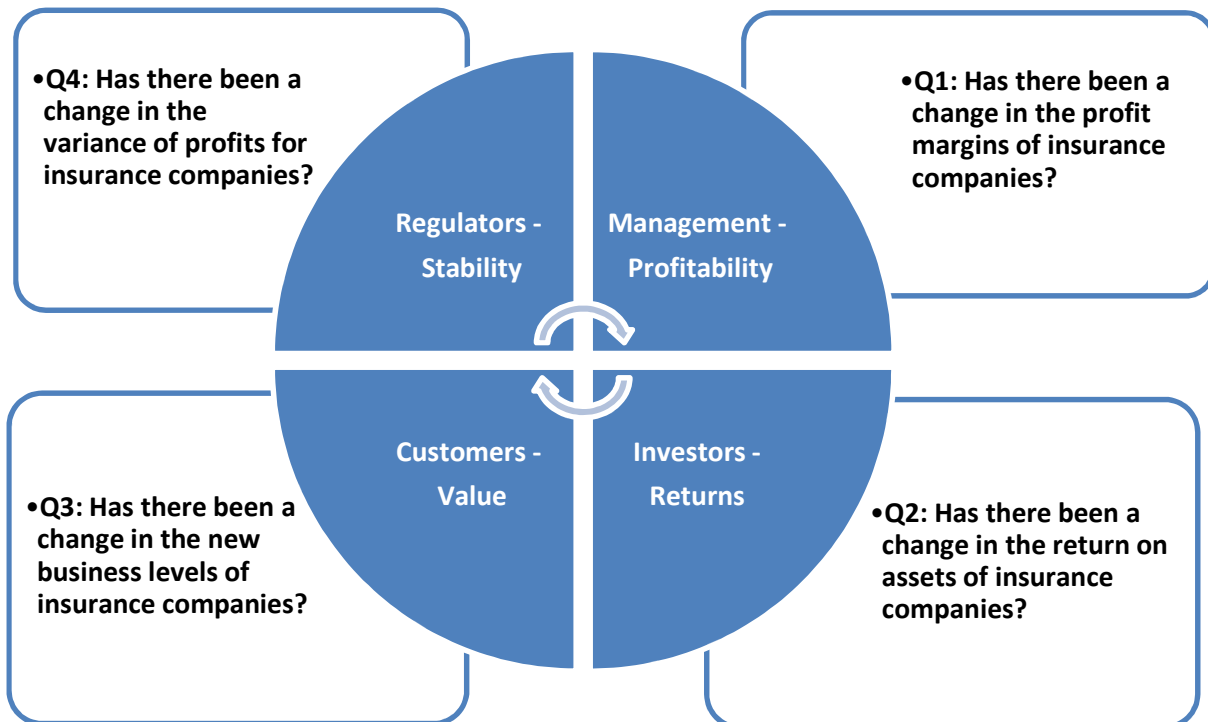The four hypotheses that were tested are as follows:

Figure 14: Key Stakeholders, their expectations and the related research hypotheses

Source: Own research

For each of these hypotheses, a comparison of the difference between the matched-pairs samples enabled the hypotheses to be answered as follows:

- Question 1: Analysis of the difference in means of the profit margins of each company before and after implementation of the risk management regulations;
- Question 2: Analysis of the difference in means of the return on assets of each company before and after implementation of the risk management regulations;
- Question 3: Analysis of the difference in means of the new business levels of each company before and after implementation of the risk management regulations;
- Question 4: Analysis of the variance of profit margins of each company before and after implementation of the risk management regulations.

4.7.   Relevance of the Research Methodology

The selected research methodology provided answers to the question of whether the implementation of risk management driven through regulation has been effective in improving the financial results of businesses within the industry and therefore adding value to the stakeholders of the industry. As risk management practices and techniques are equally applicable across different companies, industries and countries; the learnings from this research may be applicable across different industries and countries.

The methodology of using secondary data for the insurance industry was appropriate in aiming to understand whether the implementation of a risk management system through regulation had been effective. While there were certain limitations to using secondary data, there were also some benefits compared to using questionnaires to construct primary data.

> "Many researchers, from students undertaking dissertations to those who attempt to create knowledge to advance society collect data by using questionnaires…But this raises reliability and validity concerns as a consequence of low response rates and non-response bias. This constrains knowledge creation" (Alvarez, Canduela & Raeside, 2012).

The secondary data used in this study was collected in a uniform manner, covering the whole short-term insurance industry. In addition, using quantitative data, gave an objective view of the impact of the implementation of risk management driven through regulation.

4.8. Limitations

The following limitations were identified in the secondary data used in the study:

- The data were generally a few months old by the time they were available publicly; however, it was not expected to materially impact this study;

- The data for different companies were collected at different times during the year, depending on the financial year end; however, it was not expected to materially impact this study;

- Different definitions may be used for different data variables, for example the composition of "expenses". However, this risk was minimal as the Regulator had given guidance to the industry on how to compile the information;

- There may have been changes in the definitions of data variables or restatement of figures between different years within a company; however, it was not expected to materially impact this study;

- There was the possibility of data errors or omissions within the data set; however, this was a minimal risk given that information was audited;

- There may have been external factors impacting the insurance industry during the analysis period. The Regulator publishes a report attached to the industry data that is publicly available. These reports indicate that the external factors impacting on the industry were largely macroeconomic and will have a similar impact across all companies; this therefore should not materially have distorted these results. These reports were part of the raw data received for the analysis;

- There may be certain internal factors impacting an individual business that may distort the results. However, given that the data set included the entire population, it was less likely that individual internal factors would have had a material impact on the overall results;

- Certain further information may be useful in more fully understanding the results. but that information may not be available in the public space at this time. Detailed interviews or surveys with the individual insurance companies may give further details that could be the basis of further research on this topic.

There limitations to using a quantitative secondary data set mentioned above were not seen to be material. The results of the analyses were expected to be reliable.

4.9. Conclusion

The population for the study comprised the full list of short-term insurance companies in South Africa. The insurance industry was chosen as risk-based regulations were recently introduced to the insurance industry in South Africa in 2009. Short-term insurance companies were specifically chosen as their insurance contracts are short-term in nature and therefore more flexible compared to long-term insurance contracts. Therefore, any changes or improvements to the risk environment may be seen quicker in short-term insurance companies compared to long-term insurance companies.

The previous studies from the literature review showed that the authors first had to make an assessment as to whether or not risk management was implemented in each business, and the extent of the implementation. Tests were then done to compare the value of businesses that had implemented risk management to the value of businesses that had not implemented risk management.

The research methodology adopted in this study was unique in that the researcher already knew that risk management had been adopted by all companies and this allowed the researcher to do a longitudinal test of the short-term insurance industry to determine whether there had been any significant difference comparing certain variables before and after risk management was implemented.

Quantitative data was used to give an objective view of the financial impact on insurance companies resulting from the risk management regulations.

Data was available for two related samples – financial information of insurance companies before compared to after the implementation of risk management regulation. For this purpose, a test of differences was most relevant, and the paired t-test was used to compare differences in the means of the matched-pairs samples.

There were certain limitations to using a quantitative secondary data set; however, the researcher did not feel these limitations were material. The results of the analyses were expected to be reliable.

5. Results

5.1. Introduction

The researcher aimed at answering the following question:

➢ Does the implementation of risk management driven through regulation add value to the key stakeholders of an insurance company?

The results of statistical tests show that there was no significant change to the chosen financial results of companies after risk management was implemented because of regulation. This implies that the short-term insurance industry incurred costs for compliance, but did not necessarily see any real value add in terms of improved or enhanced financial results.

In answering the question, the researcher considered the different key stakeholders and in understanding their needs and expectations, the researcher formulated different hypotheses that have been tested.
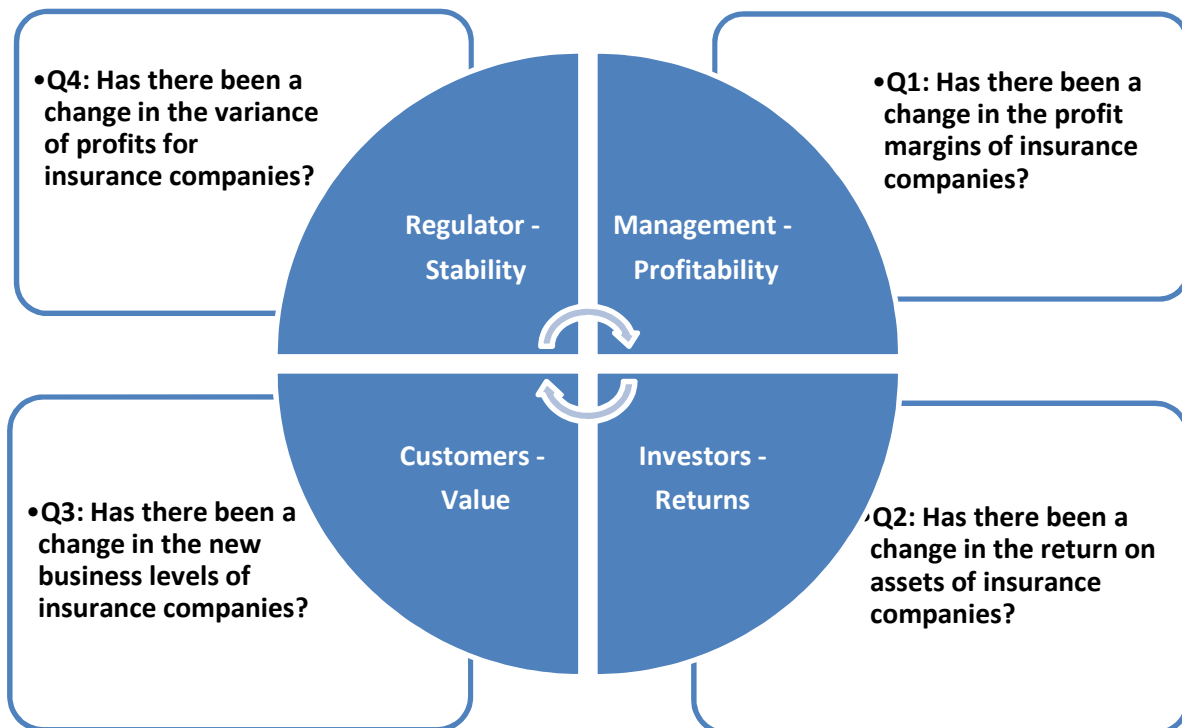

Figure 15: Key Stakeholders, their expectations and the related research hypotheses

Source: Own research

The results of the hypotheses tests are presented in this chapter.

5.2. General Overview of the SA Economy

The figure below shows the growth in the South African economy between 1990 and 2015.

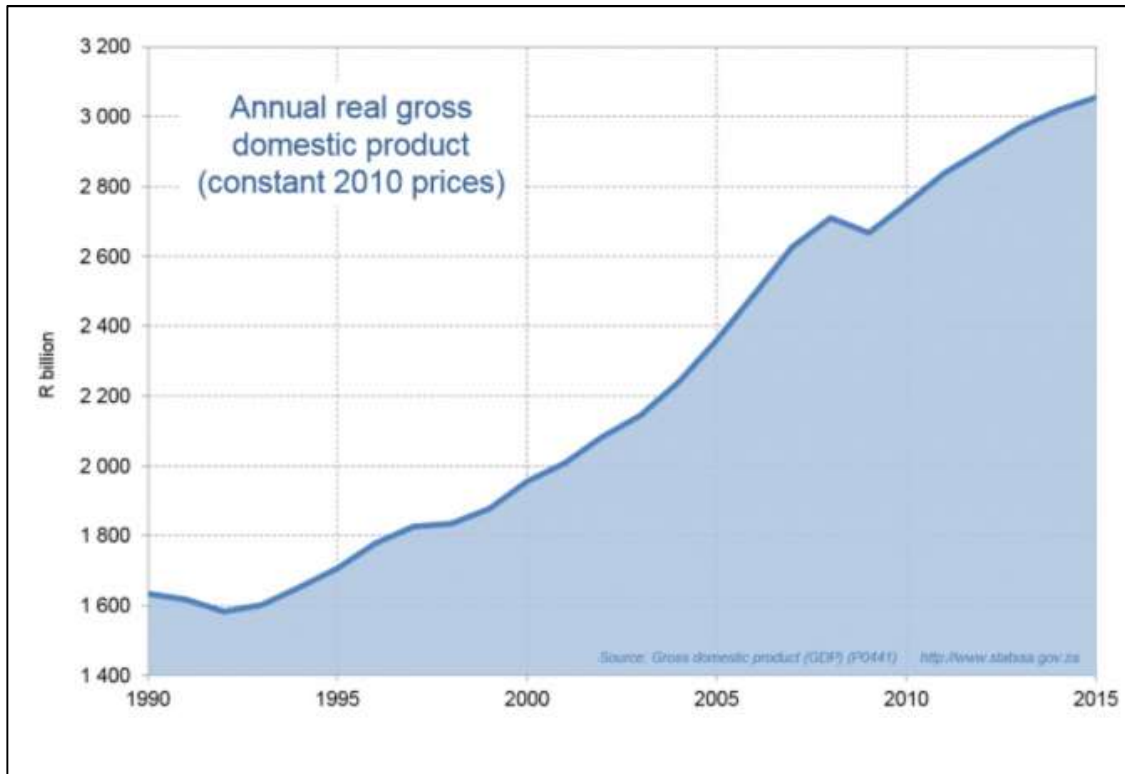**Figure 16: Growth in the SA Economy between 1990 and 2015**

Source: **(Statistics SA, 2016)**

The period of investigation for this research was between 2011 and 2015. It is important to note that there were no major external economic incidents during this time period that had a significant impact on the economy of the country. Relatively stable growth in the economy was experienced during this time period.

5.3. Management - Profitability

5.3.1. Descriptive Statistics

The first question, relating to management as a stakeholder, considers profit margins. The profit margin was calculated as the underwriting profit divided by the premium. The underwriting profit and the premium were fields that were included in the data set. The premium was the total of premiums received by a business from customers in a year. The underwriting profit was the premiums received less the claims paid. The underwriting profit is the profit before expenses are considered. Therefore, increasing expenses would not have an impact on underwriting profits.

A descriptive analysis was first undertaken in order to better understand the data.

The blue bars in the figure below show the total amount of premium received for the short-term insurance industry for each year from 2008 to 2015. It can be seen that there has been a steady increase in the amount of premium year on year.

In addition, the amount of expenses (green line) and the amount of profit (purple line) for the years 2008 to 2015 is shown.

Expenses have been increasing year on year, while profits have slowly declined between 2010 and 2014, before increasing sharply in 2015.
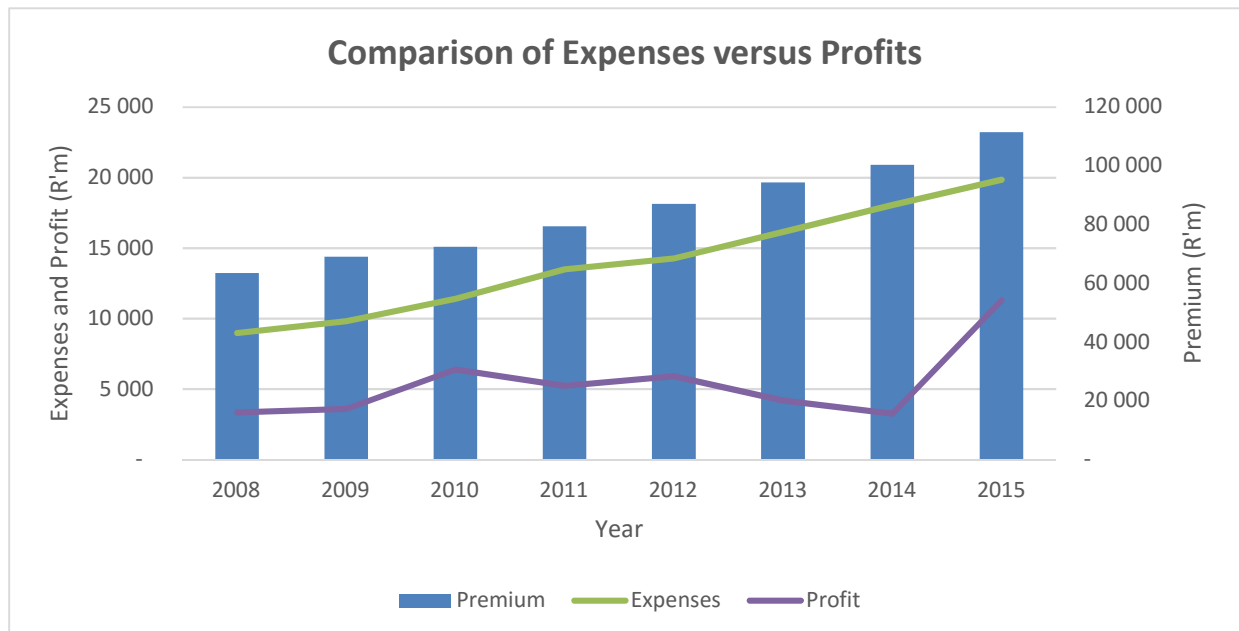

Figure 17: Comparison of Expenses versus Profits

Source: Own research

Towards the end of 2009, the journey for the risk-based regulations began and the industry started the process of implementing risk management in order to comply with regulations. It can be seen that during the period of implementation – from 2010 until 2014 (when the regulations were released), there is a downward trend in profits in the industry, even though there is a steady increase in premiums.

In the table below, the expense ratios (calculated as the total expenses/total premium both of which were included in the data set) are compared with the profit margin for the period 2008 to 2015.

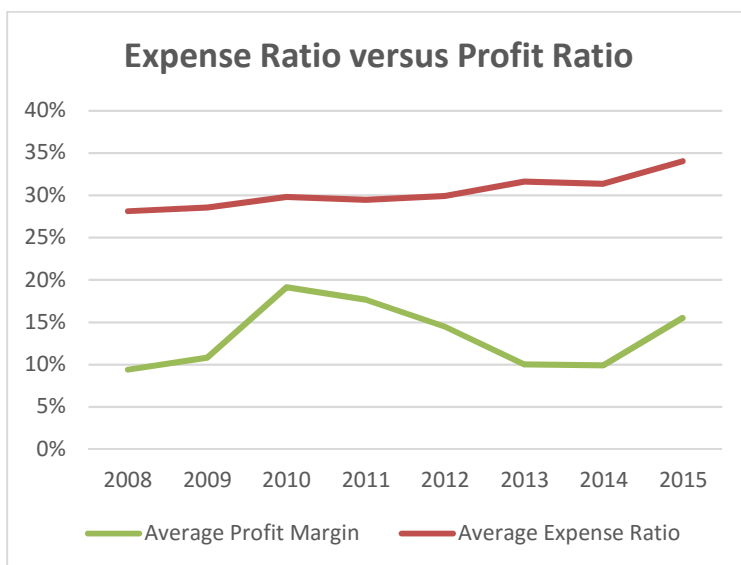**Figure 18: Comparison of Expense Ratio versus Profit Margin**

Source: Own research

It can be seen that there is a steady increase in the expense ratio of the short-term insurance industry between 2008 and 2015.

The profit margins of the short-term insurance industry decline steadily between 2010 and 2014 (the period during which risk implementation was happening), before increasing in 2015.

51

5.3.2. Statistical Results of Question 1: Has there been a change in the profit margins of insurance companies?

In order to answer Question 1: Has there been a change in the profit margins of insurance companies, the researcher defined the following hypotheses:

H0: The mean difference between the paired values is equal to zero.

H1: The mean difference between the paired values is not equal to zero.

A dependent paired samples t-test was used to test the hypothesis stated above. The results are shown in the table that follows:

Table 3: Descriptive Results for Hypothesis 1

Paired Samples Statistics

		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	NetProfit2015	16.8809	56	33.43203	4.46754
	NetProfit2011	16.6857	56	25.90034	3.46108

Table 4: Results for Hypothesis 1

Paired Samples Test

		Paired Differences							
					95% Confidence Interval of the Difference				
		Mean	Std. Deviation	Std. Error Mean	Lower	Upper	t	df	Sig. (2-tailed)
Pair 1	NetProfit2015 - NetProfit2011	.19518	31.83036	4.25351	-8.32905	8.71941	.046	55	.964

There were 94 companies in the 2011 data set for short-term insurance companies. Of all companies, 18 were no longer in the 2015 data set and were therefore removed from the

52

matched-pairs samples. In addition, companies that showed a blank in the 2011 or 2015 net underwriting profit field, were removed. The researcher also removed outliers where the net underwriting profit was either greater than 100 or less than -100.

The results from the data used in the statistical analysis show that the mean net profit margin in 2015 was 16.9% compared to a very similar 16.7% in 2011. The standard deviation for the profit margin in 2015 (33.4%) is higher than the standard deviation for the profit margin in 2011 (25.9%).

The mean difference between the profit margin in 2015 and 2011 is 0.2%, ranging from -8.3% (the lower 95% confidence interval of the difference) to 8.7% (the upper 95% confidence interval of the difference).

The results indicate a p-value of 0.964, which is more than 0.05.

The researcher can therefore conclude that there is no significant difference in the profit margin of companies in the short-term insurance industry in 2015 compared to 2011.

A check was done, where the 18 companies that were not in the 2015 data set were not removed and their net profit margin was set to 0% (assuming no profits for the year and therefore they were no longer in operation). The p-value in this test is also greater than 0.05 and indicates that there is no significant difference in the profit margin of companies in the short-term insurance industry in 2015 compared to 2011.

An additional check was done, where the 18 companies that were not in the 2015 data set were not removed and their net profit margin was set to -100% (assuming a large loss for the year and therefore they were no longer in operation). The p-value in this test is also greater than 0.05 and indicates that there is no significant difference in the profit margin of companies in the short-term insurance industry in 2015 compared to 2011.

The last check that done was to compare the profit margin in 2009 (at the start of the journey to introduce risk regulations) instead of 2011 compared to the profit margin in 2015. In this case, the p-value is also greater than 0.05, which indicates that there is no significant difference in the profit margin of companies in the short-term insurance industry in 2015 compared to 2009.

Therefore, the researcher deduces that the introduction of risk management regulations in the short-term insurance industry in South Africa has no significant impact on the net profit margins of that industry.

5.4. Investors - Returns

5.4.1. Descriptive Statistics

The second question, relating to investors as a stakeholder, considers return on assets. The return on assets was calculated as total profit/total assets. These fields were included in the data set.

A descriptive analysis was first done in order to better understand the data.

The blue bars in the figure below show the total assets for the short-term insurance industry for each year from 2008 to 2015. It can be seen that there has been a steady increase in the total assets year on year.

The return on assets (red line) for the years 2008 to 2015 is also shown. The figure shows that the return on assets of the short-term insurance industry slowly declines between 2010 and 2014 before increasing sharply in 2015.
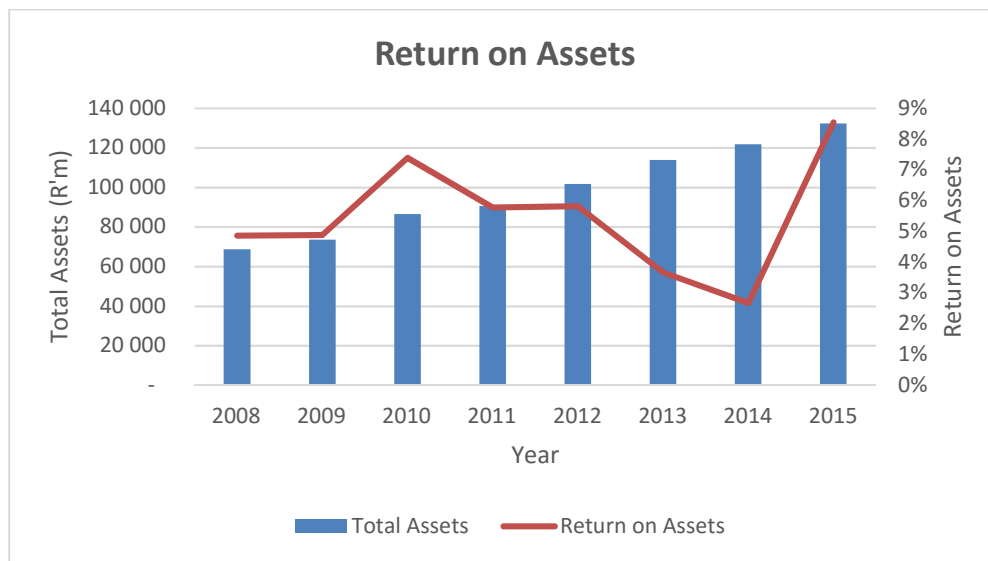

Figure 19: Return on Assets

Source: Own research

Towards the end of 2009, the journey for the risk-based regulations began and the industry started the process of implementing risk management in order to comply with regulations. It can be seen that during the period of implementation – from 2010 until 2014 (when the regulations were released), there is an initial spike in the return on assets in 2010, and thereafter a downward trend in return on assets in the industry, before spiking again in 2015. This indicates that between 2010 and 2014, growth in profits were lower than growth in assets.

54

5.4.2. Statistical Results of Question 2: Has there been a change in the return on assets of insurance companies?

In order to answer Question 2: Has there been a change in the return on assets of insurance companies, the researcher defined the following hypotheses:

H0: The mean difference between the paired values is equal to zero.

H1: The mean difference between the paired values is not equal to zero.

A dependent paired samples t-test is used to test the hypothesis stated above. The results are shown in the table that follows:

Table 5: Descriptive Results for Hypothesis 2

Paired Samples Statistics

		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	RoA2015	.0899	67	.17858	.02182
	RoA2011	.0884	67	.20805	.02542

Table 6: Results for Hypothesis 2

Paired Samples Test

		Paired Differences							
					95% Confidence Interval of the Difference				
		Mean	Std. Deviation	Std. Error Mean	Lower	Upper	t	df	Sig. (2-tailed)
Pair 1	RoA2015 - RoA2011	.00149	.19201	.02346	-.04534	.04833	.064	66	.949

55

There were 94 companies in the 2011 data set for short-term insurance companies. Of these companies, 18 were not in the 2015 data set and are therefore removed from the matched-pairs samples. In addition, blanks and outliers were removed.

The results from the statistical analysis above show that the mean return on assets in 2015 is 8.99% compared to a lower 8.44% in 2011. The standard deviation for the return on assets in 2015 (17.86%) is lower than the standard deviation for the return on assets in 2011 (20.81%).

The mean difference between the return on assets in 2015 and 2011 is 0.15%, ranging from -4.5% (the lower 95% confidence interval of the difference) to 4.8% (the upper 95% confidence interval of the difference).

The results indicate a p-value of 0.949, which is more than 0.05.

Therefore, the researcher can deduce that there is no significant difference in the return on assets of the short-term insurance industry in 2015 compared to 2011.

5.5. Customers - Value

5.5.1. Descriptive Statistics

The third question, relating to customers as a stakeholder, considers new business levels.

The new business level was calculated as premium from new business divided by total premium. The new business field and the total premium field were included in the data set.

A descriptive analysis was first done in order to better understand the data.

The blue bars in the figure below shows the premium for the short-term insurance industry for each year from 2008 to 2015. It can be seen that there has been a steady increase in the total premium year on year.

The percentage of new business (red line) for the years 2008 to 2015 is also shown. The figure shows that the percentage of new business in the short-term insurance industry gradually declines between 2010 and 2014 before increasing slightly in 2015.
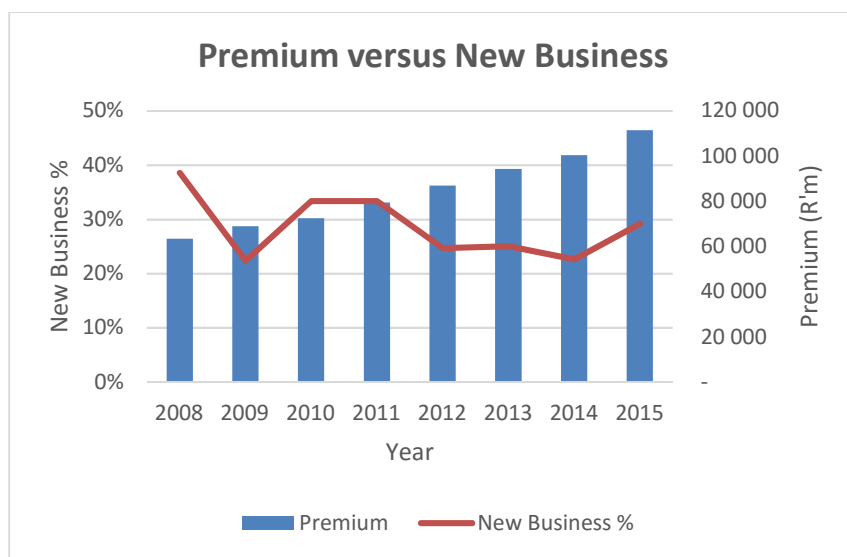

Figure 20: Premium versus New Business

Source: Own research

Towards the end of 2009, the journey for the risk-based regulations began and the industry started the process of implementing risk management in order to comply with regulations. It can be seen that during the period of implementation – from 2010 until 2014 (when the regulations were released), there is a downward trend in the level of new business in the industry, before it increased slightly in 2015.

5.5.2. Statistical Results of Question 3: Has there been a change in the new business levels of insurance companies?

In order to answer Question 3: Has there been a change in the percentage of new business in insurance companies, the researcher defined the following hypotheses:

H0: The mean difference between the paired values is equal to zero.

H1: The mean difference between the paired values is not equal to zero.

A dependent paired samples t-test was used to test the hypothesis stated above. The results are shown in the table that follows:

Table 7: Descriptive Results for Hypothesis 3

Paired Samples Statistics

		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	NB2015	25.5588	34	22.51490	3.86127
	NB2011	28.2353	34	23.65030	4.05599

Table 8: Results for Hypothesis 3

Paired Samples Test

		Paired Differences								Sig. (2-tailed)
			Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference					
		Mean			Lower	Upper	t	df		
Pair 1	NB2015 - NB2011	-2.67647	27.77367	4.76315	-12.36716	7.01422	-.562	33		.578

There were 11 new businesses that entered in 2011 that were removed from the analysis (showing 100% new business) so as not to distort the results. There were a few insurance companies that did not provide this information and were therefore not included in the test.

The results above show that the mean percentage of new business in 2015 is 25.6% compared to a higher 28.2% in 2011. The standard deviation for the percentage of new business in 2015 (22.5%) is lower than the standard deviation for the percentage of new business in 2011 (23.7%).

The mean difference between the percentage of new business in 2015 and 2011 is -2.7%, ranging from -12.4% (the lower 95% confidence interval of the difference) to 7.0% (the upper 95% confidence interval of the difference).

The results indicate a p-value of 0.578, which is more than 0.05.

Therefore, the researcher can deduce that there is no significant difference in the percentage of new business for companies in the short-term insurance industry in 2015 compared to 2011.

5.6. Regulators - Stability

5.6.1. Descriptive Statistics

The fourth question, relating to regulators as a stakeholder, considers variance of the profit margin.

A descriptive analysis was first done in order to better understand the data.

The figure below shows the variance of profits for the short-term insurance industry for each year from 2008 to 2015. It can be seen that there is a steady decrease in the variance of profits year on year from 2008 until 2012, and then a steep spike in 2013 and that level of variance is sustained in 2014 before reducing in 2015.
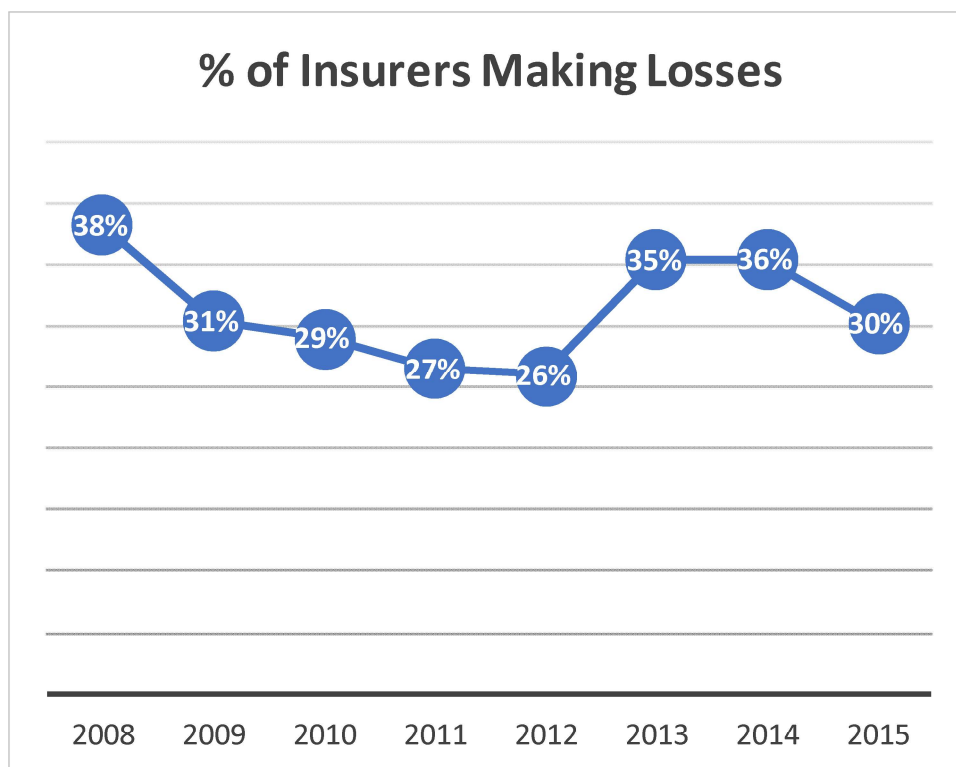

Figure 21: Loss-making Insurance Companies

Source: Own research

The graph below shows the number of insurers in the short-term insurance industry in South Africa between 2008 and 2015.
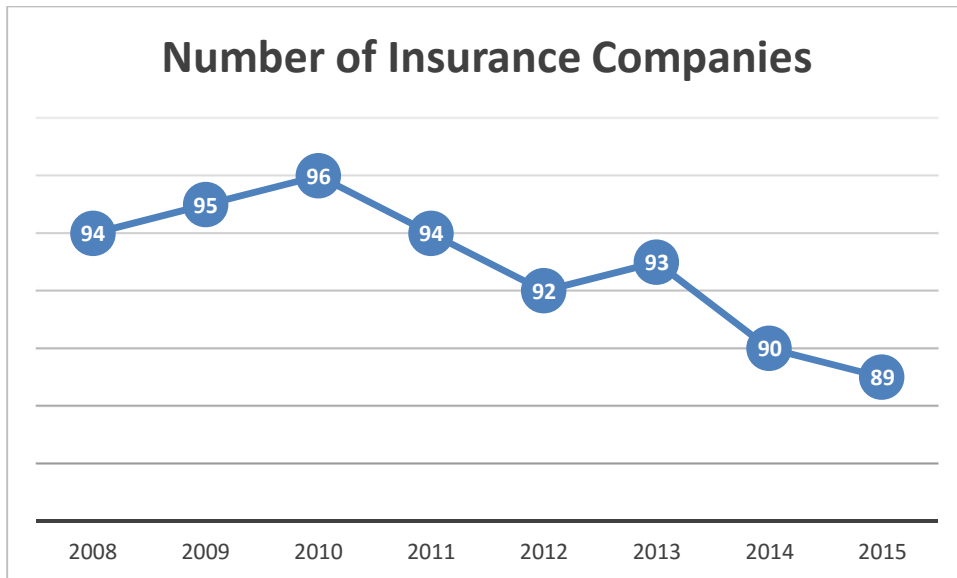

Number of Insurance Companies

Figure 23: Number of Insurance Companies

Source: Own research

The graph shows a steady decline in the number of insurance companies between 2010 and 2015. This could be due to companies either leaving the industry or consolidating/being taken over/merging.

A box and whisker chart was used to give a visual representation of the variance of profits year on year.
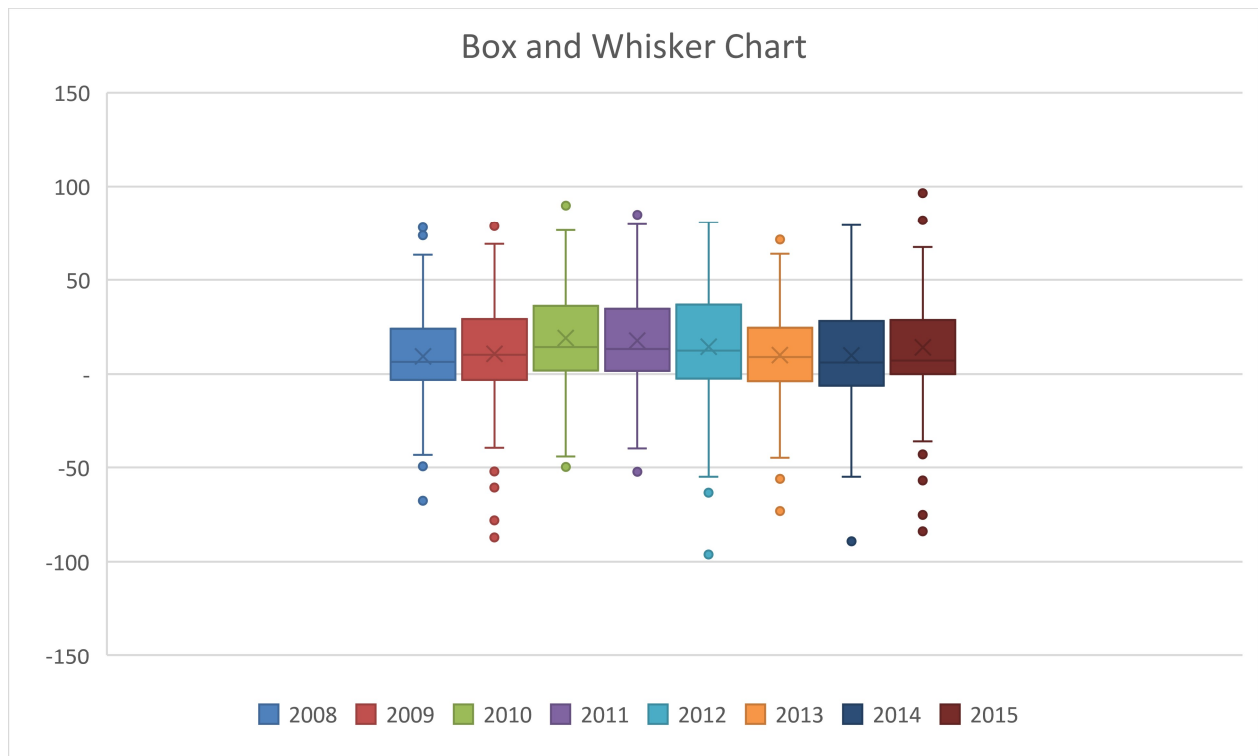
Figure 22: Box and whisker chart

Source: Own research

The boxes in the graph above show the range of the 25th and 75th percentile. The line within the box indicates the median, while the x within the box indicates the mean. The lines extending vertically from the boxes indicate the range of the upper and lower quartiles. The points outside these lines are the outliers.

The box and whisker chart gives a visual representation of the data. From this figure, there does not seem to be an improvement in the mean or median of the net profit margins of short-term insurance companies in South Africa. Also, there does not seem to be a reduction in the variance or amount of outliers compared to when there were no risk management regulations in place.

Given that a visual inspection of the data shows no significant change in the variance of profits, a statistical test was not necessary to test the significance of any difference.

5.7. Conclusion

In this chapter, the four hypothesis tests were done to determine the impact of risk management regulations on the four key stakeholders below:
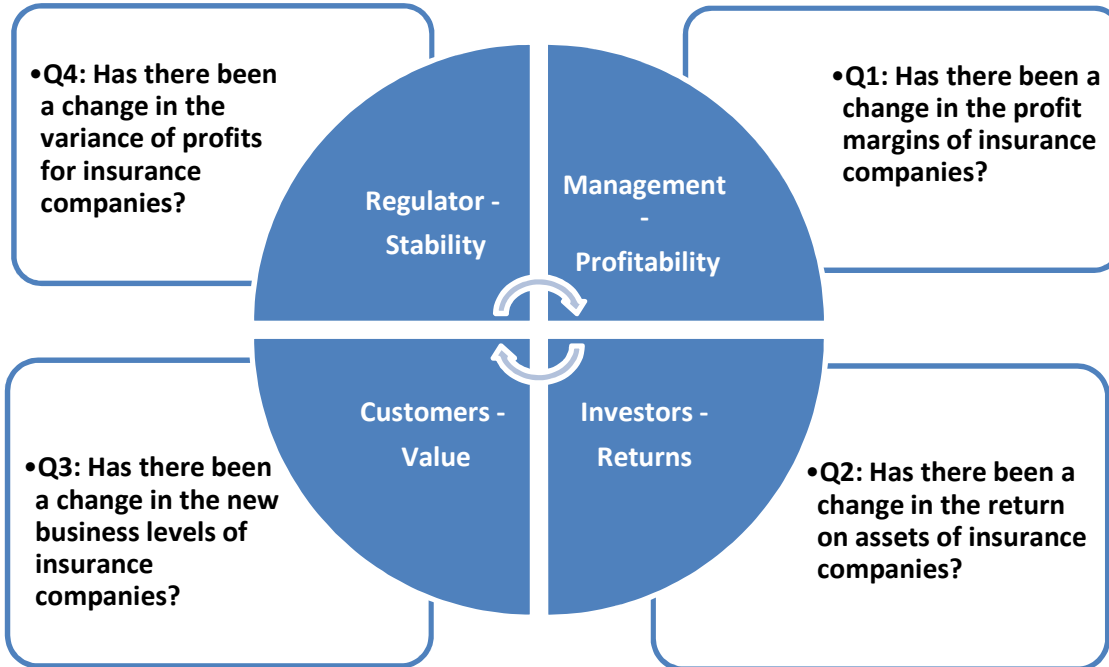

Figure 24: Key Stakeholders, their expectations and the related research hypotheses
Source: Own research

The results are summarised below.

- Question 1: **Management** – The introduction of risk management regulations in the short-term insurance industry in South Africa has had no significant impact on the net profit margins of the industry;

- Question 2: **Investors** – The introduction of risk management regulations in the short-term insurance industry in South Africa has had no significant impact on the return on assets of the industry;

- Question 3: **Customers** – The introduction of risk management regulations in the short-term insurance industry in South Africa has had no significant impact on the new business levels of the industry;

- Question 4: **Regulator** – The introduction of risk management regulations in the short-term insurance industry in South Africa has had no significant impact on the variance of net profit margins of the industry.

A discussion of the results follows in the next chapter.

6. Discussion of Results

6.1.   Introduction

The results, together with the key points from the literature review, will be discussed in this chapter. The chapter will be structured as follows:

- First, there will be a discussion of the key insights from the literature review;
- Next, there will be a recap of the questions and hypotheses;
- The four sections following this will discuss the key insights from the literature review and the results for each of the four hypotheses tested.

6.2.   Key Insights from the Literature Review

6.2.1. Why Regulate

As discussed in Chapter 2, the purpose of regulation is to promote social and economic good (Parker & Nielsen, 2011) and level the playing field between the strong and the weak (Braithwaite & Drahos, 2000).

According to Steurer (2013), there are different types of regulation including government regulation and self-regulation. Norman (2012) suggested that different forms of regulation may work better in different circumstances.

<u>According to Parker (2002) and a study done by Law, Lau, Kerrigan, and Ekstrom (2014), government regulation may not always be effective at achieving its intended purpose and may result in unintended consequences. (emphasis added)</u>

In the context of this research, government regulation was used to enforce the implementation of risk management in the insurance industry in South Africa.

According to Beasley, Branson, and Pagach (2015), there are three theories that could describe the way in which risk management is implemented in a business:

- The first theory – Institutional theory, suggests that risk will be implemented as a symbolic gesture without substantive intent to meet external requirements;
- The second theory – Agency theory, suggests that risk maturity occurs to better manage risks resulting from the relationship, which exists between the shareholder and management;

- The third theory – Resource dependence theory, suggests that risk implementation should provide strategic value to the business and should assist boards to be more proactive in detecting, understanding and managing risks that could prevent the business from meeting strategic objectives.

In order for risk management to add value to the business, when compared with the costs of implementation, a business should implement risk management for reasons aligned with resource dependency theory.

The researcher considers whether risk implementation in the South African insurance industry aligns with institutional theory, agency theory or resource dependence theory and therefore, how effective regulation is in adding value to the different stakeholders of a business (emphasis added).

6.2.2. The importance of risk management

A number of studies have shown that risk management is effective at adding value to businesses. A study was conducted by Hoyt and Liebenberg (2015), which provided persuasive evidence that risk management can be used to increase the value of insurance companies.

Farrell and Gallagher (2015), however, noted that the costs of implementing risk management is material and therefore value must be derived to justify the costs (emphasis added).

6.2.3. Investing to add value

Hoyt and Liebenberg (2015) stated that insurers that had implemented risk management were valued as much as 20% higher than other insurers. In addition, a study conducted by Farrell and Gallagher (2015) found that businesses with mature levels of risk implementation exhibit a higher business value to the magnitude of 25%. This was at a time when there were no specific regulations driving the implementation of risk management in a uniform way across the industry. Certain businesses took a decision to implement more mature risk management and these businesses were valued higher than businesses that had not implemented risk management.

However, a study done by Bromiley, McShane, Nair, and Rustambekov (2015) noted that the 2008 financial crisis cast doubt on the effectiveness of risk management adopted by leading financial services businesses. The study further noted that if risk management was not applied appropriately, it could actually worsen situations that it was meant to fix (emphasis added).

Lin, Wen, and Yu (2012) found that the implementation of risk management lowered insurers' value and return on assets. They observed that stock markets reacted negatively to risk implementation within businesses, indicating that investors may not see the value of risk implementation in comparison to the actual costs incurred (emphasis added).

Other research (Beasley, Branson, & Pagach, 2015) analysed the risk maturity of businesses in the financial services industry compared to the non-financial services industry. Businesses in the financial services industry were considered to be more highly regulated than businesses in the non-financial services industry. However, a significant difference was observed, with the non-financial services businesses demonstrating a higher risk maturity compared to the financial services businesses. This may indicate that businesses that are not forced to implement risk management through regulations, reach a higher level of risk maturity and derive more value from their risk initiatives (emphasis added).

Some research showed that business value increased as a business moved from the "weak" category to the "adequate with a positive trend" category, but did not increase beyond that level afterwards (McShane, Nair, & Rustambekov, 2011). This would mean that a business with a strong or excellent rating in terms of risk management does not necessarily increase business value further. A key question arose as to whether a strong risk-avoidance culture constrains business growth instead of enabling it (emphasis added).

A study was conducted by Pagach and Warr (2010), which claimed that generally, there was little impact from risk management implementation on a wide range of business variables. This raises the question of whether risk management is achieving its stated goal of value creation (emphasis added).

6.2.4. The Approach

The project to introduce risk-based regulations to insurance companies in South Africa started in 2009 (Financial Services Board, 2017). Since then, insurance companies put in tremendous effort in improving risk management within their businesses. In 2014, the Regulator released regulations dealing with governance and risk management issues. These regulations were shared and discussed with the industry before they were released, and the majority of the work in the risk management space was done before the regulations were released. It was intended that insurance companies would be fully compliant with the regulation by 1 April 2015.

This study aims to establish an understanding of what value had been added in the industry as a result of the implementation of risk management, which was driven through regulation.

6.2.5. The impact on key stakeholders

For the purposes of this study, the key stakeholder groups had been defined as follows:

- Management (including employees);
- Shareholders;
- Customers;
- Regulator.

In the context of this study, the researcher defined the key interests of each stakeholder group as follows:

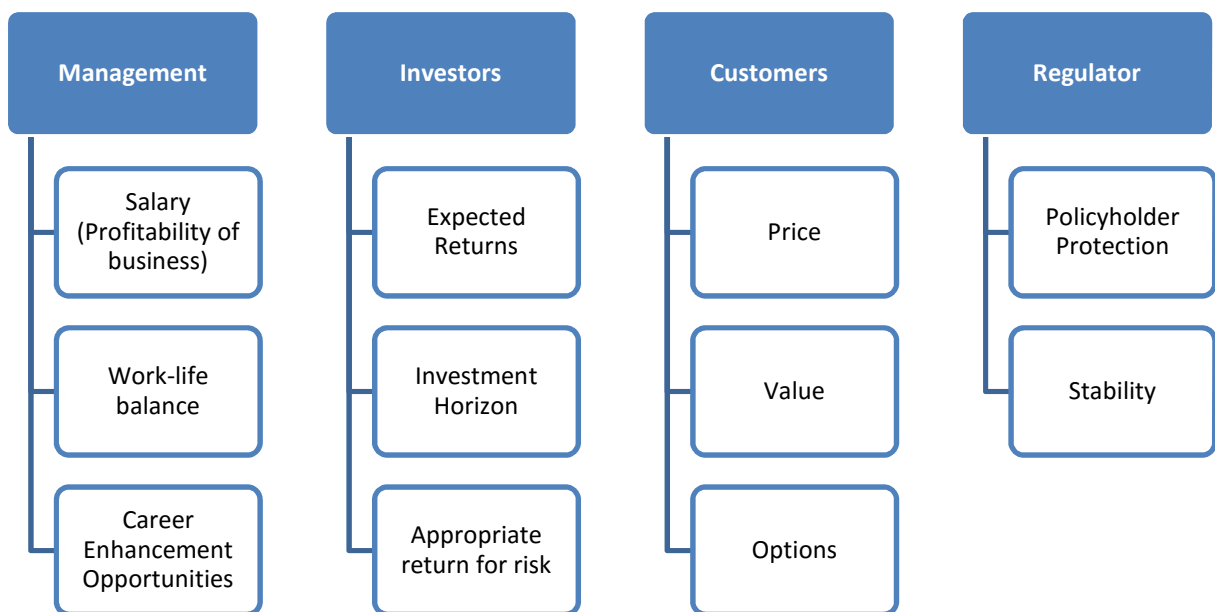| Management	Investors	Customers	Regulator
Salary (Profitability of business)	Expected Returns	Price	Policyholder Protection
Work-life balance	Investment Horizon	Value	Stability
Career Enhancement Opportunities	Appropriate return for risk	Options	

Figure 25: Key stakeholders and their main interests
Source: Own Research

Both the Regulator and management can be considered definitive stakeholders and therefore will be given priority. Shareholders are considered dominant stakeholders as they possess

67

both power and legitimacy over the business. Customers are considered to be dependent stakeholders as they may have legitimacy and urgency, but lack power within the business.

In trying to balance the needs of all stakeholders, it is important to consider that the Regulator has a higher priority when compared to shareholders and customers, and therefore may demand that the Regulator needs are met, even if they are at the expense of shareholders and customers (emphasis added).

6.3.   The Research Hypotheses

The following questions and hypotheses were developed relating to each of the key stakeholders. In answering these questions, the researcher established a view as to whether the implementation of risk management driven through regulation added value to the key stakeholders in the business.
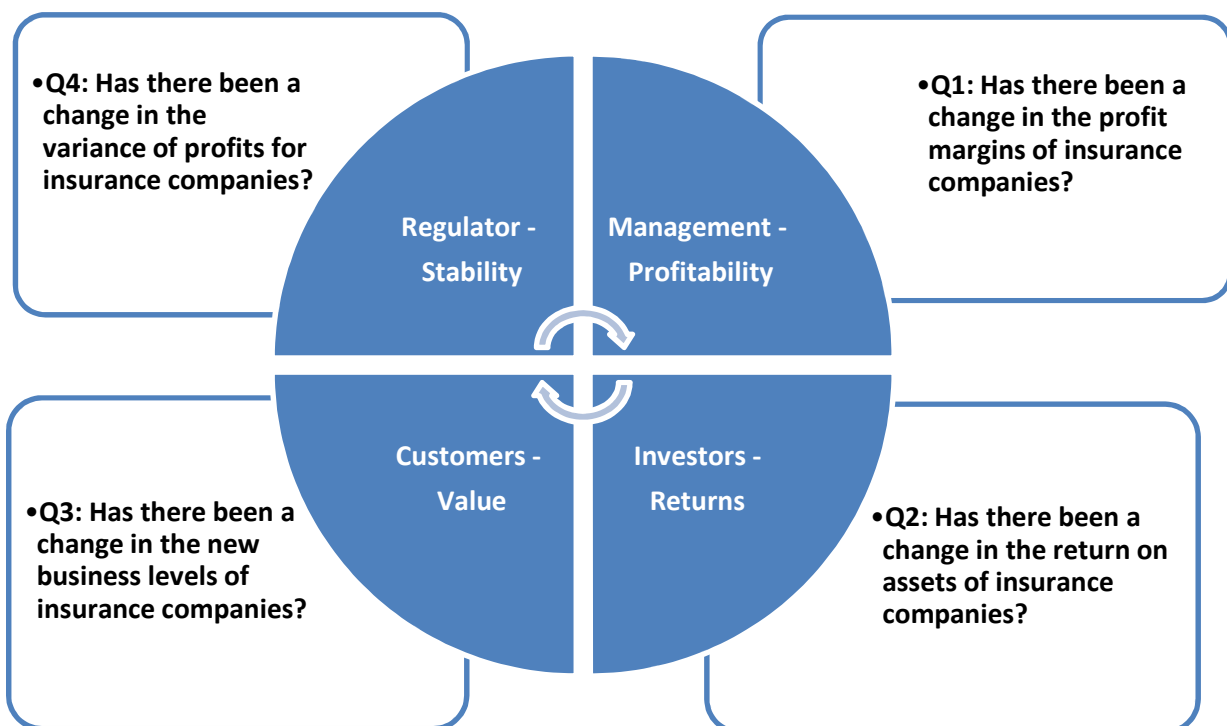
- Q4: Has there been a change in the variance of profits for insurance companies?

Regulator - Stability

Management - Profitability

- Q1: Has there been a change in the profit margins of insurance companies?

Customers - Value

Investors - Returns

- Q3: Has there been a change in the new business levels of insurance companies?

- Q2: Has there been a change in the return on assets of insurance companies?

Figure 26: Key Stakeholders, their expectations and the related research hypotheses
Source: Own research

The following four sections discuss each of these four questions in turn.

6.4. Question 1: Management

Management and employees are key stakeholders in the short-term insurance industry. Their expectations are as follows (Freeman, 2001):

- Safeguard the welfare of the organisation;
- Expected to balance the needs of different stakeholders;
- Jobs and livelihood are at stake;
- Expect job security and compensation (salaries and benefits).

The key interests of management and employees are as follows:

- Salary/Profitability;
- Work-life balance;
- Career enhancement opportunities.

The question that was chosen for the management stakeholder group relates to profitability: Question 1: Has there been a change in the profit margins of insurance companies?

The descriptive analysis showed a steady increase in the premiums for the short-term insurance industry between 2008 and 2015. Expenses also grew steadily over this period. However, between 2010 and 2014, the profits in the short-term insurance industry reduced, before recovering in 2015.

According to Farrell and Gallagher (2015), the costs of implementing risk management is material and therefore value must be derived to justify the costs.

Therefore, a test was done to determine whether or not there was any significant change to the mean of the net profit margins of companies after risk management was implemented through regulation.

The results showed that there was no significant change to the mean of the net profit margins of companies after risk management was implemented through regulation.

This meant that the industry incurred costs, but did not see value add in terms of enhanced profitability. Bromiley, McShane, Nair, and Rustambekov (2015) noted that if risk management was not implemented properly, then it could even become detrimental to the organisation.

In the context of employees and management as stakeholders:

- Management and employees have a responsibility to safeguard the welfare of the organisation. By incurring costs without deriving value, this is detrimental to the organisation;

- Management is expected to balance the needs of different stakeholders. It seems in this context that the needs of the Regulator have been met, but at a disadvantage to employees and management.

- Where costs for risk management implementation are high but there is no actual measurable value derived from those costs, then the jobs and livelihood of management and employees are at stake. It was seen that the percentage of insurers making losses increased between 2013 and 2015 compared to the 2009-2012 period.

- Management and employees expect job security and compensation. There was a sharp decline in the number of insurers in the short-term insurance industry between 2010 and 2015. This would mean reduced job security for employees and management. The decreased numbers could be due to companies leaving the industry, M&As, takeovers or consolidations.

In this context, institutional theory seemed to hold, and it seemed that risk management was implemented as a symbolic gesture in many companies without substantive intent to meet the requirements of the Regulator. This incurred costs, but did not add value to employees and management, the key stakeholders of insurance companies.

Inappropriate implementation of risk management may have unintended negative consequences to employees and management in terms of high costs resulting in reduced compensation and possibly job security (emphasis added).

6.5.   Question 2: Investors

Investors are key stakeholders in the short-term insurance industry. Their expectations were as follows (Freeman, 2001):

- Financial stake in the business;
- Expect a financial return.

The key interests of investors were as follows:

- Expected returns;
- Investment Horizon;
- Appropriate return for risk.

The question that was chosen for the investor stakeholder group related to return on assets: Question 2: Has there been a change in the return on assets of insurance companies?

The descriptive analysis showed a steady increase in total assets. However, the return on assets reduced drastically between 2010 and 2014 before recovering in 2015.

A study done by Lin, Wen, and Yu (2012) found that the implementation of risk management lowers insurers' value and return on assets. They observed that stock markets reacted negatively to risk management implementation within businesses, indicating that investors may not see the value of risk management implementation in comparison to the costs incurred.

A test was done to determine whether or not there was a significant change to the mean of the return on assets of insurance companies after risk management was implemented through regulation. The results showed that there was no significant change to the mean of the return on assets of insurance companies after risk management was implemented through regulation. It can therefore be assumed that investors in the insurance industry incurred costs, but did not see additional value in terms of enhanced returns.

Bromiley, McShane, Nair, and Rustambekov (2015) cautioned that if risk management was not implemented properly, then it can be detrimental to the organisation. In this context, it could be seen as detrimental to the industry, where investors expect to see returns on investment. In this instance, investments were made, but there were no significant returns. This may make the insurance industry less attractive for investments compared to other industries.

The three key interests of investors have been impacted as follows:

- Returns did not compensate for the additional costs incurred in implementing risk management;
- The efficiency of the industry could theoretically reduce because additional costs were incurred without seeing any additional benefits;
- The sustainability of the industry could be threatened, if insurance is seen as less attractive to investors if their return on assets does not increase in line with investments.

All three key interests of investors – expected returns, efficiency and sustainability had been negatively impacted by the implementation of risk management forcibly driven through regulation.

In this context, institutional theory seemed to hold, and it seemed that risk management had been implemented as a symbolic gesture without substantive intent in order to meet the requirements of the Regulator. This incurred costs, but had not added value to investors, who are key stakeholders of insurance companies.

In addition to not providing value, any inappropriate implementation of risk management may have unintended negative consequences to investors in terms of the lowered level of attractiveness of the insurance industry to investors.

A key question raised from a study by McShane, Nair, and Rustambekov (2011) was whether a strong risk-avoidance culture constrained business growth instead of enabling it. If investors were to find the insurance industry less attractive compared to other industries, then additional capital may not be as easily available to the insurance industry, resulting in an impediment to future growth opportunities (emphasis added).

6.6. Question 3: Customers

Customers are key stakeholders in the short-term insurance industry. Their expectations were as follows (Freeman, 2001):

- Provides revenue to the business in exchange for products;
- Expects the business to understand and meet their needs.

The key interests of customers were as follows:

- Price;
- Value;
- Options.

The question that was chosen for the customer stakeholder group relates to percentage of new business:

Question 3: Has there been a change in the percentage of new business for insurance companies?

The descriptive analysis showed a steady decline in the percentage of new business since 2010, with a slight improvement in 2015.

Farrell and Gallagher (2015) noted the costs of implementing risk management was material and therefore value must be derived to justify the costs (emphasis added).

Since customers expect good value and are concerned with price, any improvements in these expectations may result in improved sales to customers.

A test was done to determine whether there was any significant change to the mean of the percentage of new business for insurance companies after risk management was implemented through regulation. The results show that there was no significant change to the mean of the percentage of new business for insurance companies after risk management was implemented through regulation. It can therefore be deduced that customers may not see additional quality and value being derived from the implementation of risk management in the industry.

Bromiley, McShane, Nair, and Rustambekov (2015) noted that if risk management was not implemented properly, then it can be detrimental to the organisation. In this context, it was

detrimental to the industry as customers expect quality products and value at low prices. If implementation of risk management increases the cost to company, then prices could increase, or value could reduce (such as more exclusions).

The three key interests of consumers had been impacted as follows:

- Prices and premiums may increase with the increase in costs as a result of having to comply with the risk management regulations;
- Increased prices may result in a lower perceived value from insurance products;
- Customers are left with fewer options as the number of insurance companies in the industry reduced since the start of the risk implementation in the industry.

All three key interests of consumers – prices, quality, value and options could be negatively impacted by the implementation of risk management driven through regulation.

In this context, institutional theory seemed to hold, and it seemed that risk management had been implemented as a symbolic gesture without substantive intent in order to meet the requirements of the Regulator. This incurred costs, but did not add value to customers, who are key stakeholders of insurance companies.

In addition to not providing added value, any inappropriate implementation of risk management may have unintended negative consequences to customers in terms of increased premiums or fewer insurance products options that offer them protection against unforeseen accidents and incidents.

If customers were to perceive that insurance products were to provide lower value than previously, then this may result in lower sales which could mean fewer customers have insurance product which would have provided them with financial protection against unforeseen incidents (emphasis added).

6.7.   Question 4: Regulator

Regulators are key stakeholders in the short-term insurance industry. Their expectations were as follows (Freeman, 2001):

- Ensure that regulations are in place to protect consumers;
- Expect the businesses to comply with regulations.

The key interests of the Regulator were as follows:

- Policyholder protection;
- Stability of the industry.

The question that was chosen for the Regulator stakeholder group related to variance of profits:

Question 4: Has there been a change in the variance of profits for insurance companies?

The descriptive analysis showed an increase in the number of insurers making losses in 2013, 2014 and 2015 when compared to the 2010 to 2012 period. In addition, the number of insurance companies also reduced significantly. A box and whisker chart showed that there was no noteworthy change in the variance of profits compared to before the implementation of risk management.

Pagach and Warr (2010) stated that generally, there was little impact from risk management implementation on a wide range of business variables. This raised the question of whether risk management was achieving its stated goal of added value creation.

The key expectations and interests of the Regulator had been impacted as follows:

- Regulations are meant to be in place to protect customers. However, the regulations may have resulted in customers perceiving higher premiums and lower perceived value from insurance products. This could leave customers exposed to financial losses from unforeseen accidents or incidents, if they do not purchase the appropriate insurance cover;
- The Regulator is concerned with the sustainability of the insurance industry. However, as a result of the enforced risk management regulations, the industry may be less

75

attractive to employees, management, investors and customers. This could threaten the sustainability of the industry;

- The stability of the industry had also been impacted as seen by a visible increase in the number of insurers making losses and the total number of insurance companies in the market reducing significantly.

In this context, institutional theory seemed to hold, and it seemed that risk management had been implemented as a symbolic gesture without substantive intent in order to meet the requirements of the Regulator. This had incurred costs for the industry, but not added value as the Regulator may have expected.

In addition to not providing additional value, any inappropriate implementation of risk management may have unintended negative consequences to the industry in terms of reduced sustainability and stability (emphasis added).

76

6.8. Conclusion

The aim of the research was to understand the value added to stakeholders from the implementation of risk management driven through regulation.

The results of the hypotheses testing combined with the key learnings from the literature review enabled this question to be answered. A summary of the key insights from this chapter are presented below.

Question 1: Management − Has there been a change in the profit margins of insurance companies?

The results of the statistical test showed that there was no significant change to the mean of the net profit margins of companies after risk management was implemented through regulation. It could therefore be concluded that the industry incurred extra costs, but did not see additional value in terms of enhanced profitability.

In this context, institutional theory seemed to hold, and it seemed that risk management had generally been implemented as a symbolic gesture without substantive intent in order to meet the requirements of the Regulator. This incurred additional costs, but had not added extra value to employees and management, who are key stakeholders of insurance companies.

In addition to not providing extra value, any inappropriate implementation of risk management may have unintended negative consequences, as a result of the high costs, to employees and management in terms of compensation and job security.

Question 2: Investors − Has there been a change in the return on assets of insurance companies?

The results of the statistical test showed that there was no significant change to the mean of the return on assets of insurance companies after risk management was implemented through regulation. It can therefore be concluded that the investors in the insurance industry were faced with extra costs incurred by insurance companies, without any additional value being created in terms of enhanced returns on their investments.

In this context, institutional theory seemed to hold, and it seemed that risk management had been implemented as a symbolic gesture without substantive intent in order to meet the

requirements of the Regulator. This incurred extra costs to the insurance companies, but did not add value to investors, who are key stakeholders of insurance companies.

Inappropriate implementation of risk management also may have unintended negative consequences to investors in terms of the decreased attractiveness of the insurance industry to investors.

McShane, Nair, and Rustambekov (2011) also queried whether a strong risk-avoidance culture constrained business growth instead of enabling it. If investors find the insurance industry less attractive compared to other industries, then additional capital may not be as easily available to the insurance industry, resulting in an impediment to future growth opportunities.

Question 3: Customers − Has there been a change in the percentage of new business for insurance companies?

The results of the statistical test showed that there was no significant change to the mean of the percentage of new business for insurance companies after risk management was implemented through regulation. It can therefore be deduced that customers may not see additional quality and value being derived from the implementation of risk management in the industry.

In this context, institutional theory seemed to hold, and it seemed that risk management had been implemented as a symbolic gesture without substantive intent in order to meet the requirements of the Regulator. This incurred extra costs for the insurance companies, but did not add value to customers, who are key stakeholders of insurance companies.

As in the other key stakeholder groups, inappropriate implementation of risk management may have unintended negative consequences to customers in terms of higher premiums and thus lower sales of products that would have offered them protection against unforeseen accidents and incidents.

McShane, Nair, and Rustambekov (2011) had queried whether a strong risk-avoidance culture constrained business growth instead of enabling it. If customers were to perceive that insurance products were to provide lower value at a higher premium than previously, then this would negatively impact the growth prospects of the insurance industry.

Question 4: Regulator − Has there been a change in the variance of profits for insurance companies?

A box and whisker chart showed that there was no noteworthy change in the variance of profits compared to before the implementation of risk management.

In this context, institutional theory seemed to hold, and it seemed that risk management had been implemented as a symbolic gesture without substantive intent in order to meet the requirements of the Regulator. This incurred costs for the industry, but did not add value as the Regulator may have expected.

Inappropriate implementation of risk management may have unintended negative consequences to the industry in terms of reduced sustainability and stability.

There has been research (Beasley, Branson, & Pagach, 2015) which analysed the risk maturity of businesses in the financial services industry compared to the non-financial services industry. Businesses in the financial services industry were considered to be more highly regulated than businesses in the non-financial services industry. However, a significant difference was observed, with the non-financial services businesses demonstrating a higher risk maturity compared to the financial services businesses. This may indicate that businesses that are not forced to implement risk management through regulations, reach a higher level of risk maturity and derive more value from their risk initiatives.

According to Parker (2002), the complexity and inflexibility of regulations may result in costs to the business that unjustifiably decrease competitiveness. A proposal was put forward by Parker, that self-regulation could be used to steer business towards public goals without negatively impacting on the competitiveness and profitability of the business. Using self-regulation instead of government regulation may be an alternative solution to improve risk management capabilities in businesses.

7. Conclusion

The topic for research was an assessment of whether the implementation of risk management driven through regulation had added value to the key stakeholders in the insurance industry. Quantitative secondary data was used to assess this.

7.1. Principal Findings

7.1.1. Literature Review

The aim of the literature review was to understand the purpose of regulation, the importance of risk management, how investments in risk management should add value, and finally the impact of risk management regulations to the key stakeholders of the business.

The purpose of regulation as discussed was to promote social and economic good (Parker & Nielsen, 2011) and level the playing field between the strong and the weak (Braithwaite & Drahos, 2000).

However, according to Parker, 2002) and a study done by Law, Lau, Kerrigan, and Ekstrom (2014), government regulations may not always be as effective at achieving their intended purpose and may result in unintended consequences.

A number of published studies had shown that risk management was adding value to businesses. A study was conducted by Hoyt and Liebenberg (2015), during the early stages of risk management development, which provided persuasive evidence that risk management can be used to increase the value of insurance companies.

However, Farrell and Gallagher (2015) highlighted that the costs of implementing risk management was material and therefore value must be derived to justify the extra costs.

According to Beasley, Branson, and Pagach (2015), there are three theories that could describe the way in which risk management is implemented in a business. Institutional theory suggests that risk will be implemented as a symbolic gesture without substantive intent, in order to meet external requirements. Agency theory suggests that risk maturity occurs in order to better manage risks resulting from the relationship, which exists between the shareholder and management. Resource dependence theory suggests that risk implementation should provide strategic value to the business and should assist boards to be more proactive in

detecting, understanding and managing risks that could prevent the business from meeting strategic objectives.

In order for risk management to add value to the business, when compared to the costs of implementation, a business should implement risk management for reasons aligned with resource dependency theory.

According to a study done by Hoyt and Liebenberg (2015), insurers that had implemented risk management were valued as much as 20% higher than other insurers. In addition, a study conducted by Farrell and Gallagher (2015) found that businesses with mature levels of risk implementation exhibit a higher business value to the magnitude of 25%. This was at a time when there were no specific risk management regulations driving the implementation of risk management in a uniform manner across the industry. Certain businesses took a decision to implement more mature risk management and it was seen that these businesses were valued higher than businesses that had not implemented risk management.

McShane, Nair, and Rustambekov (2011) showed that business value increases as a business moves from the "weak" category to the "adequate with a positive trend" category, but does not increase beyond that level afterwards. This indicated that a business with a strong or excellent rating in terms of risk management did not increase business value further. A key question therefore arise whether a strong risk-avoidance culture actually constrains business growth instead of enabling it.

However, in contrast, a study conducted by Pagach and Warr (2010) showed that in general, there was little impact from risk implementation on a wide range of business variables.

A study done by Bromiley, McShane, Nair, and Rustambekov (2015) noted that the 2008 financial crisis cast doubt on the effectiveness of risk management adopted by leading financial services businesses. The study further noted that if risk management was not applied properly, it could even worsen situations that it was meant to fix.

Lin, Wen, and Yu (2012) found that instead, the implementation of risk management lowered insurers' value and return on assets. They observed that stock markets reacted negatively to risk management implementation within businesses, indicating that investors may not see the value of risk management implementation in comparison to the extra costs incurred.

For the purposes of this study, the key stakeholder groups relevant to the insurance industry in South that were impacted by the risk management regulations had been defined as follows:

- Management (including employees);

- Shareholders;
- Customers;
- Regulator.

In the context of this research, government regulation was used to enforce the implementation of risk management in the insurance industry in South Africa. The researcher had posed the question whether risk implementation in the South African insurance industry aligned with institutional theory, agency theory or resource dependence theory and therefore how effective regulation was in adding value to the different stakeholders of a business.

Previous research had shown that the implementation of risk management had significant positive impacts on businesses, while other research had shown that the opposite holds true. However, research had to date not been conducted on the value added to businesses from the implementation of risk management driven through regulation. Risk management regulations have been introduced in the South African insurance industry in 2009. Prior to the start of the process, risk management in the South African insurance industry was relatively immature. There was therefore an opportunity to use the South African insurance industry to assist in understanding what value could be added by risk management if it was driven through regulation.

The impact of the introduction of risk management regulations were determined for the different stakeholders of an insurance business as noted in the figure below.
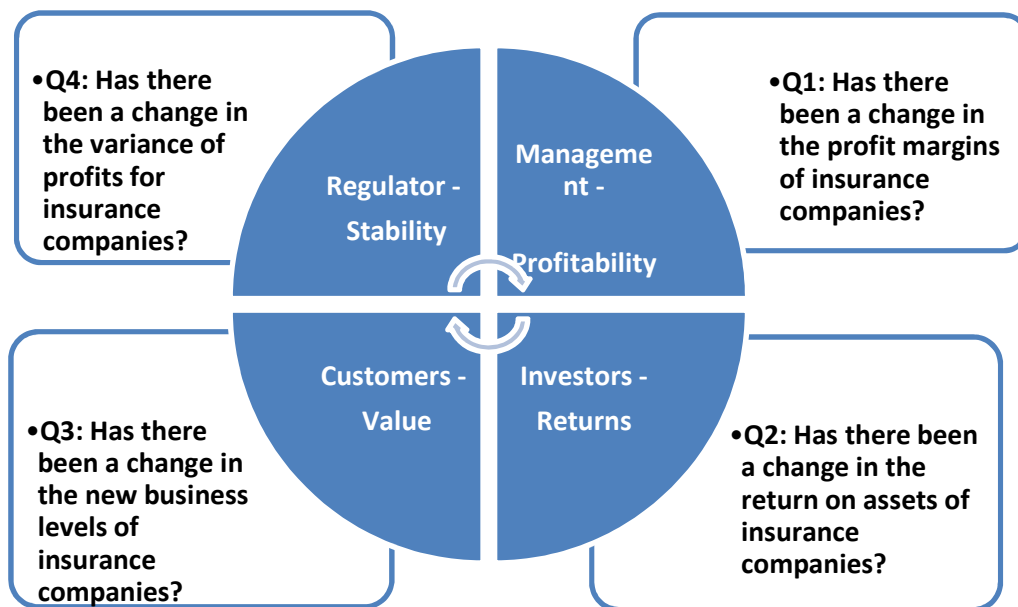

Figure 27: Key Stakeholders, their expectations and the related research hypotheses
Source: Own research

7.1.2. Hypotheses

The four questions listed in the figure above aimed to give a view of the impact on the different stakeholders in an insurance business as a result of the implementation of risk management regulations.

7.1.3. Methodology

The financial results of companies before and after the implementation of risk management regulations were compared to ascertain whether the implementation of risk management driven through regulation had been effective in adding value to the key stakeholders in the business.

The previous studies from the literature review showed that the authors first had to make an assessment as to whether or not risk management was implemented in each business, and the extent of such implementation. Tests were then conducted to compare the value of businesses that had implemented risk management to the value of businesses that had not implemented risk management.

The research methodology adopted in this paper was unique in that the researcher already knew that risk management had been adopted by all companies in this sector and this allowed the researcher to conduct a longitudinal test of the short-term insurance industry to determine whether or not there had been any significant difference comparing certain variables before and after risk management was implemented.

Quantitative data was used to give an objective view of the financial impact on insurance companies resulting from the risk management regulations.

Data was available for two related samples – financial information of insurance companies before compared to after the implementation of risk management regulation. For this purpose, a test of differences was most relevant, and the paired t-test was used to compare differences in the means of the matched-pairs samples.

There were certain limitations to using a quantitative secondary data set (as explained later in Chapter 4); however, these were not felt to be material. The results of the analyses were expected to be reliable.

7.1.4. Results and Discussion

The results of the hypotheses testing combined with the key learnings from the literature review enabled this question to be answered. A summary of the key insights are presented below.

Question 1: Management − Has there been a change in the profit margins of insurance companies?

The results of the statistical test showed that there was no significant change to the mean of the net profit margins of companies after risk management was implemented through regulation. This implied that the industry incurred extra costs for risk management implementation, but did not see any added value in terms of enhanced profitability.

In this context, institutional theory seemed to hold, and it seemed that risk management had been implemented as a symbolic gesture without substantive intent in order to meet the requirements of the Regulator. This has incurred costs but not seen to have added value to employees and management, who are key stakeholders of insurance companies.

In addition to not being seen to providing value, the inappropriate implementation of risk management may have unintended negative consequences to employees and management in terms of job security.

Question 2: Investors − Has there been a change in the return on assets of insurance companies?

The results of the statistical test showed that there was no significant change to the mean of the return on assets of insurance companies after risk management was implemented through regulation. This meant that the investors in the insurance industry saw the extra costs incurred by the insurance companies, but did not see added value in terms of enhanced returns.

In this context, institutional theory seemed to hold, and it seemed that risk management had been implemented as a symbolic gesture without substantive intent to meet the requirements of the Regulator. This incurred costs for the companies, but not added value to investors, who are key stakeholders of insurance companies.

Inappropriate implementation of risk management also may have unintended negative consequences to investors in terms of loss of attractiveness of the insurance industry to investors.

A key question from a study conducted by McShane, Nair, and Rustambekov (2011) was whether a strong risk-avoidance culture constrains business growth instead of enabling it. If

investors were to find the insurance industry less attractive compared to other industries, then additional capital may not be as easily available to the insurance industry, resulting in an impediment to future growth opportunities.

Question 3: Customers − Has there been a change in the percentage of new business for insurance companies?

The results of the statistical test showed that there was no significant change to the mean of the percentage of new business for insurance companies after risk management was implemented through regulation. Customers may not see any additional benefit or value being derived from the implementation of risk management in the industry.

In this context, institutional theory seemed to hold, and it seemed that risk management had been implemented as a symbolic gesture without substantive intent in order to meet the requirements of the Regulator. This incurred costs for the insurance companies, but did not add value to customers, who are key stakeholders of insurance companies.

Inappropriate implementation of risk management may have unintended negative consequences to customers in terms of lower sales of products as premiums increase or products have more exclusions.

A key question from a study by McShane, Nair, and Rustambekov (2011) was whether a strong risk-avoidance culture constrains business growth instead of enabling it. If customers perceive that insurance products provide lower value than previously, this will negatively impact the growth prospects of the insurance industry.

Question 4: Regulator − Has there been a change in the variance of profits for insurance companies?

A box and whisker chart showed that there was no noteworthy change in the variance of profits compared to before the implementation of risk management.

In this context, institutional theory seemed to hold, and it seemed that risk management had been implemented as a symbolic gesture without substantive intent in order to meet the requirements of the Regulator. This incurred costs for the industry, but did not added value to the companies or other stakeholders.

Inappropriate implementation of risk management also may have unintended negative consequences to the Regulator in terms of reduced sustainability and stability of the industry.

There has been research (Beasley, Branson, & Pagach, 2015) which analysed the risk maturity of businesses in the financial services industry compared to the non-financial services industry. Businesses in the financial services industry were considered to be more highly regulated than businesses in the non-financial services industry. However, a significant difference was observed, with the non-financial services businesses demonstrating a higher risk maturity compared to the financial services businesses. This may indicate that businesses that are not forced to implement risk management through regulations, reach a higher level of risk maturity and derive more value from their risk initiatives.

According to Parker (2002), the complexity and inflexibility of regulations may result in costs to the business that unjustifiably decrease competitiveness. A proposal was put forward by Parker, that self-regulation could be used to steer business towards public goals without negatively impacting on the competitiveness and profitability of the business. Using self-regulation instead of government regulation may be an alternative solution to improve risk management capabilities in businesses.

7.2. Implications for Management

The implementation of risk management had been shown in literature to be able to add value to a business. However, if implemented merely as a symbolic gesture to comply with regulations, then significant costs could be incurred with limited benefits. This could have a negative impact on the following key stakeholders of the business:

- Management and employees – The high costs incurred by insurance companies without seeing benefits may have unintended negative consequences on job security;
- Investors – The investment in an initiative that does not provide enhanced returns may have unintended negative consequences to investors in terms of the loss of attractiveness of the insurance industry to investors, compared to other industries;
- Customers − The costs incurred in implementing risk management without seeing benefits may in part be passed on to customers. Customers may be required to pay higher premiums for no additional value. This may result in lower sales, impacting negatively in turn on the insurance companies;
- Regulator − Inappropriate implementation of risk management may have unintended negative consequences to the Regulator in terms of reduced sustainability and stability of the industry.

86

The key learning for management is that risk management should add value to a business. However, implementing risk management as a symbolic gesture to comply with regulations may have negative unintended consequences for staff, investors, customers and the Regulator.

According to Parker (2002), the complexity and inflexibility of regulations may result in costs to the business that unjustifiably decrease competitiveness. A proposal was put forward by Parker, that self-regulation could be used to steer business towards public goals without negatively impacting on the competitiveness and profitability of the business. Using self-regulation instead of government regulation may be an alternative solution to improve risk management capabilities in businesses.

7.3.   Limitations of the Research

Quantitative financial data was used in this analysis. Further insights had been gained from published surveys through qualitative data. The data used in this research were secondary data. More specific insights may have been gained by creating primary data.

Insurance is part of the financial services industry. Including data from the non-financial services industry may give different insights.

This research considered whether there was an impact on financial results immediately after the implementation of the risk management regulations. The impact may only be seen after a specific time period has elapsed.

7.4.   Suggestions for Future Research

This research focused on a quantitative analysis of financial results before and after the implementation of risk management driven through regulation in the South African insurance industry. It was found that although costs were incurred by the industry, there was no significant difference in financial results.

The elements of risk management included in the regulations were compared to a list of best practice risk management elements that were expected to provide the greatest benefits. The regulations did cover all the best practice elements; however, additional benefits were not seen in the financial results.

There is an opportunity for further research to conduct a qualitative study to understand why certain best practice risk management aspects may have been implemented that did not necessarily add value to the business. There may be certain factors, where risk management was forced through regulation such as:

- There may be insufficient suitably qualified staff available in the industry, when all businesses in the industry need to implement risk management at the same time;
- The time to implementation may not have been sufficient to allow businesses to implement all the elements appropriately;
- The Board and management may lack expertise in the field of risk management, if the industry was previously relatively immature from a risk management perspective. This may have resulted in the adoption of risk management simply as a tick-box exercise rather than in a manner that would maximise value for the company.

There is also an opportunity for further research to conduct another quantitative longitudinal study to understand, if the benefits of the implementation of risk management driven through regulation can be seen after a longer time period has passed, perhaps 3-5 years.

In addition, a qualitative analysis through interviews or surveys with the different stakeholders in the insurance industry will give valuable insight into the impact of risk management driven through regulation.

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Appendix A: Ethical Clearance

Gordon
Institute
of Business
Science
University
of Pretoria

27 July 2017

Deshni Subbiah

Dear Deshni,

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