UNIVERSITEIT VAN PRETORIA
UNIVERSITY OF PRETORIA
YUNIBESITHI YA PRETORIA

**Gordon Institute
of Business Science**

University of Pretoria

**The relationship between Chief Executive Officer (CEO) remuneration
and financial performance of an organisation**

Minute Fhedzisani Modau

12382958

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

11 November 2013

Abstract

Orientation: In theory, effective remuneration contracts will link executive remuneration with organisation financial performance and provide strong incentives for executives to operate organisations and behave in ways that will be in the shareholders' best interests. Many proclaim that this is not happening as CEOs continue to be rewarded even when their respective organisations are performing poorly.

Research purpose: The purpose of this research study was to take advantage of the available information on executive remuneration data and establish the best link (correlation) between executive remuneration and organisation financial performance between 2008 and 2012.

Motivation for the study: The motivation for the research study was due to the acknowledged challenge encountered by organisations in finding a balance between executive remuneration that will be enticing enough to keep executives in the employ of the organisation and not overpaying them, especially when organisation's performance is not favourable.

Research design approach and method: The research was a quantitative, archival study, conducted over a seven year time period. The primary statistical techniques used in the study included: multiple correlation analysis, bivariate regression analysis, multiple regression analysis and stepwise regression analysis.

Main findings/results: The primary finding was that the relationship between executive remuneration and organisation financial performance has been experiencing a decline since the 2008 Global Financial Crisis. The decline has predominantly been due to a move by executives away from performance related elements of the remuneration contracts, creating disconnect between what executives are being paid and the performance of the organisation. The findings point out to the fact that, to a large extent, remuneration contracts for executives are predominantly no longer shaped by what would be optimal for an organisation and its shareholders, but are also influenced by the natural propensity of executives to influence their own remuneration contracts.
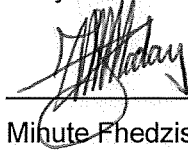
Practical managerial implications: The results suggest that there is a need for superior organisation performance measures and innovative remuneration policies that need to be developed which will be in synchronism with the long-term strategic plans of an organisation.

Contribution/value add: The study provides a key insight with regard to the fact that without any performance based elements with the executive's remuneration, it is going to be difficult to justify the high remuneration packages of executives. In the long run, a dilemma arises for board of directors as they become reluctant to either reward executives for superior performance or punish them for poor performance.

Key words: CEO remuneration, remuneration package, pay-performance, principal-agent theory, agent problem, organisation performance measures, compensation.

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.

Minute Fhedzisani Modau

30th of September 2013

In memory of

Serwala Jackson Sefara

29 September 1951 – 22 August 1997

Dedication

I dedicate this research work to my whole entire family, and more specifically to my beautiful and very patient wife Nqobile Nokukhanya Modau and son, Rofhiwa Ndumiso Modau.

Thank you for all the support and love, you make my life beautiful.

Acknowledgements

To the Lord God Almighty, I bow to You in my brokenness and give thanks for You are my strength and my refuge; You humbly came to my rescue, to save my soul and heal my heart. All I have is Yours Lord God Almighty, for I have nothing more than all You offer me – in Jesus Christ name Amen.

To Dr. Mark Bussin, I have nothing more than appreciation of your field of work, and more importantly I would like to say thank you for all the confidence and faith you had on me from day one. I will be forever grateful to you, and your family for letting me take some of their time.

To my entire family, thank you for the understanding showed when I missed all the important family occasions while being on the MBA programme. In particular, thanks to my wife Nqobile, my mother Christine, my sisters Johannah, Margaret, Shavhi and Sello, my brothers Alpheus and Benford, my niece Manthe, and nephews Mphela and Nkoro. I have absolutely nothing but absolute love for you.

To all my dear friends on the GIBS MBA programme, thank you for Dropbox, Zotero and all your support. I would like to thank Dylon Moodley in particular for your belief in me when I doubted myself the most – you are a good man, and I am here because you never gave up on me.

Thank you to all the faculty and staff at GIBS.

Table of Contents

1.   Chapter 1: Introduction

1.1. Problem Introduction

Business Times published an article called "Bang goes bank boss pay" on the 28th of April 2013 (Marais & Lefifi, 2013). The article gave an indication on how South African banks have taken to heart threats in the United Kingdom and the United States to impose a cap on bankers' salaries, slashing their Chief Executive Officers (CEOs) packages. The article did also indicate that some organisations have not shown similar restraint, dishing out hefty salary hikes despite poor organisation performance. The analysis of CEO packages in 2012 by Marais and Lefifi (2013) show that some organisations appear to be taking note of these threats while some executives were still being handsomely rewarded even though organisation's fortunes soured.

Chief Executive Officers in an organisations assume the highest levels of responsibility and accountability for the organisation and its performance on behalf of the organisation's shareholders (Wibowo & Kleiner, 2005). These individuals are typically highly skilled, have significant leadership competencies and are viewed as a scarce commodity. As a result, these executives are highly incentivised through remuneration structures to remain in the employ of the organisation and drive the performance of the organisation. In order to ensure that there is alignment between the CEO's interests and those of the shareholders it is essentially important for shareholders to reward them with incentives that will ensure alignment.

Based on the article by Marais and Lefifi (2013) it is evident that there is a challenge in finding a balance between remuneration that will be enticing enough to keep executives in the employ of the organisation and not overpaying them, especially when organisation performance is not favourable. There have also been calls in South Africa from government to put an end to excessive executive salaries as executive salaries have seemingly grown to incomprehensible level when viewed in the context of salaries received by the ordinary employee (Marais & Lefifi, 2013). In addition, executive salaries have also come under the spotlight due to the perceived weak pay-performance link, especially after the 2008 Global Financial Crisis.

1

The executive remuneration, especially of the Chief Executive Officer (CEO) of organisations, has been in the limelight in recent years, and often for the wrong reasons (Ozkan, 2011). In South Africa this includes the tragedy that followed the strike by union miners which happened in 2012 at Marikana platinum mines operated by Lonmin at Marikana near Rustenburg. The strike resulted in the tragic death of some of the mine workers as violence broke between the South African Police Services and the mine workers. The strike was due to the fact that miners were complaining that mining benefits were not reaching the workers and the surrounding communities. More importantly criticism was put on high executive remuneration when compared with the low wages of the mine workers (Leon, 2012). After the Marikana mine workers shooting political figures and union leaders started issuing familiar criticisms over executive remuneration and urged organisation board of directors to curb these remuneration.

1.2. Problem Statement

The problem with executive pay-performance is on finding the balance between executive remuneration and organisation performance – more specifically, the problem is in establishing the best link between executive remuneration and organisation performance. This problem on executive pay-performance extends to finding a suitable model to structure executive remuneration that will protect shareholders from over remunerating executives in times of economic appreciation while protecting executives from being under paid in times of economic depreciation.

1.3. Research Problem

Globally the discontent with remuneration received by executives gained momentum as a result of the 2008 Global Financial Crisis that began in United States and spread across many global economies. In view of many national recessions caused by the financial crisis of 2008, the high remuneration packages of executives has attracted the attention of the public, unions, investor, media and academic researchers. The public continues on the perception that executives receive excessive salaries and bonuses (Leon, 2012).

The unions, in the interest of social equality, continue to express outrage at large executive salaries and bonuses compared to employees national average salaries, and bonuses (Mantshantsha, 2007). The investors expect that there should be a close alignment between executive remuneration and performance of the organisations (Sharp, Mackay, Rankin, & Aling, 2012). The media on the other hand grasp on any executive remuneration that appears excessive especially when recent financial performance of the organisation is poor (Perry & Zenner, 2001). According to Shaw (2011), executive remuneration has widely been regarded as one of the key contributors to the financial crisis and these sentiments have found their way into academic literature as researchers try to understand more fully the root causes of the 2008 Global Financial Crisis.

Due to the increased awareness of the high executive remuneration by the public, unions, investors and media, with more and more fingers being pointed at their outrageously high remuneration, the academic researchers continue to focus on establishing the best pay-performance link. According to Jensen and Murphy (1999), the executive remuneration literature has grown considerably over the last 50 years.

A great number of academic researchers investigate the relationship between executive remuneration and organisation financial performance while considering principal-agent relationship as the primary foundation. The principal-agent relationship arises when the individual who owns an organisation is not the same individual as the individual appointed to manage or control it – shareholders (principals) hire managers (agents) to run the organisation on their behalf (Bebchuk & Fried, 2005). Agents are often viewed as utility maximizes and if they are not monitored, they will place their own interests above those of the principal which they serve (Hope & Thomas, 2008). According to the Jensen and Meckling (1976), executive remuneration was viewed as an effective way of aligning the interests of both the executive and shareholders, through remuneration contracts that limited agency costs while rewarding or punishing superior organisation financial performance.

3

Corporate governance mechanisms may also be utilised to ensure alignment between the interests of both the executive and shareholders while ensuring lower agency costs. According to McKnight and Weir (2009), corporate governance mechanisms are used to "realign the interests of agents and principals and so reduce agency costs" (p. 140).

In South Africa corporate governance requirements are currently applicable through the implementation of the Companies Act (2008) and King Code and Report on Governance in South Africa (King III) (Institute of Directors Southern Africa, 2009). These corporate governance requirements have given a clear indication that there is a need to ensure that executive remuneration should be linked to organisation performance, and through its disclosure requirements every organisation is obligated to provide this information.

The above discussions have identified two key points – firstly, executive remuneration should have a strong incentive effect and thus be related to performance; and secondly, due to potential conflicts of interest, safeguarding the objectivity of the remunerating process is crucial through corporate governance.

Additionally, much criticism has been levelled at organisations and their remuneration committees for the increases in executive remuneration in the face of disappointing financial results. Ozkan (2007) stated that it is widely felt that the link (correlation) between executive remuneration and organisation financial performance is not strong enough, meaning that executives receive their high salaries regardless of the financial results of their respective organisations. The amount of legislation dealing with executive remuneration has also increased in terms of requiring remuneration contracts that reward superior organisation performance (Morrissey, 2009).

It is in this regulatory changes and current economic climate that makes this research relevant in terms of determining the linking between rewards and performance for executives – a powerful lever for driving business strategy. Additionally, organisations currently face a challenge with regard to being able to reward or punish executive based on the organisation performance.

4

1.4. Research Objectives

Whether a CEO is punished for poor organisation financial performance is an important question for the public, unions, investors, media, academic researchers, and remuneration committees both locally and globally. Effective remuneration contracts, in theory, should link executive remuneration with organisation financial performance and limit agency costs while providing strong incentives for executives to operate in the shareholders' best interests. Many do proclaim that this is not happening as CEOs continue to be rewarded even when their respective organisations are performing poorly.

Lately, fiscal year-end of organisations implies the beginning of the debate over executive remuneration with much criticism directed at organisations and their respective remuneration committees for the increases in executive remuneration in the face of disappointing financial results (Lindqvist & Grunditz, 2004). In South Africa, the Companies Act (2008) and King III (2009) specifies that there should be a positive correlation between CEO remuneration and organisation performance (Institute of Directors Southern Africa, 2009). Additionally, an increase in disclosure requirements in South Africa through the Companies Act (2008) and King III (2009) has resulted in more information being available regarding executive remuneration and South African academic researchers need to take more advantage of this information in establishing pay-performance for executives (Bradley, 2011).

The primary objective of this research is to take advantage of the available information on CEO remuneration data and establish the best link (correlation) between CEO remuneration and financial performance of organisations. Research on CEO remuneration has grown even faster than actual CEO remuneration (Jensen & Murphy, 1999), and it is to this body of knowledge that the current research aims to make a contribution. In addition, the underlying theme of the literature will highlight the complexities and dangers posed for organisations in determining executive remuneration packages, specifically the difficulty of aligning these remuneration packages with societies' interests.

5

Since the 2008 Global Financial Crisis, organisations have been seeing faltering revenues, while financial targets have become elusive and more difficult to achieve. Subsequently, performance related incentives that organisation were supposed to pay to their executives could not be paid out, decreasing their executives' total earnings. This has led to most CEO, instead of answering for the decline in organisation performance, opting for "golden handshakes".

Marais and Lefifi (2013) point out that with increasing pressure on organisations to justify executive remuneration packages around the world, voters agreed to increase shareholder power over executive remuneration packages and limit "golden handshakes" – which has resulted in organisations treading carefully around the subject of reward and performance. Organisations with misaligned remuneration packages exhibit destructive environment for organisation and its shareholders as executives pursue options that primarily lead to their own personal benefits.

Every organisation in the world, either it being for profit or non-profit, has specified goals and objectives that it wants to achieve, which come out of the organisation's strategic plans and policies. The CEO is the individual appointed to ensure implementation of these strategic plans and policies on an operational basis. As a result, the CEO must then be rewarded on the basis of organisation performance. There is a need to ensure that executive rewards are linked to organisation performances – executive pay-performance link is essential for any organisation as it is drives business strategy.

According to Baker, Jensen, and Murphy (1988) "economic models of remuneration generally assume that higher performance requires greater effort or that it is in some other way associated with disutility on the part of workers" (p. 594). These economic models, for them to be able to provide incentives, predict the existence of reward systems that structure executive remuneration so that an executive's expected utility will increase with observed productivity, i.e. organisation financial performance. Remuneration structure understanding become essential as they determine executives behaviour within their respective organisations.

6

According to Frydman and Jenter (2010), a remuneration package of an executive has various levels which consists of basic salary, annual bonus, short-term and long-term performance incentives. Similarly, Attaway (2000) points out that scholar have operationalized organisation performance in many different ways – accounting-based measures and market-based measures. Fatemi, Desai, and Katz (2003) argue that such measures do not account for the risk incurred by the organisation's executive in their search for growth and profitability – suggesting two additional measures, namely economic value added (EVA) and market value added (MVA).

The research objectives of the current study are as follows:

1. to establish if there were any structural changes that occurred after the 2008 Global Financial Crisis with regard to the mix in the remuneration components received by Chief Executive Officers (CEOs);

2. to establish the closest link (correlation) between CEO remuneration and financial performance of an organisation when considering the most commonly used financial performance measures; and

3. to establish, based on the closest link (correlation) between CEO remuneration and financial performance of an organisation, a model that can be used to determine the remuneration that an organisation is to pay to its respective CEO as a result of the financial performance of the organisation which they are placed in charge.

1.5. Introduction Summary

Worldwide, the defensive response given by organisations with regard to high levels of executive salaries has been the need to attract, motivate and retain the best executives. The underlying ostensibly reasonable assertion has been that executives are highly mobile, and due to favourable financial incentives elsewhere executives will change organisations. The current chapter focused on introducing and stating the problem with regard to finding a balance between executive remuneration and organisation performance. The current chapter also defined the research problem and objectives.

7

The next chapter will consider the duties of the executives, especially the Chief Executive Officers (CEOs), challenges arising between executives and their board of directors in the agency problem, especially the challenges in establishing the best remuneration strategy for pay-performance. The next chapter will also look at corporate governance issues on addressing the agency problem and previous research studies on investigating the pay-performance link for executives.

8

2.   Chapter 2: Literature Review

2.1. Introduction

The primary objective of this research study was to determine the relationship between Chief Executive Officer (CEO) remuneration and financial performance of an organisation.   The following chapter will set out the literature pertaining to the respective research constructs, and will indicate how the various constructs relate to the research problem – linking executive rewards and performance, a powerful lever for driving business strategy. Indeed few organisations concede to doing this well or getting it right, yet it is one of the most powerful levers for driving business strategy.   The literature review will also provide insight into previous research conducted in the field as it relates to the specific constructs presented in this current study.

The literature will begin with a review of the CEOs and their duties in organisations while focusing on the underlying principles that drive the determination of their respective remuneration packages. The focus will then be on the principal-agent theory, and the issues that have risen since the 2008 Global Financial Crisis.   One of the major issues that have emerged strongly after the 2008 Global Financial Crisis is corporate governance which has been designed to ensure that executives control organisations in ways that will be acceptable to the shareholders of their respective organisations. The literature will then look at other measures to address the agency problem, namely optimal contracting and managerial power approach.   The optimal contracting approach considers executive remuneration as a solution for agency problem.   The antagonistic managerial power approach considers executive remuneration as being part of the agency problem.   The literature review will then review executive remuneration components and measures of organisation financial performance.

Finally the literature will present past research results of studies on executive pay-performance, both done internationally and in South Africa.   International studies have been carried out on the same topic, with most studies finding mixed and inconclusive results while those done in South Africa have yielded similar results in the financial and retails industry.

2.2. Chief Executive Officer (CEO)

Every organisation, in addition to creating value for its shareholders, has goals and objectives to be achieved coming out of the organisation's strategic plans and policies. In an organisation different positions and departmental groups are established with separate tasks but working together to operate as one to achieve the specified goals and objectives as specified in the organisation's strategic plans and policies (Cummings & Worley, 2009). The board of directors then appoints the CEO to be responsible and accountable for implementing the strategic plans and policies on an operational basis and report back (Wibowo & Kleiner, 2005). As a results, the CEO becomes the highest ranking and paid executive in an organisation, and has four primary duties, viz. setting strategy and vision for the organisation, building culture and good team work, and allocating capital (Wibowo & Kleiner, 2005).

The CEO is responsible for the organisation's outcomes by ensuring that the organisations' resources are properly allocated and utilised, operations are correctly executed, and planned projects are completed within the allocated capital. Andrews and David (1987) point out that the CEO is first and probably least pleasantly person who is responsible for organisation results attained in the present as designated by plans made previously. The CEO decides on which is the best way for an organisation and should be able to accommodate the fundamental strategies: increase the reputation of the organisation's offerings, and continuously communicate the designed organisation strategies to shareholders and employees.

The board of directors are an important corporate control mechanism to ensure that CEOs adopt strategic plans and policies that maximise the value delivered to the organisation's shareholders. A significant responsibility for board of directors is to both monitor and evaluate the level and structure of CEO remuneration (Fama & Jensen, 1983). Board of directors critical roles also include creating incentives that will ensure that there is alignment between the interests of the shareholders and the CEO. Conceptually this is not a difficult challenge, the dilemma is that the realities are at odds with these principles because of the agency relationship (Jensen & Murphy, 1999).

10

2.3. Principal-Agent Theory

Jensen and Meckling (1976) defined an agency relationship as "a contract under which one or more persons (the principal(s)) engage another person (the agent) to perform some service on their behalf which involves delegating some decision making authority to the agent" (p. 6). The resultant is that naturally both the principal(s) and the agent to the relationship are utility maximizers which reults in the agent not always acting in the best interests of the principal(s). Bebchuk and Fried (2005) found that the executives of organisations had personal goals that are conflicted with the interests of shareholders. As a result, the agent if left unmonitored will place their own interest above those of the principal(s) whom they are supposed to serve (Hope & Thomas, 2008). Jensen and Meckling (1976) refer the agency relationship as an "agency problem" due to the fact that the agent will not always act in the best interest of the principal.

The agency problem is highly relevant to the business community, as its existence not only led to the establishment of government agencies such as the Securities and Exchange Commission in the United States, but is also highly responsible for the high emphasis which is placed on good governance (Fama & Jensen, 1983). In order to mitigate the risks created by the agency relationship conflict and create value through the pay–performance relationship for shareholders, executive incentives can be alignined with the interests of shareholders (Veliyath & Bishop, 1995).

Jensen and Meckling (1976) also pointed out that even though the principal can limit divergences by the agent through well designed and implementing incentives, in most principal-agency relationships both parties will incur positive costs referred to as "agency costs" (Conyon & Leech, 1994). The principal will incur monitoring costs designed to limit the agent's self-serving activities, while in some cases it may be beneficial to the agent to use own resources (referred as bonding costs) to either guarantee that his or her actions will not badly affect the principal or to ensure that the principal will be reimbursed such actions are taken (Jensen & Meckling, 1976).

Even with the agency costs, there will remain some divergence between the decisions taken by the agent and those decisions by the agent which would benefit the principal(s). Jensen and Meckling (1976) define these residual losses, which form part of the agency costs, as "the dollar equivalent of the reduction in welfare experienced by the principal as a result of this divergence" (p. 5). According to Fama and Jensen (1983), agency costs also include output costs which can be defined as "the value of output lost because the costs of full enforcement of contracts exceed the benefits" (p. 304).

Agency costs illustrate that executives are subject to some form of pressure to act in the interest of shareholders. However, agency costs do not appear to be totally effective in some cases as executive counter them by entrenching themselves – making themselves valuable to shareholders and costly to replace (Shleifer & Vishny, 1989). Managerial entrenchment is defined as "the extent to which managers have the ability and incentives to pursue their self-interest and expropriate wealth from shareholders" (Florackis & Ozkan, 2009, p. 498). Managerial entrenchment may result when executives gain enough power that they are able to use the organisation to further their own personal interest rather than the interests of the organisation's shareholders. The results of managerial entrenchment are generally negative for the principal and result in underperforming organisations (Gompers, Ishii, & Metrick, 2003).

Executives may also engage in "empire building" (Jensen, 1986). Executives may, as Jensen (1986) suggests, fail to distribute excess cash when the organisation does not have profitable investment opportunities; or take on investment projects that may not be profitable for the shareholder, but are undertaken purely to increase the size of the organisation (Shleifer & Vishny, 1989). Jensen and Murphy (1999) illustrated in their study that because executive remuneration is often tied to measures such the size of the organisation, executives may seek growth as a path to personal riches. In addition, executives may seek to grow the organisation for personal promotion because often the board of directors has limited information on which to judge an executive's ability, and growth in organisation size will more often than not cast the manager in a favourable light (Hope & Thomas, 2008).

12

2.4. Optimal Contracting & Managerial Power Approach

Bebchuk and Fried (2003) suggest that there are two contrasting views on the link between the agency problem and the remuneration received by executives in an organisation. The optimal contracting approach which considers executive remuneration as a remedy to the agency problem is the more widely accepted view. Under the optimal contracting approach "boards are assumed to design compensation schemes to provide executives with efficient incentives to maximize shareholder value" (Bebchuk & Fried, 2003, p. 1). This view was also supported by Shaw and Zhang (2010) as they pointed out in their research study that efficient remuneration contracts will link executive remuneration with organisation performance, while providing strong incentives for executives to avoid self-serving activities and operate organisations in the shareholders' best interests.

According to Bebchuk and Fried (2003) optimal remuneration contracts could result from either effective arm's length bargaining between executives and board of directors, or from market constraints that will encourage executives and boards of directors to adopt such contracts even in the absence of arm's length bargaining. Market constraints consider what executives will ask board of directors to approve and what board of directors will approve. Additionally, shareholders could challenge undesirable remuneration arrangements and directly shape executive remuneration arrangements.

The contrary view to optimal contracting approach is the managerial power approach which consider remuneration received by executives not only as a potential instrument for dealing with agency problems, but also as part of the agency problem (Frydman & Jenter, 2010). According to Bebchuk, Fried and, Walker (2002) remuneration contracts are not only shaped by what would be optimal, but are also influenced by executives capability to influence their own remuneration contracts. Also, market constraints don't prevent managers from obtaining arrangements which are more favourable. According to the managerial power approach, boards approved executive remuneration contracts often deviate from optimal contracting arrangement.

13

Board of directors issues that enables this deviation include: directors being subjected to influence by executives, boards being sympathetic to executives, or incompetent in overseeing remuneration contracts (Bebchuk *et al.*, 2002). Deviations by boards from optimal contracting usually result in organisation executives being in a state whereby they are receiving rewards in excess of what would be optimal for shareholders. The excess rewards constitutes rents rather than the provision of efficient incentives (Bebchuk *et al.*, 2002).

Additionally, whether a pay arrangement adopted appears to be favourable to executives but sub-optimal for shareholders depends on how it is perceived by outsiders. Academic and media coverage has shown that there is evidence that the design of remuneration arrangements of executives is indeed influenced by how outsiders perceive them (Core, Guay, & Thomas, 2005). According to Jensen and Murphy (1999) "uninvited but influential guests at the managerial bargaining table (the business press, labour unions, political figures) intimidate board members and constrain the types of contracts that are written between managers and shareholders" (p. 65). In order to minimize or avoid outsider outrage resulting from recognized presence of rent extraction, executives obscure and legitimize their rent extraction through "camouflage", (Bebchuk & Fried, 2003). In the long run these becomes damaging as board of directors become reluctant to either reward CEOs for superior performance or punish them for poor performance.

The above discussions with regard to optimal contracting and managerial power approach indicated that there are weaknesses in the optimal contracting approach which are highlighted by the managerial power approach. Despite these weaknesses with regard to the optimal contracting approach, it is still widely believed that executive rewards can be used to align the interests of executives to those of the shareholders, and thereby reduce possible agency costs (Edmans & Gabaix, 2009). Additionally, the strong desire to camouflage might lead to the adoption of inefficient remuneration structures for organisation executives that badly affect their remuneration and organisation performance. As a result, the importance of how executive remuneration arrangements are perceived illustrate the importance of transparency of disclosure when it comes to the executive remuneration area.

2.5. Corporate Governance: Code of Good Governance

There are complexities and dangers posed for organisations in determining executive rewards. The other danger identified was with the difficulty of aligning executive rewards with societies' interests. In recent years, executive rewards have been in the limelight and often for the wrong reasons (Hsieh & Kleiner, 2003; Ozkan, 2011). In addition, recent scandals allegedly linked to CEO salaries have brought the subject to the forefront of the debate about constraining executive remuneration and reforming the associated corporate governance structure (Matsumura & Shin, 2005). Scandals worldwide have also provided a basis for broad public attention to the issues of mismanagement and governance which has given rise to codes of governances around the world (Enrione, Mazza, & Zerboni, 2006). The publication of the Code of Best Practices by the Cadbury Committee in the UK in 1992 was after the Maxwell Communications, Bank of Credit and Commerce International, and Polly Peck scandals (Matsumura & Shin, 2005).

Codes of good governance, or corporate governance, are a set of "best practice" recommendations regarding the behaviour and structure of the board of directors of an organisation (Aguilera & Cuervo-Cazurra, 2004). The recommendations are generally designed to address deficiencies in the governance system of organisations by recommending a comprehensive set of norms on the role and composition of the board of directors, relationships with shareholders and top management, auditing and information disclosure, and the selection, remuneration, and dismissal of directors and top managers.

Even though the corporate governance contents vary slightly across countries, they all present two similar objectives: (1) improving the quality of organisations' board governance, and (2) increasing the accountability of organisations to shareholders while maximizing shareholder or stakeholder value (McKnight & Weir, 2009; Aguilera & Cuervo-Cazurra, 2004). Additionally, the development and adoption of a code of good governance, according to Aguilera and Cuervo-Cazurra (2004), can be defined as "a country innovation signalling the country's commitment to improve its corporate governance system" (p. 416).

15

All over the world corporate governance measures are being introduced to ensure that executives control organisations in ways that will be acceptable to the shareholders of their respective organisations (Carlos & Nicholas, 1996). These codes of good governance are a call for organisation transparency and accountability as the growing concern that organisation executives, through their highest achieved positions in organisations are more focused on their own objectives rather than focusing on the objectives beneficial to the organisation and its shareholders. McConvill (2005) argues that the growing distrust of, and scepticism towards, organisations executives has resulted in an panoply of new corporate governance requirements enshrined in legislation or through other regulatory mechanisms.

McKnight, Milonas, Travlos, and Weir (2009) stated that "one way to reduce agency costs is to have effective corporate governance mechanisms" (p. 22). The view is that the absent of such regulations will result in higher agency costs which will be incurred by the organisation to motivate organisation executives to act in the interests of the shareholders while maximising shareholder wealth on a sustainable basis. Corporate governance mechanisms are used to "realign the interests of agents and principals and so reduce agency costs" (McKnight & Weir, 2009, p. 140). Research studies have also indicated that corporate governance requirements improvements can increase executive pay-performance link. A research study by Conyon (1997) considered 213 large organisations in the UK between 1988 and 1993 and found that there were improvements in executive pay-performance relationship due to implementation of corporate governance measures.

The corporate governance and disclosure requirements are currently applicable in South Africa through the implementation of the Companies Act (2008) and King Code and Report on Governance in South Africa (King III) (2009). King III has no legal backing, except as adopted by the JSE Listings Requirements. The main drive behind King III Report in South Africa was to ensure that top-down external regulatory mechanisms are established to motivate those in positions of power to put the interests of the organisation above their own in order to maximise shareholder wealth.

16

King III Report requires disclosure of executive remuneration and their related performance elements as well as an explanation of the basis on which remuneration is measured (Institute of Directors Southern Africa, 2009). The requirements are there to ensure that the executive directors of organisations are remunerated according to their respective performances. King III Report also suggests that shareholders should approve the remuneration policy of organisations in order to increase the accountability of executive directors to shareholders (Institute of Directors Southern Africa, 2009). Additionally, King III Report recommends that remuneration committees of organisations, which will consist of non-executive directors, should be established to determine and monitor executive remuneration (Institute of Directors Southern Africa, 2009).

2.6. CEO Remuneration Components

As previously mentioned, CEOs as the highest ranking and paid executive in an organisation, they are responsible for the organisation's outcomes by ensuring that the organisations' resources are properly allocated and utilised, operations are correctly executed, and planned projects are completed within allocated capital. As a result, the remuneration of the CEO is constantly under scrutiny and is the most focal point around executive remuneration. In South Africa the King III Report on corporate governance requires disclosure between executive remuneration and performance-related elements as well as an explanation of the basis on which executive remuneration is measured (Institute of Directors Southern Africa, 2009).

Jensen and Meckling (1976) argued in their study that a critical analysis by boards was needed into the incentive effects of their remuneration structures and vehicles. Jensen and Murphy (1999) suggested some basic policies that would create the correct monetary incentives for executives to deal with the principal-agent problem and maximize organisation value. Firstly they suggested that salaries, bonuses, stock options can be designed to provide big reward for superior performance and big penalties for poor performance. Cash remuneration was seen as having certain advantages over stock and stock options as stock-based incentives subject CEOs to whims of the stock market that are beyond their control.

17

Secondly, they suggested executives to become substantial owners of the organisation stock. It is suggested that by controlling a meaningful percentage of total corporate equity, executives will experience a direct and powerful "feedback effect" from changes in market value. The larger the organisation stock controlled, the more substantial the linkage between shareholder and executive wealth (Jensen & Murphy, 1999). On the contrary, Conyon and Leech (1994) argued against this observation by concluding in their study that "there is no evidence that the level of ownership concentration affects the growth in top director pay between 1983 and 1986" (p. 246).

Lastly, Jensen and Murphy (1999) suggest that the threat of dismissal for poor performance can be made real which will provide powerful monetary and non-monetary incentive for CEOs to maximize their respective organisation value. These basic policies suggested by Jensen and Murphy (1999) illustrate that remuneration is a broad term that can encompass a range of various reward components.

Despite substantial heterogeneity in remuneration practices across different organisations, most CEO remuneration packages consist of salary, annual bonus, short-term and long-term performance incentives (Frydman & Jenter, 2010). Figure 1 shows the executive remuneration components as determined by 21st Century Pay Solutions (2010) with Fixed Pay made up of basic salary and benefits which are not linked to performance, while Variable Pay is made up of short-term and long-term incentives which are varied according to organisation performance.

Figure 1: Executive Remuneration Components.

18
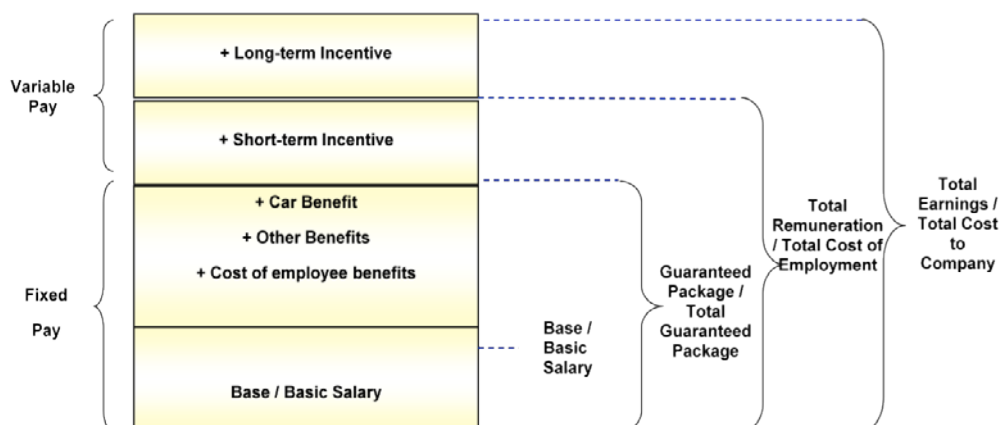
2.7. Organisation Performance Measures

A study by Murphy (1985) illustrate that according to the economic theories of remuneration "organisation performance should affect an executive's remuneration only to the extent that it serves as a proxy for unobservable managerial efforts or productivity" (p. 20). The study further points out that although these economic theories uniformly suggest a relationship between executive remuneration and observed organisation financial performance, most researches studies were not in agreement with regard to the measure of organisation financial performance. Additional studies do indicate also that in the pay-performance literature there is no consensus on the optimal measure of organisation performance as researchers have operationalized organisation performance in many different ways (Bacidore, Boquist, Milbourn, & Thakor, 1997; Attaway, 2000; Eriksson & Lausten, 2000; Carpenter & Sanders, 2002; Fatemi *et al.*, 2003; Shaw, 2011; Nel, 2012; Van Blerck, 2012).

Organisation performance measures are generally divided into accounting-based measures and market-based measures (Eriksson & Lausten, 2000; Attaway, 2000). Shaw (2011) categorised organisation performance measures into three main categories: (1) absolute financial performance measures – measures which refer to audited (qualified) measures within a specific year; (2) financial performance ratios – measures which refer to ratios derived from absolute performance measures; and (3) market performance measures – measures which refer to performance within equity markets.

General observations with regard to previous studies pay-performance link used different organisation performance measures and usually highlight the advantages in their chosen organisation measures and disadvantage in the organisation performance measures not chosen. A study by Murphy (1985) argued that organisation performance should be measured by market-based measures because they reflect shareholders wealth while pointing out few weaknesses in considering accounting-based measures – e.g. accounting based measures are either considered to be backward looking, or there are danger of these measures being manipulated by executives to make themselves look good.

19

In terms of accounting-based organisation performance measures, the following are some of the practices executives commonly use to manipulate indicators: manipulating depreciation policy (accelerated versus straight-lie); changing inventory valuation procedures; using short-term, non-capitalised leases to obtain productive equipment; and using window dressing techniques such as holding borrowed money as cash until the end of the organisation's financial year while enabling the organisation's balance sheet to looks favourable (Ward & Price, 2006). The Health & Racquet, Enron and WorldCom scandals are some of the few examples in manipulating accounting-based measures.

On the contrary, Carpenter and Sanders (2002) contend that accounting based measures are more informative of the executive's contribution to the organisation's performance than market based measures because they are less affected by the noise of the market. Additionally, a study done by Madura, Martin, and Jessell (1996) pointed out that there are shortcomings with market based measures like stock prices because stock prices tend to move with the market.

Since organisation shareholders are generally considered to be the principals in agency theories, it might seem appropriate to define organisation performance in terms of market based measures rather than in terms of accounting based measures. Additionally, as accounting standards around the world are continually being tightened it is highly suggested that the opportunity to manipulate accounting-based measures will continue to be reduced over time. As a result, researcher such as Eriksson and Lausten (2000) concluded in their research study that they do not see the use of accounting-based measures in the form of accounting profits as an organisation performance measure as any great disadvantage to their analysis.

Organisation market-based performance measures include stockholders equity, stock performance (return on common stock and changes in market value). Accounting-based measures include profitability (earnings per share, return on investment, and total profits).

The above examples illustrate that by their very different nature, the weak association between market based and accounting based organisation financial performance measures are not unexpected. Market based and accounting based organisation financial performance measures, considered from different perspectives, can be considered valid. While market based performance measures can be considered to capture the organisation's future performance, accounting based performance measures capture the organisation's historical performance. In order to avoid potential biases inherent in using either market-based or accounting-based organisational performance measure, researchers such as Canarella and Gasparyan (2008) suggest using both measures in establishing pay-performance link.

Other research studies in the pay-performance literature have indicated that both market based and accounting based measures may bear little resemblance with the economic return earned by organisation because these organisation financial performance measures do not account for the risk incurred by the organisation's executives in their search for growth and profitability (Bacidore *et al.*, 1997; Kyriazis & Anastassis, 2007; Fatemi *et al.*, 2003). As a result, these research studies have suggested two additional performance measures into investigating the relationship between executive remuneration and risk-adjusted organisation performance measures, namely economic value added (EVA) and market value added (MVA).

Economic Value Added (EVA) measure was devised by Stern Stewart & Co. (Stewart, 1990) – a worldwide management consulting firm founded in New York in 1982. Economic Value Added is a performance measure that attempts to measure and capture the true economic profit of an organisation by providing a measurement of an organisation's economic success (or failure) over a period of time (Ward & Price, 2006). Market Value Added (MVA), on the other hand, is simply the difference between the current total market value of an organisation and the capital contributed by shareholders. Market Value Added (MVA) is not a performance metric like Economic Value Added (EVA), but instead is a wealth metric which measures the level of value an organisation has accumulated over time.

21

Chari (2009) did a comprehensive literature review on different performance measures used by organisations, focusing on a comparison between EVA and other performance measures. Research study by Chari (2009) verified the soundness of claims made by proponents of EVA, that EVA was superior to other metrics as it is the financial performance measure that comes closer than any other measure in capturing the true economic profit of an organisation, helps executives to make better decisions and motivates them to perform better.

According to Stewart (1990), "EVA stands well out from the crowd as the single best measure of wealth creation on a contemporaneous basis and is almost 50% better than its closest accounting-based competitor (including Earnings-per-Share (EPS), Return-on-Equity (ROE) and Return-on-Investment (ROI)) in explaining changes in shareholder wealth" (as cited in Chari, 2009, p. 54).

Based on the above literature review on the different organisation performance measures, the current research study will consider the following organisation performance measures: Market Capitalisation (organisation's size), Earnings per Share (EPS), Return on Equity (ROE), Economic Value Added (EVA) and Market Value Added (MVA). More details will be provided on these organisation performance measures in subsequent chapters.

2.8. Linking Remuneration to Performance

The previous sections looked at defining CEOs and their duties in organisations while focusing on the underlying principles that drive the determination of their respective remuneration packages. The focus was then on the agent problem and the different measures to limit agency costs through contracting strategies and corporate governance designed to ensure that executives control organisations in ways that will be acceptable to the shareholders of their respective organisations. Linking executive remuneration and organisation performance is proving to be a powerful lever for driving business strategy, and as such, needs to be done well or at least get it right.

Research study done by Jensen and Meckling (1976) raised the following two most important points with regard to CEO remuneration and organisation performance for boards and shareholders: (1) a critical analysis was needed into the incentive effects of their remuneration structures, and (2) the way to do that was to provide its most important talent with an upside that was consistent with the upside of the organisation. Research study done by Murphy (1986) found that the basis for introducing executive performance related incentives by boards and shareholders was to create a shared vision for both shareholders (principals) and executives (agents) interests.

The rationale behind the introduction of performance related incentives for executives was based on the fact that organisation executives were assumed to respond to financial incentives in order to ensure that they act in the shareholders' interests, and based on this observation, then shareholders could benefit by introducing well-structured performance related incentives for executives (Fama & Jensen, 1983; Jensen & Meckling, 1976). Supported by McKnight *et al.* (2009), Carlos and Nicholas (1996) pointed also pointed out the effect of corporate governance introduced to ensure that executives control organisations in ways that will be both acceptable and profitable to the shareholders of their respective organisations.

On the contrary, the topic of executive remuneration has been highly been publicised for some time and often for the wrong reasons (Ozkan, 2011; Marais & Lefifi, 2013). A large volume of research related to executive remuneration has also been on the limelight, with the bulk of contributions coming from the U.S., Canada, the U.K. and European countries.

In the wake of many national economic recessions caused by the financial crisis of 2008, some analysts such as Bebchuk, Cohen, and Holger (2010) cited excessive executive remuneration as the main contributing factor. This has resulted in much criticism been levelled at organisations and their remuneration committees in particular for the increases in executive rewards in the face of disappointing organisation financial results (Lindqvist & Grunditz, 2004).

It appears that organisations' obsession to maximizing shareholder value has been tragic for shareholders, executives, the economy and society at large. Yet, the relation between executive remuneration, especially that of the CEO, and organisation performance remains an important issue in financial debate (Traichal, Gallinger, & Johnson, 1999; Hsieh & Kleiner, 2003). Recent news also show how vocal institutional shareholders have become with regard to expressing their discontent about remuneration packages rewarded to organisation executives, especially when their respective organisations have performed poorly (Ozkan, 2011; Marais & Lefifi, 2013). In the long run, public pressure will result in boards adopting a risk-averse orientation as they either avoid rewarding executives with substantial financial gains for superior performance or failing to impose meaningful financial penalties for poor performance.

Jensen and Murphy (1999) acknowledge that there are serious problems with executive remuneration, but they view "excessive" CEOs' pay as not being the biggest issue. They point out that "the relentless focus on how much CEOs are remunerated diverts public attention from the real problem – how CEOs are paid" (Jensen & Murphy, 1999, p.64). Haynes, Thompson and Wright (2007) point out that failure to reward or punish executives for either superior or poor performance, respectively, will erode the link between CEO remuneration and organisation performance and will according to Jensen and Murphy (1999) entrench what they call "bureaucratic remuneration systems". The remuneration of organisations' top executives should be virtually dependent of organisation performance; and organisations which evaluate their CEOs will be successful overall (Anderson & Kleiner, 2003).

The theoretical and empirical literature on executive remuneration is fairly well developed, it is far from complete according to Canarella and Gasparyan (2008). A large number of pay-performance studies have been carried out in most parts of the world, and these studies reflect a lack of consensus on the pay-performance relationship (Bruce, Buck, & Main, 2005) – even though the application of agency theory to the design of executive contracts and use of corporate governance generally predicts a positive pay-performance correlation for executives.

24

The empirical remuneration literature indicate that there is no consensus on the optimal measure of organisation financial performance as researchers continue to operationalized organisation performance in many different ways (Bacidore *et al.*, 1997; Attaway, 2000; Fatemi *et al.*, 2003; Chari, 2009). Previous research studies considered, as a measure of organisation performance, accounting-based and market-based measures, and more recently EVA and MVA. Some researchers like Canarella and Gasparyan (2008) used both accounting-based and stock market-based measures to avoid potential biases inherent in using either of the two performance measures.

Previous research studies on establishing the relationship between executive remuneration and organisation performance include those done by Murphy (1986) which included publicly held organisations in the U.S.. Murphy (1986) study found a strong link between executive remuneration and organisation performance – performance measure was in terms of shareholder returns and growth in the organisation sales. Research study by Murphy (1985) is one of the first influential research studies on the closest link (correlation) between executive remuneration and organisation performance. Other studies include those done by Coughlan and Schmidt (1985) which studied the relationship between CEO remuneration and stock price performance and their results led them to conclude that the two were linked.

Studies which considered large U.S. organisations in the 1990s included that done by Jensen and Murphy (1999); the study tested the relationship between CEO wealth and shareholder wealth and found little evidence of a relationship between executive remuneration and organisation performance. Additional studies have also been conducted by researchers such as Veliyath and Bishop (1995) which found a strong relationship between executive remuneration and stockholders equity while research study by Attaway (2000) found a small positive relationship between the two measures. Veliyath and Bishop (1995) also found in their research study that organisations with high return on equity rewarded their CEOs with higher cash remuneration.

25

Both research studies by Veliyath and Bishop (1995) and Attaway (2000) were restricted to specific industries – Veliyath and Bishop (1995) study used a sample of U.S. drug and pharmaceutical organisations while Attaway (2000) study considered organisations in the computer and electronics industry. The trend in the U.S. of considering industry specific organisation in determining the closest link (correlation) between CEO remuneration and organisation performance has mostly dominated. Industry specific studies include those done by Akhigbe, Madura and Ryan (1997) in commercial banks, and Barber, Ghiselli and Deale (2006) in the restaurant segment of the hospitality industry. The industry specific choice assessment was as a result of regulatory and other industry-specific conditions that can cause the pay-performance linkage in that specific industry to differ from that of other industries.

Akhigbe *et al.* (1997) studies found that the accumulated human capital of CEOs and the commercial bank size were positively related to the total CEO remuneration which included salary, bonus, and stock options. The studies also found that CEO remuneration had a positive significant relationship with both accounting-based performance measures and market-based performance measures. The restaurant segment of the hospitality industry study by Barber *et al.* (2006) regressed executive remuneration over share price, gross revenue and net income. The results of the study indicated a positive link (correlation) between executive remuneration and share price for larger restaurant organisations. The relationship between executive remuneration and gross revenue was stronger for smaller restaurant organisations, while for older restaurant organisations net income was a predictor of executive remuneration. The results by Barber *et al.* (2006) illustrate that even within the same industry strong links (correlation) might also depend on other factor such as the size of the organisation.

The above mentioned research studies considered both market-based measures and accounting-based measures. Research study by Bacidore *et al.* (1997) indicated that "the most appropriate measure of shareholder value is the return shareholders earn through price appreciation and dividends in excess of that required to compensate shareholders for systematic risk" (p. 19).

As a result, Bacidore *et al.* (1997) study concluded that EVA (Economic Value Added) satisfies those requirements in terms of its correlation with the measure of shareholder value creation. To further support this view, Fatemi *et al.* (2003) studies found EVA (Economic Value Added) and MVA (Market Value Added) to be better predictors of cross-sectional variation in executive remuneration than traditional performance measures such as Return on Assets (ROA) or return on equity (ROE). Studies by Bacidore *et al.* (1997) and Fatemi *et al.* (2003) support research results by Chari (2009) that point out that EVA is superior to other organisation performance measures because it captures the true economic profit of an organisation. Fatemi *et al.* (2003) research study further concluded that executive remuneration have a weak positive relationship with EVA and a strong positive relationship with MVA.

The need for superior organisation performance measures also calls for innovative remuneration policies that are in synchronism with the long-term strategic plans of an organisation. The study by Frydman and Saks (2010) supports this observation as their research study of a long-term perspective of executive remuneration from 1936 to 2005 found that the "pay-to-performance sensitivities were considerable in most decades except the 1940s" (p. 2131). The primary drive, according to Frydman and Saks (2010), was remuneration arrangements which were designed in most of the twentieth century that served to tie the wealth of executives to organisation performance and perhaps to align executive incentives with shareholders' interests.

On the contrary, Gregg, Machin and Szymanski (1993) research study used data from organisations in the United Kingdom between 1983 and 1991, regressed the change in executive remuneration on the change in shareholder returns and found different results. Their study concluded that between 1983 and 1988 there was a positive (statistically significant) correlation between executive remuneration and organisation performance measured using stock market valuations and earnings per share. However, the study found that after 1988, "any such positive relationship completely disappears" (Gregg *et al.*, 1993, p. 6).

27

More research studies done in the 1990s in the U.K. include the one done by Conyon and Leech (1994) which investigated the agency theory's prediction that CEO remuneration is positively related to organisation performance in large U.K. organisations. The results of their study were found to be in line with recent U.S. literature that showed that it is possible to find a positive, statistically significant relationship between executives' remuneration and a measure of shareholder wealth. Additionally, the econometric results of the study based on organisations listed in the U.K. between 1985 and 1995 by Conyon, Peck and Sadler (2000) indicate that executive remuneration is positively related to total shareholder return, but not earnings per share. More importantly with the study is that it considered consistency with other research, noted the influence of organisation size on executive remuneration (even though not considered in their studies) and called for further research on the important issue of corporate governance.

Zhou (2000) conducted the first systematic examination of the relationship between CEO remuneration and organisation performance for Canadian organisations. The study considered the three organisation performance measures: the accounting return on total assets, return on equity, and the market return to common stock. The results of the study found that CEO remuneration rose with organisation size and is linked to organisation performance – these results were found to be consistent with, and largely similar to, the findings of previous studies for other countries, particularly the U.S.. Zhou (2000) study does indicate that despite extensive linkages between the two countries, there are a number of institutional and market differences between Canada and the U.S., this may result in differences in their remuneration systems and effectiveness.

A study by Merhebi, Pattenden, Swan and Zhou (2006) examined 722 Australian organisation between 1990 and 1999, and found results which were consistent with other findings for organisations in the U.S., U.K. and Canada when market-based model specifications were used. Their results found that CEO remuneration and organisation performance association is positive and statistically significant.

The Australian research study also showed that Australian CEOs were remunerated in a similar manner to those in the U.S., U.K. and Canada and provides some support for CEO pay as a remedy for agency costs. Merhebi *et al.* (2006) study also concluded that CEO remuneration is part of the agency problem when one considers only the cash component. Core *et al.* (2005) emphasized that the primary source of remuneration sensitivity comes from stock and option holdings.

Firth, Fung and Rui (2006) conducted CEO pay-performance study in China. Their study found that there was a positive relation between CEO remuneration and organisation performance measured in both accounting and shareholder wealth terms. Their study results indicate though that the relations were only statistically significant under certain ownership conditions. Organisations that have state bureaucratic agencies as the major shareholder did not appear to embrace performance related pay schemes. In contrast, listed organisations with a private blockholder as the largest shareholder based CEO remuneration on changes in shareholder wealth.

The above literature does indicate that research studies done in Australia, Canada, China, U.S. and the U.K. found positive links between CEO remuneration and some observable measure of organisation performance. However, literature review does indicate that some researchers did not find significant positive pay-performance links.

Jensen and Murphy (1999) analysed 2505 CEO remuneration in 1400 publicly held organisations from 1974 to 1988 in the U.S., and concluded that the relationship between CEO and shareholder wealth was small and had fallen by an order of magnitude in the last 50 years. Mueller (2006) study supported this observation by concluding that executive remuneration packages in U.S. increased by far more than could be accounted for by increases in managerial productivity in the 1990s. Gregg *et al.* (1993) studies done for U.K. organisations also found that the positive relationship between executive remuneration and organisation performance completely disappears after 1988. Gregg *et al.* (1993) research study analysed a sample of approximately 300 large U.K. organisations between the 1980s and early 1990s.

Another U.K. study by Haynes *et al.* (2007) found that organisation size had a significant impact on executive remuneration and that the responsiveness of executive remuneration to organisation performance was much smaller when compared to the size of the organisation. A study by Duffhues and Kabir (2008) found no evidence of a positive pay-performance relationship for executives in the Netherlands, which led to the conclusion that executives in the Netherland received rewards for reasons unrelated to performance.

Studies by Florackis and Ozkan (2009) found that higher managerial entrenchment led to greater agency costs. Research studies by Ozkan (2011) strongly suggested that corporate governance such as the U.K. Greenbury Report that proposed a positive executive pay-performance have not been totally effective. Ozkan (2011) research study analysed a sample of 390 U.K. non-financial companies from the FTSE Allshare index for the period between 1999 and 2005. These two studies above suggest the need for external and internal corporate governance in addressing agency costs.

In South Africa, a CEO pay-performance research study by Shaw (2011) looked at financial service organisations for the time period between 2005 and 2010. Shaw (2011) research study categorised organisation performance measures into three main categories: absolute financial performance measures, financial performance ratios, and market performance measures. Shaw (2011) research study used the following organisation performance measures: economic profit, accounting profit, and shareholder returns in the form of return on equity (ROE) and headline earnings per share (HEPS); and two critical organisation characteristics which are indicators of organisation performance were also included in the study, namely debt to assets ratio and total assets or book value.

Shaw (2011) study found a moderate to strong relationship between CEO remuneration and organisation performance. However, the results of the study indicated that there has been a decline in the relationship since 2008. The results of the study also yielded an associated structural change in the mix of remuneration components – "most notably there was an observed shift in CEO remuneration from variable pay to fixed pay" (Shaw, 2011, p. 102).

Similar studies in the South African financial institutions done by Van Blerck (2012) used Economic Value Added (EVA), Return on Equity (ROE) and share price as the organisation performance measures and considered a time period between 2002 and 2011. Van Blerck (2012) research study supported Shaw (2011) research study as the study found a moderate correlation between share price and executive remuneration, and only a weak relationship with Return on Equity (ROE) before 2007. Additionally, Van Blerck (2012) research study found that the remuneration received by executives in South African financial institutions correlated strongly with EVA, and the correlation strengthened after the 2008 financial crisis. More importantly, Van Blerck (2012) study also found that United States based executives have rewards that are strongly aligned to equity based incentives as compared to South African executives whose rewards are strongly aligned to Economic Value Added (EVA).

Another industry specific study done in determining pay-performance link in South Africa was by Nel (2012) which looked at the relationship between organisation financial performance and CEO guaranteed cost to company in the retail and consumer goods sector. Nel (2012) study utilised the DuPont Model to analysing the relationship between CEO remuneration and organisation financial performance. DuPoint Model includes the performance of management and strategic decisions into the assessment of the financial performance of an organisation. DuPont analysis is an expression which breaks return on equity (ROE) into three parts, namely profitability (measured by profit margin), operating efficiency (measured by asset turnover) and financial leverage (measured by multiplier) (Ward & Price, 2006).

Nel (2012) study utilised Guaranteed Package (Fixed Pay) which included Basic Salary and Benefits as a measure of CEO remuneration. Nel (2012) study illustrated that the financial performance of organisations in the South African retails and consumer goods sector had little or no effect on the Guaranteed Packages (Fixed Pay) of CEOs. Nel (2012) suggests that the CEOs' managerial power could have led to an increase in their guaranteed cost to company that was misaligned with the financial performance of their respective organisations after the 2008 Global Financial Crisis.

31

2.9. Literature Review Summary

Worldwide there is much attention being directed toward the relationship between the remuneration received by CEOs and the performance of their respective organisations. Sun, Zhao and Yang (2010) indicated that "the pay–performance relationship appears to be the most studied topic in Asian executive compensation research, similar to those studies in Western countries" (p. 780). In addition, the trend around the world of considering industry specific organisation in determining the link (correlation) between CEO remuneration and organisation performance has mostly dominated the discussions around the subject. Research studies like those done by Shaw (2011), Van Blerck (2012) and Nel (2012) in South Africa also illustrate the need to understand the relationship between remuneration received by CEO and the performance of organisations.

The literature reviewed indicated that past research studies on executive pay-performance, especially for CEOs, has yielded mixed and inconclusive results. The literature reviewed also indicate that much creative thinking is needed to establish not only sound, but innovative remuneration policies that will be in synchronism with the long-term strategic plans and policies of organisations. While great performance of organisations is required by the shareholders, it must be ensured that executives get the right rewards.

The current chapter looked at the literature pertaining to the executive pay-performance research constructs. The next chapter presents the main research questions used in providing the direction for the current research,

32

3.   Chapter 3: Research Questions

3.1. Introduction

The establishment of organisations dates back to the times when salaried managers coordinated the flow of goods and services.   When these organisations grew in the 19th century different style of management was established to look after the interests of shareholders (principal), and the salaried managers became known as executives (agents).   The literature review highlighted the problem created by this arrangement as executives had the opportunity to use their given power to their own advantage and to the disadvantage of the shareholders – agency problem.

In order to mitigate the risks created by the agency problem, the incentives of the executives need to be aligning with the interests of shareholders, thus creating value for the shareholders through the pay–performance relationship (Veliyath & Bishop, 1995).   Additionally, corporate governance measures (including measures surrounding executive remuneration) were introduced to ensure that executives control organisations in ways that will be acceptable to the shareholders of the organisation (McKnight & Weir, 2009).

There is still considerable controversy concerning factors dominant in shaping the remuneration of top executives in organisations.   In particular, public concern has been expressed that executive remuneration packages received are not justified by the underlying economic performance of the respective organisations (Conyon & Leech, 1994).   The executive remuneration has also been in the limelight in recent years, and often not for the right reasons (Ozkan, 2011; Leon, 2012; Marais & Lefifi, 2013).

Increased awareness of the remuneration arrangements for executives, with more and more fingers being pointed at their outrageously high salaries, the academic researchers continue to focus on establishing the executive pay-performance relationship.   The pay-performance relationship appears to be the most studied topic in Asian executive remuneration research, similar to those studies in Western countries (Sun *et al.*, 2010).   The research questions follow from the issues raised around executive remuneration.

33

3.2. Specific Research Questions

3.2.1. Question One: 2008 Global Financial Crisis Effects

What are the structural changes that have occurred with regard to the mix of remuneration components that Chief Executive Officers (CEOs) receive after the 2008 Global Financial Crisis?

3.2.2. Question Two: Closest Link (Correlation)

What is the closest link (correlation) between CEO remuneration and financial performance of an organisation when considering the most commonly used measures over the seven year research period and during each individual year of the research study?

3.2.3. Question Three: CEO Remuneration Model

Based on the correlation analysis results between the CEO remuneration and financial performance of organisations considered over the seven year period, what model can be used to determine the remuneration that an organisation is to pay to its particular CEO?

3.3. Research Questions Summary

According to 21st Century Pay Solutions (2010) the executive remuneration consists of both Fixed Pay and Variable Pay. The current research considered Fixed Pay and Short Term Incentive (STI) portion of the Variable Pay. The sum of the Fixed Pay and Short Term Incentive make up Total Remuneration received by the highest paid executive in an organisation, the CEO.

Question one looked at structural changes that occurred as a result of the 2008 Global Financial Crisis. The global recession of 2008 – 2009 was a marked by global economic decline that began in December 2007 and took a particularly sharp downward turn in September 2008 (Colander, 2010). The bursting of the U.S. housing bubble, which peaked in 2006, caused the values of securities tied to U.S. real estate pricing to plummet, damaging financial institutions globally.

34

Academic researchers have operationalized organisation performance and CEO remuneration components in many different ways (Attaway, 2000). Shaw (2011) categorised organisation performance measures into three main categories, namely absolute financial performance measures, financial performance ratios and market performance measures. Research question two focused on determining the closest link (correlation) between multiple measures of organisation performance and CEO Total Remuneration.

Based on the different organisation performance measures used for the current research and the changes that have occurred since the 2008 Global Financial Crisis and the closest link (correlation) between the research constructs, research question three established a model for Total Remuneration as defined in Figure 1. The model was developed with the view to be used determining the best contracting strategy for executives to ensure a positive and significant link (correlation) between the CEO total remuneration and the different organisation performance measures.

The next chapter will present the research methodology that was used to test the research questions as listed in the current chapter.

4. Chapter 4: Research Methodology

4.1. Introduction

The primary objective of the current research was to determine the relationship between CEO remuneration and organisation performance. The literature review conducted provided guidance in designing the methodology that was applied in the current research. The objective of utilizing similar methodologies facilitated both a comparison with other research studies, as well as providing assurance that the methodology applied in the current research was statistically sound and acceptable.

The research study was a non-empirical exploratory quantitative study that was aimed at describing the relationships between CEO Total Remuneration and financial performance of an organisation. The Total Remuneration consisted of Fixed Pay (car benefit, other benefits and cost of employee benefits) and Short Term Incentive (measures performance for up to one year, and typically includes profit share, commission and bonus schemes) as defined on Figure 1 .

4.2. Research Design

The research took the form of a desktop study and was archival in nature using secondary sources to provide the organisation financials and their respective executive remuneration data for CEOs. The research approach was *ex-post facto* in nature where the focus was on reporting the characteristics of the variables rather than playing any role in manipulating them (Saunders & Lewis, 2012).

The research data utilised was for publicly listed organisations on the Johannesburg Stock Exchange (JSE). According to the JSE Listing Requirements, listed organisations are contractually bound to adopt the King III and the Companies Act of 2008 (Institute of Directors Southern Africa, 2009), and as a result these organisations were required to disclose the information needed for the current research. The information used for the current research was therefore deemed credible as it had been subject to financial audits that are stipulated by the JSE Securities Exchange rules.

The research data used in the current research was drawn from McGregor BFA Database. McGregor BFA is South Africa's provider of financial data feeds and analysis tools and cover JSE and global share prices as well as organisation information including annual reports and financial statements.

Both CEO remuneration and organisation performance measures are all numeric quantities. As a result, the method of analysis for the current research was quantitative in nature. A quantitative approach was used for the current research as it allowed for simple yet robust statistical analysis in the form of a correlation and regression analysis. A descriptive approach was chosen for the current research as it served to determine the relationship between the two variables – financial performance of the organisation and CEO remuneration.

The conceptual framework of suggested relationship suggested that there was an independent variable (organisation financial performance measures) and a dependent variable (CEO Total Remuneration) (Saunders & Lewis, 2012). The current research study was also longitudinal in nature, and this allowed for trends to develop and this were useful in isolating any unusual observations either in the events or the data itself.

The archival nature of the study indicated that the relevant data existed which eliminated the challenge of generating sufficient data. In cases where data for the key constructs was missing from McGregor BFA database, individual organisations annual reports were used to collect the relevant data. Additionally, organisation annual reports were used to confirm the currencies for all the data from McGregor BFA database.

The timing of the impact of organisation performance on executive remuneration was seen as being potentially important. In order to examine whether executives are actually rewarded for good performance, one can consider the time series of organisation performance and relate this to subsequent variations in executive remuneration – that is, there is an important issue of timing in the sense that an executive's reward at a particular time may correspond to his performance and effort levels at previous dates (Conyon & Leech, 1994).

37

4.3. Scope

The current research utilised publicly listed organisations on the JSE as its population for a time period between 2006 and 2012. The seven year time period was chosen as it covered the full business cycle (Canarella & Gasparyan, 2008) – the growth phase experienced between 2006 through to 2007, recessionary decline phase in 2008 and 2009, and then the recovery phase occurring from 2009 through to 2012.

The combined number of organisations listed on the JSE is around 472 and from within different industries (JSE, 2009). This was considered to be too large to be practically studied for the purposes of this research. As a result, the JSE Top 40 with a combined market capitalisation of 83.69% of the total JSE Market Capitalisation as of the 25th of April 2013 (Satrix, 2013) represented a significant quantity of the total JSE and was considered for the current research. The same scoping process is consistent with that of previous research on executive remuneration done by Miller (1995).

4.4. Unit of Analysis

The primary objective of this research was to determine the relationship between CEO remuneration and financial performance of an organisation. As a result, the research had two units of analysis, namely CEO remuneration and organisation financial performance measures.

The current research will consider Total Remuneration, which consists of Fixed Pay (the combination of the basic salary and benefits (car benefit, other benefits and cost of employee benefits) received during the organisation's financial year) and Short-Term Incentive (measures performance for up to one year, and typically includes profit share, commission and bonus schemes) (21st Century Pay Solutions, 2010). According to Lippert and Porter (1997) many studies with the primary objective of determining the relationship between CEO remuneration and financial performance of an organisation have only used Fixed Pay and Short Term Incentive as measures of remuneration.

Ideally Long Term Incentive should be included in studies with the objective of determining the relationship between CEO remuneration and financial performance of an organisation (Lippert & Porter, 1997; Murphy, 1985). However, many credible studies have only included Short Term Incentive in their analysis since Long Tterm Incentive proved to be problematic to measure and also uncertain, and only based on a future performance target at the time Total Remuneration was awarded (Core, Holthausen, & Larcker, 1999). The sum of Short Term Incentive and Long Term Incentive make up Variable Pay as defined on Figure 1, while the sum of Fixed Pay and Variable Pay make up Total Cost to Company of a CEO.

The second unit of analysis was the financial performance of the organisations. Shaw (2011) categorised organisation performance measures into three main categories: (1) absolute financial performance measures – measures which refer to audited (qualified) measures within a specific year; (2) financial performance ratios – measures which refer to ratios derived from absolute performance measures; and (3) market performance measures – measures which refer to performance within equity markets. While market performance measures are viewed as being affected by the noise of the market (Carpenter & Sanders, 2002), there are weaknesses in using absolute financial performance measures to measure financial performance of an organisation – for example, the fact that accounting profits are backward looking and can be manipulated.

In order to avoid potential biases inherent in using either of the two most popular organisational performance measures, namely accounting-based and stock market-based measures, Canarella and Gasparyan (2008) suggest using both measures. In addition, financial performance ratio measures such as ROE and ROA are sometimes seen to bear little resemblance with the economic return earned by an organisation since they do not account for the risk incurred by the executives of organisations in their search for growth and profitability (Bacidore *et al.*, 1997; Fatemi *et al.*, 2003). Two measures of risk-adjusted organisation performance have been suggested, namely economic value added (EVA) and market value added (MVA).

39

For the purposes of the current research, and largely based on past research work on pay-performance sensitivity, the following organisation financial performance measures were chosen – their definition were as found in McGregor BFA, and Ward and Price (2006):

1. Market Capitalisation: The total value of the issued shares of a publicly traded organisation. This figure is used to determine an organisation's size.

   EQ1: $MarketCapitalisation = IssuedShares \times Market\,Price$

2. Earnings per Share (EPS): The portion of an organisation's profit allocated to each outstanding share of common stock; it serves as an indicator of an organisation's profitability.

   EQ2: $EPS = \dfrac{NetIncome - DividendsOn\,PreferredStock}{AverageOuts\tan dingShares}$

3. Return on Equity (ROE): The amount of net income returned as a percentage of shareholders equity – it is a ratio that measures an organisation's efficiency in generating profit for each unit of shareholders' equity. Return on equity measures an organisation's profitability by revealing how much profit an organisation generates with the money shareholders have invested.

   EQ3: $ROE = \dfrac{NetIncome}{ShareholderEquity}$

4. Economic Value Added (EVA): A measure of an organisation's financial performance based on the residual wealth calculated by deducting cost of capital from its operating profit (adjusted for taxes on a cash basis).

   EQ4: $EVA = \dfrac{\dfrac{NetOperating\,ProfitAfterTax(NOPAT)}{CapitalEmployed(CE)}}{WeightedAverageCostofCapital(WACC)}$

5. Market Value Added (MVA): It was found that it is essential to analyse MVA by placing all organisations on a uniform basis. There are different approaches to establish this and the one chosen for the current research was to express MVA performance indicator as a ratio as opposed to the difference based on the general definition for MVA. The approach effectively standardises all the enterprises to have the same size and further facilitates comparisons between large and small organisations. However, the use of a ratio eliminates the contribution of size to value creation.

EQ5: $MVA = \dfrac{MarketValue}{TotalCapital}$

4.5. Sampling

The study considered for the current research was longitudinal in nature – a correlational research study that involves repeated observations of the same variables over long periods of time, and it is a type of observational study (Saunders & Lewis, 2012). The relationship between CEO remuneration and measures of organisation performance were observed over a period of seven years between 2006 and 2012. The time period included the recessionary decline phase due to the 2008 Global Financial Crisis. Studies by Canarella and Gasparyan (2008) indicates that events such as the financial crisis will have an impact on the linkage between executive remuneration and organisation performance. Based on that reason the seven year research period included the years before and after the 2008 Global Financial Crisis.

The advantages of pooling the research constructs data into the seven years period also included the fact that this reduced variability, provided better long term indicators, and more reliable and valid measures of organisation performance than annual measures (Jensen & Murphy, 1999). The approach was also chosen to ensure the validity of the research, and also to ensure that the history for a given organisation would yield a maximum of seven observations. The seven years period was also deemed enough to ensure limited influence of short term irregularities, while being short enough to provide reliable estimates of the research constructs.

41

The JSE formally recognises eleven economic groups (industries) that include a combined number of approximately seven hundred organisations (JSE, 2009). The sample considered for the current research considered the 40 listed organisations on the JSE as measured by market capitalisation – JSE Top 40. The sample choice of the JSE Top 40 indicates that the current research considered convenience sampling – a non-probability sampling technique in which the organisations were selected based on the argument that they are representative. The consequence of the sampling method was that an unknown portion of the population was excluded.

Due to the fact that some organisations which form part of the population had no chance of being sampled, the extent to which the convenience sample for the current research actually represents the entire population could not be known even though addressed. The confidence in the sample could be indicated by the fact that as of the 25th of April 2013 the Market Capitalisation of the JSE Top 40 had a combined market capitalisation of 83.69% of the total JSE Market Capitalisation (Satrix, 2013). The proportion of the total capitalisation, and hence the sample, was seen as being large enough to be sufficient for the following research.

The list of organisations on the JSE Top 40 changes from year to year as a result of some organisations not being able to make it onto the list as a result of being out grown by those organisations which were previously not on the list as determined by Market Capitalisation of the organisation. The resulting number of organisations in the JSE Top 40 between 2006 and 2012 was 57 in total. Additionally, the 57 organisations that made the JSE Top 40 between 2006 and 2012 had to meet the following criteria to be considered for the current research:

1. the organisation had to have been on the JSE Top 40 for the research period between 2006 and 2012 – number reduced to 27 organisations,

2. the secondary research data required for the current research had to be available either from McGregor BFA Database or financial statement of the respective organisation – number reduced to 22 organisations, and

42

3. more than one organisation with the same executive receiving the same remuneration was considered as one organisation and the different organisation performance measures were added – number reduced to 21 organisations.

Table 1 contains the list of organisations considered in the current research which cannot be described as a random sample because of the method of selecting the sample and the conditions placed on selecting the organisation for inclusion in the study.

Table 1: Organisations list for current research – listed alphabetically.

#	Organisation	Industry
1	ABSA Group Ltd	Financials
2	Anglo American Platinum Ltd	Basic Materials
3	Anglo American PLC	Basic Materials
4	BHP Billiton PLC	Basic Materials
5	Exxaro Resources Ltd	Basic Materials
6	FirstRand Ltd	Financials
7	Impala Platinum Holdings Ltd	Basic Materials
8	Intu Properties PLC	Financials
9	Investec PLC	Financials
10	Kumba Iron Ore Ltd	Basic Materials
11	MTN Group Ltd	Telecommunications
12	Naspers Ltd	Consumer Services
13	Nedbank Group Ltd	Financials
14	Old Mutual PLC	Financials
15	Remgro Ltd	Industrials
16	RMB Holdings Ltd	Financials
17	SABMiller PLC	Consumer Goods
18	Sanlam Ltd	Financials
19	Sasol Ltd	Oil & Gas
20	Standard Bank Group Ltd	Financials
21	Tiger Brands Ltd	Consumer Goods

Table 2 contains the research sample industry breakdown indicating the number of organisation(s) in each industry represented in the current research. The above selection process is consistent with that of previous research studies on determining the correlation between executive remuneration and organisation performance (Miller, 1995).

Table 2: Research sample industry breakdown.

Industry	Number of Organisations
Basic Materials	6
Consumer Goods	2
Consumer Services	1
Financials	9
Health Care	0
Industrials	1
Oil & Gas	1
Telecommunications	1
Total number of organisations in the research sample	**21**

4.6. Data Collection and Analysis

4.6.1. Data Collection

As previously mentioned, the primary source for the data used for the current research study was obtained from the financial data provider McGregor BFA. In cases whereby the data needed for the research was not available in the McGregor BFA database, financial statements of the respective organisations included in the research sample were used as secondary source – these financial statements were available from the websites of the respective organisations in accordance with JSE regulations.

4.6.2. Data Analysis

The analysis for the current research was based on the simple correlation model. Correlation analysis defines the variation in one variable by the variation in another, without establishing a cause-and-effect relationship (Weiers, 2010). The analysis is called simple correlation because there are just two variables (namely, dependent and independent variable) and measures the strength of the linear relationship between the two. Correlation analysis was used to determine two important measures of the strength: (1) the coefficient of correlation and (2) the coefficient of determination.

The coefficient of correlation (R:$-1.0 \leq R \leq +1.0$) is a number that indicates both direction and strength of the linear relationship between the dependent variable and the independent variable (Weiers, 2010). When the coefficient of correlation (R) is positive the dependent and independent variables are directly related – i.e. when one variable increases, the other variable will also tend to increase. When coefficient of correlation (R) is negative the dependent and independent variables are inversely related – i.e. when one variable increases the other tend to decrease and vice versa. In terms of the strength of the relationship, the larger the absolute value of the coefficient of correlation (R), the stronger the linear relationship. Table 3 contains limits that were used to interpret the correlation strength in the current research as documented in the work done by Ratner (2009).

Table 3: Correlation coefficients values and strengths.

Relationship Direction	Correlation Coefficients	Relationship Strength
Direct **(+)**	$+0.71 \leq R \leq +1.00$	Strong
	$+0.31 \leq R \leq +0.70$	Moderate
	$+0.00 < R \leq +0.30$	Weak
	$R = 0$	No Linear
Inverse **(-)**	$0.00 < R \leq -0.30$	Weak
	$-0.31 \leq R \leq -0.70$	Moderate
	$-0.71 \leq R \leq -1.00$	Strong

45

Another relationship strength measure used was the coefficient of determination (R^2: $0.0 \leq R^2 \leq +1.0$). The numerical value of R^2 is the proportion of the variation in the dependent variable that is explained by the regression equation that determines the nature of the relationship (Weiers, 2010; Anderson, Sweeney, Williams, Freeman, & Shoesmith, 2007).

The other analysis considered in the current research was based on multiple regression and multiple correlation analysis. The multiple regression model had more than two independent variables and was described as by the following equation:

EQ6: $CEO_{TOT\,Re\,muneration} = b_0 + b_1 \times OPM_1 + b_2 \times OPM_2 + \ldots + b_k \times OPM_k + \varepsilon$

Where, $\qquad b_0$ = a constant

$\qquad\qquad OPM$ = Organisation Performance Measure

$\qquad b_1, b_2, \ldots, b_k$ = partial regression coefficients for the independent variables $OPM_1, OPM_2, \ldots, OPM_k$ respectively

$\qquad\qquad \varepsilon$ = Random error, or residual

Each b_i ($i = 1,2,\ldots,k$) in EQ6 represented a slope relating changes in CEO Total Remuneration ($CEO_{TOT\,Re\,muneration}$) to changes in one of the organisation performance measures (OPM_i, with $i = 1,2,\ldots,k$) whenever all the other organisation performance measures were held constant. Multiple regression analysis provided a best-fit mathematical model (equation) for values of the independent variables according to the least-squared criterion in which the sum of the least squared deviations between observed and estimated values of the dependent variable was minimised (Anderson *et al.*, 2007).

Additionally, given a specific combination of OPM values, EQ6 provided the single best estimate for an individual $CEO_{TOT\,Re\,muneration}$ value for that set of OPM values. However, the estimate was subject to uncertainty. The first step in quantifying the uncertainty was through the multiple standard error of estimate (SEE). The numerical value of multiple standard error of estimate reflected the amount of scatter, or dispersion, of the data points about the hyperplane represented by the multiple regression model.

In multiple regression analysis there were more than two independent variables, and as a result it was necessary to separately test (1) the overall significance of the multiple regression equation and (2) each of the partial regression coefficients in the equation. The significant level (alpha (α)) chosen for the current research was equal to 0.05 for a variable to be able to enter the equation and alpha (α) equal to 0.10 for a variable to leave the equation. The lower the value, in terms of alpha (α), the more significant a variable had to be to enter or stay in the equation (model).

The CEO remuneration model was generated utilising stepwise regression whereby the independent variables enter the regression analysis one at a time (Weiers, 2010). The first organisation performance measure to enter the regression analysis was the one that explained the greatest amount of variation in the CEO remuneration. The second variable to enter was the one that explained the greatest amount of the remaining variation in CEO remuneration, and so on with each step resulting in a new regression equation (model).

In addition, multicollinearity, a problem in multiple regression that develops when one or more of the independent variables is highly correlated with one or more of the other independent variables, needed to be tested (Weiers, 2010). When one independent variable is a perfect linear combination of the other independent variables, i.e. when the regression between the two independent variables resulted in coefficient of determination (R^2) equal to 1.0, then the matrix of inter-correlations among the independent variables is singular and there exists no unique solution for the regression coefficients. However, if the independent variables are not perfectly correlated, but only highly correlated, there exists a solution for the regression coefficients and the estimates, while unbiased, are unstable, and their standard errors are typically large (Anderson *et al.*, 2007). Multicollinearity is a multivariate problem, not a bivariate problem and this meant that a simple perusal of the bivariate correlation matrix was not going to be sufficient to eliminate consideration of the problem of multicollinearity.

In order to be certain that multicollinearity was not present, the following recommended method was used: the coefficients of determination (R^2) of each independent variable regressed on the other independent variables needed to be examined using the Variance Inflation Factor (VIF) (Anderson *et al.*, 2007). The Variance Inflation Factor (VIF) was found to be the most reliable way to examine multicollinearity, and was calculated as follows:

EQ7: $VIF = \dfrac{1}{1 - R^2}$

For the current research, when the bivariate correlations among the independent variables was found to be greater than 0.65, it was assumed that multicollinearity problem might exist and the Variance Inflation Factor method was used to validate if multicollinearity existed or not. The following rule was applied in terms of determining if there was a multicollinearity problem: when any of the Variance Inflation Factors (VIF) were found to be greater than 5.0 it was concluded that there was a multicollinearity problem – typical values of 10 or more are regarded as problematic (Anderson *et al.*, 2007). Multicollinearity is a problem seldom considered in elementary statistics texts, because it is not really a mathematical-statistical problem, but it rather is a problem in the interpretation of the coefficients (Weiers, 2010).

4.7. Research Limitation

Due to the nature of the research study and the time constraints of the research project, the following were identified as the research limitations:

- The current research will only describe the specific relationship between performance and pay and will not provide further information about causal factors influencing the CEO remuneration and the financial performance of the organisations.

- The research also assumed that through their managerial power, CEOs were unable to influence boards of directors and their respective remuneration committees, and thus could not influence the structure of their remuneration packages.

48

- The size of the organisations studied, and the possible effect that this would have on the Total Remuneration of the CEO, was deemed to be beyond the scope of this research topic. The fact that all the organisations selected were large organisations would address the problem of organisation size as a threat to the validity of the research.

4.8. Research Methodology Summary

The research methodology presented in the current chapter was found to be in line with other research studies on the executive pay-performance studies previously done. Additionally, the research methodology provided direction in searching for the research data and analysing that research data in order to address the research questions raised in the preceding chapter.

The next chapter reviews the output of the analysis performed on the research data using the sampling and statistical methods described in the current chapter.

5. Chapter 5: Research Results

5.1. Introduction

This chapter will present a broad analysis of the descriptive statistics and also presents the results used to address the research questions. The results were generated using the sample selected for the research which included twenty one organisations of the JSE Top 40 from 2006 to 2012.

5.2. Descriptive Statistics

5.2.1. CEO Remuneration: Fixed Pay and Variable Pay

The research sample data acquired from McGregor BFA for executive Total Remuneration were generally listed in South African Rands (ZAR) and others were listed in other currencies, namely British Pound (GBP), Euro (EUR) and United States Dollar (USD).

Executive remuneration figures which were not in South African Rand (ZAR) were converted to South African Rand (ZAR) utilising the average exchange rates between 2006 and 2012 as calculated and given in Table 4. The seven year average rate were utilised as they ensure limited influence of short term irregularities between the different exchange rates due to the fact that the seven year time period between 2006 and 2012 covers the full business cycle (Canarella & Gasparyan, 2008).

Table 4: Average exchange rates.

Currency Relationships	2006 – 2012		
	Minimum	Average	Maximum
GBP/ZAR	10.24	**13.08**	18.51
USD/ZAR	5.97	**7.74**	11.38
EUR/ZAR	7.17	**10.47**	14.63

The exchange rates were sourced from Bloomberg. Table 4 also includes minimum and maximum exchange rates which were all experienced in different dates.

Figure 2 shows Total Remuneration received by respective organisations'
CEOs from 2006 to 2012 which were converted to South African Rands (ZAR)
utilising exchange rates in Table 4. Figure 2 contains Fixed Pay (upper
graph) and Short Term Incentive (lower graph) with the labels on the left hand
side of the graphs. The list of organisations found on Figure 2 is made of
organisations in the following industries: Basic Materials, Financials and
Consumer Goods. The Short Term Incentive graph also includes the
calculated mean for each organisation for the seven year research period.

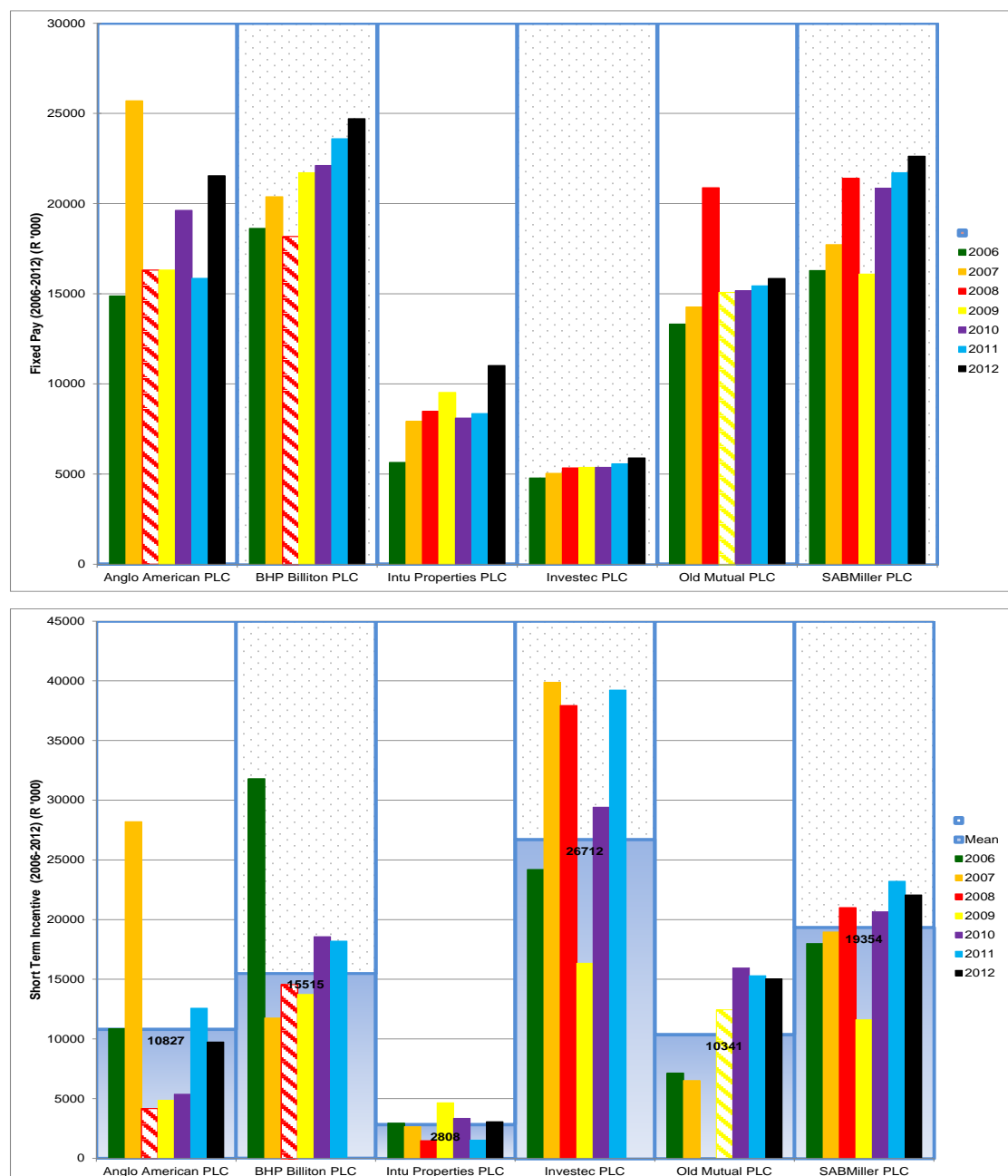**Figure 2: Total Remuneration – ZAR converted.**

Figure 3 shows the respective CEOs' Fixed Pay and Short Term Incentive for four organisations in the Basic Materials industry category that were listed in South African Rands (ZAR). On Figure 3 (and Figure 2 above) the changes in CEOs of particular organisations in certain years are indicated by bars with pattern fills which corresponds to the year in which there was CEO Turnover in that particular organisation – e.g. the pattern filled bar in 2008 for Anglo American Platinum Ltd on Figure 3 indicates the change in CEO in that year.

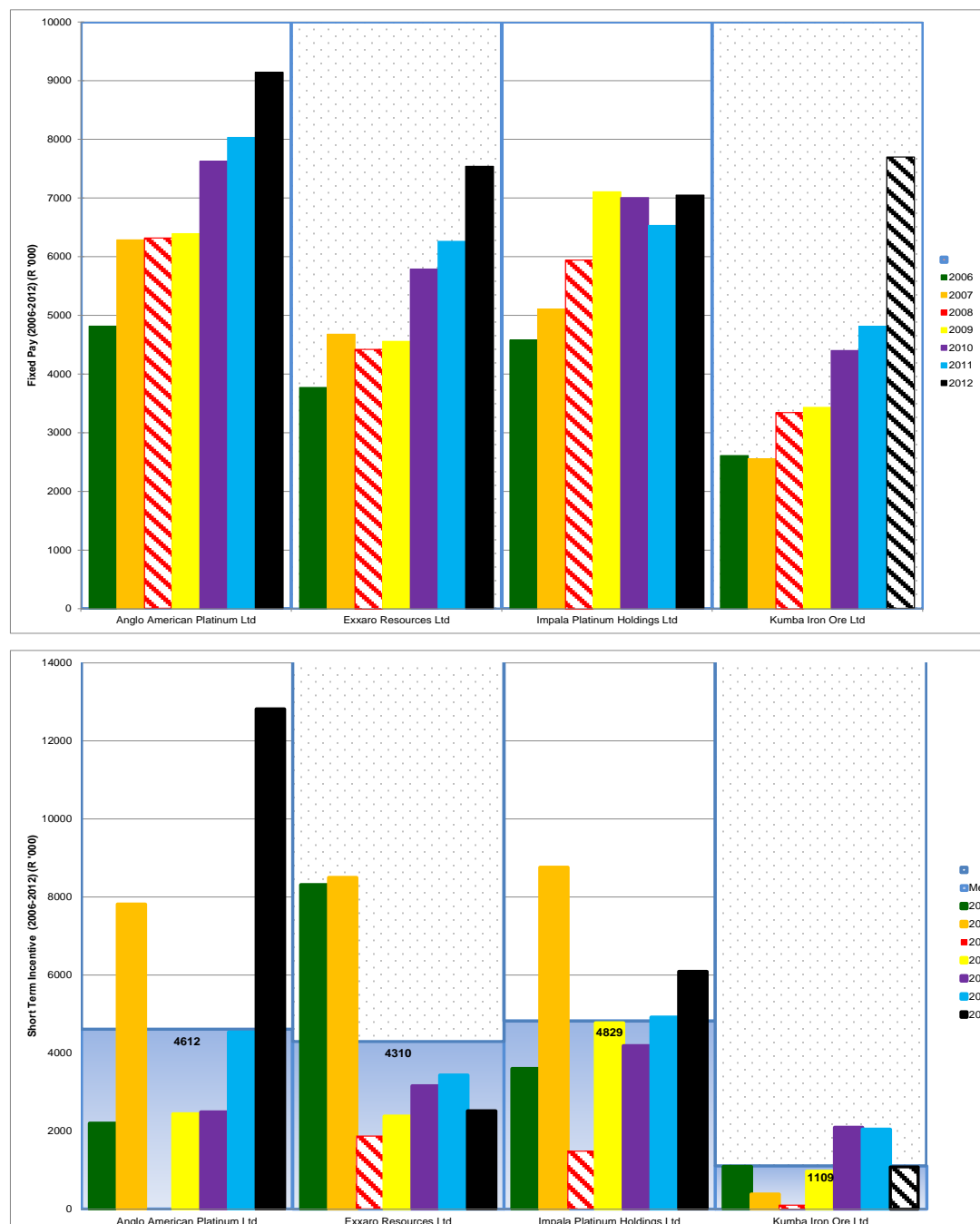**Figure 3: Total Remunerations – Basic Materials.**

52

Figure 4 shows the respective CEOs' Fixed Pay and Short Term Incentive for six organisations in the Financials industry category contained in the research sample with remuneration figures listed in South African Rands (ZAR). Also indicated on Figure 4 are CEO Turnovers of some of the organisations in certain years.

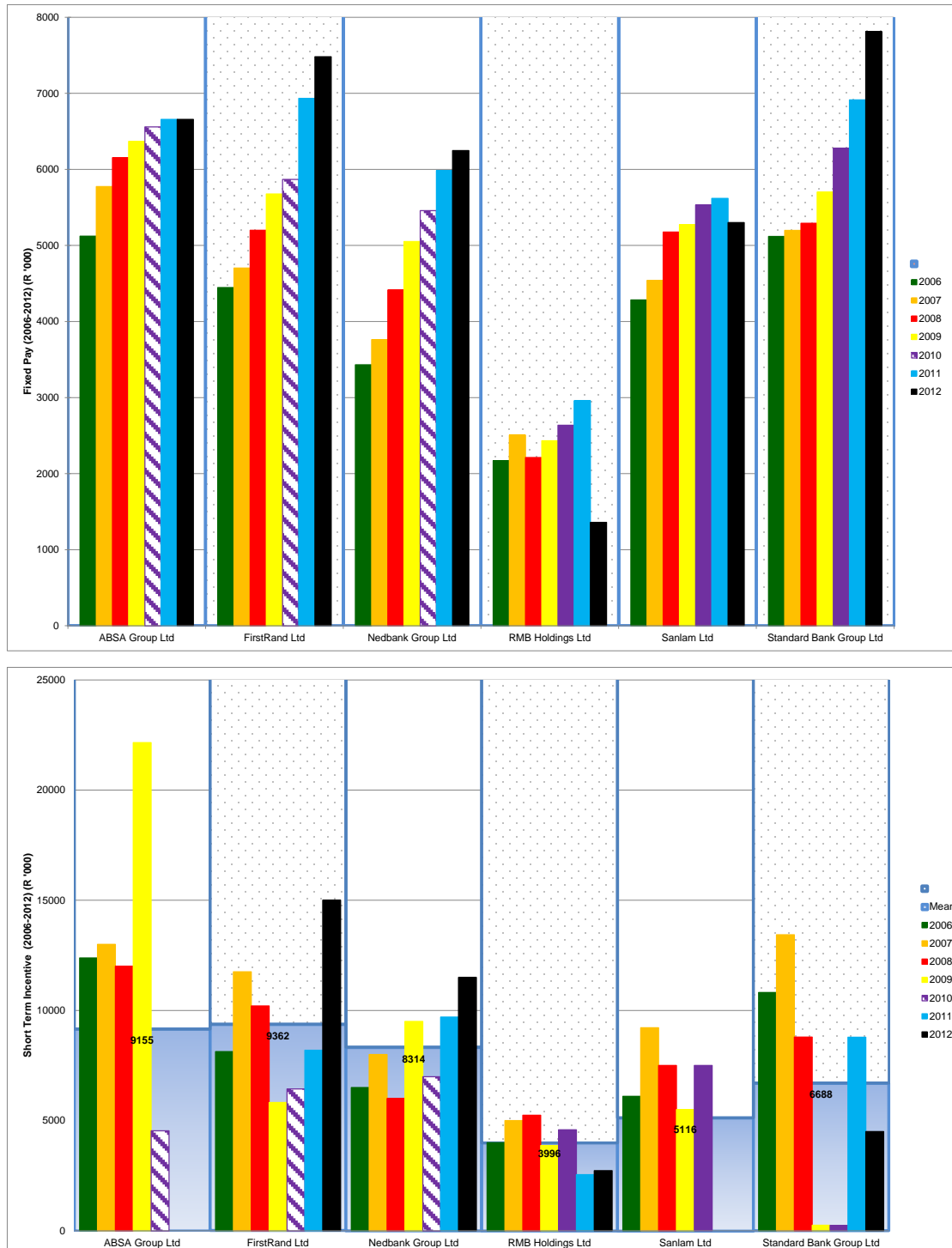**Figure 4: Total Remuneration – Financials.**

Figure 5 shows the respective CEOs' Fixed Pay and Short Term Incentive for five organisations that belong in the Telecommunications, Consumer Services, Industrials, Oil & Gas and Consumer Goods category of industries category contained in the research sample with remuneration figures listed in South African Rands (ZAR). Figure 5 also include CEO Turnovers of some of the organisations.

Figure 5: Total Remuneration – Other Industries.
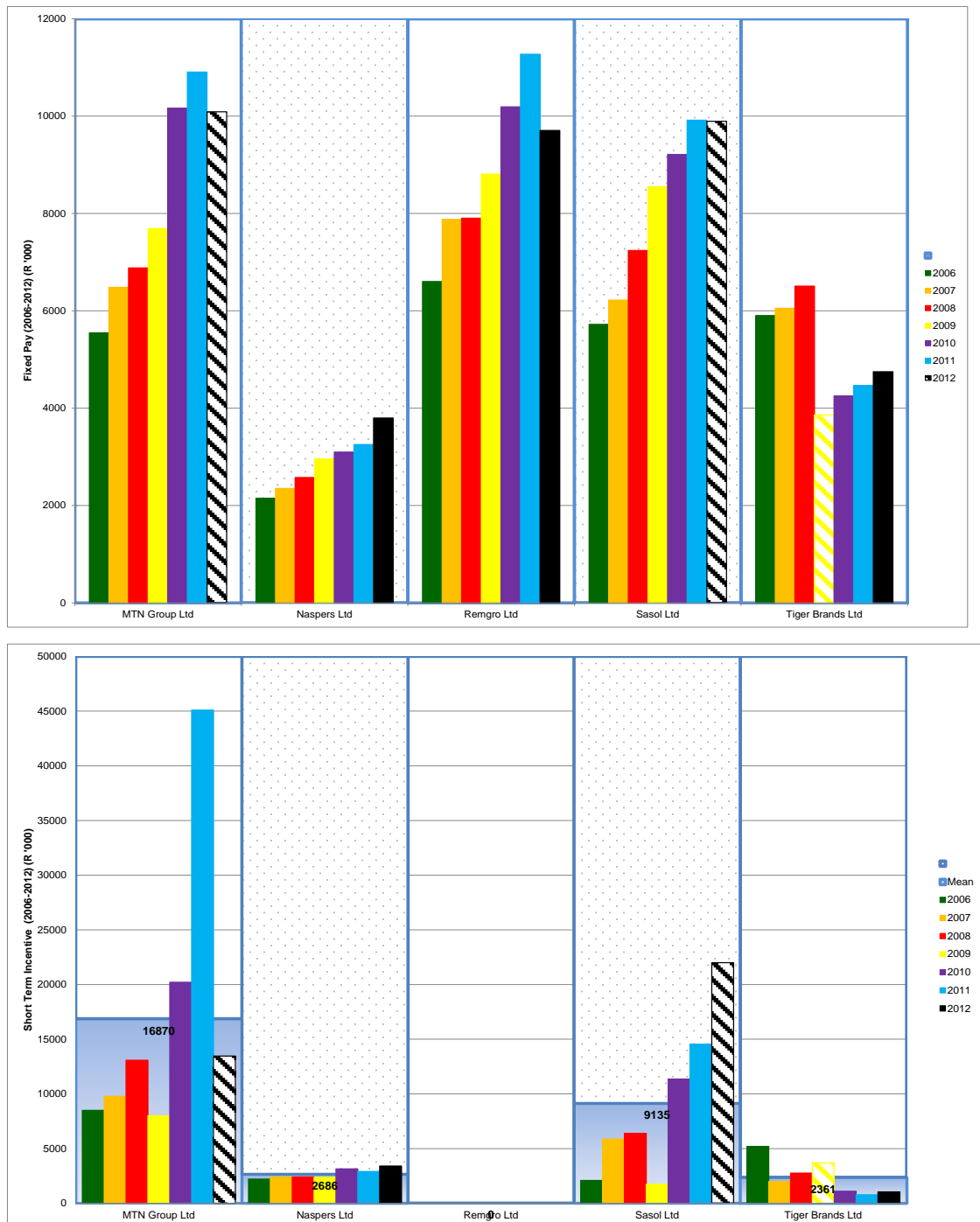
A general observation of the Total Remuneration as grouped from Figure 2 to Figure 5 indicate that there is a pattern with regard to the Fixed Pay as received by organisations' CEOs while there is no particular pattern with regard to the Short Term Incentive illustrating that some components of CEO remuneration are more as a result of organisation performance than others (Bradley, 2011). Additionally, from Figure 2 to Figure 5 it can be observed that CEOs of highly globalized organisations tend to be paid at higher levels, reflecting the increased complexity of managing global organisations (Fatemi *et al.*, 2003).

Figure 6 shows, for the current research study period between 2006 and 2012, the year-on-year and cumulative CEO Turnover derived from Figure 2 through to Figure 5 with the recession period between 2008 and 2009 indicated on the figure as the shaded area. Also included in the form of a shaded area on Figure 6 was the "August 2011 Stock Market Fall" (Bremer & Dmitracova, 2011) – the stock markets fell sharply in stock prices in August 2011 in stock exchanges across the U.S., Middle East, Europe and Asia due to fears of contagion of the European sovereign debt crisis to Spain and Italy, as well as concerns over France's current AAA rating, concerns over the slow economic growth of the United States and its credit rating being downgraded.

**Figure 6: Research sample CEO Turnover.**
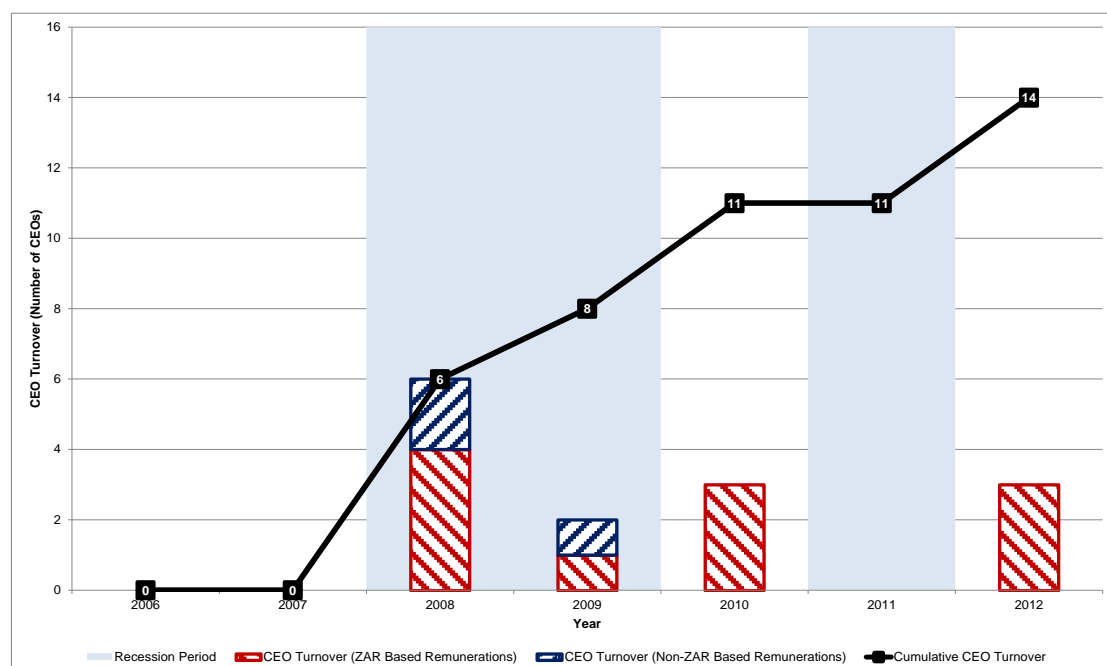
Based on the original research sample with 21 number of CEOs and 14 CEO turnovers, the total number of CEOs analysed over the seven year period of the research study was 35. As a result, 38% of the organisations studied had only one CEO, 57% had two CEOs and 5% had three CEOs over the seven year period of the study research period between 2006 and 2012.

Table 5: Numerical descriptive statistics – Fixed Pay (R '000).

Year	Mean	Standard Deviation	Minimum	Median	Maximum
2006	6655	4759	2153	5118	18612
2007	7861	6265	2353	5774	25694
2008	8102	5800	2211	6153	21392
2009	7996	5107	2433	6368	21701
2010	8821	5752	2637	6558	22104
2011	9095	5662	2957	6913	23590
2012	9814	6244	1359	7698	24697

Table 5 contains the numerical summaries of the descriptive statistics for Fixed Pay received by CEOs in the research sample of 21 organisations over the seven year period between 2006 and 2012. Figure 7 shows graphical representation of the descriptive statistics for Fixed Pay mean and median for the research sample of the 21 organisations over the seven year period.

Figure 7: Graphical descriptive statistics – Fixed Pay.
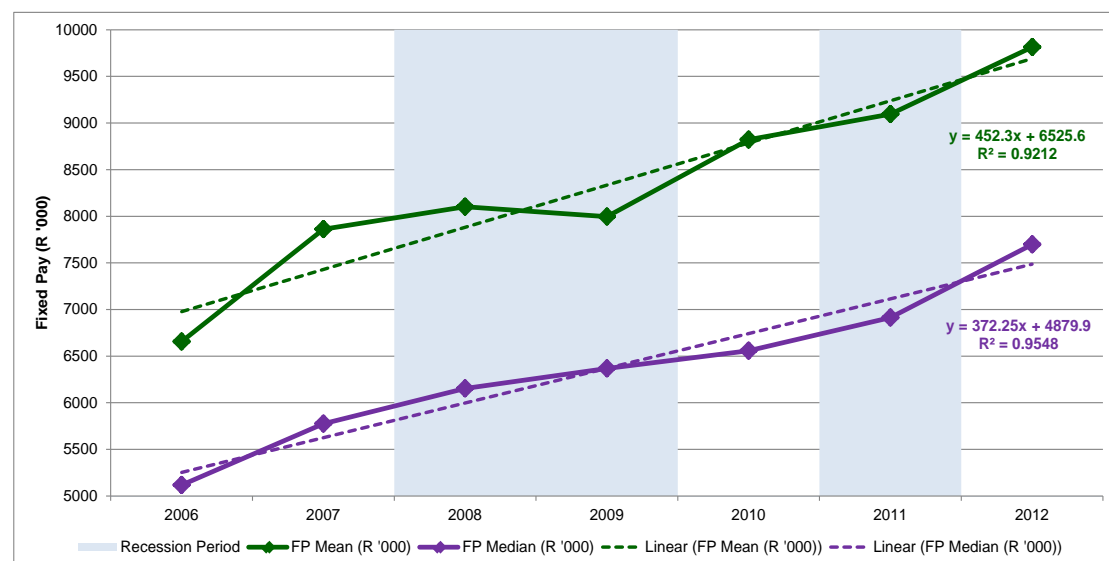
The general trajectory of the average Fixed Pay received by CEOs on Figure 7 was observed to be increasing, slowed down during the recession period between 2008 and 2009 and then continued to increase until 2012. The Fixed Pay mean and median plots on Figure 7 can both be approximated by linear equations with the coefficient of determination (R^2) equal to 0.9212 and 0.9548 respectively.

Table 5 contains the standard deviation for the Fixed Pay received by CEOs for the research sample and the research time period. Utilizing these standard deviation amounts, bounds were created around yearly Fixed Pay means between 2006 and 2012 to describe CEOs Fixed Pay amounts that are ±1, ±2, and ±3 standard deviations. Figure 8 shows the dispersion breakdown of the CEOs Fixed Pay within ±1, ±2, and ±3 standard deviations about their respective means – the actual means were illustrated as lying along the vertical axis that intercepts the horizontal axis at 0%.

Figure 8: FP Dispersion Breakdown – ±1, ±2 and ±3 Standard Deviations.
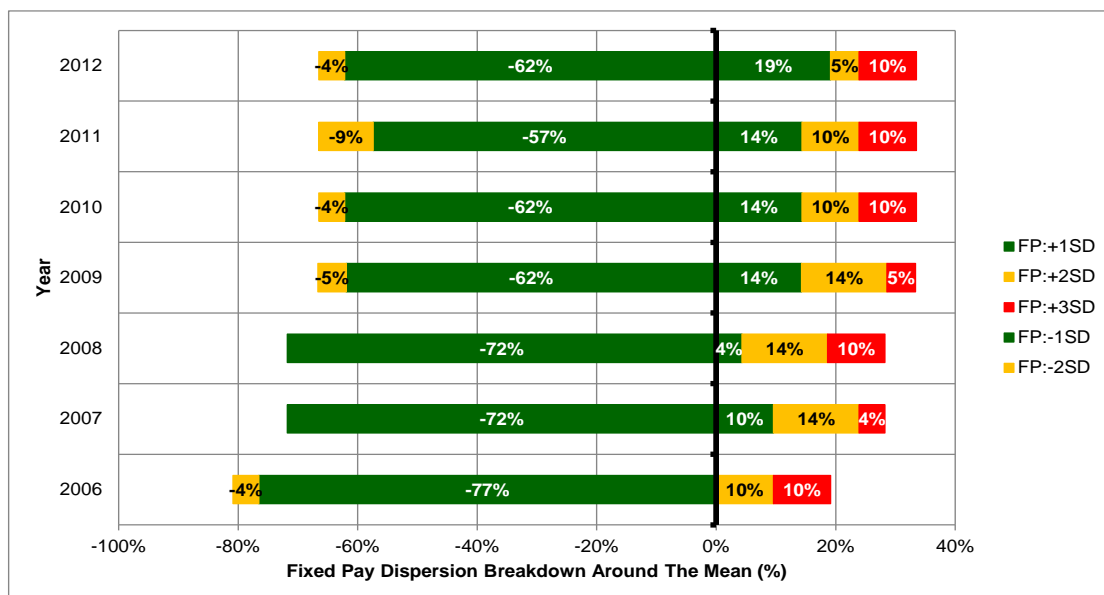
According to Figure 8, in 2006 77% of CEOs were receiving Fixed Pay amounts that fell between the mean minus one times the standard deviation and the mean, i.e. CEOs' Fixed Pay fell between R 1.896 million (R 6.655 million – R 4.759 million) and R 6.655 million. Additionally, none of the CEOs received Fixed Pay between the mean and the mean plus one times the standard deviation between 2006 and 2012.

57

Figure 8 indicates that 77% of Fixed Pay received by CEOs in 2006 fell within ±1 standard deviation of the mean. Between 2007 and 2012, the number of CEOs receiving Fixed Pay between the mean and +1 standard deviation were observed to be increasing from 10% in 2007 to 19% in 2012. As the bounds moved to ±2 and ±3 standard deviations fewer CEOs' Fixed Pay amounts were found in those bounds – at mean minus two or three times the standard deviation either few or none got paid between those bounds.

Table 6: Numerical descriptive statistics – STIs (R '000).

Year	Mean	Standard Deviation	Minimum	Median	Maximum
2006	8381	7906	0	6500	31797
2007	10182	9399	0	8498	39881
2008	7473	8982	0	5243	37920
2009	6527	5821	0	4770	22154
2010	8160	8087	0	4583	29421
2011	10357	12470	0	4918	45095
2012	6953	7324	0	3400	22059

Table 6 contains the numerical summaries of the descriptive statistics for Short Term Incentive. Figure 9 shows graphical representation of the descriptive statistics for Short Term Incentive' mean and median for the research sample over the seven year period.

Figure 9: Graphical Descriptive Statistics – STIs.
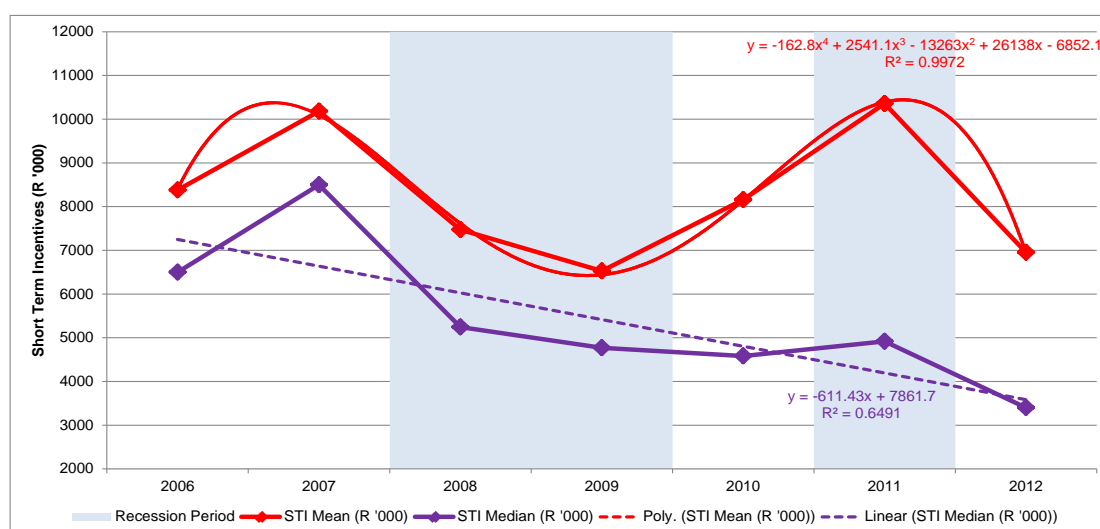
Based on Figure 9, there was no general trajectory observed for the average (mean) Short Term Incentive between 2006 and 2012. On the contrary, it was observed that the Short Term Incentive median had a downwards moving trajectory which was approximated by a linear equation with the coefficient of determination (R^2) equal to 0.6491. For an approximation equation with the coefficient of determination (R^2) greater than that found for the median ($R^2 = 0.6491$), the Short Term Incentive mean approximation equation was found to be of the fourth degree with coefficient of determination (R^2) being 0.9972.

Figure 10 shows the dispersion breakdown of the CEOs Short Term Incentive within ±1, ±2, and ±3 standard deviations about their respective means – the actual means were thought of lying along the vertical axis that intercepts the horizontal axis at 0%. According to Figure 10, in 2006 62% of CEOs received Short Term Incentive that fell between the STIs mean minus one times the standard deviation and the mean, while 19% of CEOs received Short Term Incentive that fell between the mean and the mean plus one standard deviation. The number of CEOs receiving Short Term Incentive between the mean and mean plus one standard deviation was observed to be increasing between 2006 and 2007 moving from 19% to 29% through those years as indicated on Figure 10.

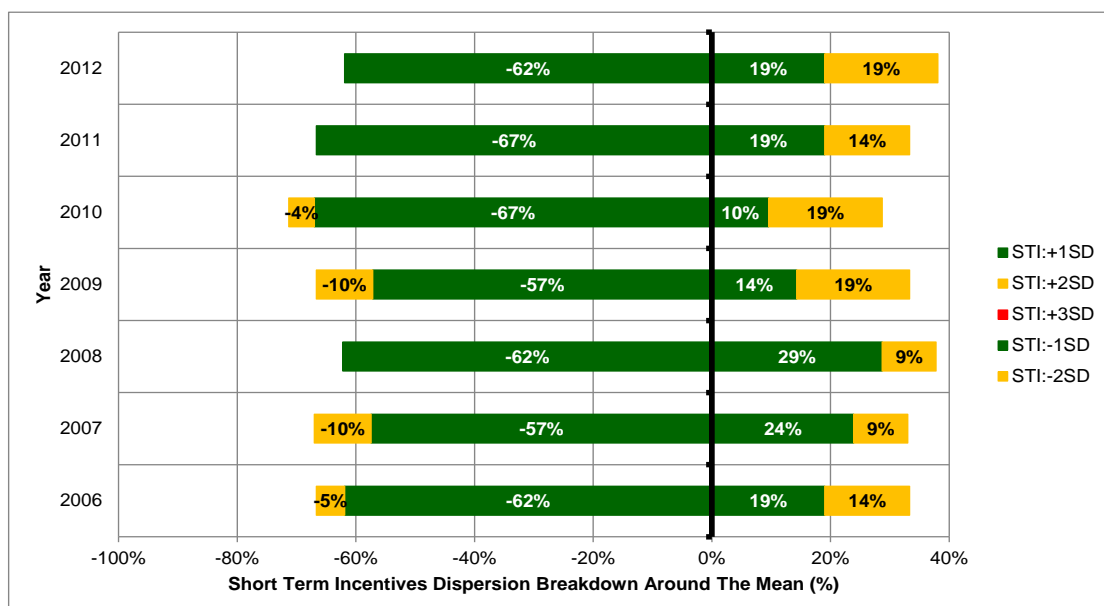**Figure 10: STI Dispersion breakdown – ±1, ±2 and ±3 Standard Deviation.**

Figure 10 indicate that 81% (62% + 19% = 81%) of CEOs received Short Term Incentive in 2006 that fell within ±1 standard deviation of the mean. The highest number of CEOs receiving Short Term Incentive within ±1 standard deviation was observed to be in 2008 at 91% while the lowest number of CEOs within ±1 standard deviation was 71%, experienced in 2009. As the bounds moved to ±2 and ±3 standard deviations fewer CEOs' Short Term Incentive were found in those bounds. It was also observed that for Short Term Incentive, there were no CEOs who received Short Term Incentive within the ±3 standard deviations bounds – the ±1 and ±2 standard deviations make up the 100%.

5.2.2. Organisation Performance Measures

The following organisation performance measures were chosen for the current research: Market Capitalisation (MC), Earnings per Share (EPS), Return on Equity (ROE), Economic Value Added (EVA) and Market Value Added (MVA).

Figure 11 shows the Market Capitalisation of the research sample that contains twenty one of the forty largest publicly listed organisations on the JSE, the combined JSE market capitalisation, and the research sample percentage portion of the JSE between 2006 and 2012.

Figure 11: Market Capitalisation – research sample vs. JSE.
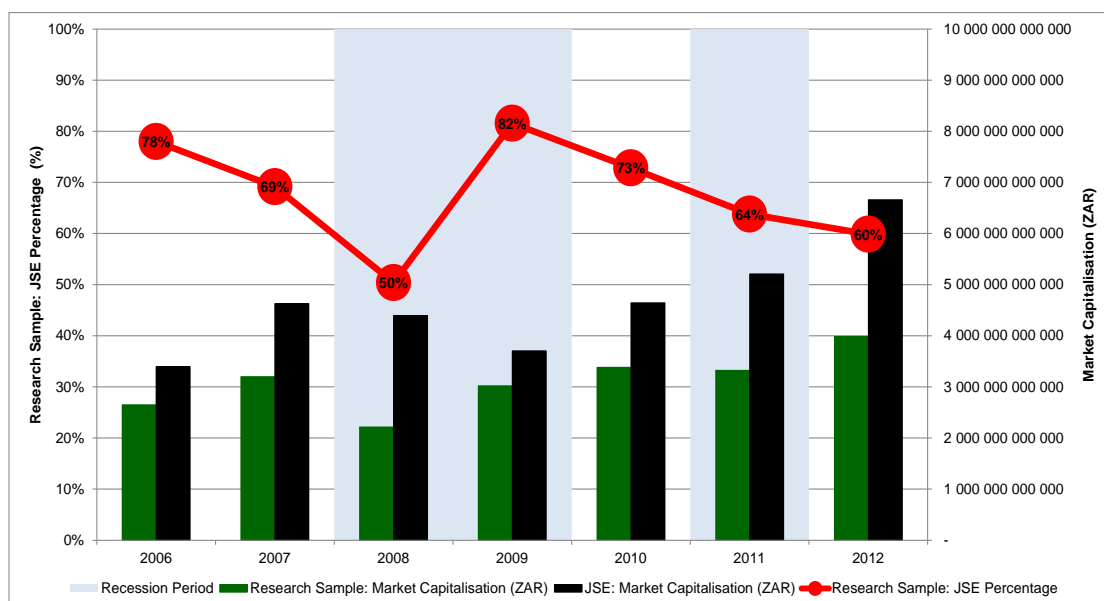
Despite the fact that only the twenty one largest organisations in the JSE have been included in the research sample, these organisations, as illustrated on Figure 11, had a combined Market Capitalisation of between 50% and 82% of the total JSE Market Capitalisation for the research period between 2006 and 2012. The average percentage Market Capitalisation representation of the research sample to the JSE Market Capitalisation for the seven year research period between 2006 and 2012 was 68%.

There was therefore large enough proportion of the total JSE market capitalisation to be sufficient for the research. All the organisations that resulted in the research sample of 21 were therefore deemed large enough to address the problem of organisation sample size as a threat to the validity of the research.

Table 7 contains the numerical summaries in the form of means (averages) of the descriptive statistics for organisation performance measures selected for the current research, i.e. Market Capitalisation (MC), Earnings Per Share (EPS), Return on Equity (ROE), Economic Value Added (EVA) and Market Value Added (MVA).

Table 7: Descriptive Statistics – performance measures means.

Year	Market Capitalisation (ZAR)	EPS (c)	ROE (%)	EVA (R'000)	MVA
2006	126 127 302 078	411 872	45.41	-96 040 059	2.68
2007	152 428 562 410	372 635	27.22	-55 045 568	2.92
2008	105 504 699 867	408 180	20.07	8 437 130	1.92
2009	143 840 910 288	277 988	21.37	-74 430 824	1.99
2010	161 080 579 054	351 671	19.95	-49 226 725	2.07
2011	158 206 364 568	436 858	23.08	4 623 051	1.98
2012	189 816 637 829	257 915	16.91	-50 811 025	2.03

Table 8 contains the numerical summaries in the form of standard deviations for the organisation performance measures. Each individual organisation performance measure for the research sample and the seven year research period will be discussed further in the following section.

61

Table 8: Descriptive Statistics – Standard Deviation.

Year	Market Capitalisation (R)	EPS (c)	ROE (%)	EVA (R '000)	MVA
2006	117 876 561 428	918 429	56.88	486 081 146	2.00
2007	147 782 173 297	871 015	23.38	360 619 615	2.90
2008	101 376 853 276	929 707	39.34	214 398 037	1.11
2009	138 000 304 554	648 033	30.31	338 667 551	1.60
2010	151 136 297 119	915 648	19.79	383 469 055	1.34
2011	141 199 051 489	1 155 145	22.68	228 620 487	1.37
2012	173 261 507 601	552 202	17.97	427 188 317	1.53

5.2.2.1.   Market Capitalisation

Figure 12 shows the plot for Market Capitalisation means from 2006 to 2012. According to Figure 12 the observed overall trend of Market Capitalisation means (averages) is consistently increasing with an observed decline in 2008 and 2011 due to the Global Financial Crisis. The other observed decline in Market Capitalisation was observed to be in 2011 which was due to the August 2011 Stock Market Fall. Also included on Figure 12 are two trendlines to approximate the Market Capitalisation means.   The coefficients of determination (R^2) for the linear and cubic functions were determined to be 0.5480 and 0.6629 respectively.

Figure 12: Market Capitalisation means and trendlines.

62
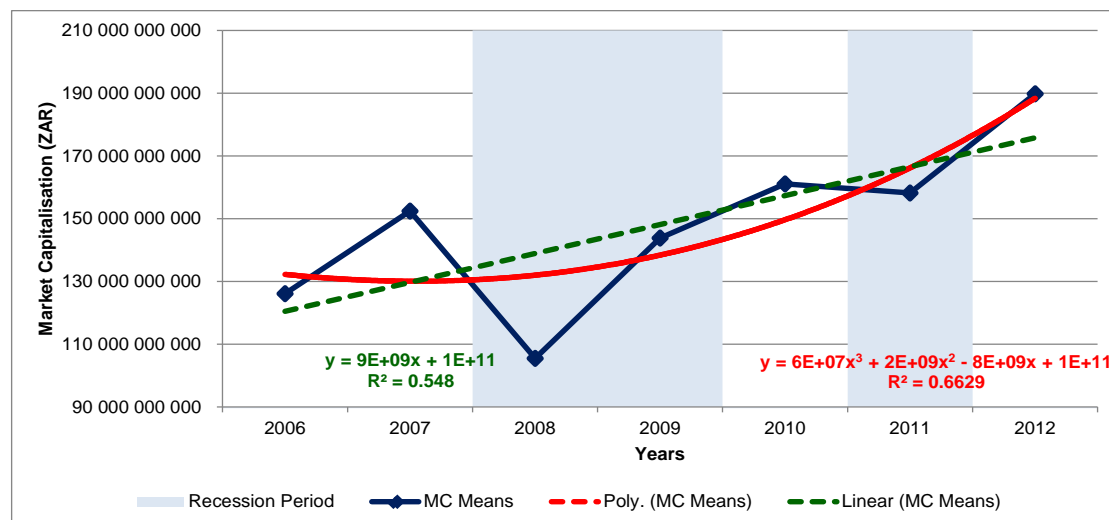
5.2.2.2.   Earnings Per Share (EPS)

Figure 13 shows the plot for the Earnings per Share (EPS) means from 2006 until 2012. According to Figure 13 EPS means for the research sample during the seven year period showed were observed to be oscillating with an increasing oscillation envelope. The lowest EPS mean was experienced in 2012 while the highest was experienced in 2011 corresponding to the August 2011 Stock Market Fall. The other peak observed was in 2008, corresponding to the 2008 Global Financial Crisis. Figure 13 also shows two trendlines to approximate the EPS means – the coefficients of determination (R^2) for the linear and cubic functions are 0.1919 and 0.3466 respectively.
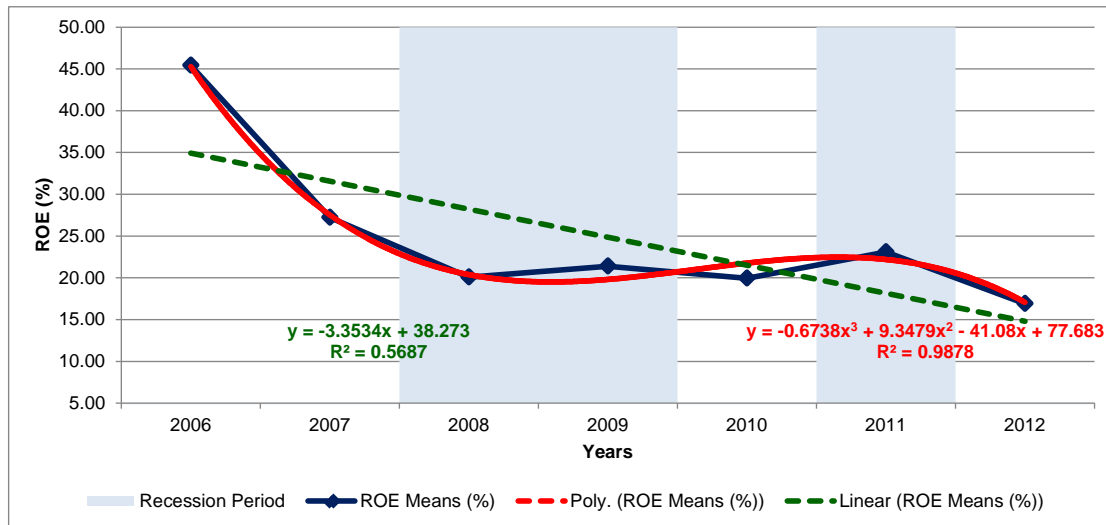
Figure 13: Earnings per Share (EPS) means and trendlines.
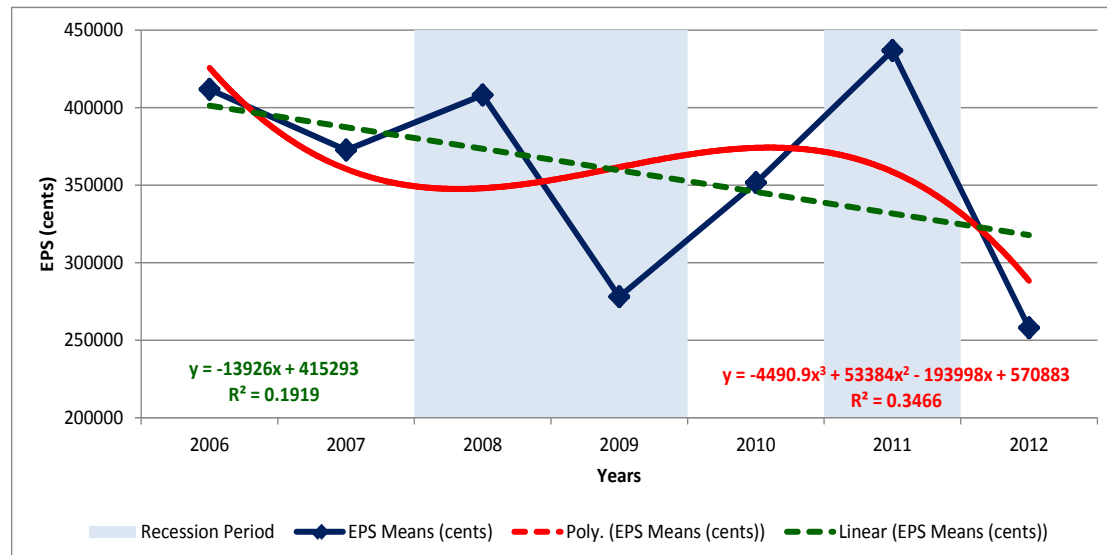
5.2.2.3.   Return on Equity (ROE)

Figure 14 shows the Return on Equity (ROE) means from 2006 to 2012 – the observed overall trend for Return on Equity (ROE) means (averages) is consistently decreasing even with a slight recovery in 2009 and 2011. Return on Equity (ROE) means (averages) for the research sample during the seven year research period declined from 45.41% to 16.91% – a 63% decline in Return on Equity (ROE) between 2006 and 2012. Figure 14 also has linear and cubic functions to approximate the Return on Equity (ROE) means with coefficients of determination (R^2) given as 0.5687 and 0.9878 respectively.

63

Figure 14: Return on Equity (ROE) means and trendlines.

$y = -3.3534x + 38.273$
$R^2 = 0.5687$

$y = -0.6738x^3 + 9.3479x^2 - 41.08x + 77.683$
$R^2 = 0.9878$

5.2.2.4. Economic Value Added (EVA)

Figure 15 shows the plot for the Economic Value Added (EVA) means (averages) from 2006 until 2012. The means plot for EVA as shown on Figure 15 shows no clear trend in an upward or downward direction for the research sample during the seven year research period. The observed EVA trend showed positive values in 2008 and 2011, corresponding to the two financial crisis experienced. Also included on Figure 15 are two trendlines to approximate the EVA means. The coefficients of determination (R^2) for the linear and cubic functions are 0.1556 and 0.3218 respectively.

Figure 15: Economic Value Added (EVA) means and trendlines.

$y = 7E+06x - 7E+07$
$R^2 = 0.1556$

$y = 1E+06x^3 - 2E+07x^2 + 9E+07x - 2E+08$
$R^2 = 0.3218$
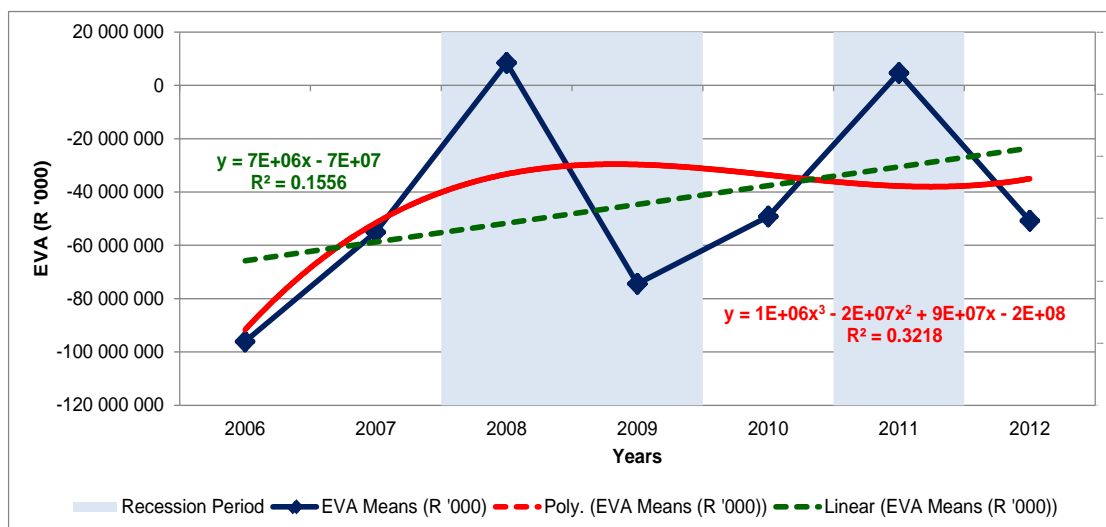
5.2.2.5. Market Value Added (MVA)

Figure 16 shows the plot for the Market Value Added (MVA) means (averages) from 2006 until 2012. Based on Figure 16 (and Table 7) all the MVA) means (averages) for the research sample showed a 24% decline between 2006 and 2012. Figure 16 shows a growth Market Value Added (MVA) means between 2006 and 2007 followed by a drop in 2008. Market Value Added (MVA) means were then maintained around 2.00 from 2008 until 2012. Also included on Figure 16 are two trendlines to approximate the Market Value Added (MVA) means. The coefficients of determination (R^2) for the linear and cubic functions are 0.5089 and 0.6747 respectively.

Figure 16: Market Value Added (MVA) means and trendlines.
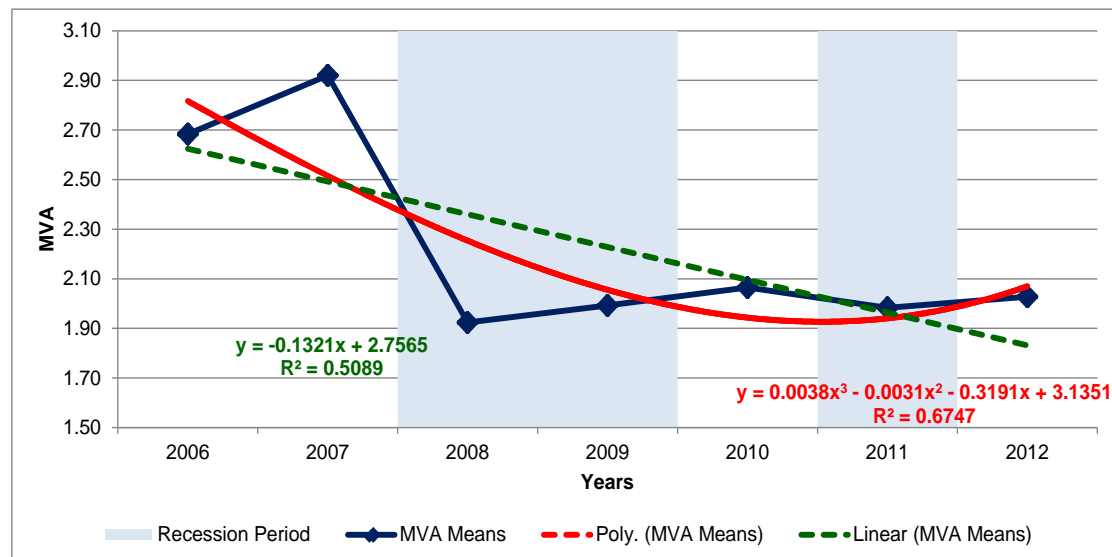
5.3. Question One Results: 2008 Financial Crisis Effects

The primary objective of the current research was to determine the relationship between CEO remuneration and financial performance of an organisation. As a result, the first question investigates if there any structural changes that have occurred with regard to the mix of remuneration components CEOs receive after the 2008 financial crisis. The implementation of the Companies Act (2008) and King III was also expected to cause the some form of structural changes in CEO remuneration to ensure that executive remuneration are linked to organisation performances.

65

Figure 17 shows year-on-year percentage changes in CEO Total Remuneration (Fixed Pay and Short Term Incentive) between 2006 until 2012. Also included on Figure 17 are the respective initial Fixed Pay and Short Term Incentive averages (i.e. for South African Rands (ZAR) Based figures, other currencies based (Non-ZAR Based) figures and the total research sample) for 2006.

According to Figure 17 the percentage year-on-year changes trajectories for CEO Fixed Pay listed in South African Rands (ZAR) and other currencies were observed to be similar except in 2012 whereby the two were going in opposite directions. As for the CEO Short Term Incentive, the trajectories were observed to be similar except for 2011 whereby the CEO STIs listed in South African Rands spiked while those listed in other currencies slowed down.

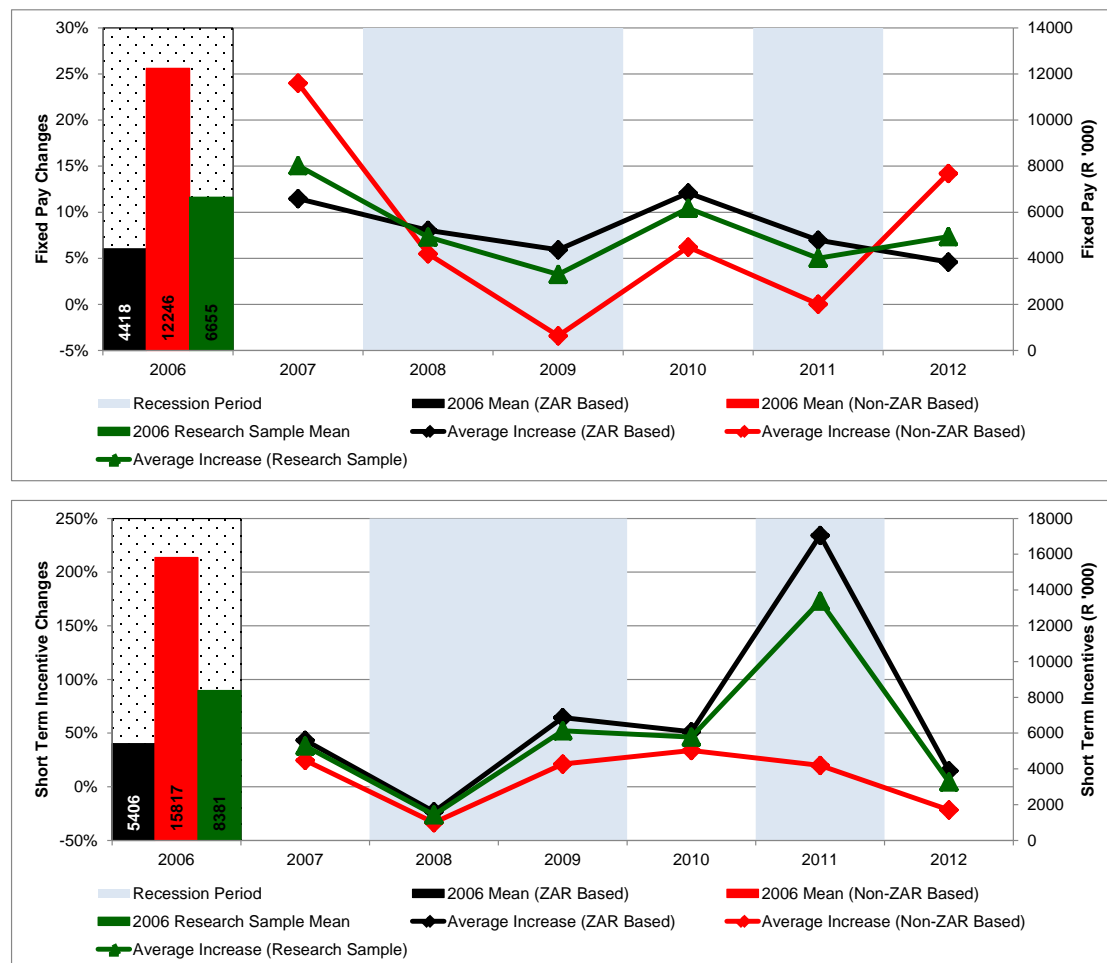**Figure 17: CEO 2006 Fixed Pay means and percentage changes.**

Figure 18 shows the coefficient of correlation results for the correlation analysis that was done with CEO Turnover as the dependant variable and Fixed Pay and Short Term Incentive year-on-year percentage changes as the independent variables. Based on the correlation analysis results it was observed that CEO Turnover was inversely related to both the Fixed Pay and Short Term Incentive received by CEOs. The inverse relationship between CEO Turnover and Fixed Pay was observed to be weak, while the inverse relationship between CEO Turnover and Short Term Incentive was observed to be strong – correlation coefficient guidelines as per Ratner (2009).

Figure 18: Correlation – CEO Turnover vs. Year-on-Year % Increases.
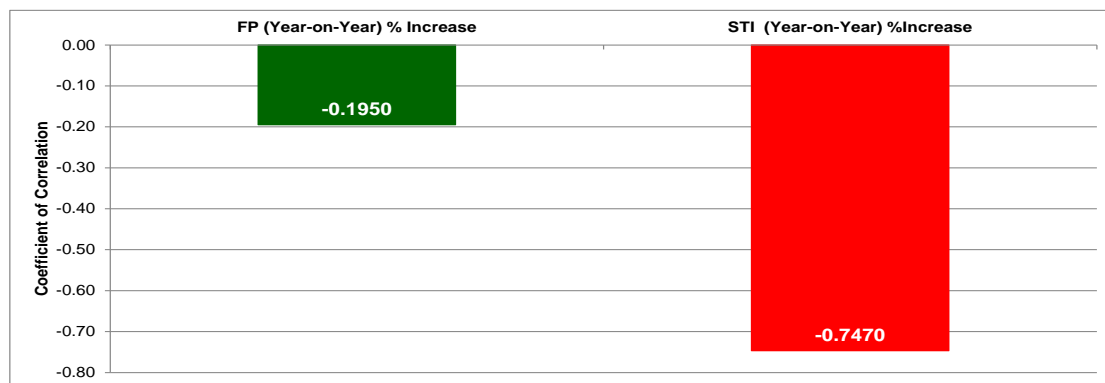
Table 9 contains statistical numerical information for Fixed Pay boxplots for all the organisations contained in the research sample between 2006 and 2012. Figure 19 shows the boxplots for Fixed Pay received by CEOs of the respective organisations.

Table 9: Fixed Pay Boxplots numerical information.

Year	Min.	Q1	Median	Q3	Max.	IQR
2006	2153	4027	5118	6255	6604	2229
2007	2353	4610	5774	7895	7911	3286
2008	2211	4799	6318	21392	21392	7597
2009	2433	4803	6391	12298	21701	7495
2010	2637	5410	6558	10178	15155	4767
2011	2957	5588	6913	11091	15848	5503
2012	1359	6066	7698	10546	15835	4481

67

The boxes on Figure 19 have ranges given in Table 9 as Inter-Quartile Ranges (IQRs) which represent the middle 50% of the research sample enclosed by the Lower Quartile (Q1) and the Upper Quartile (Q3), and centred about the median (the single line inside the box). The remaining 50% of the sample is contained within the areas between the box and the lower (25%) and upper (25%) whisker – with some exceptions called outliers – represented in the form of points outside of the boundaries of the whiskers on Figure 19.

Figure 19: CEOs Fixed Pay Boxplots (2006 – 2012).
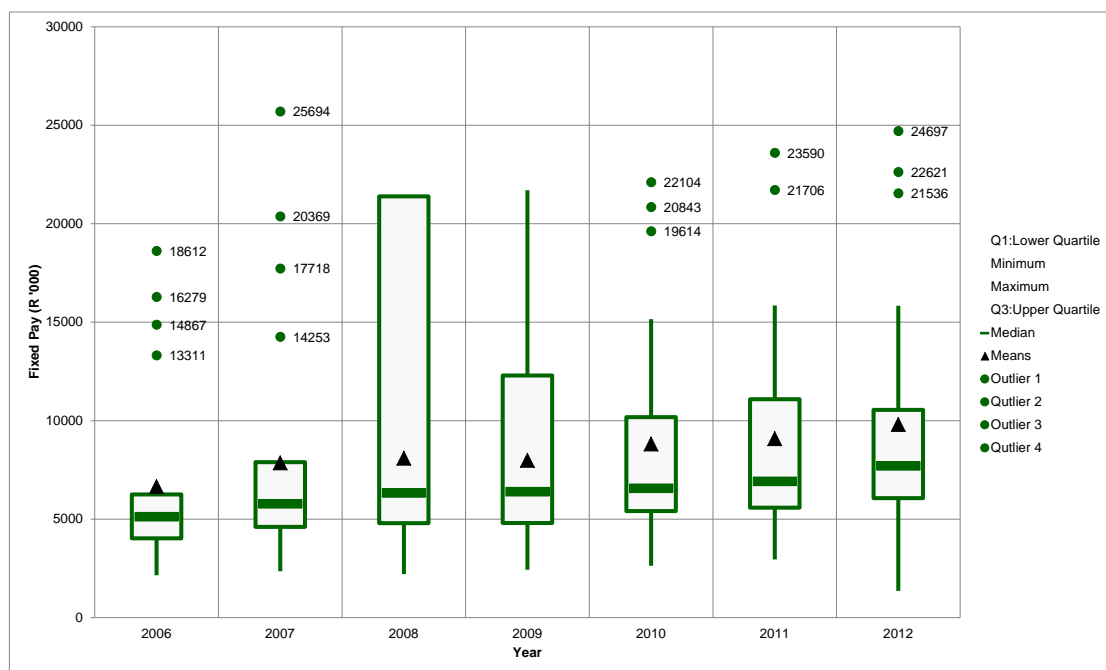
Based on Figure 19, the medians were found to be positioned closer to the lower end of the Fixed Pay paid by organisations to their respective CEOs than the means – triangle markers on the boxplots. The medians are not influenced by outliers as compared to the means. The outliers are generally calculated to be more than 1.5 times of the Upper Quartile (Q3) (Anderson *et al.*, 2007; Weiers, 2010).

Table 10 contain statistical numerical information for Short Term Incentive boxplots. Figure 20 shows the boxplots for Short Term Incentive paid by organisations to their respective CEOs for the seven year research period between 2006 and 2012.

68

Table 10: Short Term Incentive Boxplots numerical information.

Year	Min.	Q1	Median	Q3	Max.	IQR
2006	0	2571	6500	10832	17979	8261
2007	0	3827	8498	12376	18960	8549
2008	0	1475	5243	11638	21000	10162
2009	0	2372	4770	10556	22154	8184
2010	0	2811	4583	13653	29421	10842
2011	0	1787	4918	14918	23210	13131
2012	0	520	3400	13135	22059	12615

While the lowest Fixed Pay received by a CEO in the research sample between 2006 and 2012 was found to be R 1.359 million in 2012 (Table 9), Table 10 indicates that the lowest Short Term Incentive received by any of the research sample received CEOs was nothing for all the years between 2006 through to 2012. Additionally, comparison between Figure 19 and Figure 20 indicate the high levels of Short Term Incentive outliers as compared to those found for Fixed Pay. In addition, the lower (approximately 25%) of the research sample data according to Table 10 and Figure 20 received no Short Term Incentive, especially in 2012.

Figure 20: CEOs Short Term Incentive Boxplots (2006 – 2012).
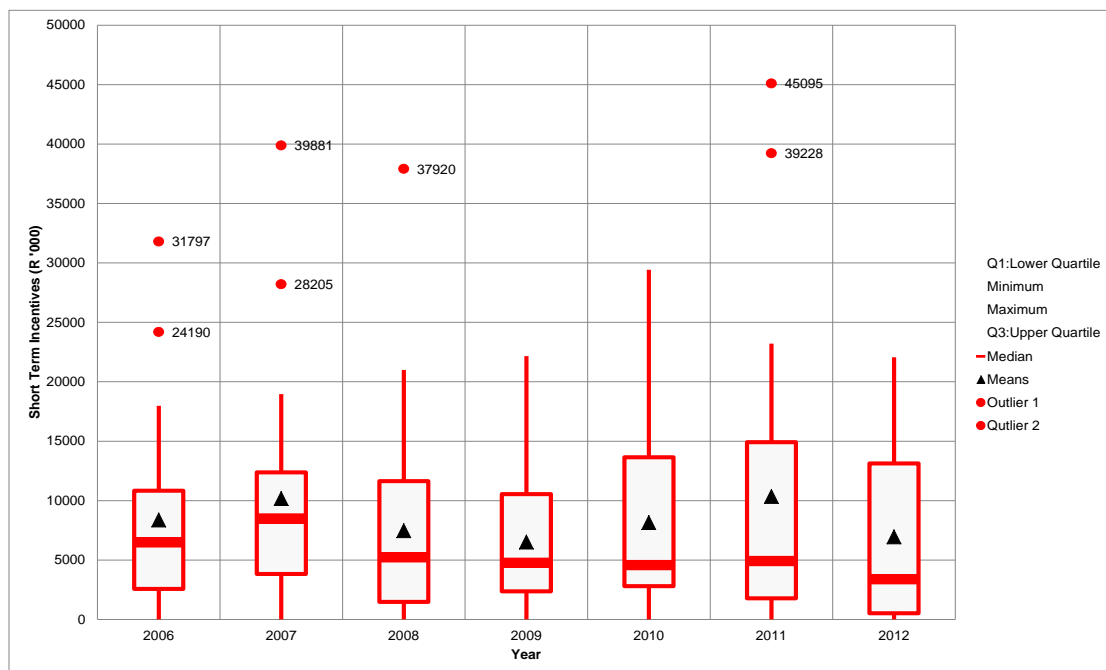
Figure 21 shows the calculated STI:FP ratios for means and medians between 2006 and 2012 with their respective trendlines. The trendlines indicated that there has been a change in the mix in Fixed Pay and Short Term Incentive and the change has been statistically significant – $R^2_{mean} = 0.4534$ and $R^2_{median} = 0.7876$.

Figure 21: STI/FP Ratios (2006 – 2012).

Figure 22 shows the means percentage mix between Fixed Pay and Short Term Incentive as a percentage of Total Remuneration received by CEOs. Figure 22 indicate that the Fixed Pay has increase from 44% in 2006 to 59% in 2012, and according to Figure 21 above the trend indicate an increasing Fixed Pay compared to decreasing Short Term Incentive.

Figure 22: Fixed Pay – Short Term Incentive Mix (2006 – 2012).

70

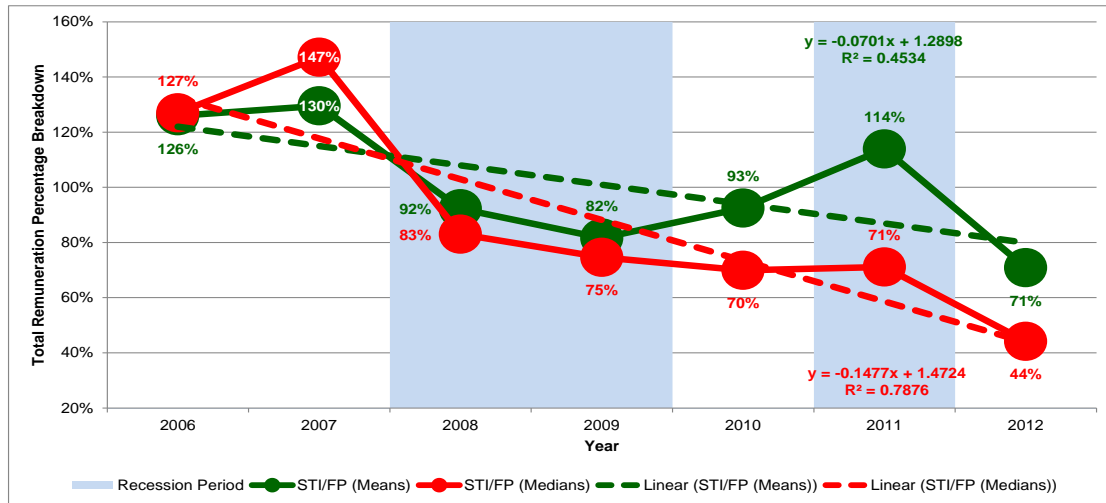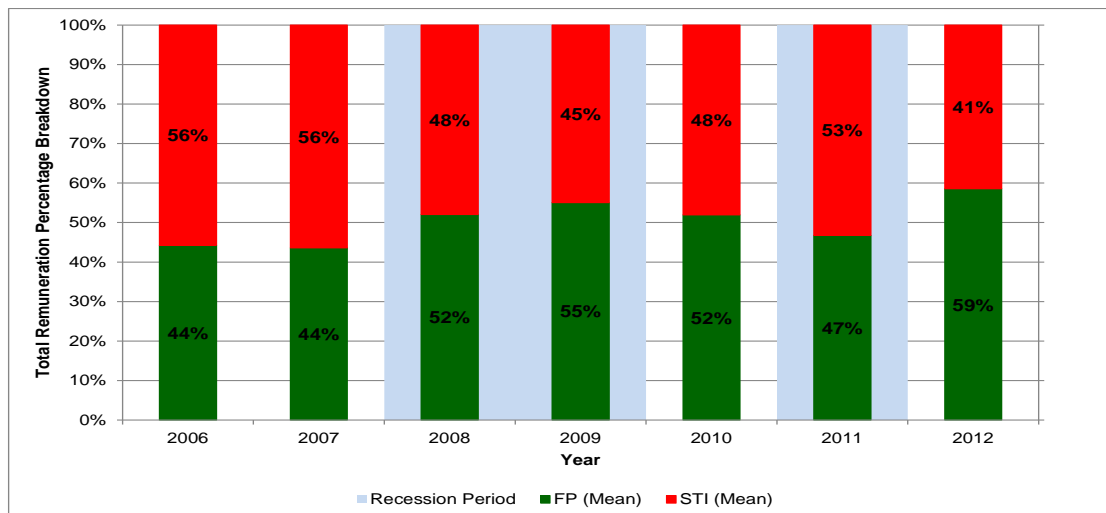## 5.4. Question Two Results: Closest Link (Correlation)

The second research question was aimed at determining the closest link (correlation) between CEO remuneration and organisation performance measures over the seven year research period and also during each individual year of the research study. The expectation was that a positive relationship exists between CEO remuneration and measures of organisation performance especially after the implementation of the Companies Act (2008) and King III which require CEO remuneration to be linked to some form of organisation performances.

Figure 23 shows the coefficient of correlation (R) results for the correlation analysis that was done with Fixed Pay as a dependant variable; independent variables considered for the correlation analysis included all the organisation financial performance measures chosen for the current research and are as listed on the horizontal axis of Figure 23. Figure 23 also included the seven year correlation results averages for each of the organisation financial performance measures. Figure 23 also includes a table with all the coefficient of correlation (R) numerical values.

Figure 23: Correlation Analysis – Fixed Pay Dependent Variable.

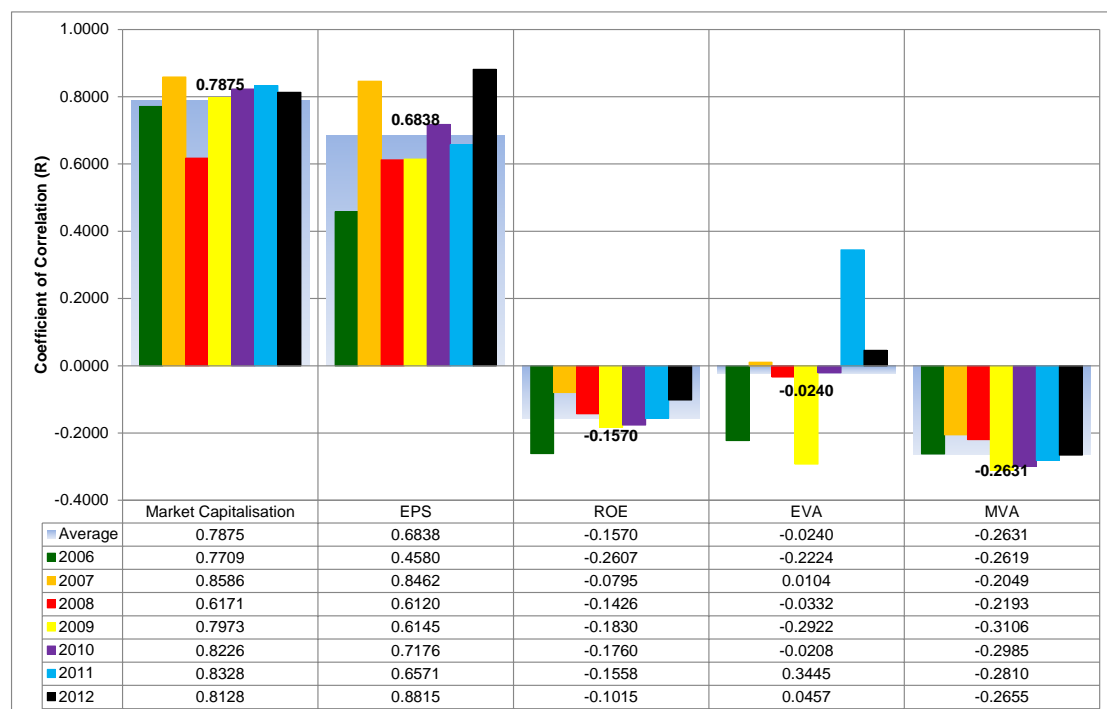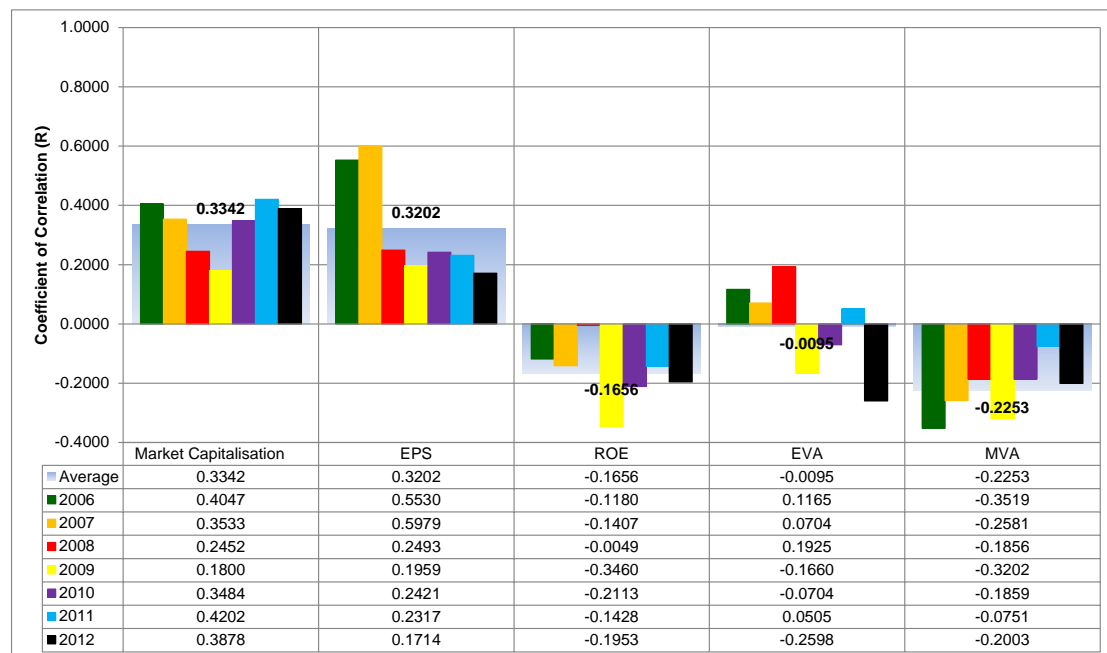|	Market Capitalisation	EPS	ROE	EVA	MVA
Average	0.7875	0.6838	-0.1570	-0.0240	-0.2631
2006	0.7709	0.4580	-0.2607	-0.2224	-0.2619
2007	0.8586	0.8462	-0.0795	0.0104	-0.2049
2008	0.6171	0.6120	-0.1426	-0.0332	-0.2193
2009	0.7973	0.6145	-0.1830	-0.2922	-0.3106
2010	0.8226	0.7176	-0.1760	-0.0208	-0.2985
2011	0.8328	0.6571	-0.1558	0.3445	-0.2810
2012	0.8128	0.8815	-0.1015	0.0457	-0.2655

Figure 24 shows the coefficient of correlation results for the correlation analysis that was done with Short Term Incentive (STIs) as the dependant variable; independent variables are as listed on the horizontal axis and included all the organisation financial performance measures chosen for the current research. . Figure 24 also included the seven year correlation results averages.

Figure 24: Correlation Analysis – STI Dependent Variable.

	Market Capitalisation	EPS	ROE	EVA	MVA
Average	0.3342	0.3202	-0.1656	-0.0095	-0.2253
2006	0.4047	0.5530	-0.1180	0.1165	-0.3519
2007	0.3533	0.5979	-0.1407	0.0704	-0.2581
2008	0.2452	0.2493	-0.0049	0.1925	-0.1856
2009	0.1800	0.1959	-0.3460	-0.1660	-0.3202
2010	0.3484	0.2421	-0.2113	-0.0704	-0.1859
2011	0.4202	0.2317	-0.1428	0.0505	-0.0751
2012	0.3878	0.1714	-0.1953	-0.2598	-0.2003

Due to the extreme relative nature of outliers, especially for Short Term Incentive paid to CEOs by organisations, the medians for CEOs remuneration were also considered in the correlation analysis. Medians are not influenced by outliers compared to the means; and in most cases when data sets have outliers reporting the median as the central tendency of the data often gives a better 'typical' data value than the mean (Weiers, 2010; Anderson *et al.*, 2007).

Figure 25 shows correlation results when the means and medians of the CEO remuneration and organisation performance measures were considered – with the Fixed Pay and Short Term Incentive as the two separately considered dependent variables.

72

Figure 25: Correlation Coefficients Results – Means & Medians.

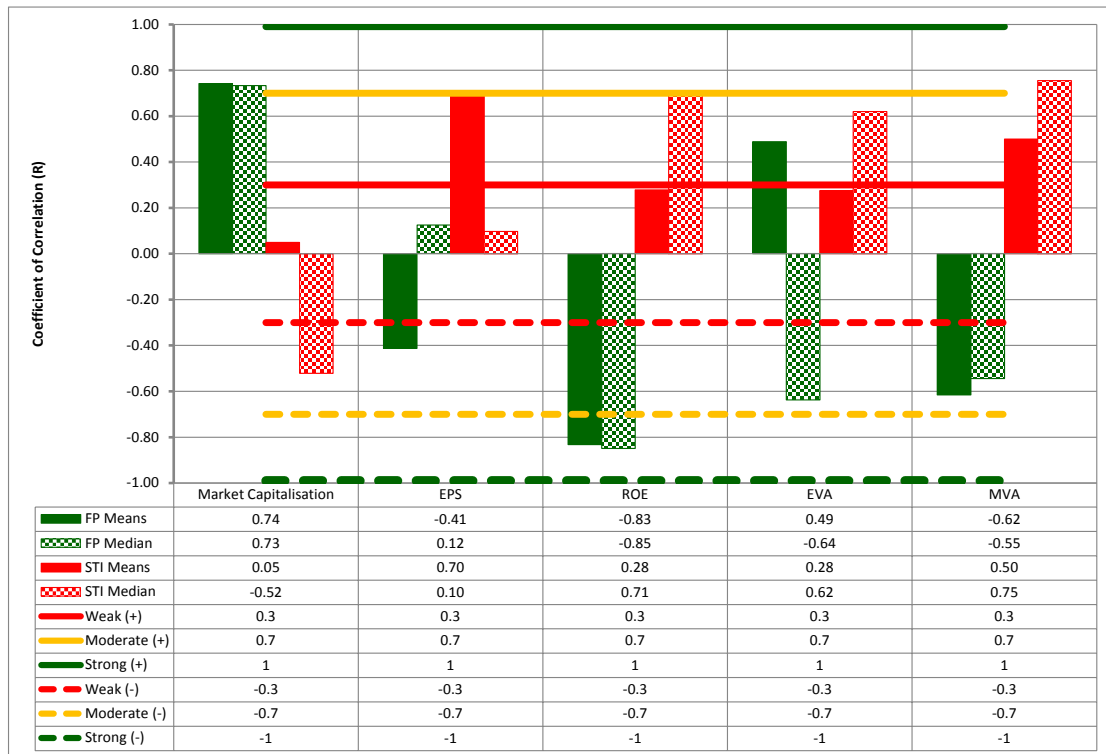|	Market Capitalisation	EPS	ROE	EVA	MVA
FP Means	0.74	-0.41	-0.83	0.49	-0.62
FP Median	0.73	0.12	-0.85	-0.64	-0.55
STI Means	0.05	0.70	0.28	0.28	0.50
STI Median	-0.52	0.10	0.71	0.62	0.75
Weak (+)	0.3	0.3	0.3	0.3	0.3
Moderate (+)	0.7	0.7	0.7	0.7	0.7
Strong (+)	1	1	1	1	1
Weak (-)	-0.3	-0.3	-0.3	-0.3	-0.3
Moderate (-)	-0.7	-0.7	-0.7	-0.7	-0.7
Strong (-)	-1	-1	-1	-1	-1

Figure 26 shows the coefficients of correlation absolute differences in the results found on Figure 25 between the means and medians of the two dependent variables (i.e. Fixed Pay or Short Term Incentive).

Figure 26: Means and Medians Correlation Coefficients (R) Differences.
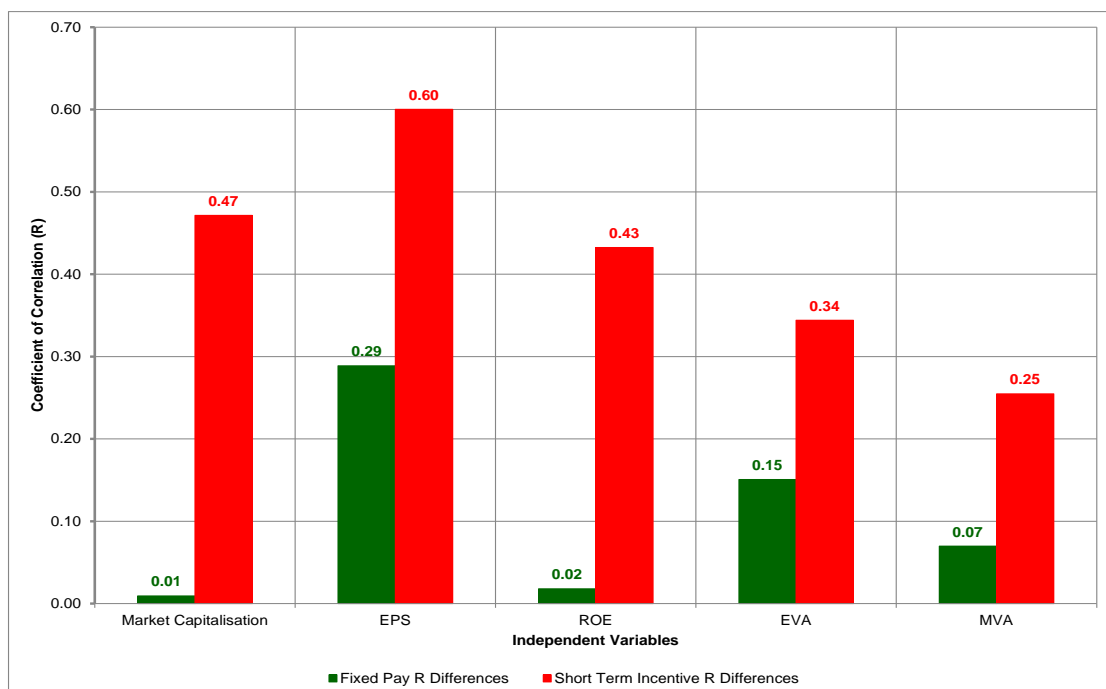

73

Figure 26 illustrate that the observed absolute differences in the coefficients of correlation between Fixed Pay means and medians when used as dependent variable are between 0.01 and 0.10. On the contrary, the observed absolute differences in the coefficients of correlation between Short Term Incentive means and medians when used as dependent variable are between 0.29 and 0.43. This illustrate that the absolute differences between means and medians is higher for Short Term Incentive as compared to Fixed Pay.

5.5. Question Three Results: CEO Remuneration Model

The previous section gave correlation analysis results between CEO remuneration and the different organisation performance measures. Based on the direction and strengths of the different research constructs, the following section looked at establishing a model that can be used to determine the CEO remuneration based on the different financial organisation performance measures.

Due to the large number of independent variables, most results in this section will be presented from stepwise regression analysis which helps in this conditions whereby some of the independent variables may be highly correlated. The general idea of the stepwise regression was the balancing act of trying to (1) explain the most possible variations in CEO remuneration, while (2) using the fewest possible financial organisation performance measures to develop a CEO remuneration model.

5.5.1. Fixed Pay Model

Prior to estimating the stepwise regression equation or model for CEOs' Fixed Pay, multiple correlation analysis was done on the independent variables and the results are contained in Table 11. It was observed that the bivariate correlation between independent variables MVA and ROE was higher than 0.65 – which indicated a potential multicollinearity problem.

As mentioned in previous chapters, multicollinearity is a condition in which two or more of the independent variables are highly correlated with each other. In addition, multicollinearity is a multivariate problem, not a bivariate problem.

74

Table 11: Fixed Pay Model – Multicollinearity Test.

Variables	FP	MC	EPS	ROE	EVA	MVA
FP	1.0000					
MC	0.7417	1.0000				
EPS	-0.4128	-0.5752	1.0000			
ROE	-0.8325	-0.4098	0.4717	1.0000		
EVA	0.4882	-0.1394	0.4186	-0.5608	1.0000	
MVA	-0.6155	-0.0930	0.2430	**0.6985**	-0.5376	1.0000

As a result of the bivariate correlation between MVA and ROE being higher than 0.65, the means of the ROE independent variable were regressed on the means of the MVA independent variable between 2006 and 2012 to examine and be certain using the Variance Inflation Factor (VIF) that multicollinearity was not present between the two independent variables.

The coefficient of multiple determination (R^2) between ROE and MVA means was found to be 0.4878 and the Variance Inflation Factor was then determined to be 1.95 using EQ7. The calculated 1.95 Variance Inflation Factor was found to be below the cut-off value of 5.0 to indicate that there was no presence of multicollinearity problem.

There are some literatures on statistical analysis that suggest that any evidence of multicollinearity in developing models should always be considered as flag to generate to independent models considering the two highly correlated independent variables (Weiers, 2010). The current research also considered developing the model that could be implement with either ROE or MVA, and this largely depended on whether the variables were considered by the stepwise regression analysis.

Due to the absence of multicollinearity, all the organisation financial performance measures were then included into the stepwise regression analysis without any fear that high correlations among independent variables will lead to unreliable and unstable estimates of regression coefficients of the model. Table 12 contains the stepwise regression analysis in determining the Fixed Pay model.

Table 12: Fixed Pay Model Generation.

STEP 1: Entering variable ROE	
EQ8: $FP = 10528 - (88.23) \times ROE$	
R^2	0.6931
SEE	618
p-value	0.0201

STEP 2: Entering variable MC	
EQ9: $FP = 7310 - (67.32) \times ROE + (1.82 \times 10^{-08}) \times MC$	
R^2	0.8859
SEE	421
p-value	0.0130

STEP 3: Entering variable EVA	
EQ10: $FP = 6064 - (37.29) \times ROE + (2.46 \times 10^{-08}) \times MC + (1.01 \times 10^{-05}) \times EVA$	
R^2	0.9619
SEE	281
p-value	0.0125

Step 4: Leaving variable ROE	
EQ11: $FP = 4417 + (3.12 \times 10^{-08}) \times MC + (1.59 \times 10^{-05}) \times EVA$	
R^2	0.9071
SEE	380
p-value	0.0086

STEP 5: Entering variable MVA	
EQ12: $FP = 6292 + (2.92 \times 10^{-08}) \times MC + (1.13 \times 10^{-05}) \times EVA - (799.6) \times MVA$	
R^2	0.9745
SEE	230
p-value	0.0069

In multiple stepwise regression there are more than two independent variables, and as a result it was necessary to separately test (1) the overall significance of the multiple regression equation and (2) each of the partial regression coefficients in the equation. Table 12 above provided the p-values found in testing the significance of the overall multiple regression models.

76

According to Table 12, the Fixed Pay models were found to be less than the alpha (α) of 0.05, denoting that the models were significant. The p-values in testing the significance of the different partial regression coefficients of the two valid models as found in the Step 3 and Step 5 of Table 12 are listed in Table 13. Based on the p-value in Table 13, it was observed that the partial regression coefficients for ROE (Step 3 model), EVA (Step 3 model) and MVA (Step 5 model) were found to be insignificant as they were found to be greater that the research significant level of 0.05.

Table 13: Fixed Pay Model Significant Level Test.

Fixed Pay Model: Partial Regression Coefficient Significant Level Tests

Independent Variables	p-values		
	Step 3 Model	Step 4 Model	Step 5 Model
ROE	0.1294	-	-
Market Cap. (MC)	0.0194	0.0058	0.0039
EVA	0.0921	0.0173	0.0320
MVA			0.0671

The null hypothesis for the stepwise regression statistical test states that a coefficient is not significantly different from zero – i.e. for all intents and purposes, the partial regression coefficient is zero indicating that the partial regression coefficient is not valid in the model. Smaller p-values, as found for some of the independent variables and contained in Table 13, reflect small probabilities and suggest that the partial coefficients are important to the model as their values are significantly different from zero – the partial coefficient are not equal zero.

Independent variables with partial coefficients which are approximately equal to zero do not help model the dependent variable and they can almost always be removed from the model, unless there are strong theoretical reasons to keep them (Anderson *et al.*, 2007).

5.5.2. Short Term Incentive Model

Similarly to the Fixed Pay model development in the previous section, prior to estimating the stepwise regression equation (model) for Short Term Incentive, multiple correlation analysis was done for the model's independent variables and the results were similar to those found in Table 11 in the previous section when the means of the research sample were considered. This implied that similar conclusion could be taken with regard to none existence of multicollinearity between the bivariate correlation between MVA and ROE that was found to be greater than 0.65.

The absence of multicollinearity in this case meant that all the organisation financial performance measures could be included into the stepwise regression analysis to determine the Short Term Incentive (STs) model. The stepwise regression analysis when the means were considered for the STIs model resulted in none of the organisation performance measures entering the equation.

Based on the results presented on Figure 25 and Figure 26 in support of the fact that in most cases when data sets have outliers reporting the median as the central tendency of the data often gives a better 'typical' data value than the mean (Weiers, 2010), multiple correlation analysis was done for the STI model's utilising the medians of the research data for both dependent and independent variables. The multiple correlation analysis results are contained in Table 14.

Table 14: STIs Model – Multicollinearity Test.

Variables	STIs	MC	EPS	ROE	EVA	MVA
STIs	**1.0000**					
MC	**-0.5209**	1.0000				
EPS	**0.0974**	-0.4423	1.0000			
ROE	**0.7104**	-0.6281	0.1552	1.0000		
EVA	**0.6195**	**-0.8512**	0.4119	0.5826	1.0000	
MVA	**0.7548**	-0.1307	0.0616	**0.7882**	0.2319	1.0000

Assessment of the multiple correlation analysis results in Table 14 indicated that some of the independent variables were highly correlated with their absolute value of the coefficient of correlation greater than 0.65 – which indicated a potential multicollinearity. Based on Table 14 results, one potential multicollinearity existed between Market Capitalisation and Economic Value Added (EVA), and the other between Return on Equity (ROE) and Market Value Added (MVA).

Table 15 includes multicollinearity test results utilising the Variance Inflation Factors (VIFs). The table contains the coefficient of multiple determination (R^2) for highly correlated independent variables and the calculated Variance Inflation Factors (VIFs). The calculated VIFs were all found to be below the cut-off value of 5.0 to indicate that there was no multicollinearity problem.

Table 15: STI Model – Variance Inflation Factor for Multicollinearity Test.

Highly Correlated	R^2	VIF		Multicollinearity
MC – EVA	0.7245	3.63	(< 5.0)	None
MVA – ROE	0.6213	2.64	(< 5.0)	None

Due to the absence of multicollinearity, all the organisation financial performance measures were then included into the stepwise regression analysis to determine Short Term Incentive model utilising the research sample medians instead of the means. Table 16 contains the stepwise regression analysis in determining the Short Term Incentive model which included only one organisation performance measure, namely, Market Value Added (MVA) (represented by EQ13).

Table 16: Short Term Incentive Model Generation.

STEP 1: MVA (Market Value Added)	
EQ13: $STIs = -3064 + (4967.60) \times MVA$	
R^2	0.5697
SEE	1178
p-value	0.0498

Table 16 contains the significant level test results (p-values) of the overall significance of the multiple regression Short Term Incentive model which was found to be 0.0498, indicating that the model is statistically significant. Table 17 provides the significant level test results (p-values) for each of the variables that make up the Short Term Incentive model. The p-value for the STIs model was found to be greater than 0.05 making it statistically insignificant. The p-value for the partial regression coefficient of Market Value Added (MVA) in the multiple regression equation for STIs was found to be statistically significant as it was found to be less than 0.05.

Table 17: Short Term Incentive Model Significant Level Test.

STI Model: Partial Regression Coefficients Significant Level Test	
Independent Variables	**p-values**
	Step 1 Model
Market Value Added	0.0498

5.6. Research Results Summary

The current chapter contains all the research results generated utilising the research methodology prescribed in the previous chapter. The descriptive statistics of the research data indicated that the 2008 Global Financial Crisis and the August 2011 Stock Market Fall affected both the CEO remuneration and organisation financial performance measures chosen for the current research. The other effect that these two financial crisis had was on the CEO Turnover which rose from zero to approximately 30% of the research sample considered for the current research between 2007 and 2008.

Based on the descriptive statistics results, coefficient of determination (R^2) were determined to quantify the performances of the different models determined for CEO remuneration and organisation financial performance measures. While the model for CEO Fixed Pay indicate an upward trend with that for CEO Short Term Incentive indicating a downward movement, further

statistical analysis were done in answering the first research question on the effects of the 2008 Global Financial Crisis.

The descriptive statistics results of CEOs' Total Remuneration and the different organisation financial performance measures were then statistical analysed to determine the closest link (correlation) between the two research constructs, thereby answering the second research question. Based on the direction and strengths of the different research constructs determined from correlation analysis, two models were established for CEOs' Fixed Pay and Short Term Incentive.

The next chapter will discuss the results found in the current chapter within the context of the literature review.

81

6. Chapter 6: Results Discussions

6.1. Introduction

The current chapter presents and discusses research results of the data analysis in terms of the research questions and objectives within the context of the literature review presented in Chapter 2. The primary source for the data used for the current research study was obtained from the financial data provider McGregor BFA. In cases whereby the data needed for the research was not available in the McGregor BFA database, financial statements of the respective organisations included in the research sample were used as secondary source – these financial statements are available from the websites of the respective organisations in accordance with JSE regulations.

6.2. Executive Remuneration Context

The remuneration paid to the Chief Executive Officer (CEO) of an organisation is typically a mixture of Fixed Pay (Salary and Benefits) and Variable Pay (Short Term Incentive and Long Term Incentives). As pointed out in the literature review, executive remuneration forms an important part of corporate governance, and is "one way to reduce agency costs is to have effective corporate governance mechanisms" (McKnight *et al.*, 2009, p. 22). In recent years, CEO's remuneration has seen a dramatic rise relative to that of an average worker's salary in a number of countries around the world and has been in the limelight, and often for the bad reasons due to disappointing performance of organisations (Ozkan, 2011; Marais & Lefifi, 2013).

The corporate governance and disclosure requirements are currently applicable in South Africa through the implementation of the Companies Act (2008) and King III (2009). The main drive behind King III Report in South Africa was to ensure that top-down external regulatory mechanisms are established to motivate those in positions of power to put the interests of the organisation above their own in order to maximise shareholder wealth. King III Report requires disclosure between salary and performance-related elements as well as an explanation of the basis on which remuneration is measured (Institute of Directors Southern Africa, 2009).

82

6.3. Discussions: Research Question One

The global recession of 2009 is a marked global economic decline that began in December 2007 and took a particularly sharp downward turn in September 2008 (Colander, 2010). According to IMF the global recession that started in 2007 was characterised as such in 2009 as it was only seen as a national recession in United States in December 2007, but only met the criteria for being a global recession throughout the calendar year 2009 (Rosenhek, 2013). The International Monetary Fund (IMF) define global recession as a decline in annual per-capita real World Gross Domestic Product (GDP).

Based on what happened leading to the 2008 – 2009 Global Financial Crisis or Global Recession, the first question investigated if there were any structural changes that have occurred to the total remuneration received by CEOs after 2008. The implementation of the Companies Act (2008) and King III was also expected to cause some form of structural changes in remuneration – more specifically, and in the context of the current research, to ensure that there is a link between executive remuneration and organisation performances.

The primary objective of the current research was to determine the relationship between CEO remuneration and organisation financial performance. As part of understanding factors that might have resulted in there being any structural changes in executive remuneration and if requirements by King III for linking pay to performance were effective, the following section will also consider organisation financial performance measures in understanding influences in structural changes applicable to CEOs' rewards.

Figure 27 shows the ratio of the research sample's Market Capitalisation over the total JSE Market Capitalisation. Figure 27 results illustrate that the research sample had a combined Market Capitalisation of between 50% and 82% of the total JSE Market Capitalisation, with an average of 68% during the seven years research period between 2006 and 2012. Based on Figure 27 it can therefore be concluded that there was therefore large enough proportion of the total JSE Market Capitalisation in the research sample to be sufficient for the current research.

83

Figure 27: Research Sample-to-JSE Market Capitalisation Ratio.

In addition, Figure 27 results also illustrate that the research sample could also be deemed large enough to address the problem of organisation sample size as a threat to the validity of the research.

Table 18 contains the descriptive statistics summary for the organisation financial performance measures used in the current research, namely Market Capitalisation (MC), Earnings per Share (EPS), Return on Equity (ROE), Economic Value Added (EVA) and Market Value Added (MVA).

Table 18: Statistics – Performance measures summary (2006 – 2012).

Organisation Performance Measures		Means		Standard Deviation	
		Year	Amounts	Year	Amounts
MC (ZAR)	Min.	**2008**	105 504 699 867	**2008**	101 376 853 276
	Max.	**2012**	189 816 637 829	**2012**	173 261 507 601
EPS (cents)	Min.	**2012**	257 915	**2012**	552 202
	Max.	**2011**	436 858	**2011**	1 155 145
ROE	Min.	**2012**	16.91	**2012**	17.97
	Max.	**2006**	45.41	**2006**	56.88
EVA (ZAR)	Min.	**2006**	-96 040 059	**2008**	214 398 037
	Max.	**2008**	8 437 130	**2006**	486 081 146
MVA	Min.	**2008**	1.92	**2008**	1.11
	Max.	**2007**	2.92	**2007**	2.90

84

Figure 28 shows the research sample's Market Capitalisation percentage changes that occurred from 2006 through to 2012, and also included on the figure are both the initial value in 2006 and the final cumulative Market Capitalisation value labelled as "Final" on the figure. According to Table 18 the lowest Market Capitalisation average experienced during the research period was in 2008 with an average value of R 105.504 billion. Also visible on Figure 28, this was the same year the Market Capitalisation had the highest drop of 31% from R 152.428 billion of the previous year.

Figure 28: Market Capitalisation (MC) percentage changes.
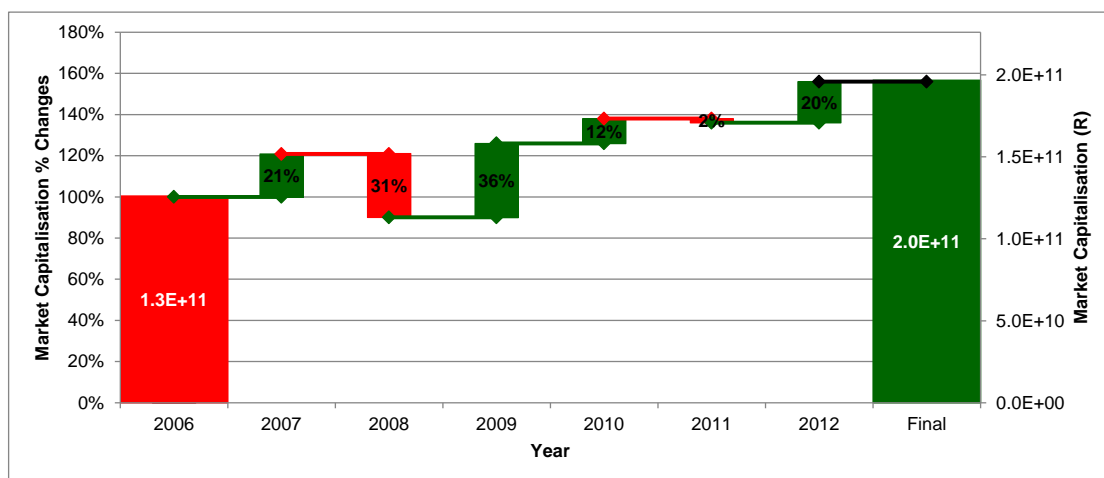
It can be reasonably concluded that the drop in Market Capitalisation was due to the 2008 Global Financial Crisis. The drop in Market Capitalisation was relatively lower for the August 2011 Stock Market Fall which resulted in a drop of 2% in Market Capitalisation. The results also indicate that it was in 2008 that the Market Capitalisation standard deviation was at its lowest at R 101.377 billion illustrating that due to the 2008 Global Financial Crisis, the organisations' Market Capitalisation was least dispersed.

The above results demonstrated the response of Market Capitalisation to the 2008 Global Financial Crisis illustrating that Market Capitalisation is a market-based measure and as such it is affect by the noise of the market (Carpenter & Sanders, 2002). Even at the peak of the of the global recession, in 2009 the research sample organisations' Market Capitalisation increased by 36%, resulting in the organisations in the research sample representing 80% of the total JSE's Market Capitalisation.

85

Figure 29 shows the research sample's Earnings per Share (EPS) percentage changes that occurred from 2006 through to 2012 with initial and cumulative value indicated. Based on the observed percentage changes of Market Capitalisation (Figure 28) and Earnings per Share (Figure 29), except in 2010, when the average Market Capitalisation increases, the average Earnings per Share (EPS) decreases.

The contradicting responses between accounting based (Earning per Share (EPS)) and market based (Market Capitalisation) organisation performance measures indicates the need to consider both measures in pay-performance research studies. Canarella and Gasparyan (2008) also observed the need to consider both market based and accounting based performance measures in their research study.

Figure 29: Earning per Share (EPS) percentage changes.
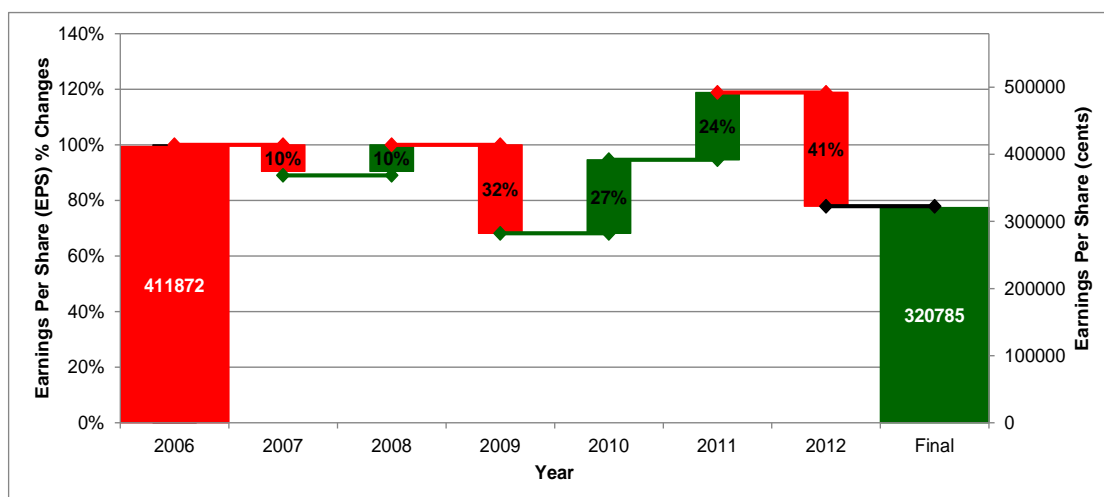
The 2008 Global Financial Crisis was marked by global economic decline that began in December 2007 and took a particularly sharp downward turn in September 2008; the August 2011 Stock Market Fall occurred in 2011. In both cases, it can be observed based on Figure 29 that the following years after the financial crisis of 2008 and 2011, there was an average drop of 32% and 41% in Earning per Share.

Figure 30 on the next page shows the research Return on Equity (ROE) percentage changes that occurred from 2006 through to 2012 with initial and cumulative value indicated on the figure.

According to Table 18, the lowest average Return on Equity (ROE) experienced between 2006 and 2012 was in 2012 at 16.91%. The lowest ROE might have been experienced in 2012, and according to Figure 30 the drop in ROE started in 2007 with a 40% decrease from 2006 figures, and was followed by another 26% decrease in 2008 – a total drop of 66% in ROE between 2007 and 2008. Similar to research study by Nel (2012), the current research results also indicated that ROE across all 21 organisations showed a slight recovery in 2009 and 2011 during the seven years research period.

Figure 30: Return on Equity (ROE) percentage changes.
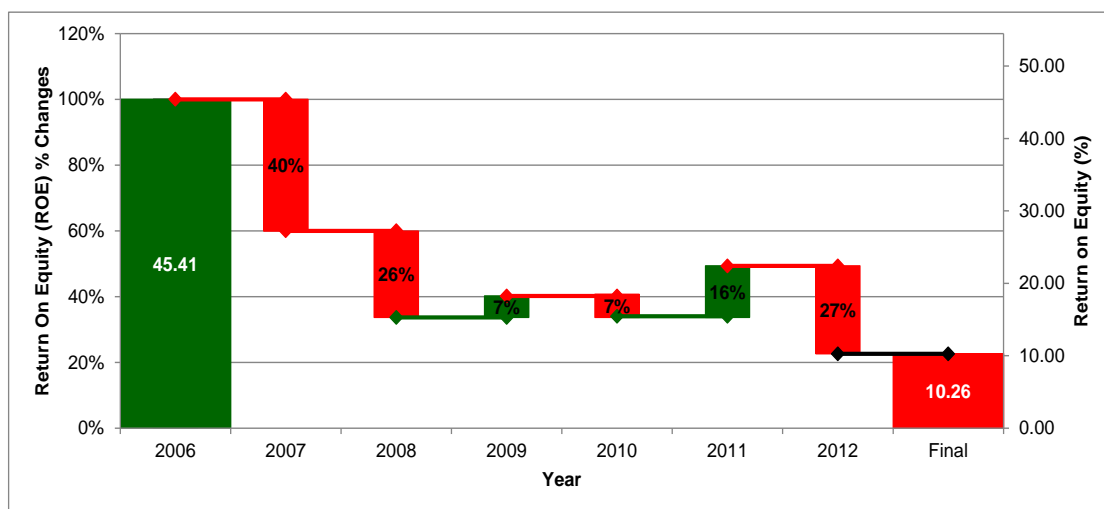
Economic Value Added (EVA) is the profit earned by an organisation less the cost of financing the organisation's capital – i.e. negative average amounts of EVA indicate that value was destroyed while a positive amount indicates that value was created (Chari, 2009). Based on Table 7 from the previous chapter and Table 18, it was observed that during 2008 and 2011 organisations earned profits and allocated less amounts to the cost of financing their capitals. This behaviour by CEOs, as allocators of capital (Wibowo & Kleiner, 2005), resulted the average Economic Value Added (EVA) being positive in those two years of the seven year research period. It can be reasonably assumed that the decision of allocated less amounts to the cost of financing organisations' capitals in 2008 and 2011 were as a result of the 2008 Global Financial Crisis and the August 2011 Stock Market Fall respectively.

87

Figure 31 shows the research Economic Value Added (EVA) percentage changes that occurred from 2006 through to 2012 with initial and cumulative value. Please note that Figure 31 was not drawn to scale. Table 18 results indicate that organisations in the research sample were destroying a combined average value of R 96.040 billion in 2006. The EVA percentage changes presented on Figure 31 indicates that the average amount of value destroyed by the same organisations reduced by 40% in 2007.

The observation with regard to EVA illustrates that organisations, on average, were being managed well by their CEOs in light of anticipated unfavourable global financial performance in 2008 and 2011. The highest average EVA experienced between 2006 and 2012 was in 2008 at R 8.437 billion, while the other positive EVA was experienced in 2011 at R 4.623 billion.

Figure 31: Economic Value Added (EVA) percentage changes.
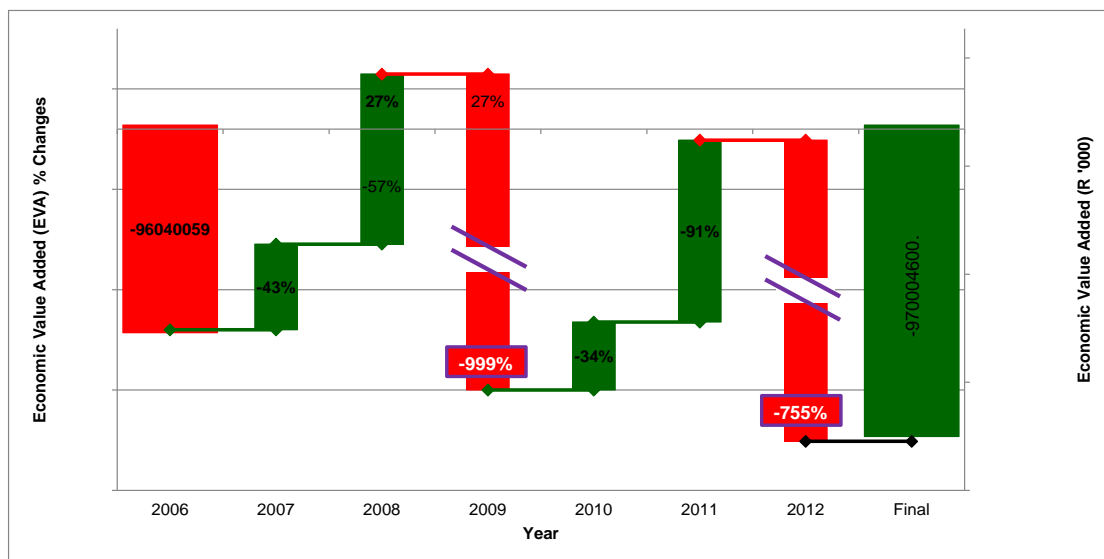

Market Value Added (MVA) performance indicator was determined as a ratio in order to standardise all the organisations to have the same size and further facilitates comparisons between large and small organisations. In addition, the use of a ratio eliminated the contribution of size to value creation.

Figure 32 on the next page shows the research Market Value Added (MVA) percentage changes that occurred from 2006 through to 2012 with initial value in 2006 and the cumulative value for 2012 shown on the figure.

The average Market Value Added (MVA) percentage changes on Figure 32 indicated that value creation by organisation dropped by 34% from 2007 to 2008, and by a further 4% from 2010 to 2011. These drops in the average Market Value Added (MVA) illustrated that the 2008 Global Financial Crisis and the August 2011 Stock Market Fall resulted in organisations accumulating lower levels of value over those periods due to the unfavourable global financial performance. Additionally, based on Table 7 from the previous chapter, the two lowest Market Value Added values occurred both in 2008 and 2011

Figure 32: Market Value Added (MVA) percentage changes.
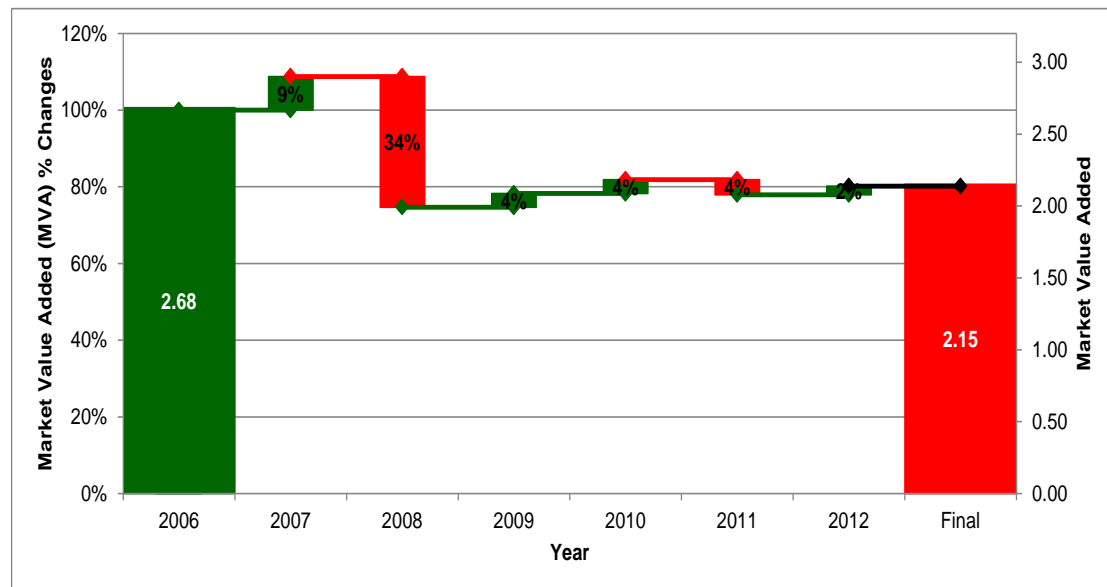
The results of the descriptive statistics, especially the means, were then used to generate graphical representation of the different organisation performance measures. In addition, trendlines, both linear and cubic trendlines, were generated to approximate the different means for all the organisation financial performance measures chosen for the current research. Table 19 contains linear and cubic trendlines information for all the organisation financial performance measures.

In Table 19, the linear trendlines information given are the coefficient of determination (R^2) and the slope of the function. The cubic trendlines information contained in Table 19 is the coefficient of determination (R^2) and the observable general movement of the trendlines.

Table 19: Trendlines – Performance Measures Summary (2006 – 2012).

Organisation Performance Measures	Linear Trendlines		Cubic Trendlines	
	R^2	Slope	R^2	General Movement
MC	0.5480	Positive	0.6629	Upwards
EPS	0.1919	Negative	0.3466	Downwards
ROE	0.5687	Negative	0.9878	Downwards
EVA	0.1556	Positive	0.3218	Upwards
MVA	0.5089	Negative	0.6747	Downwards

Based on the results contained in Table 19 it was observed that the coefficient of determination (R^2) for linear trendlines were lower than those for the cubic trendlines illustrating that with a cubic trendlines, the percentage of variation in organisation performance measures explained by the time period is higher. For example, between 2006 and 2012 ROE can be explained by a linear trendline with a fit of 0.5687 and a much improved fit when explained by a cubic trendline with a coefficient of determination (R^2) being equal to 0.9878.

Observation of the slope and the general movement of the trendlines given in Table 19 were found to be similar, upwards for cubic trendlines when the linear trendline slope was positive and downwards cubic trendlines when the linear trendline slope was negative. These results were similar to those found by Nel (2012) for similar considered organisation performance measures.

When considering the current research's chosen organisation financial performance measures and the effects resulting from the 2008 Global Financial Crisis and the August 2011 Stock Market Fall on those financial performance measures, it was concluded that if the current research's primary objective was to determine the relationship between Chief Executive Officer (CEO) remuneration and organisation financial performance then an understanding resulting from those effects need to be understood. The first question was aimed at exactly understanding if there were any structural changes that have occurred to the total remuneration of CEOs after the 2008 Global Financial Crisis.

Figure 19 showed CEOs' Fixed Pay boxplots summary for all 21 organisations included in the research sample between 2006 and 2012. Based on the Fixed Pay boxplots results, it was observed that the box sizes (Inter Quartile Ranges – IQRs) were smaller before the 2008 Global Financial Crisis. The Inter Quartile Ranges (IQRs) were R 2.229 million and R 3.286 million   in 2006 and 2007 respectively while being equal to R 7.597 million in 2008.

Figure 33 shows Inter Quartile Range percentage changes for CEOs' Fixed Pay from 2006 through to 2012. The results on Figure 33 were observed to indicate that in 2008 the range for 50% Fixed Pays paid to CEOs grew by 131%. These findings strongly suggest that there were some structural changes experienced from 2008 with regard to the Fixed Pay as received by CEOs, especially in 2008.
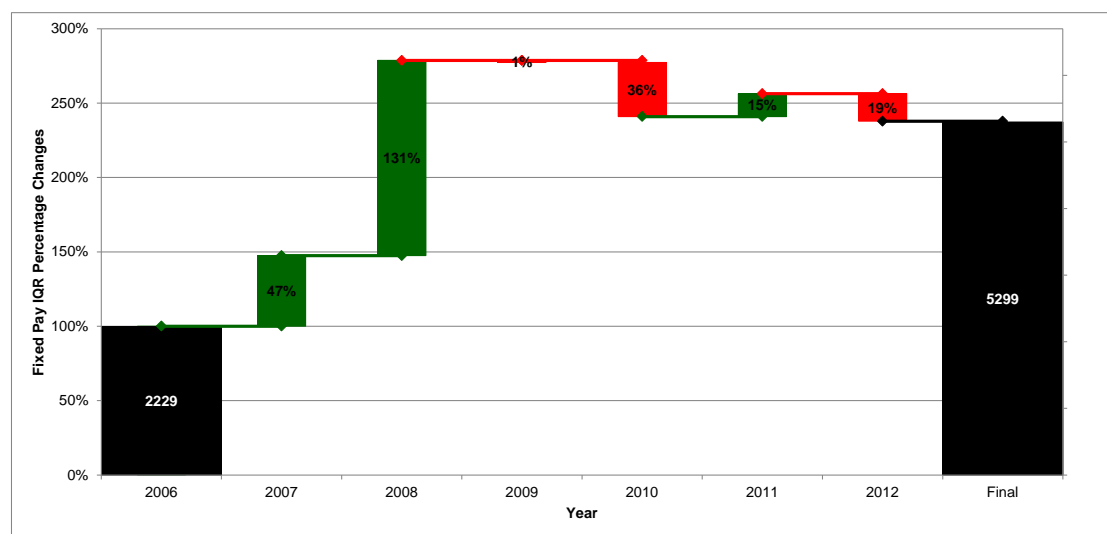
Figure 33: Fixed Pay IQR percentage changes.

Figure 34 presents the Fixed Pay boxplot summary of results as found on Figure 19 and in Table 9. The figure represents 25% and 75% envelopes for CEOs' Fixed Pay between 2006 and 2012. According to Figure 34, 75% of CEOs received Fixed Pay between R 4.610 million and R 7.911 million in 2007, while 25% received between R 2.353 million and R 4.610 million in the same year. The story changed in 2008 when 75% received between R 4.799 million and R 21.392 million, indicating some structural change with regard to CEOs' Fixed Pay due to the 2008 Global Financial Crisis as the envelope covering 75% of CEOs' Fixed Pay increased by 403%.

Figure 34: 25% and 75% Fixed Pay boxplot summary envelopes.
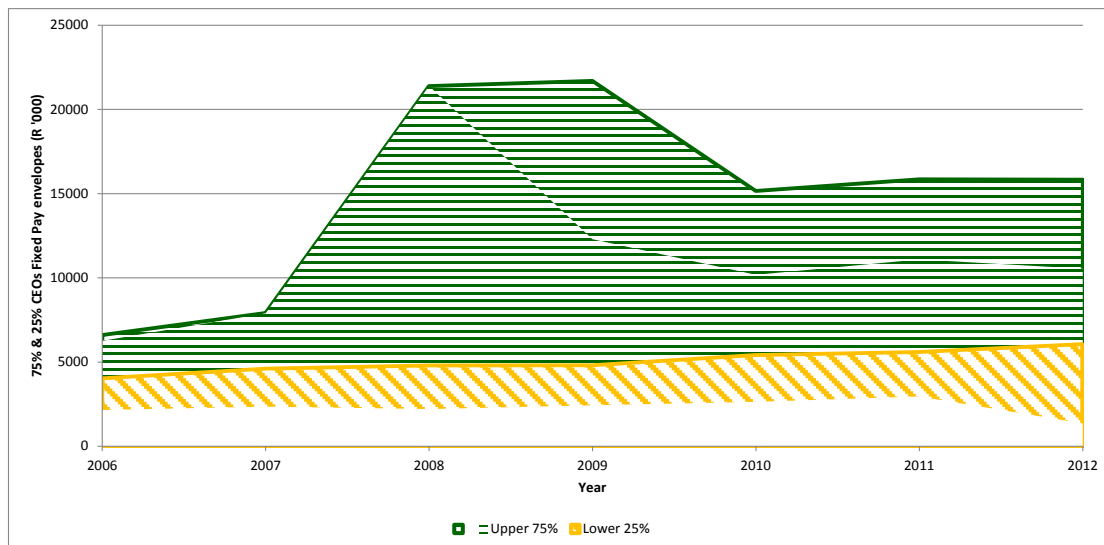
Data analysis results in the form of the boxplot did however show that in 2007 there were four organisations that paid their respective CEOs Fixed Pays that were more than 3/2 times R 7.895 million – represented on the Fixed Pay boxplots (Figure 19) as outliers.

Figure 20 showed the Short Term Incentive boxplot for the research sample between 2006 and 2012. Based on the Short Term Incentive boxplot result, it was observed that the box sizes (Inter Quartile Ranges – IQRs) were similar before the 2008 Global Financial Crisis – i.e. R 8.261 million and R 8.549 million in 2006 and 2007 respectively. Figure 20 (and Table 10) showed that in 2007 50% of CEOs received between R 3.827 million and R 12.376 million of Short Term Incentive; while the upper 25% received between R 12.376 million and R 18.960 million and the lower 25% of CEOs received nothing to R 3.827 million.

There were CEOs who received Short Term Incentive that were more than 3/2 times the Upper Quartile (Q3) in 2006, 2007, 2008 and 2011. The STIs boxplots did indicate a shift of the Lower Quartile (Q1) moving towards the zero amounts. Figure 35 shows Inter Quartile Range percentage changes for CEOs' STIs from 2006 through to 2012. Figure 35 showed that the CEOs Short Term Incentive grew by only 19% in 2008, which is much lower compared to the 131% increase found for Fixed Pay IQR in the same year.

92

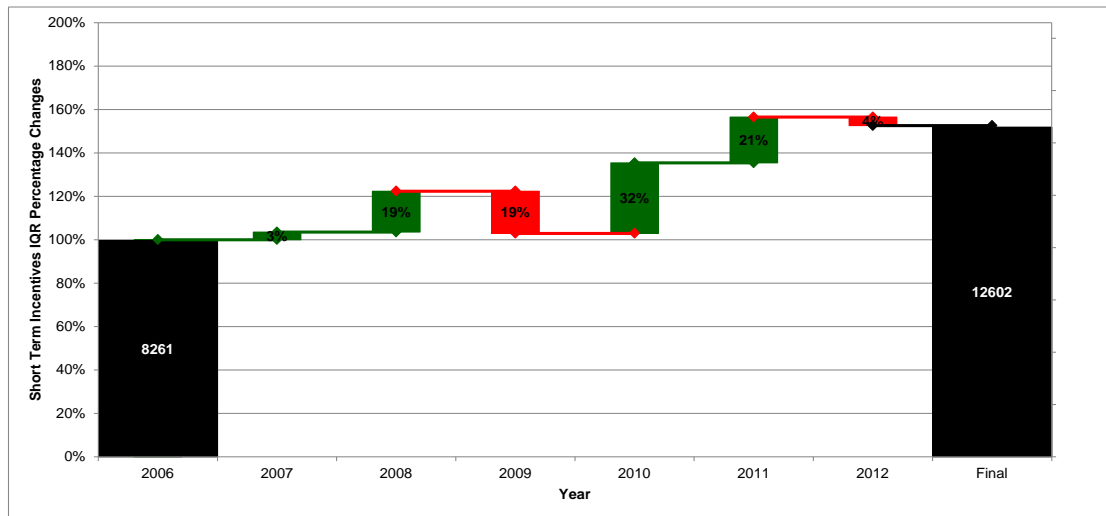**Figure 35: STIs IQR percentage changes.**

Figure 36 presents the Short Term Incentive (STIs) boxplot summary envelopes for results found on Figure 20 and in Table 9. The figure represents 25% and 75% envelopes for CEOs STIs between 2006 and 2012. Figure 36 observation indicated that 75% of CEOs received STIs between R 3.827 million and R 18.960 million in 2007, while 25% received nothing to R 3.827 million of STIs in the same year. Figure 36 does indicate that there was no significant jump in the STIs' percentage change envelope for the 75% of the CEOs in the research sample. It can be observed on Figure 36 though that after the 2011 financial crisis, the 25% STIs percentage envelope has decreased, standing at almost R 0.520 million.

Figure 36: 25% and 75% STIs boxplots summary envelopes.

93
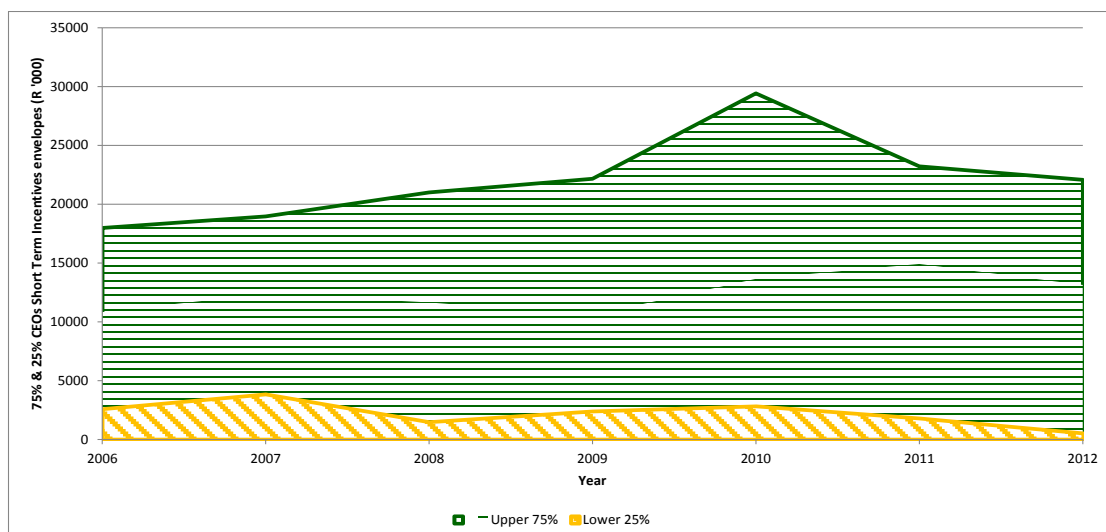
The above findings strongly suggest that there have been some structural changes that have occurred to the Total Remuneration of CEOs as paid by their respective organisations after 2008. These findings can be supported further by the calculated means and medians STI-to-FP ratios plotted on Figure 21 which also includes their respective trendlines. The trendlines supports the finding in there been structural changes in the Total Remuneration received by CEOs as the observed upward movement of the trendline between 2006 and 2007 has been replaced by a downward moving trendlines – R^2_{mean} = 0.4534 and R^2_{median} = 0.7876.

Additionally, correlation analysis was done between the CEO Turnover and the Total Remuneration received by CEOs. The findings of the correlation analysis indicate that CEO Turnover was inversely related to both the Fixed Pay and Short Term Incentive received by CEOs. The inverse relationship between CEO Turnover and Fixed Pay was observed to be weak, while the inverse relationship between CEO Turnover and Short Term Incentive was observed to be strong. The results indicated that as STIs continued to plummet, some CEOs were finding it hard to stay on, and as a result the number of CEO Turnover increases as illustrated by the inverse relationship.

The other finding with regard to the structural change can be credited to the fact that during economic uncertainty or difficulty (e.g. 2008 Global Financial Crisis and August 2011 Stock Market Fall) some boards are more likely to keep their CEOs in order to maintain stability (Favaro, Karlsson, & Neilson, 2012). The results of retaining a CEO lead in most cases to managerial power and entrenchment (Shleifer & Vishny, 1989; Gompers *et al.*, 2003; Florackis & Ozkan, 2009).

The results of managerial power and entrenchment are generally negative for the principal and result in underperforming organisations as seen by the high Fixed Pay increases and the decline in some of the organisation performance measures, namely Earnings Per Share (EPS), Return on Equity (ROE) and Market Value Added (MVA) (Gompers *et al.*, 2003) making the optimal contracting strategy inefficient and unable to address the agency problem (Frydman & Jenter, 2010).

94

King III Report requires disclosure between executive remuneration and performance-related elements as well as an explanation of the basis on which remuneration is measured. King III was drafted on an "apply or explain" basis which requires management to explain how the principles of the code were applied, or if not applied, their reasons for not applying them. In essence, if an organisation does not comply, the reasons behind that decision will have to be explained to stakeholders. This is maybe the biggest differentiator to the previous King codes which were underpinned by a "comply or explain" theory.

Based on the findings above, it can be seen that CEOs are becoming more innovative as they are noticeably moving away from focusing on Short Term Incentive because STIs are categorised as performance related elements. As a result, CEOs are paying greater focus on Fixed Pay as they are findings innovating ways not only to make the Companies Act (2008) and King III requirements ineffective, but more to avoid being measured for performance. This brings up the point made by Jensen and Murphy (1999) which is "the relentless focus on how much CEOs are remunerated diverts public attention from the real problem – how CEOs are paid" (p. 64). The implementation of the Companies Act (2008) and King III was expected to cause some form of structural changes to ensure that executive remuneration is linked to organisation performances, the opposite has been observed.

6.4. Discussions: Research Question Two (Correlation)

The second research question was aimed at determining the closest link (correlation) between CEO Total Remuneration and organisation performance measures over the seven year research period and also during each individual year of the research study.

Corporate governance and economic theories of remuneration largely suggest that organisation performance should affect an executive's remuneration to the extent that it serves as a proxy for unobservable managerial effort or productivity. The expected pay-performance was that a direct and strong relationship exists between CEO remuneration and measures of organisation performance especially after the implementation of the Companies Act (2008) and King III.

95

Figure 37 shows the correlation results summary between 2006 and 2012 in the form of trends for all the independent variables when Fixed Pay was considered as a dependent variable. Also included on Figure 37 are the different relationship boundaries that were chosen to determine whether the relationship between the dependent variable and the independent variable was either weak (0.00 ≤ R ≤ 0.30), moderate (0.31 ≤ R ≤ 0.70) or strong (0.71 ≤ R ≤ 1.00) (Ratner, 2009). The most noticeable finding with regard to the relationships and strengths of CEO Fixed Pay and organisation performance measures was that they are generally moving in and out of the different relationship boundaries and changing direction in other years.

Figure 37 correlation results indicate that Fixed Pay was found to be weakly and inversely correlated to ROE. The inverse relationship between Fixed Pay and MVA was found to be weak to moderate. The relationship between Fixed Pay and EVA was found to be weak to moderate, and inverse in other years (2006, 2008, 2009 and 2010) while direct in other years (2007, 2011 and 2012). Both direct relationships between Market Capitalisation and EPS with Fixed Pay were found to be moderate to strong.

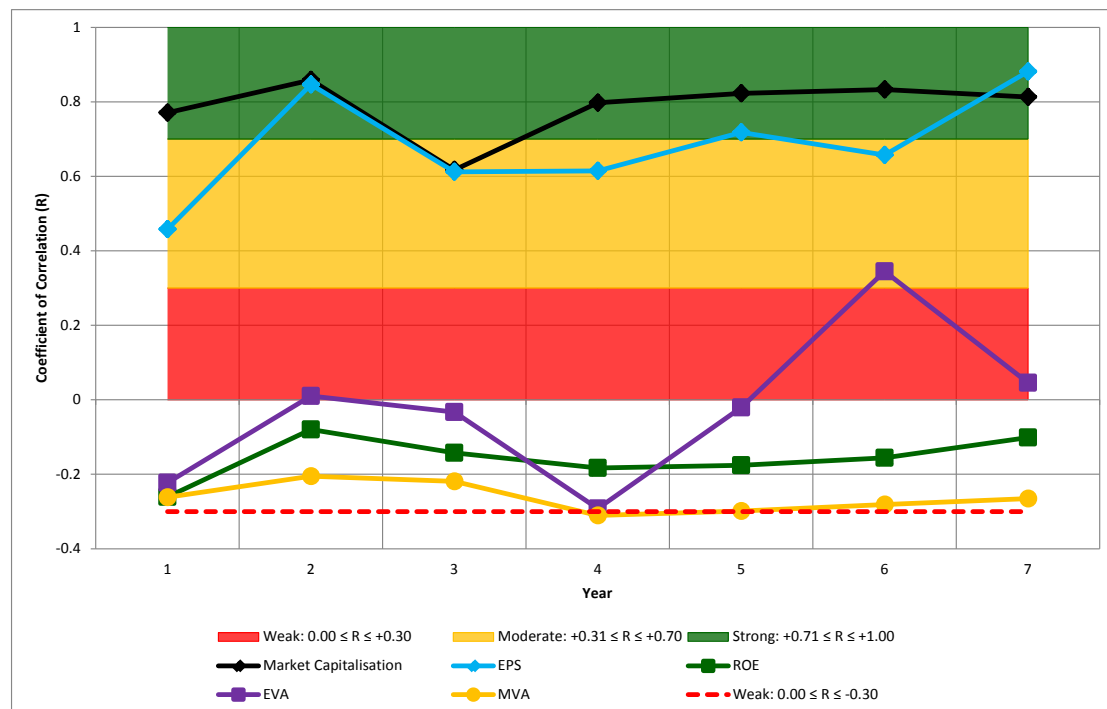**Figure 37: Fixed Pay correlation results summary (2006 – 2012).**

Figure 38 shows the correlation results summary between 2006 and 2012 in the form of trends for all the independent variables when Short Term Incentive were considered as a dependent variable. Figure 38 also included the different relationship boundaries used to determine strengths of the relationships as given in Table 3.

The correlation results on Figure 38 indicate that Short Term Incentive had an inverse relationship with ROE and the strength of the relationship was weak to moderate. Similar relationship in terms of direction and strength was observed between Short Term Incentive and MVA as it was for Fixed Pay, the relationship was also inverse and weak to moderate. The relationship between STIs and EVA was found to be generally weak, and direct in other years (2006, 2007, 2008 and 2011) while inverse in other years (2009, 2010 and 2012). Both direct relationships between Market Capitalisation and EPS with Short Term Incentive were found to be weak to moderate.

**Figure 38: STIs correlation results summary (2006 – 2012).**
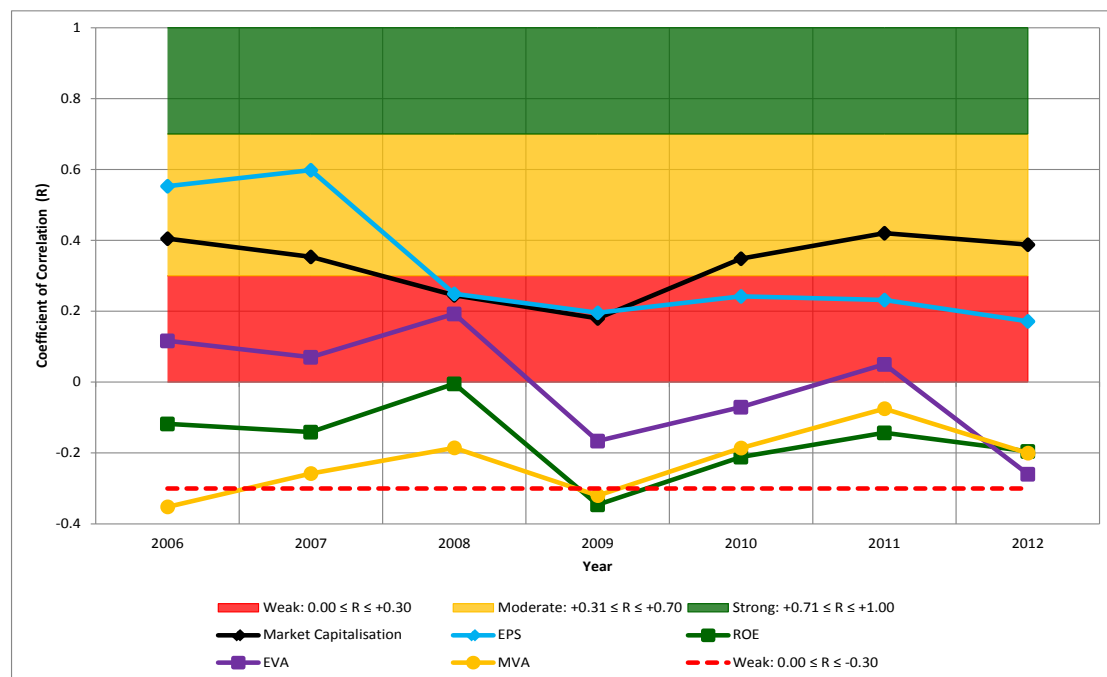
The most stable of the findings based on Figure 37 and Figure 38 was the direct relationship found between CEO Total Remuneration with Market Capitalisation and EPS, the other being the inverse relationship with Return on Equity (ROE) and Market Value Added (MVA).

Considering Figure 37 and Figure 38 the correlation results trajectories for ROE and MVA were observed to be steadily rising and peaking in 2007 (Fixed Pay) and 2008 (Short Term Incentive) and then steadily declining afterwards; and similarly, the steadily rising and peaking was also observed in 2012 (Fixed Pay) and 2011 (Short Term Incentive). These findings of the relationship between CEO Total Remuneration and ROE support those found by Nel (2012) and Van Blerck (2012), and more importantly the behaviour of the relationship during and immediately after financial crisis – Van Blerck (2012) found similar behaviour in 2007 for South African financial services.

MVA (Market Value Added) represents value created while Return on Equity (ROE) measures an organisation's profitability by revealing how much profit an organisation generates with the money shareholders have invested. Based on these two performance measures and the inverse relationship found between them and CEO Total Remuneration is of a major concern, especially as value creation occurs during global financial difficulties when executive adopt risk-averse orientation during these times.

Figure 39 shows the average ROE and MVA between 2006 and 2012. The average drops in ROE and MVA were observed to be 63% and 24% respectively between 2007 and 2008. Based on the observed inverse relationships between CEO Total Remuneration with both MVA and ROE, Fixed Pay during the same period increased by a staggering 47%.

Figure 39: Average ROE and MVA (2006 – 2012).
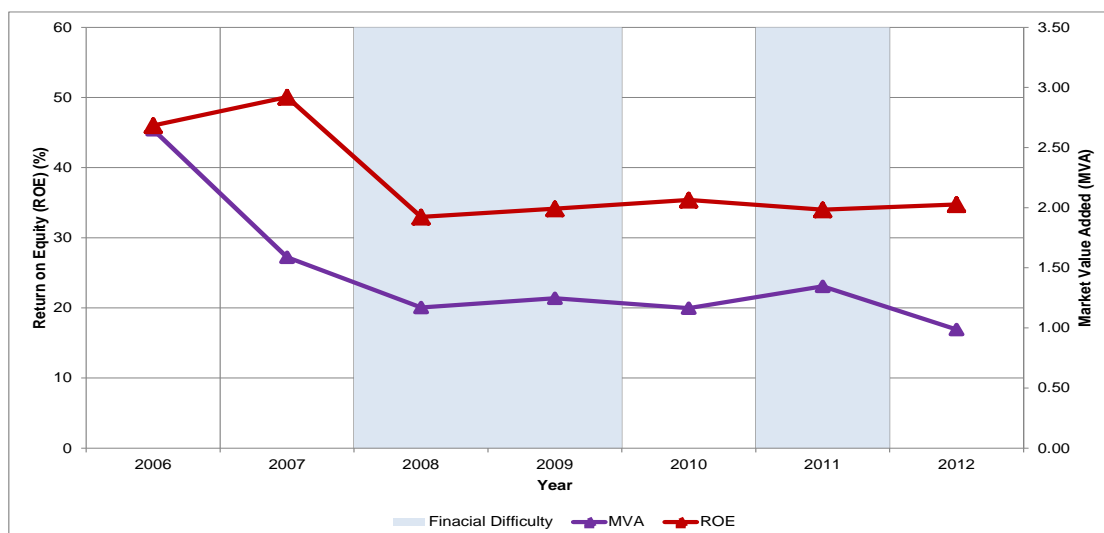
The next most significant finding was that of the relationship between CEO Total Remuneration and EVA which tended to change direction depending on the global economic standings. When the global economy was experiencing uncertainty or difficulties (e.g. 2008 Global Financial Crisis and August 2011 Stock Market Fall), EVA was found to be leaning towards being more directly related to CEO Total Remuneration. When the global economy was performing well, EVA was found to be leaning towards being more inversely related to CEO Total Remuneration as organisations earned more profits and allocating less amounts on the cost of financing their respective organisations' capital.

The correlation findings with regard to EVA suggest that CEOs, during economic certainty engage more in "empire building" whereby taking investment projects that may not be profitable for the shareholder, but are undertaken purely to increase the size of the organisation – this can be clearly illustrated using average EVA and Market Capitalisation plots on Figure 40.

Similar findings were made by Hope and Thomas (2008) concluding that executives grow organisations due to the fact that since boards have limited information on which to judge their ability, growth in organisation size seems to be the best next solution in ensuring that executives appears favourably to boards.

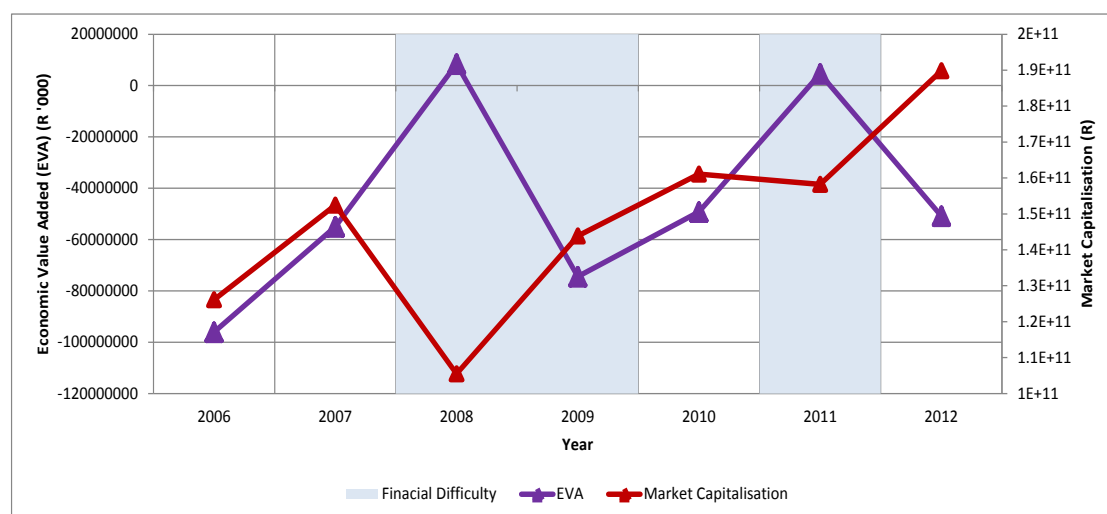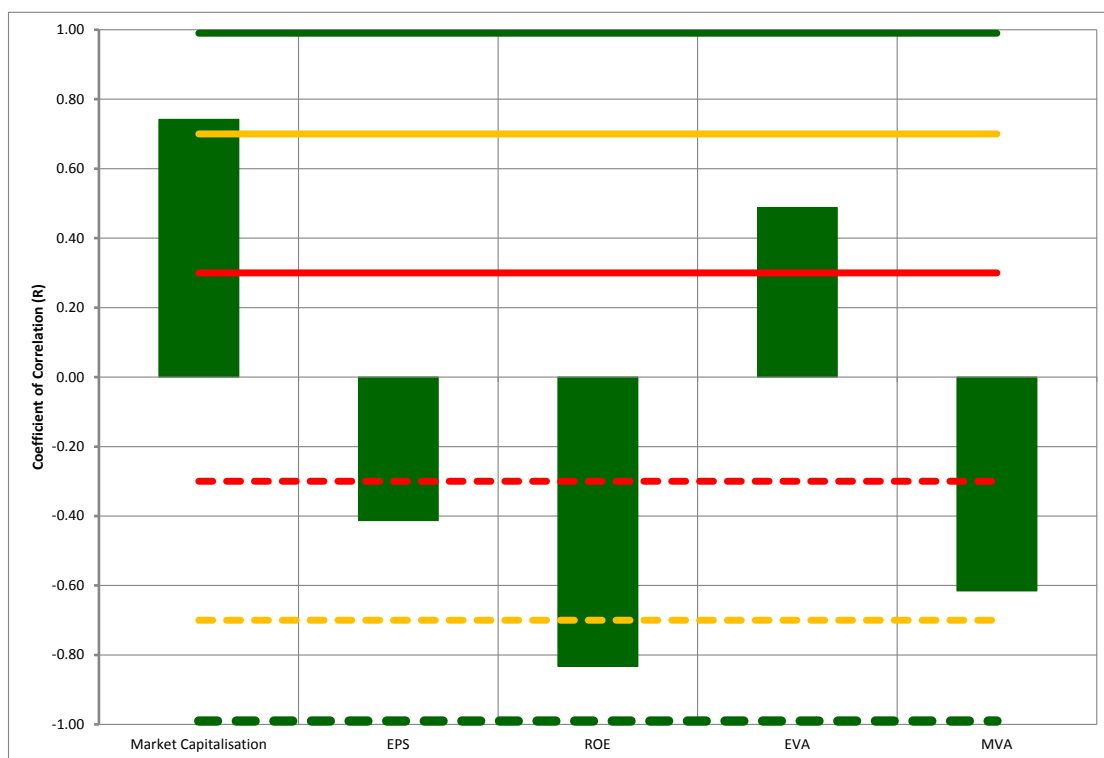**Figure 40: Average EVA and Market Capitalisation (2006 – 2012).**

Figure 41 shows the correlation results summary with the dependent variable being Fixed Pay. Fixed Pay results were generated utilising the different research constructs means as there were no significant differences in the coefficients of correlation results observed when either means or medians were used. There were however, significant differences in the coefficients of correlation results between the means and medians for the Short Term Incentive and the choice was taken to use medians due to the fact that medians are generally not influenced by outliers (Weiers, 2010).

**Figure 41: Fixed Pay means correlation results summary.**

The findings, based on Figure 41 indicated that the average Fixed Pay had a direct relationship with Market Capitalisation and EVA over the seven year period, and the relationships were found to be strong and moderate respectively. Figure 41 findings results also indicated that average Fixed Pay was inversely correlated to EPS, ROE and MVA over the seven year period, and the respective relationships were moderate, strong and moderate.

Figure 42 shows the correlation results summary with the dependent variable being Short Term Incentive (STIs). These results were generated utilising the different research constructs medians.

100

The findings based on Figure 42 indicate that, except for EVA, relationship of Short Term Incentive (STIs) and all organisation financial performance measures were directly opposite to those found for Fixed Pay. The STIs was found to be moderately inversely related to Market Capitalisation and directly related to the other four organisation financial performance measures. The relative relationship strengths of Short Term Incentive with the EPS, ROE, EVA and MVA were found to be weak, strong, moderate and strong.

Figure 42: STIs medians correlation results summary.
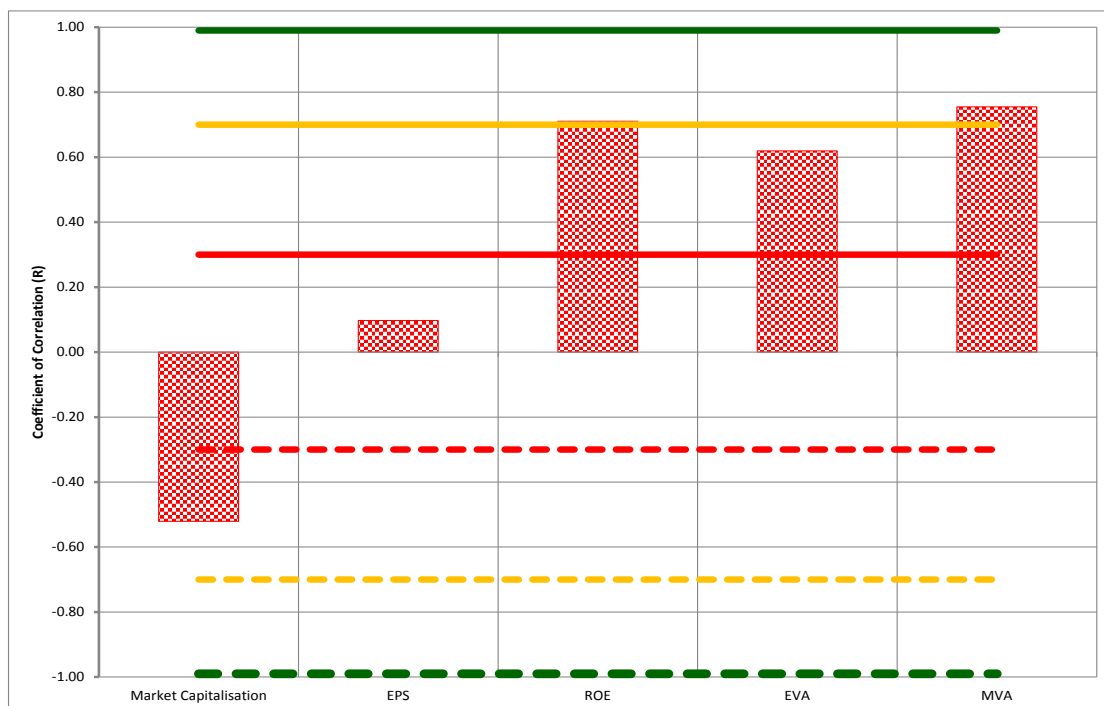
Accordingly, Shaw and Zhang (2010) point out that efficient remuneration contracts will link executive remuneration with organisation performance, while providing strong incentives for executives to operate in shareholders' best interests. The findings above with regard to the directions and strengths of the relationships between CEO Fixed Pay and organisation performance measures (Market Capitalisation, EPS, ROE, EVA and MVA) between 2006 and 2012 illustrate that the general pay-performance link has been lost. On the contrary, the directions and strengths of the relationships between Short Term Incentive and organisation financial performance measures indicate that there exist a link between what executives receive as Short Term Incentive and accounting based measures,

The irony related to the above findings with regard to CEO Total Remuneration (Fixed Pay and Short Term Incentive) is in that while the Short Term Incentive link with organisation financial performance measures (i.e. accounting based measures) exists, and Fixed Pay link with organisation performance measures continue to be eroded, organisations' executives are becoming more innovative as they are noticeably moving away from focusing on Short Term Incentive and paying greater focus on Fixed Pay. As eluded in answering the previous research question, the avoidance of Short Term Incentive by executive is mainly to avoid performance related elements in determining their remuneration.

The above findings strongly suggest that failure to reward or punish executives for either superior or poor performance will continue to erode the link between CEO Total Remuneration and financial organisation performance. Additionally, implementation of the Companies Act (2008) and King III was to ensure that executive remuneration are linked to organisation performances; the next step perhaps is in ensuring that innovative means used by CEOs to avoid being measured on their respective organisation performance are eliminated.

Currently, the optimal contracting approach, with boards of directors being assumed to design remuneration schemes to provide executives with efficient incentives to maximize shareholder value (Bebchuk & Fried, 2003), is not working. On the contrary, the managerial power approach, which views executive remuneration not only as a potential instrument for addressing agency problems, but also as part of the agency problem itself (Frydman & Jenter, 2010) is what is dominating. In the long run, according to Jensen and Murphy (1999), Anderson and Kleiner (2003), and Haynes *et al.* (2007) has entrenched bureaucratic remuneration systems which have been damaging as boards become reluctant to either reward CEOs for superior performance or punish them for poor performance.

As pointed out by Jensen and Murphy (1999) "the relentless focus on how much CEOs are remunerated diverts public attention from the real problem – "how CEOs are paid" (p. 64).

102

6.5. Discussions: Research Question Three (Model)

In order to further test the correlation between CEO Total Remuneration and financial organisation performance measures, the following section was aimed at establishing a model that could be used to determine the CEO Total Remuneration based on the different financial organisation performance measures. The results for the current research question were presented from a stepwise regression analysis. The general idea of the stepwise regression was the balancing act of trying to (1) explain the most possible variations in CEO Total Remuneration (Fixed Pay and Short Term Incentive), while (2) using the fewest possible financial organisation performance measures to develop a CEO Total Remuneration model.

Table 20 contains the correlation analysis results summary found in the previous section. The correlation analysis results of CEO Total Remuneration with some of the organisation financial performance measures are worrying due to their inverse relationship nature, especially the relationship of Fixed Pay with EPS, ROE and MVA, and that of Short Term Incentive with EVA. These relationships were expected to be direct and strong especially after the implementation of the Companies Act (2008) and King III which require CEO remuneration to be linked to some form of organisation performances.

Table 20: Correlation Analysis Results Summary.

Research Constructs	Fixed Pay (FP)		Short Term Incentive (STI)	
Market Cap. (MC)	$FP\alpha MC$	Strong	$STI\alpha\dfrac{1}{MC}$	Moderate
EPS	$FP\alpha\dfrac{1}{EPS}$	Moderate	$STI\alpha EPS$	Weak
ROE	$FP\alpha\dfrac{1}{ROE}$	Strong	$STI\alpha ROE$	Strong
EVA	$FP\alpha EVA$	Moderate	$STI\alpha EVA$	Moderate
MVA	$FP\alpha\dfrac{1}{MVA}$	Moderate	$STI\alpha MVA$	Strong

Due to the different strengths that exist between the CEO Total Remuneration and the different organisation performance measures, stepwise regression analysis was used as it will only consider those independent variables with the greatest effect on the CEO Total Remuneration. In a stepwise regression, the independent variables enter the regression analysis one at a time with the first organisation performance measure being the one that explained the greatest amount of variation in the CEO Total Remuneration.

Additionally, due to the fact that one or more of the organisation performance measures might be highly correlated with one or more of the other financial performance measures, multicollinearity problem was tested. Multicollinearity, a multivariate problem and not a bivariate problem, meant that a simple perusal of the bivariate correlation matrix was not going to be sufficient to eliminate consideration of the problem of multicollinearity. In order to be certain that multicollinearity was not present, the Variance Inflation Factor (VIF) method was utilised.

When the absolute bivariate correlations among the independent variables was found to be greater than 0.65, it was assumed that multicollinearity problem might exist; and when the variance inflation factors (VIF) was determined to be greater than 5.0 it was concluded that there might exist a multicollinearity problem. Table 21 illustrate that there were no multicollinearity problems with regard to the performance measures

Table 21: Multicollinearity Test Summaries.

Independent Variables	Bivariate Correlation	R^2	VIF	Multicollinearity
Dependent Variable: Fixed Pay				
MVA – ROE	0.6985	0.4878	1.95	None
Dependent Variable: Short Term Incentive				
MC – EVA	0.8512	0.7245	3.63	None
MVA – ROE	0.7882	0.6213	2.64	None

The multiple regression models for the CEOs Total Remuneration had more than two independent variables and were described by the follows equations (models):

EQ14: $FixedPay = b_0 + b_1 \times OPM_1 + b_2 \times OPM_2 + \ldots + b_k \times OPM_k + \varepsilon$

EQ15: $ShortTermIncentives = b_0 + b_1 \times OPM_1 + b_2 \times OPM_2 + \ldots + b_k \times OPM_k + \varepsilon$

EQ16: $CEO_{Total\,Re\,muneration} = FixedPay + ShortTermIncentives$

6.5.1. Fixed Pay Model Discussions

Table 22 contains the Fixed Pay model generation results. The first variable to be invited into the CEO Fixed Pay model was ROE in Step 1. Step 1 tied up with the correlation results Figure 41 which shows ROE to be the independent variable to be most highly correlated with Fixed Pay with an absolute value of the coefficients of correlation (R) being equal to 0.83. The partial regression coefficient for ROE was found to be negative 88.23. The regression equation was observed to be significant with the p-value of 0.0201 which was less than the alpha (α) of 0.05. The coefficient of multiple determination (R^2) was observed to be equal to 0.6931 – which indicated that the changes in ROE explained 69.31% of the variation in CEOs' Fixed Pay. The multiple standard error of estimate (SEE) was found to be 618 (R 0.618 million).

Table 22: Fixed Pay model generation results summary.

Steps	R^2	Constant	ROE	MC (10^{-08})	EVA (10^{-05})	MVA	SEE	*p*-value
		b_0	b_1	b_2	b_3	b_4		
1	69.31	10528	-88.23	-	-	-	618	0.0201
2	88.59	7311	-67.32	1.82	-	-	421	0.0130
3	96.19	6064	-37.29	2.46	1.01	-	281	0.0125
4	90.71	4417	**(left)**	3.12	1.59	-	380	0.0086
5	97.45	6292	**(left)**	2.92	1.13	-799.6	230	0.0069

The next variable to enter the Fixed Pay model was Market Capitalisation in Step 2. The inclusion of Market Capitalisation shook things up by reducing the constant from 10528 to 7311. The percentage of variation in Fixed Pay that was explained by ROE and Market Capitalisation rose from 69.31% to 88.59%. The estimation ability of the equation was also found to have improved with the standard error of estimate reduced to 421 (R 0.421 million). Step 3 introduced EVA into the Fixed Pay model and the percentage of variation in Fixed Pay explained by ROE, Market Capitalisation and EVA rose to 96.19% and standard error of estimation reduced to 281 (R 0.281 million).

The final step, Step 5, introduced MVA, and before introducing MVA, ROE was removed from the model (Step 4) due to observations raised by Weiers (2010) on any evidence of multicollinearity. Weiers (2010) went as far as pointing out that utilising a model with highly correlated independent variables was pointless as multicollinearity might have set in already and at that point one has "lost the ability to make meaningful interpretations of the partial regression coefficients" (p. 674). Removing ROE from the Fixed Pay model in Step 4 resulted in the percentage of variation in Fixed Pay explained by Market Capitalisation and EVA reducing to 90.71% as the standard error of estimation increased to 380 (R 0.380 million).

Lastly, Step 5 introduces MVA without ROE into the Fixed Pay Model. However, of the independent variables not yet included, MVA explained the greatest amount of remaining variability in Fixed Pay, so it came into the regression model. The stepwise regression analysis terminated at MVA, leaving out Earnings per Share (EPS) from the Fixed Pay model. The percentage variation in Fixed Pay explained by the final step with Market Capitalisation, EVA and MVA was found to be 97.45% with standard error of estimation being 230 (R 0.230 million).

Table 22 provided the p-values for the overall multiple regression models (Step 1 – Step 4). All the p-values were found to be less than the alpha (α) of 0.05. The p-values in Table 22 indicated that the multiple regression equations were found to be statistically significant.

Figure 43 shows the summary of results for coefficient of determination (R2) and p-values the partial regression coefficients from Step 1 through to Step 5 as related to Fixed Pay models in Table 22. The figure also contained the significant level (alpha (α)) chosen for the current research which was equal to 0.05 (Alpha IN) for an independent variable to be able to enter the equation and alpha (α) equal to 0.10 (Alpha OUT) for a variable to leave the equation.

Figure 43 indicated that in Step 2, the p-value for the partial regression coefficient for Market Capitalisation was higher than 0.05. This indicated that the partial regression coefficient for Market Capitalisation was statistically insignificant. Similar results were observed for EVA and MVA in Step 3 and Step 5 respectively, indicating that their respective partial regression coefficients were statistically insignificant for those Fixed Pay models. Of greater significance was the greater than 0.1 p-value for ROE in Step 3 which saw it being eliminated from the Fixed Pay model in Step 4.

Figure 43: Partial regression coefficient p-values and R^2.
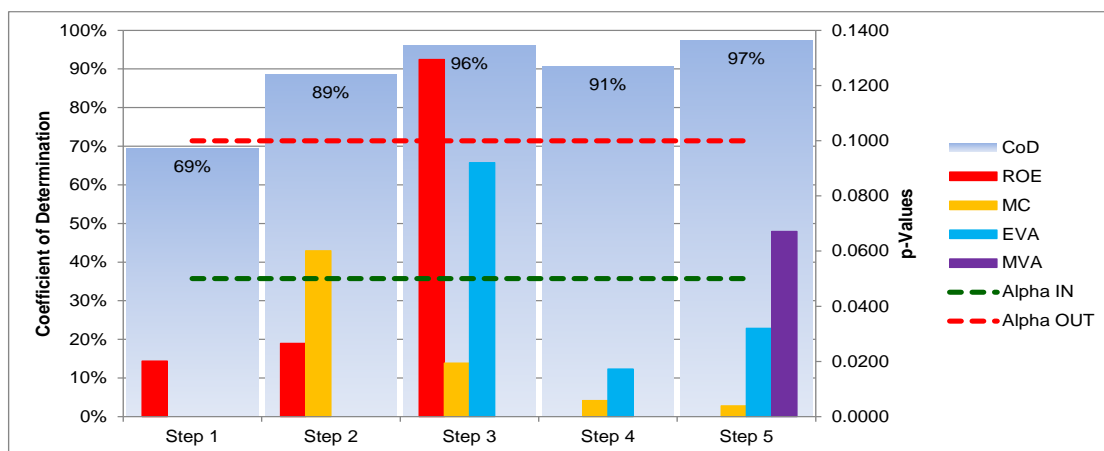
According to the Fixed Pay models given in Table 22, the results strongly indicate that some structural changes are required in order for the Fixed Pay model to be valid. The model does reflect the fact that CEO Fixed Pay has lost the link with some of the organisation performance measures considered for the current research. Similar findings were made by Haynes *et al.* (2007) when they concluded that the link between CEO remuneration and organisation performance measures has been eroded. The results illustrate that the problem will persist as CEO continue to focus on Fixed Pay.

107

6.5.2. Short Term Incentive Model Discussions

Table 23 contains the stepwise regression analysis summary of results found in generating the Short Term Incentive model. Based on Table 23 results, the stepwise regression analysis only included MVA, leaving out Market Capitalisation, EPS, EVA and ROE from the Short Term Incentive Model. The one and only independent variable or organisation performance measure that was invited into the Short Term Incentive model was MVA and it explained 56.97% of the variations in CEOs' Short Term Incentive. The standard error of estimation (SEE) was observed to be 1178 (R 1.178 million).

Table 23: Short Term Incentive model generation results summary.

Steps	R^2	Constant b_0	MVA b_1	SEE	p-value
1	0.5697	-3064	4967.60	1178	0.0498
Partial Coefficient p-values			0.0498		

The overall significance of the multiple regression equation was tested and found to be 0.0498. The partial regression coefficient (b_1) for MVA was tested was also tested and found to have a p-value equal to 0.0498. These results are also contained in Table 23. The p-value in Table 23 for MVA was found to be less than the alpha (α) of 0.05, denoting that the partial regression coefficient of MVA (b_1) was significant. According to the Short Term Model given by EQ13 another MVA factor of 1.00 will increase the estimated Short Term Incentive received by CEO by R 4.967 million with standard error of estimation being 829 (R 0.829 million).

6.5.3. CEO Total Remuneration Model Testing

The findings with regard to the inverse relationship of some of the organisation financial performance measures, especially those found with regard to the relationship between Fixed Pay and some of the organisation financial performance measures like ROE, indicate, to a large extent, that CEOs are paid more even when the measure that indicates an organisation's efficiency in generating profit for each unit of shareholders' equity is declining.

108

In addition, the partial regression coefficients in the CEO Total Remuneration model were expected to be positive and significant – this would have been consistent with the agency notion that top executives are rewarded for increases in shareholder wealth. All the Fixed Pay models derived in the current research were found to have negative partial regression coefficients and in other cases their partial regression coefficients were found to be statistically insignificant.

These findings are disturbing, especially when theories such as the optimal contracting approach suggest that executive remuneration can be used as a remedy to the agency problem. According to Shaw and Zhang (2010), it was pointed out in their research that efficient remuneration contracts will link executive remuneration with organisation performance, while providing strong incentives for executives to operate in shareholders' best interests. Previous sections have highly indicated that remuneration contracts between executives and organisation are not only shaped by what would be optimal, but are also influenced by the ability of executives to influence their own remuneration schemes as observed by the structural changes in CEO Total Remuneration after the 2008 Global Financial Crisis (Bebchuk *et al.*, 2002).

Total Remuneration received by CEOs has changed in structure and levels over the years when considering the seven year research period chosen for this study. These changes, as also pointed out by Shaw (2011), have not occurred only as a natural response to declining Short Term Incentive in light of the global financial crises which have resulted in organisations performing poorly. Previous sections of the current research indicated that these changes have been deliberate as the data analysis showed that there has been an increase in Fixed Pay received by CEOs coupled with the declining Short Term Incentive.

Due to these deliberate externalities that have influenced the actual CEO Total Remuneration received by executive, the models derived in this research can be assumed to need further investigation. In addition, the behaviour of some of the research constructs do indicate that more pre-2008 data needs to be considered to derive a more robust and valid models.

109

Short Term Incentive were found to be directly related to all of the organisation financial measures chosen for the current research, except Market Capitalisation. In addition, the Short Term Incentive model was also found not to include Market Capitalisation and any negative partial regression coefficients as the partial regression coefficient for MVA was found to be positive. The Short Term Incentive model only included Market Value Added which explained 56.97% of Short Term Incentive received by executives.

Since the Short Term Incentive model did not include any of the organisations financial performance measures which it was found to be inversely related to, the model was tested. The Short Term Incentive model results were then plotted against other organisation financial performance measures to observe how those measures responded against the model between 2008 and 2012. Actual Short Term Incentive received by CEOs were also plotted on the same figure.

Figure 44 shows the STIs model comparison with the MVA between 2006 and 2012. Also included on the figure are the two financial crisis that occurred in 2008 and 2011. Figure 44 indicated that in 2006 and 2007 the average STIs received by CEOs in the research sample could be estimated by the STIs model, within some residual. The STIs model's response deviates from the actual STIs received by CEOs after 2009 and were aligned again in 2012.

Figure 44: STIs model testing vs. Market Value Added (MVA).
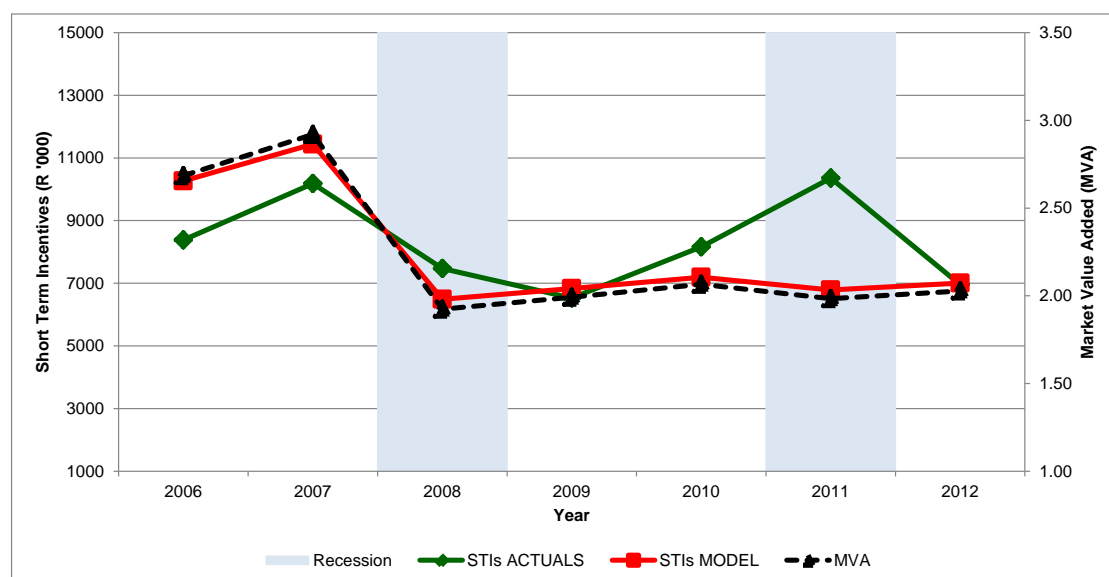
Due to the fact that the STIs model only contains MVA, the STIs model output in Figure 44 above was found to be similar to the actual average Market Value Added (MVA) between 2006 and 2012. Figure 45 shows the STIs model comparison with the Market Capitalisation between 2006 and 2012. The response shown on Figure 45 between Market Capitalisation and the STIs model output support the results found with regard to Market Capitalisation being inversely related to STIs received by CEOs, especially after 2008 crisis.

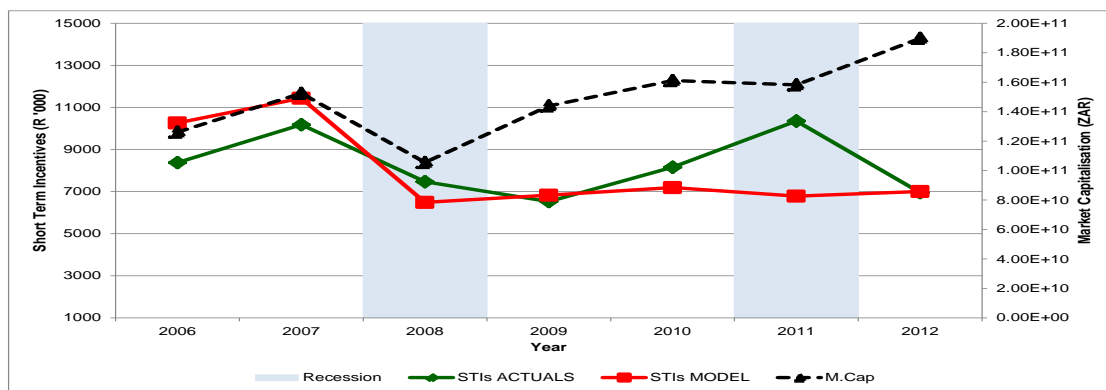**Figure 45: STIs model testing vs. Market Capitalisation.**

Figure 46 shows the STIs model comparison with the Earning per Share (EPS) between 2006 and 2012. The results do indicate that organisations' EPS follow STIs received by CEOs. This may be as a result of some of the organisations utilising EPS as their internal measure in determining STIs as received by CEOs. Correlation analysis indicated that the relationship has been dropping since 2006, indicating that there exist a general disconnect between pay and performance with regard to CEOs' STIs.

Figure 46: STIs model testing vs. Earnings per Share (EPS).
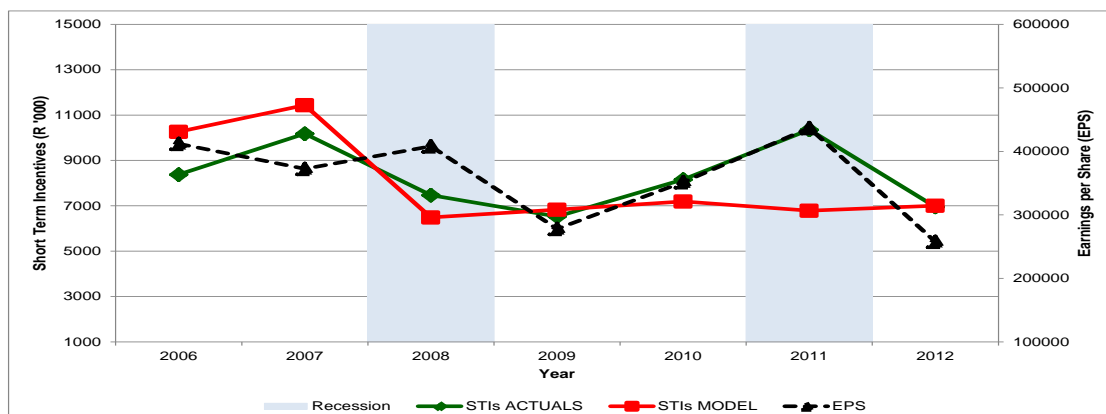

111

Figure 47 shows the STIs model comparison with the Return on Equity between 2006 and 2012. This organisation performance measure was found to be inversely proportional to Fixed Pay, indicating that as average ROE decreased, the average CEO's Fixed Pay increased. The STIs model response compares well with ROE as it indicated that the CEO's STIs should be directly related to ROE – as ROE decreases, the STIs should decrease.

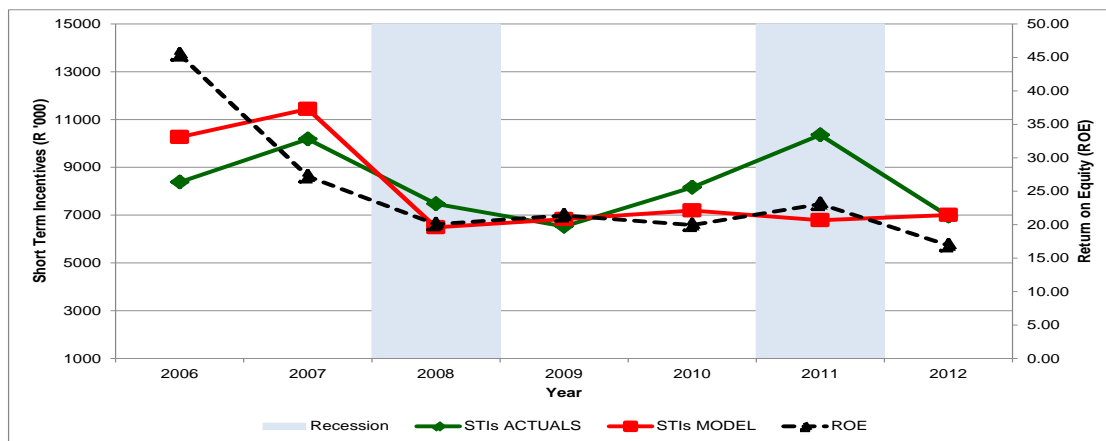**Figure 47: STIs model testing vs. Return on Equity (ROE).**

Figure 48 shows the STIs model comparison with the Economic Value Added (EVA) between 2006 and 2012. Below sults indicate that CEOs are usually found to be adding value during financial difficulties as they focus on creating value for their shareholders. The opposite is true immediately when the financial crisis has past. This evident on the figure during the two financial crisis experienced in 2008 and 2009.

Figure 48: STIs model testing vs. Economic Value Added (EVA)

112
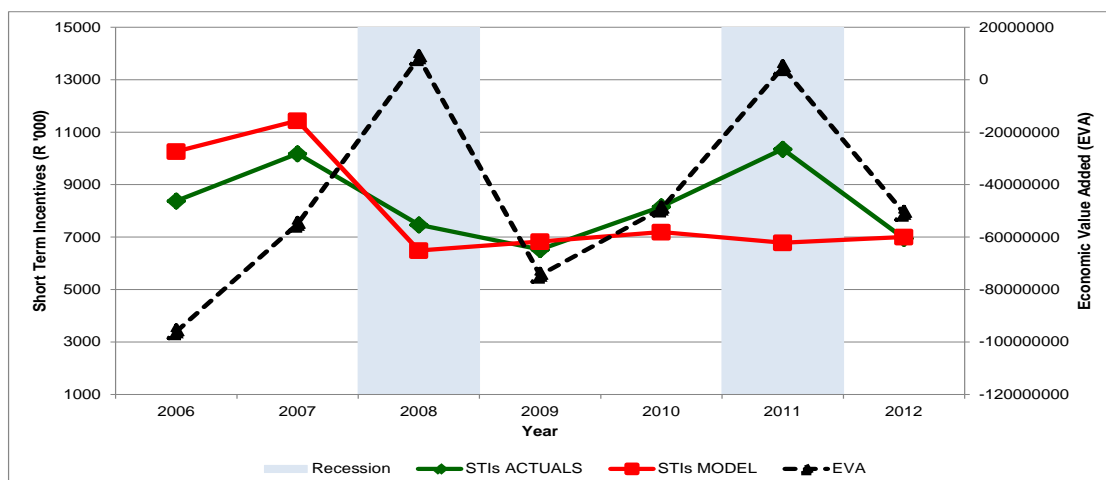
6.6. Results Discussions Summary

The implementation of the Companies Act (2008) and King III was to ensure that executive remuneration are linked to organisation performances. The current research discussions highlighted that executives are becoming more innovative in bypassing the pay-performance requirement. One such method took precedence after the 2008 Global Financial Crisis as executives after the event have noticeably been moving away from focusing on Short Term Incentive and paying greater focus on Fixed Pay. The primary aim of such a move was mainly to avoid performance related elements in determining their remuneration.

This has created a natural disconnect between what executives are being paid and the performance of the organisation resulting in inverse relationships between some of the organisation performance measures with CEO Total Remuneration, especially Fixed Pay received by executives. The link between executive remuneration and organisation performance has been lost. The irony is in that as the link continues to be eroded between Fixed Pay and organisation performance measures, CEO continue to focusing more on Fixed Pay and pushing for a move away from Short Term Incentive – the performance related element of their remuneration packages.

The current chapter's discussions have strongly highlighted that remuneration packages received by executives have changed in structure and levels over the years. The unfortunate truth is that these changes have not occurred only as a natural response that resulted in poor organisation performances leading to declining Short Term Incentive, especially after the 2008 Global Financial Crisis. These changes have been deliberate, and perhaps the next step needed is in ensuring that innovative means used by executives in avoiding being measured on their respective organisation performance are eliminated.

The next chapter will reiterate the main findings and recommendations given by the various findings based on the research questions.

113

7. Chapter 7: Conclusions

7.1. Introduction

In theory, efficient remuneration contracts will be designed well enough to link executive remuneration with organisation performance, and provide strong incentives for executives to operate organisations in the best interests of the shareholders. Additionally, the Companies Act (2008) and King III (2009) specify that there should be a positive correlation between executive remuneration and organisation performance. The primary objective of this research was to take advantage of the available information on CEO remuneration data and establish the best link (correlation) between CEO remuneration and financial performance of organisations.

This chapter will present the main findings of the current research on CEO pay-performance. In addition, recommendations will be presented for implications to relevant stakeholders. Lastly, recommendations will be made for future research on the subject of CEO pay-performance.

7.2. Research Questions Conclusions

A strong inverse relationship between Short Term Incentive and CEO Turnover was determined current research study. Leading to the conclusion that as a result of poor organisation performance due the 2008 Global Financial Crisis, some CEOs found it hard to stay on due to lower or none availability of Short Term Incentive. For those who stayed, the conclusion taken points to the fact that their remuneration contracts with their respective organisations were no longer shaped by what would be optimal, but were also influenced by the ability of executives to influence their own remuneration schemes.

It can also be concluded that during economic uncertainty or difficulty some board of directors kept their CEOs in order to maintain stability. The retaining of CEOs led, in most cases to managerial power and entrenchment which result in negative implications for the principals as CEOs rewarded themselves with higher increases in Fixed Pays even though their respective organisation were underperforming.

114

The above conclusions and further analysis indicate that there were some structural changes experienced after the 2008 Global Financial Crisis with regard to Total Remuneration received by CEOs – these structural changes were amplified further after the August 2011 Stock Market Fall. These changes were deliberate and it can thus be concluded that after 2008, CEOs were focusing more of Fixed Pay and moving away from Short Term Incentive. It can also be concluded that move by executives to focusing on Fixed Pay is a way of avoiding being measured on performance as they eliminate performance-related elements from their remuneration contracts by avoiding Short Term Incentive.

It can also be concluded based on the directions and strengths of the relationships between CEOs' Total Remuneration and organisation financial performance measures that the general pay-performance link has been lost. The deliberate move by executives to focusing on Fixed Pay and moving away from performance related elements in Short Term Incentive has created a disconnect between what executives are being paid and the performance of the organisation.

In determining the CEO Total Remuneration model it was expected that the partial regression coefficients in the model would be positive and significant. Based on the CEO Total Remuneration model generated some of the partial regression coefficients were negative and statistically insignificant which led to the conclusion executives are rewarded for destroying shareholder wealth.

7.3. Stakeholder Recommendations

The work done in the current research suggests that a stronger test of the pay for performance link, and the power of incentive design are required in order to ensure that executives are reward or punished for poor performance. The question on how executives are paid also needs to be considered. There is also a need for a robust and valid model which contains partial regression coefficients which are positive and significant to ensure consistency with the agency notion that top executives are rewarded for increases in shareholder wealth.

Additionally, boards and remuneration committees need to pay more attention on the different measures available, accounting-based and market-based measures, in assessing top executives' performance.

More attention is also needed with regard the different behaviours by top executives in making the Companies Act (2008) and King III requirements ineffective as they avoid being measured for performance. The "apply or explain" basis of the King III needs to be looked at while designing better and robust pay-performance models.

7.4. Future Research

The following are some of the future studies that can be considered as a result of the current research study:

- The research study needs to be expanded over a longer time period to ensure that valid models for both Fixed Pay and Short Term Incentive are generated. The longer time will enable the researcher to see times whereby top executives were rewarded for performance without influencing their own remuneration packages.

- The current research study did not consider Long Term Incentives. There is a need to understand and include these as the unit of analysis for remuneration packages received by CEO in the studies. Long Term Incentives are an important component of any CEO's remuneration and its addition to research studies on pay-performance will surely bring a different and required perspective and insights to the relationship between CEO remuneration and organisation performance measures.

- The observed direct relationship between Fixed Pay and Economic Value Added (EVA) illustrated the ability of top executives to make sound decisions during financial crisis. As a result, the need to consider causality in the pay-performance studies need to be understood to ensure that the derived models are well applied.

116

7.5. Summary of Findings

The current research considered 21 of the JSE Top 40 organisations which had a combined market capitalisation of between 50% and 82% of the total JSE Market Capitalisation for the research period between 2006 and 2012. The average percentage Market Capitalisation representation of the research sample to the JSE market capitalisation for the seven year research period between 2006 and 2012 was 68%. There was therefore large enough proportion of the total JSE Market Capitalisation for the results and the conclusions reached to be deemed valid as the research sample was large enough to address the problem of organisation sample size as a threat to the validity of the research.

The major findings of the current research indicate that there has been a structural change in the CEOs' Total Remuneration packages after the 2008 financial crisis which has seen CEOs moving away from Short Term Incentive and focusing more on Fixed Pay. The structural changes have not occurred as a natural response to declining Short Term Incentive in light of the global financial crises which have resulted in poor organisation performances, the current research results illustrated that there has been an increase in Fixed Pay coupled with the declining Short Term Incentive; this pointed to a deliberate change in the structure of CEOs' Total Remuneration.

Additionally, it was concluded that CEOs, during economic certainty engage more in "empire building" as growth in organisation size seems to be the best way for CEOs to ensure that they appear favourably to their boards. Also, during economic uncertainty or difficulty it was found that some boards kept their CEOs in order to maintain stability and this resulted in negative implications for the shareholders as CEOs rewarded themselves with higher increases even though their respective organisation were underperforming – the resulting effect was managerial power and entrenchment.

The structural changes in CEOs' Total Remuneration, "empire building" behaviour by CEOs, managerial power and entrenchment have created a natural disconnect between CEO Total Remuneration and their respective organisation performances.

117

Additionally, the partial regression coefficients of the Fixed Pay model and Short Term Incentive were expected to be positive and significant which would have been consistent with the agency notion that executives are rewarded for increases in shareholder wealth. The opposite was observed which indicated the lost link between pay and performance for executives. Another natural disconnect created was based on the fact that CEOs remuneration packages are generally determined on the basis of what others in comparable organisations, regardless of performance, are being paid.

118

8. References

21st Century Pay Solutions. (2010). *Global Reward Trends*. Retrieved from https://www.saica.co.za/Portals/0/about/Committees/Global%20Reward%20Trends.pdf

Aguilera, R. V., & Cuervo-Cazurra, A. (2004). Codes of Good Governance Worldwide: What is the Trigger? *Organization Studies*, *25*(3), 415–443.

Akhigbe, A., Madura, J., & Ryan, H. (1997). CEO Compensation and Performance of Commercial Banks. *Managerial Finance*, *23*(11), 40–55.

Anderson, B., & Kleiner, B. H. (2003). How to Evaluate the Performance of Chief Executive Officers Effectively. *Management Research News*, *26*(2/3/4), 3–11.

Anderson, D. R., Sweeney, D. J., Williams, T. A., Freeman, J., & Shoesmith, E. (2007). *Statistics for Business and Economics* (Vol. 6). London: Thomson Learning.

Andrews, K. R., & David, D. K. (1987). The Concept of Corporate Strategy.

Attaway, M. C. (2000). A Study of the Relationship Between Company Performance and CEO Compensation. *American business review*, *18*(1), 77–85.

Bacidore, J. M., Boquist, J. A., Milbourn, T. T., & Thakor, A. V. (1997). The Search for the Best Financial Performance Measure. *Financial Analysts Journal*, 11–20.

Baker, G. P., Jensen, M. C., & Murphy, K. J. (1988). Compensation and Incentives: Practice vs. Theory. *The journal of Finance*, *43*(3), 593–616.

Barber, N., Ghiselli, R., & Deale, C. (2006). Assessing the Relationship of CEO Compensation and Company Financial Performance in the Restaurant Segment of the Hospitality Industry. *Journal of Foodservice Business Research*, *9*(4), 65 – 82.

Bebchuk, L. A., Cohen, A., & Holger, S. (2010). The Wages of Failure: Executive Compensation at Bear Stearns and Lehman 2000-2008. *Yale Journal on Regulation*, *27*(2), 257 – 282.

Bebchuk, L. A., & Fried, J. M. (2003). *Executive Compensation as an Agency Problem*. National Bureau of Economic Research.

Bebchuk, L. A., & Fried, J. M. (2005). Pay Without Performance: Overview of the Issues. *Journal of Applied Corporate Finance*, *17*(4), 8–23.

Bebchuk, L. A., Fried, J. M., & Walker, D. I. (2002). *Managerial Power and Rent Extraction in the Design of Executive Compensation*. National Bureau of Economic Research.

Bradley, S. (2011). Chief Executive Remuneration and Effects on Company Performance in a South African Context. Rhodes University.

Bremer, C., & Dmitracova, O. (2011). Analysis: France, Britain AAA-Rating Under Scrutiny. *Reuters*. Paris/London.

Bruce, A., Buck, T., & Main, B. G. (2005). Top Executive Remuneration: A View from Europe. *Journal of Management Studies*, *42*(7), 1493–1506.

Canarella, G., & Gasparyan, A. (2008). New Insights into Executive Compensation and Firm Performance: Evidence from a Panel of "New Economy" Firms, 1996-2002. *Managerial Finance*, *34*(8), 537–554.

Carlos, A. M., & Nicholas, S. (1996). Theory and History: Seventeenth-Century Joint-Stock Chartered Trading Companies. *Journal of Economic History*, *56*(4), 916.

Carpenter, M. A., & Sanders, W. (2002). Top Management Team Compensation: The Missing Link Between CEO Pay and Firm Performance? *Strategic Management Journal*, *23*(4), 367–375.

Chari, L. (2009). Measuring Value Enhancement Through Economic Value Added: Evidence from Literature. *IUP Journal of Applied Finance*, *15*(9), 46 – 62.

Colander, D. (2010). *Macroeconomics* (8th ed.). New York: McGraw-Hill/Irwin.

Conyon, M. J. (1997). Corporate governance and executive compensation. *International Journal of Industrial Organization*, *15*(4), 493–509.

Conyon, M. J., & Leech, D. (1994). Top Pay, Company Performance and Corporate Governance. *Oxford Bulletin of Economics & Statistics*, *56*(3), 229 – 247.

Conyon, M. J., Peck, S. I., & Sadler, G. (2000). Econometric Modelling of UK Executive Compensation. *Managerial Finance*, *26*(9), 3–20.

Core, J. E., Guay, W. R., & Thomas, R. S. (2005). Is U.S. CEO Compensation Inefficient Pay Without Performance? *Michigan Law Review*, *103*(6), 1142 – 1185.

Core, J. E., Holthausen, R. W., & Larcker, D. F. (1999). Corporate Governance, Chief Executive Officer Compensation, and Firm Performance. *Journal of financial economics*, *51*(3), 371–406.

Coughlan, A. T., & Schmidt, R. M. (1985). Executive Compensation, Management Turnover, and Firm Performance: An Empirical Investigation. *Journal of Accounting and Economics*, *7*(1), 43–66.

Cummings, T. G., & Worley, C. G. (2009). *Organization development & change*. South-Western Pub.

Duffhues, P., & Kabir, R. (2008). Is the Pay–Performance Relationship Always Positive?: Evidence from the Netherlands. *Journal of multinational financial management*, *18*(1), 45–60.

Edmans, A., & Gabaix, X. (2009). Is CEO Pay Really Inefficient? A Survey of New Optimal Contracting Theories. *European Financial Management*, *15*(3), 486–496.

Enrione, A., Mazza, C., & Zerboni, F. (2006). Institutionalizing Codes of Governance. *American Behavioral Scientist*, *49*(7), 961 – 973.

Eriksson, T., & Lausten, M. (2000). Managerial Pay and Firm Performance. *Scandinavian Journal of Management*, *16*(3), 269–286.

Fama, E. F., & Jensen, M. C. (1983). Separation of Ownership and Control. *Journal of law and economics*, *26*(2), 301–325.

Fatemi, A., Desai, A. S., & Katz, J. P. (2003). Wealth Creation and Managerial Pay: MVA and EVA as Determinants of Executive Compensation. *Global Finance Journal*, *14*(2), 159–179.

Favaro, K., Karlsson, P.-O., & Neilson, G. (2012). *CEO Succession Study 2011 Extended Study Report* (Annual Report No. 2012) (pp. 1 – 26). New York/Stockholm/Chicago: Booz & Co.

Firth, M., Fung, P. M., & Rui, O. M. (2006). Corporate Performance and CEO Compensation in China. *Journal of Corporate Finance*, *12*(4), 693–714.

Florackis, C., & Ozkan, A. (2009). The Impact of Managerial Entrenchment on Agency Costs: An Empirical Investigation Using UK Panel Data. *European Financial Management*, *15*(3), 497 – 528.

Frydman, C., & Jenter, D. (2010). *CEO Compensation*. National Bureau of Economic Research.

Frydman, C., & Saks, R. (2010). Executive Compensation: A New View from Long-term Perspective. *Review of Financial Studies*, *23*(5), 2099–2138.

Gompers, P., Ishii, J., & Metrick, A. (2003). Corporate Governance and Equity Prices. *Quarterly Journal of Economics*, *118*(1), 107.

Gregg, P., Machin, S., & Szymanski, S. (1993). The Disappearing Relationship Between Directors' Pay and Corporate Performance. *British Journal of Industrial Relations*, *31*(1), 1–9.

Haynes, M., Thompson, S., & Wright, M. (2007). Executive Remuneration and Corporate Divestment: Motivating Managers to Make Unpalatable Decisions. *Journal of Business Finance & Accounting*, *34*(5-6), 792–818.

Hope, O.-K., & Thomas, W. B. (2008). Managerial Empire Building and Firm Disclosure. *Journal of Accounting Research*, *46*(3), 591–626.

Hsieh, C., & Kleiner, B. H. (2003). New Developments in Executive Compensation. *Management Research News*, *26*(7).

Institute of Directors Southern Africa. (2009). *King III Report on Corporate Governance for South Africa*. Pietermaritzburg.

Jensen, M. (1986). Agency Costs of Free Cash Flow, Corporate Finance, and Takeovers. *American Economic Review*, *76*(2), 323.

Jensen, M., & Meckling, W. H. (1976). Theory of the Firm: Managerial Behavior, Agency Costs and Ownership Structure. *Journal of financial economics*, *3*(4), 305–360.

Jensen, M., & Murphy, K. (1999). CEO Incentives: It's not how much you pay, but how. *Harvard Business Review*, *3*, 64–76.

JSE. (2009). Global Classification System. Retrieved from http://www.jse.co.za/Products/FTSE-JSE/Classification-System.aspx#Global

Kyriazis, D., & Anastassis, C. (2007). The Validity of the Economic Value Added Approach: An Empirical Application. *European Financial Management*, *13*(1), 71–100.

Leon, P. (2012). *Marikana, Mangaung and the South African Mining Industry* (No. Webber Wentzel Report). Cape Town: Address to the South African Institute of International Affairs.

Lindqvist, J., & Grunditz, J. (2004). CEO Compensation and Company Performance An Empirical Study of the situation in Sweden's Listed Companies. *Masters Thesis*, (2003).

Lippert, R. L., & Porter, G. (1997). Understanding CEO pay: A test of two pay-to-performance sensitivity measures with alternative measures of alignment and influence. *Journal of Business Research*, *40*(2), 127–138.

Madura, J., Martin, A. D., & Jessell, K. A. (1996). Determinants of CEO Compensation In Small Publicity-Traded Business. *American Business Review*, *14*(1), 80.

Mantshantsha, S. (2007, February). Is There a Case for a Maximum Salary? *USB Agenda Magazine*. Retrieved from http://hdl.handle.net/10019.1/4653

Marais, J., & Lefifi, T. A. (2013, April 28). Bang Goes Bank Boss Pay. *Sunday Times*, p. 1. South Africa.

Matsumura, E. M., & Shin, J. Y. (2005). Corporate Governance Reform and CEO Compensation: Intended and Unintended Consequences. *Journal of Business Ethics*, *62*(2), 101–113.

McConvill, J. (2005). Positive Corporate Governance and its Implications for Executive Compensation. *German Law Journal*, *6*, 1777–1804.

McKnight, P. J., Milonas, N. T., Travlos, N. G., & Weir, C. (2009). The Cadbury Code Reforms and Corporate Performance. *ICFAI Journal of Corporate Governance*, *8*(1), 22 – 42.

McKnight, P. J., & Weir, C. (2009). Agency Costs, Corporate Governance Mechanisms and Ownership Structure in Large UK Publicly Quoted Companies: A Panel Data Analysis. *The Quarterly Review of Economics and Finance*, *49*(2), 139–158.

Merhebi, R., Pattenden, K., Swan, P. L., & Zhou, X. (2006). Australian Chief Executive Officer Remuneration: Pay and Performance. *Accounting & Finance*, *46*(3), 481 – 497.

Miller, D. J. (1995). CEO Salary Increase May Be Rational After All: Referents and Contracts in CEO Pay. *Academy of Management Journal*, *38*(5), 1361–1385.

Morrissey, J. (2009, September 23). More Angry Investors Say, Throw the Boards Out. Time Business & Money. Retrieved from http://www.time.com/time/business/article/0,8599,1925344,00.html

Mueller, D. C. (2006). Corporate Governance and Economic Performance. *International Review of Applied Economics*, *20*(5), 623–643.

Murphy, K. J. (1985). Corporate Performance and Managerial Remuneration: An Empirical Analysis. *Journal of accounting and economics*, *7*(1), 11–42.

Murphy, K. J. (1986). Incentives, Learning, and Compensation: A Theoretical and Empirical Investigation of Managerial Labor Contracts. *The Rand Journal of Economics*, 59–76.

Nel, M. (2012). Sensitivity of Guaranteed Cost to Company of CEOs in the South African Retail and Consumer Goods Sector. Gordon Institute of Business Science (GIBS).

Ozkan, N. (2007). Do Corporate Governance Mechanisms Influence CEO Compensation? An Empirical Investigation of UK Companies. *Journal of Multinational Financial Management*, *17*(5), 349–364.

Ozkan, N. (2011). CEO Compensation and Firm Performance: An Empirical Investigation of UK Panel Data. *European Financial Management*, *17*(2), 260–285.

Perry, T., & Zenner, M. (2001). Pay for Performance? Government Regulation and the Structure of Compensation Contracts. *Journal of Financial Economics*, *62*(3), 453–488.

Ratner, B. (2009). The Correlation Coefficient: Its Values Range Between +1/−1, or Do They?. *Journal of Targeting, Measurement & Analysis for Marketing*, *17*(2), 139 – 142.

Rosenhek, Z. (2013). Diagnosing and Explaining the Global Financial Crisis: Central Banks, Epistemic Authority, and Sense Making. *International Journal of Politics, Culture & Society*, *26*(3), 255 – 272.

Satrix. (2013). Satrix 40. Retrieved from http://www.satrix.co.za/products/satrix40.aspx

Saunders, M., & Lewis, P. (2012). *Doing Research in Business and Management: An Essential Guide to Planning Your Project*. Harlow: Prentice Hall.

Sharp, L., Mackay, G., Rankin, N., & Aling, P. (2012). *Are South Africa's CEOs Overpaid?* (No. 2012Q1) (pp. 1–36). Labour Market Navigator.

Shaw, K. W., & Zhang, M. H. (2010). Is CEO Cash Compensation Punished for Poor Firm Performance? *The Accounting Review*, *85*(3), 1065–1093.

Shaw, P. (2011). CEO Pay-Performance Sensitivity in South African Financial Services Companies. Gordon Institute of Business Science (GIBS).

Shleifer, A., & Vishny, R. W. (1989). Management entrenchment: The case of manager-specific investments. *Journal of financial economics*, *25*(1), 123–139.

Stewart, G. (1990). *The Quest for Value*. New York: Harper Collins Publishers.

Sun, S. L., Zhao, X., & Yang, H. (2010). Executive Compensation in Asia: A Critical Review and Outlook. *Asia Pacific Journal of Management*, *27*(4), 775–802.

Traichal, P. A., Gallinger, G. W., & Johnson, S. A. (1999). The Relationship Between Pay-for-Performance Contracting and External Monitoring. *Managerial Finance*, *25*(9), 68–88.

Van Blerck, T. G. (2012). The Relationship Between Executive Remuneration at Financial Institutions and Economic Value Added. Gordon Institute of Business Science (GIBS).

Veliyath, R., & Bishop, J. (1995). Relationship Between CEO Compensation and Firm Performance Empirical Evidence of Labour Market Norms. *The International Journal of Organizational Analysis*, *3*(3), 268–283.

Ward, M., & Price, A. (2006). *Turning Vision Into Value: Corporate Finance for Non-financial Executives*. Van Schaik.

Weiers, R. M. (2010). *Introduction to Business Statistics* (7th ed.). Cengage Learning.

Wibowo, G., & Kleiner, B. H. (2005). The Duties of a Chief Executive Officer. *Management Research News*, *28*(2/3), 88–99.

Zhou, X. (2000). CEO Pay, Firm Size, and Corporate Performance: Evidence from Canada. *Canadian Journal of Economics/Revue canadienne d'économique*, *33*(1), 213–251.
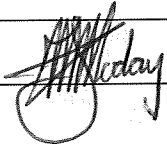
COPYRIGHT DECLARATION FORM

Student details				
Surname:	**Modau**		**Initials:**	**MF**
Student number:	**12382958**			
Email:	**Fhedzi@gmail.com**			
Cell :	**083 296 6769**		**Landline:**	**011 462 9194**
Course details				
Degree:	**MBA**		**Year completed:**	**2013**
Department:	**GIBS**			
Supervisor:	**Dr Mark Bussin**			
Supervisor email:	**drbussin@mweb.co.za**			
Confidentiality / Embargo				
Do you need to have your report embargoed? If so, write a letter of motivation to substantiate (please attach letter to this form). Without a letter this will not be granted.				
Yes	**X**	**No**		
If yes, please indicate period requested				
Two years		****Permanent**		
**Please attach a copy of the letter of permission from the Vice-Principal: Research and Postgraduate Studies, if indicated, permanent. Without a letter this will not be granted.				
A copy of your research report will be uploaded to UPetd/UPSpace Can the Information Centre add your email address to the UPetd/UPSpace web site?				
Yes	**X**	**No**		
If no, please motivate (ignore if report is to be embargoed)				
Copyright declaration				

I hereby certify that, where appropriate, I have obtained and attached hereto a written permission statement from the owner(s) of each third-party copyrighted matter to be included in my research report ("the work"), allowing distribution as specified below. I certify that the version of the work I submitted is the same as that, which was approved by my examiners and that all the changes to the document, as requested by the examiners, have been included.

I understand that all rights with regard to intellectual property in the work vest in the University who has the right to reproduce, distribute and/or publish the work in any manner it may deem fit.

I agree that, a hardcopy of the abovementioned work be placed in the Gordon Institute of Business Science Information Centre and worldwide electronic access be given to the softcopy on UPetd and UPSpace.

| Signature: | Date: 11 | 11 | 2013 |