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The relationship between executive remuneration at financial institutions and Economic Value Added

Timothy George van Blerck
24385302

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Contact Details:
Tel: 011 234 7014
Mobile: +27 83 324 0485
Email: tim.vanblerck@gmail.com

Abstract

Orientation

The research will compare the alignment of the remuneration between United States and South African banks with respect to the Economic Value Added, a measure of a firm's economic profit that adjusts profit by subtracting the cost of capital.

Research purpose

South African banks have been widely recognised for their high standard of corporate governance and stability during the financial crisis. Executive remuneration based on short-term equity has been recognised by both academic literature as well as bank regulators as one of the causes of the financial crisis. The research seeks to understand the differences in remuneration alignment between the failed and surviving banks.

Motivation for study

Misaligned incentives within the United States banks are accepted by both academics and regulators as one of the causes of the 2008 financial crisis and subsequent economic downturn. This research puts this theory to the test by comparing the alignment of executive remuneration between South African banks that were internationally recognised for successfully navigating the financial crisis, and the largest United States banks, of which three failed catastrophically over the same time period.

Research design, approach and method

The remuneration for the largest United States and South African banks is tested for correlation against Economic Value Added (EVA®), share price and return on equity. Correlation between executive remuneration and the constructs is tested between the two countries before as well as after the financial crisis.

Main findings

South African bank executive remuneration correlated strongly with EVA® and this correlation strengthened after the financial crisis. In comparison, the United States sample banks exhibited strong correlation between share price and remuneration before the financial crisis. The failed United States banks had no correlations between executive remuneration any of the constructs, a pattern that has been repeated in the United States Banks that have survived the financial crisis.

Practical/managerial implications

Practically, the research demonstrated the vast differences in executive remuneration alignment between the United States and South Africa. In South African banks, executive remuneration is far more closely aligned to EVA®, whereas the United States banks only correlated with share price before the financial crisis, raising the question of whether managers are able to exert excessive power. The research demonstrates the magnitude of the gap between the recommendations of regulators and remuneration policies, with South African banks far more closely aligned than their United States counterparts.

Contribution/value added

The research findings concur with theory presented in literature that misaligned incentives based on equity contributed towards the financial crisis. Of particular concern is the change in remuneration correlation after the financial crisis, where South African banks increased correlation with EVA® while United States banks no longer correlated with EVA®, ROE or share price.

Keywords

Executive remuneration; Bank; Financial crisis; Economic Value Added; EVA; South Africa; United States.

Declaration

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

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Timothy George van Blerck

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List of Abbreviations

BIS - International Bank of Settlements

CEO -Chief Executive Officer

EVA® - Economic Value Added, a registered trademark of Stern Steward & Co

FSB - Financial Services Board

GDP - Gross Domestic Profit

ROA - Return on assets

ROE - Return on equity

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"The words "bank" and "bankrupt" have common etymological roots, dating from the 13th century. In the 13th century, it was bankers bankrupting banks. In the 21st century, bankers are still bankrupting banks."

Andrew G Haldane, Executive Director, Financial Stability and Member of the Financial Policy Committee of the Bank of England, delivering the Wincott Annual Memorial Lecture, Westminster, London

24 October 2011

(Haldane, 2011)

1. Chapter One: Introduction to research problem

1.1. Background to the research problem

Executive remuneration ("compensation" in United States terms) refers to the various forms of payment received by the senior directors of companies. Executive remuneration diverges from conventional employee remuneration in that executive or senior directors are held accountable to shareholders for the performance of the organisation managed by the executive and owned by the shareholder.

The senior directors or executives of a corporation typically assume the highest levels of responsibility and accountability for the performance of an organisation on behalf of the shareholders of the company. It is in the shareholder's interests to reward the executive with incentives that align the interests of the executive with the interests of the shareholders.

It has been widely argued that executive remuneration policies were partly responsible for the dramatic collapse in market capitalisation of the United States banks and subsequent global economic crisis (Haldane, 2011), (Fahlenbrach & Stultz, 2011) and (Bebchuk & Spamann, 2010). Concerns that the structure of executive remuneration at banks providing incentives for taking excessive risks has been an issue for a number of years (Bebchuk & Spamann, 2010).

Executive compensation has come under the spotlight both locally and globally both because of the rapid growth in comparison to the average company salary and the perceived weak link between pay and performance. Within South Africa the introduction of the King III corporate governance standards in March 2010 brought new rules that address concerns regarding both the growth and the performance pay link in executive remuneration. The United States introduced the Dodd–Frank Wall Street Reform and Consumer Protection Act in July 2010 after the public outcry over the perceived role of executive remuneration in the 2007/2008 period of economic downturn. This United States legislation focuses on enforcing disclosure of executive remuneration, thereby granting shareholders the

right to approve pay and enforcing the link between executive pay and company performance.

1.2. Research problem

Lehman Brothers declared bankruptcy on the 15th September 2008 with total assets of $639 billion, making the largest bankruptcy in history and marking the beginning of the global financial crisis (Mamudi, 2008). Despite these failures, over the period of 2000 to 2008 the top five executives at Bear Sterns and Lehman derived approximately $1.4 and $1 billion respectively from cash bonuses and equity sales from their performance based compensation schemes. In contrast to the returns enjoyed by the bank executives, investor's shareholdings in Bear Stearns and Lemans performed disastrously over the same time period (Bebchuk, Cohen, & Spamann, 2010).

According to Tim Geithner, United States Treasury Secretary, "compensation should be structured to account for the time horizon of risks" (U.S. department of the Treasury, 2009). Rewarding bank executives with large amounts of equity-based compensation before the long-term consequences are realised has incentivised bank executives to focus on short-term results at the expense of generating long-term shareholder value (Bebchuk & Spamann, 2010).

In modern economies concentration of bank assets increases the systematic risk to a nation's economy should one of these large banks fail. In the UK during 2007 the assets of the largest three banks was 200% of GDP (Haldane, 2011). While not as extreme a similar level of bank asset concentration exists in South Africa, according to the South African Reserve Bank at the end of 2011 the four largest South African banks hold R2 645 billion or 85% of all bank assets, a figure equal to the GDP of South Africa in 2010 (Statistics South Africa, 2011). Given the importance of banks due to their massive asset base and previous evidence of risk induced by equity based incentives, comparing bank executive remuneration against measure of economic profit such as Economic Value Added (EVA®) should provide an indication as to whether the market and credit risk are taken into account when awarding executive remuneration.

The International Bank of Settlements (BIS) recognised the influence of banks' remuneration structures on risk taking and risk management and recommended increasing the specificity of the remunerations disclosure requirements in the Basel 3 framework. Specifically, the BIS noted that by disclosing a bank's compensation policy market participants would be able to assess the support for a bank's strategy and risk posture (Basel Committee on Banking Supervision, 2010).

The BIS recommends that a wide variety of measures regarding credit, market and liquidity risk be used in order to adjust remuneration to account for risk incurred in generating return. Specifically the BIS suggest that adjustment for market and credit risk may be done by taking into account economic capital allocation combined with a cost of capital, although this calculation would not for account for liquidity risk (Basel Committee on Banking Supervision, 2010).

Economic Value Added (EVA®) is a valuation metric that aims to measure a firm's ability to generate profits in excess of the cost of the capital utilised to generate those profits. Specifically EVA® can be defined as follows (Desai & Ferri, 2006):

EVA®= *NOPAT – (Cost of Capital * Capital)*

Where

NOPAT = Net Operating Profit after Tax
Capital = Capital invested by debit holders and equity holders
Cost of Capital = Weighted average cost of after tax debit and cost of equity

Thus from the above equation, the Economic Value Added meets the criteria set by the BIS as a measure of economic capital allocation combined with a cost of capital used to adjust remuneration for market and credit risk.

This research intends to build on that done by Paul Shaw in his 2011 research proposal titled "CEO Pay Performance Sensitivity in South African Financial Services Industries".

1.3. Research objectives

The broad research objective is to investigate the relationship between executive remuneration and measurements of company performance in the banking industry. The underlying theme of the literature is the complexity and danger

posed by misaligned incentives, specifically the difficulty of aligning incentives with societies' interests in large banks. Typically companies with misaligned incentives between executive management, shareholders and external stakeholders exhibit destructive behaviour as management chooses options that primarily lead to their personal benefit. As Andrew Haldane, Executive Director for Financial Stability and the Bank of England pointed out, banks are especially characterised by high risks and high returns, with the returns being reaped primarily by the bank's managers, secondly the bank's shareholders, and with the burden of the risk incurred falling on society (Haldane, 2011).

Literature suggests that executive management compensation initiatives are typically aligned with equity-based measures of company performance, but in banks the use of equity incentives has led to managers maximising their personal short-term gains while exposing society, and to a lesser extent the shareholders, to the risk of bankruptcy. At the same time, that management is being incentivised to maximise returns without regard for risk in order for global banks to continue a long-running trend of increasing their size. When the financial crisis broke, the global banking system required one quarter of the global GDP for their temporary support (Haldane, 2011).

The study will examine the usefulness of the Economic Value Added measure of profit as a predictor of misaligned incentives and therefore its potential use as a measure of a bank's long-term success in weathering economic downturns. The study also samples the difference in the performance between South African and United States banks, providing useful depth by including both banks that failed and those that prospered during the financial crisis in the sample.

South Africa is ranked first in the world with respect to auditing and reporting, and fourth in terms of the country's financial market development according to the World Economic Forum's Global Competitiveness Report 2011/12 (World Economic Forum, 2012). In comparison to the United States, where two major banks failed and the third was the subject of an arranged buyout, South Africa's highly rated financial institutions have faired well according to the IMF, when they

praised South Africa's financial system as being sophisticated and fundamentally sound (International Monetary Fund, 2008).

1.4. Summary of introduction

In summary, the issue around executive remuneration in banks has received significant attention in the wake of the recent global financial crisis. Public concerns regarding executive remuneration has been focused on the growth of the levels of remuneration in contrast to the academic debate around the behaviour resulting from misaligned incentives. The ideal alignment of incentives for executives at large banks is especially difficult to define because the incentives not only need to align the interests of management and shareholder, but those interests also need to align with the interests of the society within which the bank operates. The traditional equity-based incentives would appear to benefit shareholders in the short term, but it may have the long-term effect of driving bank executives to take risky decisions to the detriment of both shareholders and the general public who would have to bail out bankrupt banks.

Economic Value Added (EVA®) is a broader measure of return that takes into account the cost of capital used to generate the profit. Aligning executive remuneration to EVA® in place of the more traditional equity based measures may assist in better aligning executive remuneration at banks with a wider set of stakeholders and not just short term shareholder's interests.

The next chapter provides background to executive remuneration and summarises issues that have arisen in executive remuneration, specifically at large banks, through a review of literature.

2. Chapter Two: Literature Review

2.1. Introduction

The focus of this study examines the relationship between bank executive remuneration and measures used to assess the performance of these financial institutions.

This chapter will review the literature pertaining to the research constructs addressed and explain their relevance to the topic at hand. The literature review will begin with the history and general concepts behind executive remuneration then consider issues behind executive remuneration at large banks including the role of executive remuneration in the 2008 financial crisis. The review then covers the case for basing executive remuneration on broader measures of profit such as EVA. Finally, the review will examine the situation of the South African financial services industry and executive remuneration within South Africa.

The review will concentrate on the principle-agent challenge and the role of misaligned incentives in the financial crisis that do not take into the account the risks poses to the greater society in the case of a large bank failure.

2.2. The role of executive management

Leadership of a complex organisation is a shared activity and combined inputs, capability and interactions of the executive management team all from part of the strategic decision making process (Hambrick, 2007).

2.3. Executive remuneration

2.3.1. Theory of incentives

The theory of incentives has its roots in Adam Smith's "Incentive Contracts in Agriculture" contained in his 1776 publication, "The Wealth of Nations", but it is Chester Barnard who can be credited with the first attempt to define the theory of incentives in the field of management contained in his book, "The Function of the Executive" (Laffont & Martimort, 2001).

Barnard (1938) described the roles of incentives as an essential element of an organisation as incentives drive the motivation of people to contribute their separate efforts to contribute towards a cooperative system. Barnard (1938) also noted that not only is the granting of adequate incentives a critical requirement for organisational success, but that the arrangement of incentives is an “aspect of executive work that failure is most pronounced" (Barnard, 1938, p. 139)

2.3.2. Principle agent theory

This research paper is based on the principle agent theory and the assumption that by correctly aligning the interests of shareholders and managers, the firm will improve in performance and efficiency in the long term. The foundation of the principle agent theory is that shareholders of a corporation (principles) and the managers who exert control over the corporation (agents) have different interests and preferences for risk. In addition, the principle has less available information than the agent and therefore cannot always ensure the agent is always acting in the principles best interests, especially in the case where the agents actions may be costly for the principle to observe (Bebchuk & Fried, 2006). Principle agent theory has been the basis for most models of corporate governance (Fama & Jensen, 1983). According to Abowd, (1990) the principle controls the trade-off between better management and increased compensation cost by adjusting the level of performance sensitivity in the agent compensation contract.

In his paper on Bank CEO incentives and the credit crisis, Fahlenbrach and Stultz (2011) support the use of principle agent theory through the use of equity based incentives, stating that economists and corporate governance experts since Adam Smith considered that the managements and shareholders’ interests best aligned “if manager's compensation increases when shareholders gain and falls when shareholders loose” (Fahlenbrach & Stultz, 2011, p. 12).

Although both financial and non-financial measures are typically used to align the interest of the principle and the agent, of 177 United States companies included in a study of executive compensation, 161 explicitly used a measures of accounting profit as a performance measure in their annual bonus plans (Murphy K. J., 1999). Given that non-equity based performance has historically had a weak sensitivity to

performance, regulators and shareholders have encouraged the move to equity-based compensation. Equity-based compensation is strongly supported as a means that, in principle, can provide desirable incentives (Bebchuk & Fried, 2004), and supported by Murphy K. J., (1999) p. 36 ”stock ownership provides the most direct link between shareholder and CEO wealth”.

The conventional design of equity-based compensation has been based on granting options to purchase a certain number of firm shares at a specified price, otherwise known as stock options. Stock options are far from perfect in terms of a pay performance linkage mechanism as they allow the agent to obtain windfall gains as that result of share price movement that had little to do with the managers own performance. Typical remuneration plans allowed executives to benefit from general trends driving up market and industry share prices, thus rewarding executives even when their relative performance was poor. The second and more dangerous side effect of option-based compensation is the freedom given to executives to unwind their stock options, therefore allowing them to take advantage of short-term spikes in value. Compensation systems that allow executives to take advantage of short term spikes in share price encourages executive management to engage in short term gains at the cost of building long term sustainability, to the point where evidence exists linking executives ability to lock in short term gains and levels of earnings manipulation and financial misreporting (Bebchuk & Fried, 2004).

In a study using primary data to analyse the behavioural preference of the CEO "agent" for equity based compensation, CEO preference for equity-based compensation was positively related to both the length of time the CEO had spent at the company and the CEO's youth, while negatively associated with company share price volatility, current level of equity based compensation and the perception that the share price accurately represented the company value (Zajac, 1992). This research demonstrates that equity-based compensation has limits to its use when aligning the interests of agents an their principles.

The national context within which a firm operates has a significant impact on the use of equity-based incentives. The high use of equity-based compensation to align

the interests of the principle and the agent is a particular characteristic of the United States/United Kingdom Anglo Saxon corporate governance model. The United States has the highest average proportional use of equity incentives in their executive remuneration breakdown, accounting for 60% of the total remuneration package. Corporate governance structures vary across countries and these variations directly affect the degree to which equity based incentives are used to align incentives between the principle and agent (Allcock & Filatotchev, 2010).

Table 1 below provides a breakdown of CEO compensation packages in international companies with revenues between $1billion-$3billion, displaying significant variation in equity incentive among countries.

Table 1 Large company CEO compensation breakdown sorted by equity incentive

Country	Fixed Pay %	Cash Bonus	Equity Incentive
United States	23	17	60
Brazil	27	41	32
France	44	25	31
Hong Kong	51	19	30
United Kingdom	40	38	22
Belgium	52	26	22
Netherlands	51	28	21
Italy	52	29	19
Japan	71	12	17
Germany	39	47	14
Ireland	44	43	13

Source (Allcock & Filatotchev, 2010)

2.3.3. Optimal contracting approach

The optimal contracting approach is often considered to be the official approach to setting executive remuneration guidelines (Bebchuk & Jesse, 2005). In the optimal contracting approach shareholders lack either expertise or incentive to lead the firms they own and therefore "the owners of a firm delegate the authority to make day-to-day operating decisions and set long-term corporate policy to a set of competent professional managers" (Otten & Heugens, 2007, p. 6). Because of the information asymmetry issue present in the principle-agent relationship, not all power is handed over to the firm's executive managers. In the optimal contracting approach, shareholders are relying on an independent corporate board made up of

professional managers who will set the executive pay arrangements as well as decide upon the hiring and firing of executives, guided solely by interests of the shareholders and any without interference from executive management. A well-designed contract will protect the interests of shareholders by motivating the executives to work on the owner's behalf by protecting their own self-interest (Otten & Heugens, 2007).

The principle of an arm's length or optimal contract underpins the most of the research into executive remuneration undertaken by financial economists. In spite of the importance of the optimal contracting approach as a premise for research into executive remuneration, the influence of managers over the supposedly independent directors has been widely recognised from legal organisational and sociological perspectives (Bebchuk & Jesse, 2005).

2.3.4. Managerial power approach

The managerial power approach contrasts with the optimal contracting approach by recognising the role of the concept known as managerial power, whereby managers weld substantial power over their own remuneration arrangements (Bebchuk & Fried, 2004). The managerial power approach does not replace the optimal contracting approach but rather recognises that there are two opposite forces shaping compensation schemes. Market driven forces seek to maximise the value of the managerial compensation, while managerial power seeks to shift the arrangement towards an arrangement more favourable to management. The stronger the managerial power the further that the actual remuneration arrangement from the optimal contract. Therefore managerial power is often responsible for perverse incentives resulting in managers changing their firm's parameters in such a way that increases manager's pay but result in a loss of value to shareholders (Bebchuk & Fried, 2004).

Bhagat & Romano, (2009) Offer practical examples where attempts to align shareholders and managers interests through the use of equity incentives have failed due to short term equity incentives driving behaviours that only benefited to management. The authors recommend that equity incentives be modified so that the benefit is only passed to the executive in two to four years if the executive were

to leave the firm (Bhagat & Romano, 2009). Holmstrom, (2006) In his critique of Bhagat (2009) also recognises the role and influence played by managerial power but argues that this power is tempered by a dramatic rise in shareholder influence that began in the 1980s. He argues that the solution to the managerial power issue may not be wholesale reform of corporate governance. Instead, he says that the issue is highly complex and would be better resolved by ensuring that the board has access to formalised, audited and generally accepted account practices to incentivise the correct management behaviour (Holmstrom, 2006).

2.3.5. Company size and the labour market CEO pay

In their research into the spectacular growth of executive pay Gabaix and Landier (2008) researched possible causes behind the average Fortune 500 CEO's pay increasing over six times since the 1980s. Empirical evidence suggests that CEO pay is strongly associated with the size of the company, a conventional rule of thumb hold that CEO pay increases by 3% for every 10% increase in company size. Gabaix and Landier (2008) observed that relationship between firm market capitalisation and growth in salary was far stronger with CEO pay increasing at the same rate as growth in firm size. The combined increase in size of the firms magnifies the benefit of attracting a marginally more talented CEO, as even a small increase of 0.016% in value of a large cap firm such as GE valued at $362 billion generates substantial value, in this case $58 million, relative to CEO pay (Wessel, 2006).

2.4. Alignment of risks and rewards in the banking sector moral hazard

A moral hazard occurs when a task has been delegated from the principle to the agent and the principle looses the ability to control the actions of the agent when the agent's actions are no longer observable (Laffont & Martimort, 2001). According to Bebchuk & Spamann, (2010) there is a fundamental moral hazard problem caused by governments insuring bank depositors. Equity holders have a disproportionate incentive to incur risks, as shareholders will capture the full upside of the outcome; whereas the downside of the risk is partially mitigated by the government insuring the deposits should the bank go bankrupt. The moral

hazard problem is particularly severe for banks, as they tend to have many small widely dispersed creditors without the means or willingness to evaluate bank risk behaviour or solvency. Numerous academic papers have presented evidence that that deposit insurance increases the likelihood of bank failures, including Houston & Christopher (1995) and Barth, Caprio, & Levine (2006).

2.5. Leverage induced bank vulnerabilities

The 2008 financial crisis demonstrated the negative externalities created by highly leveraged financial institutions. Small decreases in asset value led to bank distress and insolvency in highly leveraged banks. These distressed banks were compelled to sell off assets in order to reduce their leverage. These asset sales placed pressure on the entire asset market, thereby transferring pressure to other previously healthy banks. Ultimately this systematic risk can lead to financial systems to freezing, causing severe repercussions for the rest of the economy (Admati, DeMarzo, Hellwig, & Pfleiderer, 2010).

2.6. Executive remuneration pay performance sensitivity

2.6.1. Remuneration components

WorldatWork, with 30,000 members, is the largest non-profit organisation dedicated to human resource issues. It defines a total reward model that places compensation as one of five key factors of a total reward structure that collectively describes the desires of employees. The total reward factors include:

- Compensation (Remuneration)
- Benefits
- Work-Life
- Performance and recognition
- Development and career opportunities

WorldatWork considers compensation as one of many factors that a firm has to deliver in order to attract, retain and motivate employees (WorldatWork, 2011).

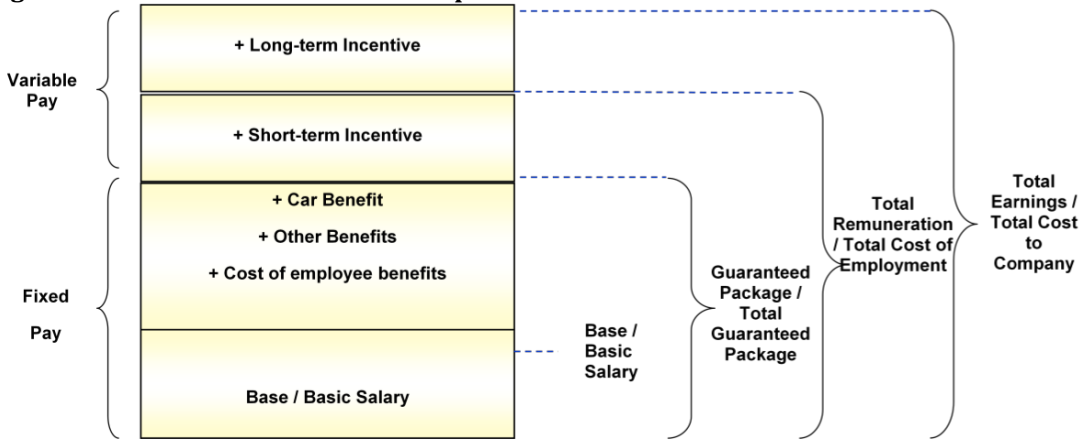
Figure 1: Total Rewards Model

(WorldatWork, 2011)

Among numerous academic models Armstrong and Brown (2006)'s total rewards model by distinguishes between transactional reward and relational rewards. The transactional rewards component maps to the compensation component of the WorldatWork, while the relational rewards map to the remaining rewards in the model. The transactional pay components are divided into three components, namely base pay, benefits and contingent pay.

Together with the previous literature examined citing the role of equity incentives and their uses, these remuneration components have been found to be importance when addressing role of executive remuneration.

Figure 2: Common Remuneration Components



Source (21st Century Pay Solutions, 2010)

Executive remuneration consists of both a fixed and a variable portion. The fixed pay portion consists of salary and other benefits not linked to performance, while the variable portion is varied according to certain measures of company performance (21st Century Pay Solutions, 2010).

2.7. Measuring corporate performance

Murphy's seminal work into corporate performance and managerial remuneration investigated two the measures of corporate performance, namely total shareholder returns and growth in sales, as key measurers of corporate performance (Murphy K. , 1985). Later studies building on Murphy's work expanded the definition of corporate performance to include a wider set of corporate performance metrics (Tosi, Warner, Katz, & Gomez-Mejia, 2000):

- Absolute financial performance
- Return on Equity (ROE) in both short and long term
- Return on Assets (ROA)
- Share price performance
- Market returns
- Internal performance indicator

Murphy's (1985) research strongly suggested that both firm sales and total shareholder returns were related strongly and positively to managerial compensation. It is advocated that the performance remuneration relationship should be assessed using the total compensation package as only including the omitting the long term incentives by only including base pay and short term bonuses omits useful performance sensitive components of the remuneration (Murphy K. , 1985). It must be noted that Murphy's study consisted of 73 United States manufacturing firms limiting the generalizability of his conclusions. A separate study analysing 100 firms selected for diversity points to a very different conclusion, overwhelmingly firm size accounts was found to have determined CEO pay (Tosi, Warner, Katz, & Gomez-Mejia, 2000). Abowd (1990), in his survey covering the top 75 employees of 600 corporations, found that there was a relatively weak relationship between accounting measures of firm performance and remuneration in contrast to a fairly strong relationship with remuneration and both economic and market measures of firm performance.

2.7.1. Return on Equity as a measure of bank performance

Since the late 1990s there has been increasing focus on return on equity (ROE) as a performance target, with major banks setting explicit ROE targets for their managers. These targets are revealing in terms of investor and managerial incentives. Since ROE is an entirely equity-focussed concept, ROE targets provide strong incentives for banks to increase equity returns. In the context of a bank increasing ROE may be achieved through increasing asset volatility or taking on additional debit. Therefore ROE is improved by additional risk-taking (Haldane, 2011). (Fahlenbrach & Stultz, 2011) Interestingly, one can conclude that there is no evidence to suggest that banks with more closely aligned shareholder incentives performed any differently over the course of the financial crisis.

2.7.1. Share price as a measure of bank performance

According to Fahlenbrach & Stultz, (2011) before the financial crisis in 2006, the typical United States bank CEO pocketed over $1 million for every 1% increase the value of their firm. The strong relationship between share price and managerial compensation was found in Murphy's (1985) analysis of 500 executives from 73 of

the largest United States manufacturing firms over the period 1964-1981. "The primary and indisputable conclusion of this paper is that firm performance, as measured by the shareholder's realized return, is strongly and positively related to managerial remuneration" (Murphy K. , 1985, p. 40).

2.7.1. EVA as a measure of bank performance

Economic Value Added (EVA®) is a registered, management performance measure pioneered by Stern Stewart & Company. EVA® measures the value generated in a company after all costs and expenses have been including the firm's cost of capital. In simplest terms, EVA® measures how much economic value in dollars the company is creating after taking into account only the cost of debt and equity capital. Thus EVA® is a measure of economic efficiency (Abdeen & Haight, 2002).

The EVA® approach contrasts with the traditional approach that are based on accounting profits and their relevant ratios, such as the return on equity (ROE) and the return on assets (ROA). Traditional performance measurement benchmarks do not consider the total cost of invested capital, often accounting for the cost of debit and not equity used to generate the profit (Kyriazis & Anastassis, 2007). Thus performance incentives based on EVA® better the interests of management and shareholders and “it is widely acknowledged that the fundamental shareholder-manager agency problem is not getting the CEO to work harder, but rather getting him to choose actions that increase rather than decrease shareholder value” (Murphy, 1999, p. 28).

Stern, Bennett, Stewart and Chew (1996) argue that because many large companies utilise a decentralised decision making process, top down measures of performance such as earning per share are obsolete. Stern *et al* argue that performance measures related to residual income are more appropriate because they ensures that managers take decisions that will increase the value of the firm.

Andrew G. Sutherland, a vice president of Stern Stewart, draws parallels between the roles of misplaced incentives in the 2008 financial crisis and the collapse of Enron. In the case of a bank such as Lehman Brothers, rewarding executive management based on an equity basis, earnings per share in this case, failed to

take into account the cost of equity capital. Thus management were rewarded each time they increased earnings by increasing leverage. As the leverage increased so did the opportunity cost of the shareholder's equity because the shareholders have the weakest claim to debit in the event of bankruptcy (Sutherland, 2009).

2.8. Failure of current performance incentives

Although the evidence for the role of performance incentives contributing to the credit crisis is mixed the argument is often raised by both banking regulators and academics.

The Financial Stability Board (FSB) of the Bank for International Settlements (BIS) acknowledges that unsound compensation practices led to the global financial crisis. The FSB noted in 2010 that that work was still required raise the standard of risk adjustment to remuneration. The FSB has subsequently released a set of recommendations that aim to adjust remuneration schemes based on risks incurred in generating returns (Basel Committee on Banking Supervision, 2011).

In his investigation into the structural causes of the global crisis, Crotty (2009, p. 565) cites the magnitude of executive bonuses as one of the "perverse incentives that create excessive risk exacerbate booms and generate crises". Crotty (2009) contrasts the bonus pools at the investment banks at the height of the boom in 2006 with the losses that occurred a year later. Examples cited included Goldman Sachs' 2006 bonus pool of $16 billion compared against the 2007 Wall Street investment banks loss of $11 billion, and Merrill Lynch employees receiving a bonus pool of $3.6 billion when the firm lost $35.8 billion. Both this investigation and the FSB emphasise their concern that it is rational for the executives at banks to engage in a high risk high return strategy if there is no possibility their bonuses would have to be returned should the downside materialise (Basel Committee on Banking Supervision, 2011). The recommendation from the FSB to adjust remuneration to take into account risk also recognises these shared concerns.

The FSB's recommendations on alignment of remuneration do not address the role of the shareholders in incentivising management to take on excessive risk. Hagendorff and Vallascas (2011) investigated bank CEO remuneration and risk-

taking regarding bank mergers, and it was found that that "executive remuneration at large banks encourages risk-shifting activities, whereby shareholders in systemically important banks encourage CEOs to undertake risk-increasing investment choices to extract wealth from regulators and bondholders" (Hagendorff & Vallascas, 2011, p. 1093). These findings suggested that increased shareholder involvement in setting executive compensation, e.g. the "say on pay" as stipulated by the Dodd–Frank Wall Street Reform and Consumer Protection Act, is unlikely to mitigate risk-taking in the banking industry. Bank shareholders find it optimal to offer CEOs risk-taking incentives that extract gains from other groups of bank creditors (Hagendorff & Vallascas, 2011).

In contrast with the prevailing view regarding incentives driving banks to take on excessive risk, Fahlenbrach and Stultz (2011) finds little evidence that executive remuneration policies are designed to encourage bank executives to engage in excessive risk taking. In contrast, Haldane (2011) provides solid examples of strong alignment of CEO incentives to increase equity returns. The median United States bank CEO had more than eight times the value of their total compensation in their portfolio in 2006 (Haldane, 2011). Haldane also cites Fahlenbrach and Stultz (2011), pointing out that the average bank CEO in the United States gained over a million dollars every 1% increase in firm's equity.

Haldane (2011) uses the evidence presented in (Fahlenbrach and Stultz (2011) to argue that the focus on increasing equity return through increasing leverage, and therefore risk, was one of the factors directly responsible for the financial crisis of 2008. "If banks seek to maximise shareholder value, they will seek bigger and riskier bets. Joint stock banking with limited liability puts ownership in the hands of a volatility junkie" (Haldane, 2011, p. 6).

Haldane (2011) again draws support for the argument that equity based incentives contributed to the financial crisis from Fahlenbrach and Stultz (2011) paper. Of the five investment banks with the largest equity positions held by the CEO, two failed, one was taken over, and two had banks were forced to become a bank holding companies to qualify for bailout money.

Haldane's (2011) assertions are backed by Crotty's (2009) description of the mechanism used by the banks to generate high returns, exposing the banks to equally high risk. In the four years leading up to the financial crisis, half of the return on equity was generated through higher leverage and not better return on investment, innovation or capital gains. By 2006, half of the debit held by United States investment banks was in the form of overnight borrowing that could be recalled at a moment's notice.

2.8.1. The case for a risk adjusted measures of performance – Basel III

The Basel Committee on Banking Supervision Financial Stability Board (FSB) has published a set of nine principles for the achievement of sound compensation practices at financial institutions. Principle four states that compensation at banks must be adjusted for all types of risk. The FSB therefore aims to ensure that compensation at financial institutions is aligned with prudent risk management, efficient oversight by authorities and aligns the interests of all stakeholders. The FSB cautions against the sole use of operational efficiency measures as they are regarded as especially unsuitable in the case of monitoring the performance of senior management, since they rarely capture the risks posed by the activity (Basel Committee on Banking Supervision, 2010).

The FSB recognises the movement towards the use of economic efficiency performance measures. These measures assess revenue earned against the capital absorbed by the activity being measured. Economic efficiency measures such as risk adjusted return on capital and net economic contribution have the ability to take into account at least a part of the risk such activities pose (Basel Committee on Banking Supervision, 2010).

2.8.2. South African financial services overview

The IMF (2009) considers South Africa's financial system to be sophisticated and fundamentally sound (International Monetary Fund, 2008). South Africa stands in contrast to many other countries where banks required support their central bank to remain liquid. The IMF has ascribed the steadiness of the South African Banks to

their low leverage, high profitability and low levels of exposure to foreign assets (International Monetary Fund, 2009). The high standard of South Africa's financial services and corporate governance standards is also recognised in the World Bank's international competitiveness rankings with the soundness of South African banks being rated as 2nd in the world and 1st for both the strength of auditing and reporting standards as well as the efficacy of corporate boards being rated as strongest in the world. Selected aspects of South Africa's global competitiveness rankings are presented in the below highlighting South Arica's relative sophistication in financial services and corporate governance (World Economic Forum, 2012).

Table 2: Selected South African global competitiveness rankings rank

Name	Value (7-highest)	Rank/144
1st Pillar Institutions		
Strength of auditing and reporting standards	6.6	1
Efficacy of corporate boards	5.8	1
Protection of minority shareholders' interests	6.0	2
8th pillar: Financial market development		
Legal rights index, 0–10 (best)*	10	1
Regulation of securities exchanges	6.5	1
Availability of financial services	6.4	2
Soundness of banks	6.7	2
Financing through local equity market	5.4	3

(World Economic Forum, 2012)

The South African Reserve Bank agrees with the IMF's reasoning regarding the stability of South African Banks, noting that farsighted regulation and risk management as well as low exposures to highly leveraged financial instruments shielded South African Banks from 2008 financial crisis. The role of regulations such as the National Credit Act, Financial Intelligence Centre Act and the King Governance Code all assisted in providing stability to the South African Financial system (South African Reserve Bank, 2010). The performance of South African Banks during the 2008 financial crisis stands in sharp contrast to their United States counterparts.

2.9. Summary of literature review

The literature review provided a summary the theories and issues around executive remuneration at large banks as well an overview of the reasons behind in regulator's proposals for realigning executive remuneration to better account for risk following the financial crash in 2008.

Principle agent theory was recognised as the theory underpinning most current models of corporate governance and key to understanding the basis of executive remuneration in general. Principle agent theory is dependent on the use of correctly aligned incentives with equity-based incentives widely used to align the interests of the principle and agent. The use of equity based incentives has unintended consequences when used to align the interests executive management at large banks with that of the shareholders. Partly these consequences are a result of the fact that the interests of shareholders and societies interests diverge in that the consequences of a large bank failure fall predominantly on society as governments are forced to provide bank bail out the packages rescuing the shareholders. These unintended consequences are a result of the highly leveraged capital structure of banks, numerous insured depositors and the potential for economic damage should a large bank fail. As a result of these consequences equity based incentives at banks encourage management to make risky decisions that do not benefit their organisations, shareholders or society in the long term.

The literature research examined research linking various factors also at play in determining executive remuneration apart from firm performance. The literature linking executive compensation to managerial power presents a clear logical argument but cannot prove that managerial power is to blame where executives receive generous compensation when firms fail to perform. A strong link between firm size and executive remuneration is found providing a strong incentive for executives to grow the size of their firms even at the expense of firm performance.

In the United States executive remuneration at banks was strongly linked to equity based incentives prior to the 2008 financial crisis. Equity based performance incentives could have introduced vulnerabilities into the banking through incentivising increased liquidity risk and leverage. Given the potential for damage

caused by poorly designed incentives the Basel III regulations recommended basing executive remuneration on risk-adjusted measures of performance such as EVA.

Lastly the literature describes the landscape of the South African financial services industry. This sector has been recognised internationally for its strength during the financial crisis and sophistication by both the IMF and the World Bank. Since the South African faired far better than the United States in the 2008 financial crisis, the research will attempt to discern differences in the alignment of the executive remuneration between the two countries.

The next chapter defines the research hypothesis to be researched.

3. Chapter Three: Research Questions

3.1. Introduction to research questions

The research questions follow from the issues raised around executive remuneration at banks in the literature review as well as the difference in the performance between the South African and United States banks. The research questions assessed the relationship between executive remuneration, Economic Value Added (EVA®) and equity based measures of performance such as return on equity (ROE) and share price. Secondly, the research questions evaluated whether the relationship between the abovementioned constructs has changed since the start of the financial crisis in 2007. Thirdly, the research questions examined the difference between the South African and United States sample banks in terms of their alignment between executive remuneration and relative alignment to either EVA® or ROE and share price. Lastly, the study tested whether, before the economic crisis, a relatively closer alignment between EVA® and executive remuneration compared to equity based measures of performance was a useful predictor of survival for United States banks.

3.2. Research questions and hypothesis

The literature suggested strong linkage between pay incentives and performance using principle agent theory. The financial crisis of 2008 has highlighted the dangers of incorrectly aligned performance incentives in the financial services industry.

Both academic and regulatory authorities repeatedly highlighted performance incentives based on Return on Equity (ROE) as a contributor to the failure of the banking system in the United States. In contrast the same sources recommend that incentives be based on broader measures of financial performance that at least partially take into account the risk incurred in generating returns. Economic Value Added (EVA®) is one measure that takes into account the cost of size of the funding used to generate a return.

The South African financial sector was relatively stable in contrast with the financial sector in the United States. Comparing the bank executive remuneration

alignment between the two country sample groups may lend support to the argument that incorrectly aligned incentives contributed to the financial crisis in 2008.

3.2.1. Research Question 1 SA bank correlations pre 2007

For the South African bank sample group, was the change in executive remuneration more closely correlated with EVA®, ROE or growth in share price before 2007?

3.2.2. Research Question 2 US bank correlations pre 2007

For the United States bank sample group, was the change in executive remuneration more closely correlated with EVA®, ROE or growth in share price before 2007?

3.2.3. Research Question 3 SA bank correlations post 2006

For the South African bank sample group, has bank executive remuneration has become less closely correlated with ROE and more closely correlated with EVA® after 2006?

3.2.4. Research Question 4 US bank correlations post 2006

For the United States bank sample group, has bank executive remuneration has become less closely correlated with ROE and more closely correlated with EVA® after 2006?

3.2.5. Research Question 5 failed bank correlations

For the United States bank sample group, is there is a statistically significant correlation between the bank's executive remuneration alignment to ROE or share price and likelihood of the bank failing during the financial crisis?

3.3. Summary of research questions

The study's research questions examined the relationship between executive remuneration, EVA®, return on equity and share price. The relationship between

the above constructs was also contrasted between the South African and United States bank samples. Lastly, the study tested whether a closer correlation between EVA® and executive remuneration is a useful predictor of a bank's ability to survive an economic downturn.

The next chapter lays out the research methodology used to test the research questions listed in this chapter.

4. Chapter Four: Research methodology

4.1. Research design introduction

The study took the form of a non-empirical exploratory quantitative study describing the relationships between constructs mentioned above.

The research design followed the findings contained in the literature review that suggesting that poorly aligned equity based performance incentives at banks contributed towards the 2008 financial crisis. It was suggested that banks with executive remuneration incentives aligned to a broader measure of profitability, such as Economic Value Added (EVA®) should have outperformed banks with poorly designed executive incentives.

The research took the form of a desktop study and was archival in nature, using secondary sources to provide the financial performance and executive remuneration data. The same secondary financial data was used build a view of the various banks performance with respect to the EVA® measure. The data was sourced from audited, public disclosed reports and should therefore have a high degree of credibility.

4.2. Method

Remuneration data for the United States bank sample was drawn from the annual proxy statement filing where by law a company must disclose information concerning the amount of compensation paid to its chief executive officer, chief financial officer and the three other most highly compensated executive officers.

The remuneration data for the South African banks sample was drawn from the McGregor BFA database, the database that covers the remuneration information of the bank's executive directors.

The sampled United States bank financial and share price information was drawn from either publically available standardised financial databases or from archived annual financial reports where the bank were no longer in existence. None of the South African banks in the sample group failed over the time period and all South

African financial and share price data was retrieved from the McGregor BFA database.

The research approach is *ex-post facto* in nature, with the focus on examining the characteristics of the variables rather than attempting to manipulate the variables (Blumberg, Cooper, & Schindler, 2008). The data was longitudinal with repeated observations of the same set of variables conducted over many time intervals (Blumberg, Cooper, & Schindler, 2008). The data was drawn annually for ten years from 2002 until 2011, a time period that includes the financial crisis occurring between 2007 and 2008.

The research aimed to prove, *ex post facto*, that a closer correlation between the independent available (executive remuneration) and independent variable (Economic Value Added) predicts the better performance of a bank.

The research approach described is sufficient to provide a meaningful result for the following reasons:

1. A quantitative approach allows the use of robust statistical techniques to perform regressions analysis
2. The literature suggests that there is a strong relationship between the dependant variable (executive remuneration) and the independent variables (equity based performance).
3. The archival nature of the variable data was readily available in regulatory filing and standardised databases.

4.3. Unit of analysis and population

The unit of analysis for this study is the organisation.

The population of the study included all listed banks in the world. This was determined by the fact that only listed companies are required to disclose their remuneration and financial performance. The limitation of the population was a function of this study examining the unique challenges in remuneration in large listed banks.

4.4. Sample metrics

The study's chosen metrics for the sample bank's performance EVA®, return on equity and share price, are all numeric quantities based on calculations performed on various financial indicators. Executive compensation is also expressed as a numeric quantity. Therefore the method of analysis will be quantitative in nature.

For the purposes of the this research and time constraints, executive compensation consisted of the fixed pay, benefits and short term incentives while omitting long term incentives. Ideally long-term incentives should be included in studies into CEO pay and performance but Lippert and Porter (1997) noted that many studies have only used fixed pay and short term incentives as measures of remuneration due to time constraints (Murphy K. , 1985).

Lippert and Porter (1997) as well as Murphy (1885) state that long term incentives should be included, however, many credible studies have only included short term incentives and long term compensation problematic to measure since the compensation amount is uncertain and only based on a future performance target at the time the compensation is awarded (Core, Holthausen, & Larcker, 1999) .

The specific indicators of company performance were limited to the following three measures, as suggested by literature:

1. Share price - price of a single share of stock at the end of the year being measured
2. Return on Equity - a ratio measuring a firm's efficiency in generating profit for each unit of shareholders equity
3. Economic Value Added - an estimation of economic profit.

4.5. Sample size and method

Two samples groups were used to contrast the experience of the South African Banking sector against the United States banking sector. The South African sample consisted of banks that meet all the following criteria:

1. Listed as a bank under the supervision of the South African Reserve Bank (SARB);
2. Listed on the JSE as either a
    a. Bank
    b. Investment bank on the JSE.
3. In existence since the start date

Although eight banks qualify to be in the South African sample, it is important to note that the banking sector is fairly concentrated within the four largest banks in South Africa, accounting for 84,6 percent of all assets in the banking sector (South African Reserve Bank, 2011).

Table 3: South African banks sample group

Name	JSE sector	Control
ABSA Group Limited	Bank	Foreign
Capitec Bank Limited	Bank	Local
FirstRand Group Limited	Bank	Local
Investec Bank Limited	Investment Bank	Local
Mercantile Bank	Bank	Foreign
Nedbank Limited	Bank	Local
Sasfin Bank Limited	Investment Bank	Local
Standard Bank of South Africa Limited	Bank	Local

The United States sample consists of banks or bank holding companies that met at least one of the following criteria:

1. Received funding under the Troubled Asset Relief Program (TARP) in October 2008.
2. Banks that were dissolved or purchased during the financial crisis in 2008.
3. Listed one of the seven largest bank holding companies by assets in 2011 by the United States Federal Reserve Bank.

The United States bank sample group stratifies the sample based on the effects of the 2008 financial crisis. The first group in the sample is made up of the banks that were dissolved or purchased during the financial crisis, the second group consists of the banks that received the initial Troubled Asset Relief Program (TARP) funding and the third group received no TARP funding. The confidence level of the

analysis was maximised through the inclusion of banks that successfully navigated the 2008 financial crisis as well as banks that failed.

Table 4: United States bank holding company sample group

Name	2008 crisis action taken
Bear Sterns	Dissolved
Bank of America	TARP Participant
Citigroup	TARP Participant
JP Morgan Chase	TARP Participant
Lehman Brothers	Dissolved
Merrill Lynch	Purchased
Metlife	No TARP take up
Wells Fargo	TARP Participant

Sources (Henry, 2009) and (National Information Centre, 2012)

4.6. Data collection

4.6.1. United States sample

In the case of remuneration data for the United States sample, the data will be sourced from the bank's Proxy Statement Pursuant to Section 14(a) of the Securities Exchange Act of 1934, with the Securities and Exchange Commission (SEC) also abbreviated as the DEF 14A. The DEF 14A lists the summary compensation for any person serving as Chief Executive Officer or Chief Financial Officer and the three other most highly compensated executive officers for the financial year.

United States financial data and data required for the calculation of EVA® requires the use of standardised financial statements and data including the share price beta. This information will be provided by the YCharts.com financial data service.

4.6.2. South African sample

For the South African sample, all data will originate from secondary sources. Financial information required for the calculation of executive remunerations for the South African banks was extracted from the McGregor's BFA database, as was the executive compensation information and the standardised financial statements used to calculate EVA®. Full disclosure of remuneration for company directors is a requirement of the King II governance code and a requirement for listing on the

JSE. King II was applicable from 2002 until King III superseded it in 2010, extending the remuneration disclosure requirement to include both company directors and the next three most highly paid executives (Grant Thornton, 2004).

4.6.3. Data analysis

The SPSS statistical software package was be used to analyse the data, test for normality and test the associations between executive remuneration, EVA®, ROE and the bank's share price growth.

Spearman's rank correlation coefficient is a nonparametric rank statistic used to measure the strength of association between two variables. "Spearman's coefficient is not a measure of the linear relationship between two variables.... It assesses how well an arbitrary monotonic function can describe the relationship between two variables, without making any assumptions about the frequency distribution of the variables" (Hauke & Kossowski, 2011, p. 89).

Spearman's coefficient can be used for ordinal variables measured. Spearman's coefficient does not require the relationship between the variables be linear or to be measured on an interval scales (Hauke & Kossowski, 2011).

The research tested for the following correlations:

1. EVA® and executive remuneration.
2. EVA® and growth in share price.
3. Executive remuneration and growth in share price.
4. Executive remuneration and return on equity.

4.7. Research Limitations

The research question is limited to banking sector organisations and the conclusions may not be extended to other industries sectors without more research due to the unique nature of banks, for example, their leverage and levels of regulation, the results of the research cannot be assumed to apply to other organisation types. The convenience sample is only drawn from largest banks listed on the JSE and the United States Federal Reserve and therefore the result cannot automatically be assumed to apply to other countries.

The research time frame is limited to ten years. Although this time period does cover an economic cycle covering a period of expansion, downturn and recovery the validity of the results could be greatly increased by extending the timeframe to cover multiple economic cycles.

The causal relationship between the variables is not examined in this study. Should the basis of the causal relationship change, the conclusions about the specific relationships would then need to be re-examined.

Data on failed bank was not available from the same publically available databases as the banks that survived the financial crisis. The data for the failed banks was gleaned from SEC filings and therefore may omit any standardisation that was applied to the surviving banks.

4.8. Research method conclusion

The research method provided direction in searching for and analysing data addressing the research questions raised in the preceding chapter.

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

5. Chapter Five: Research Results

5.1. Introduction

The research results chapter will concentrate on a broad description of the data as well as the descriptive statistics used in answering the differences in executive remuneration and EVA® at banks.

5.2. Description of the sample

The final sample was made up of 16 banks, split evenly between banks based in the United States and those based in South Africa. The financial data was sampled on an annual basis over their individual financial reporting cycle through the period 2002-2011. Three of the United States Banks did not survive the financial crisis in the same form as they entered the crisis. In 2008 Bear Stearns was sold to JP Morgan Chase, Merrill Lynch sold to Bank of America and Lehman Brothers declared bankruptcy. In contrast the South African bank sample group did not experience any failures over the sample timeline. Firstly a basic analysis of the data for each of the constructs under discussion is presented, the correlations for each research question are then presented.

5.3. Company performance descriptive statistics

The statistical analysis sought to explore the relationship between the chosen independent variable, executive remuneration and the dependant variables describing company performance, namely Economic Value Added, share price and return on equity. All the variables are continuous in their nature. The calculation for Economic Value Added calculation required inputs from each banks income statement, balance sheet as well as external metrics such as the firm share price beta.

Either the Pearson's Product-Moment correlation or Spearman's Rank-Order correlation calculation could be appropriate in determining the relationship between the independent and dependant variables. Pearson's Product-Moment Correlation assumes the data to be sufficiently normally distributed. Since the data was not found to be sufficiently normally distributed, Spearman's Rank-Order

Correlation was then most appropriate to calculation to determine the relationship between the independent and dependent variables. The sample data means and standard deviations are first presented in tables of figures and later in a graphical format with a polynomial trend line.

Table 5: Descriptive Statistics - South African sample data (mean)

Year	ROE	Remuneration (R)	EVA®(R'000)	Share Price (R)
2002	17,60	3 114 583	1 270 387	40,44
2003	2,32	2 799 417	(1 580 243)	27,84
2004	14,25	3 912 563	2 088 179	41,75
2005	17,73	3 754 733	3 504 240	59,93
2006	20,17	5 718 792	3 657 174	88,19
2007	19,72	6 927 704	5 338 447	66,02
2008	17,44	7 103 615	5 186 720	50,65
2009	13,94	5 958 521	3 137 246	54,75
2010	13,42	6 506 021	3 016 519	67,80
2011	15,17	7 500 073	3 937 671	79,07

Table 5 above describes the sample means for average executive remuneration and performance indicators of the selected South African banks over the period 2002 to 2011.

Table 6: Descriptive Statistics - South African sample data (standard deviation)

Year	ROE	Remuneration (R)	EVA®(R'000)	Share Price (R)
2002	18	1 943 769	1 384 333	5 130
2003	2	2 473 621	8 625 961	2 959
2004	14	2 733 503	2 342 842	4 393
2005	18	2 201 966	4 439 583	5 911
2006	20	2 645 271	3 445 848	9 477
2007	20	4 082 298	5 097 235	5 007
2008	17	3 789 805	5 148 778	3 966
2009	14	2 866 806	4 131 136	4 900
2010	13	2 763 744	2 801 346	5 103
2011	15	2 995 562	3 710 117	6 333

Table 6 above describes the sample standard deviations for average executive remuneration and performance indicators of the selected South African banks over the period 2002 to 2011.

Table 7: Descriptive Statistics - United States sample data (mean)

Year	ROE	Remuneration ($)	EVA®($'000)	Share Price ($)
2002	13,58	5 301 656	(2 065 725)	74,37
2003	17,95	7 411 259	(342 702)	97,41
2004	15,37	6 880 150	(19 212 855)	104,22
2005	16,59	8 224 171	(1 267 859)	110,04
2006	18,45	9 759 916	(1 033 659)	132,57
2007	11,27	5 176 860	(36 715 292)	86,25
2008	4,37	4 783 346	(17 802 052)	29,84
2009	0,87	5 426 870	(6 300 929)	30,43
2010	4,62	4 425 185	(13 580 225)	35,70
2011	6,91	5 651 109	42 788 548	24,77

Table 7 above describes the sample means for average executive remuneration and performance indicators of the selected United States banks over the period 2002 to 2011.

Table 8: Descriptive Statistics - United States sample data (standard deviation)

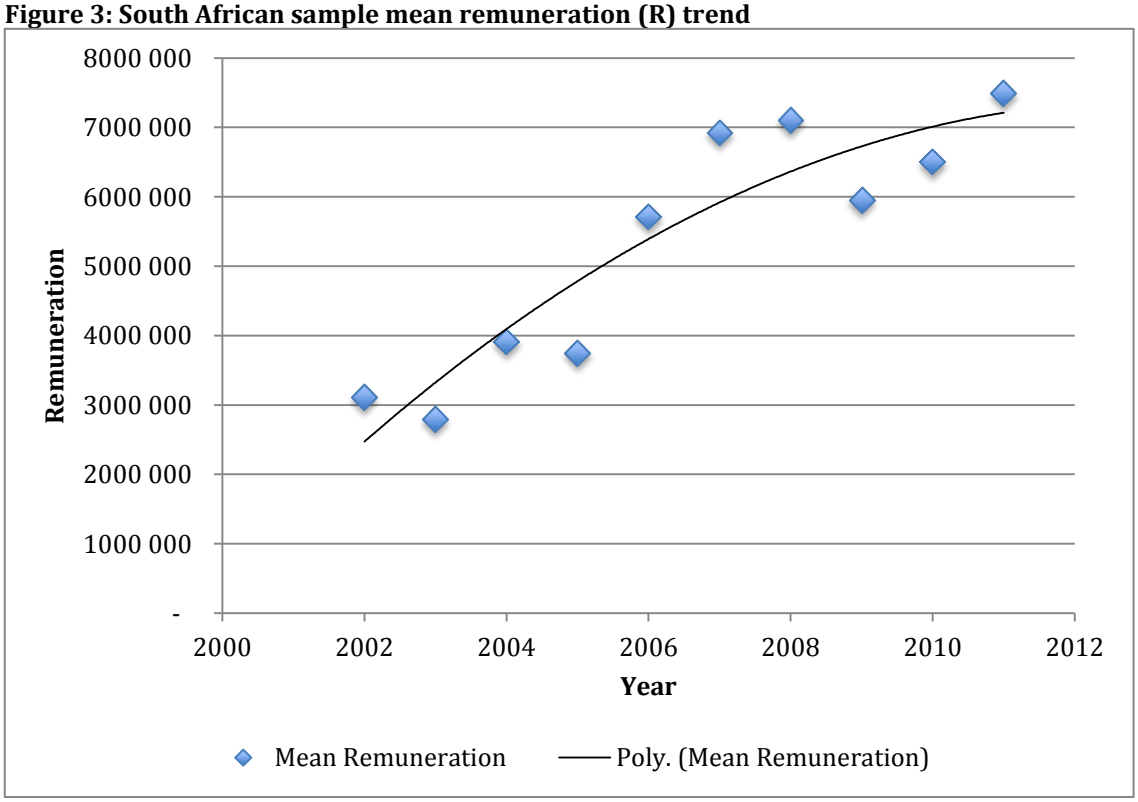
SD	ROE	Remuneration ($)	EVA®($'000)	Share Price ($)
2002	5,82	3 931 637	5 795 104	106
2003	3,57	4 688 360	5 665 888	147
2004	3,99	3 434 192	49 186 763	144
2005	3,71	3 072 410	5 901 193	144
2006	3,15	5 732 104	6 676 341	164
2007	6,06	6 257 082	84 953 061	80
2008	2,78	5 318 832	13 470 445	20
2009	6,10	3 230 178	25 768 902	9
2010	5,34	2 965 773	25 678 467	12
2011	5,66	1 636 745	84 703 402	10

Table 8 describes the sample standard deviations for average executive remuneration and performance indicators of the selected United States banks over the period 2002 to 2011.

5.4. Banks executive remuneration sample description

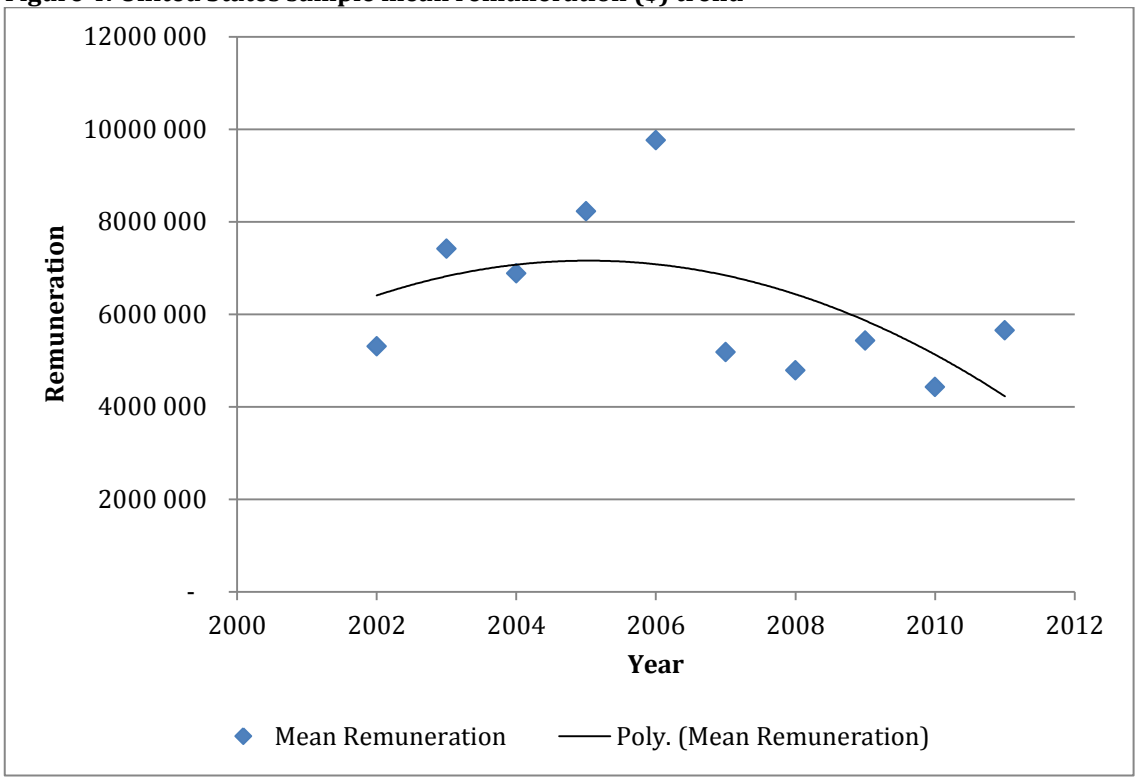
The polynomial trend line for the average executive remuneration at South African banks shows a strong continuous upwards trend from approximately R3,1 million to R7,5 million over the ten years but with relatively slower growth from 2007 onwards.

Figure 3: South African sample mean remuneration (R) trend



United States mean bank executive remuneration steadily rises from 2001-2006 but rapidly falls to below 2001 levels in 2007 with a negligible net gain of 7% over the entire period. The slump from 2007 onwards in United States executive remuneration stands in strong contrast to the experience of steady increase South African executive's remuneration.

Figure 4: United States sample mean remuneration ($) trend

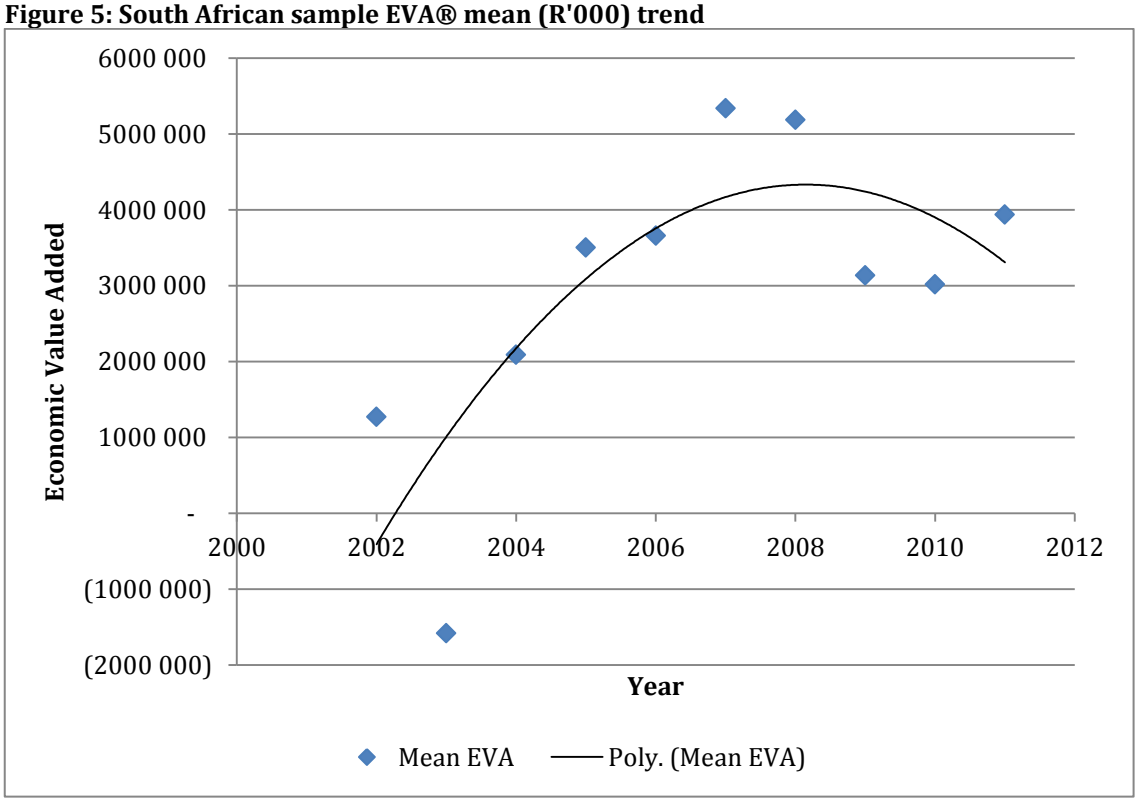


South African bank executive compensation contrasts strongly with that of their United States counterparts. Although bank executives in both countries faced a drop in earnings in 2007 the United States sample salary drop was far more dramatic and without recovery ending at 2002 levels. In contrast the South African Bank executives experienced only a minor setback in remuneration in 2007 and more than doubled their remuneration over the same period.

5.5. Economic Value Added sample description

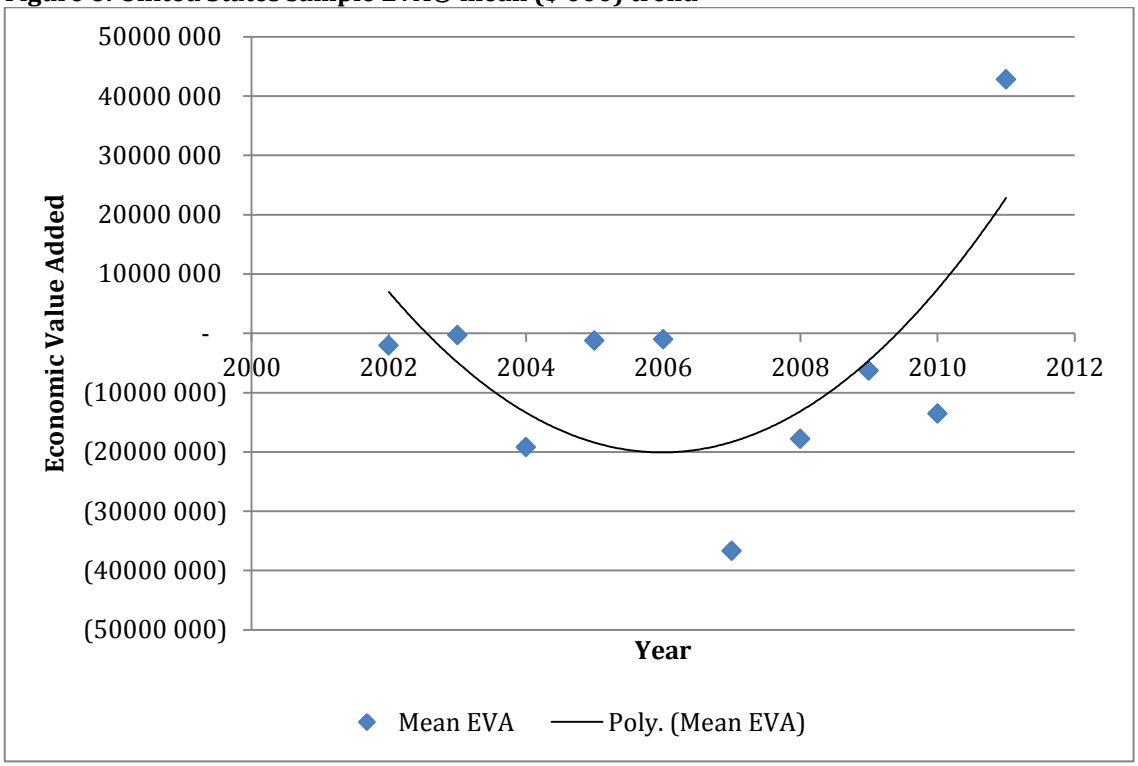
The polynomial trend line for the average Economic Value Added at South African banks shows a rapid growth from approximately R1 billion in 2001 to a peak of over R4 billion in 2008, then a steady decline over the remainder of the sample period, remaining above the R3 billion mark.

Figure 5: South African sample EVA® mean (R'000) trend



The United States EVA® mean trend falls dramatically from negative $2 billion to a low of negative $36 billion before 2007. Only in 2011 does the average EVA® became substantively positive at $42 billion.

Figure 6: United States sample EVA® mean ($'000) trend

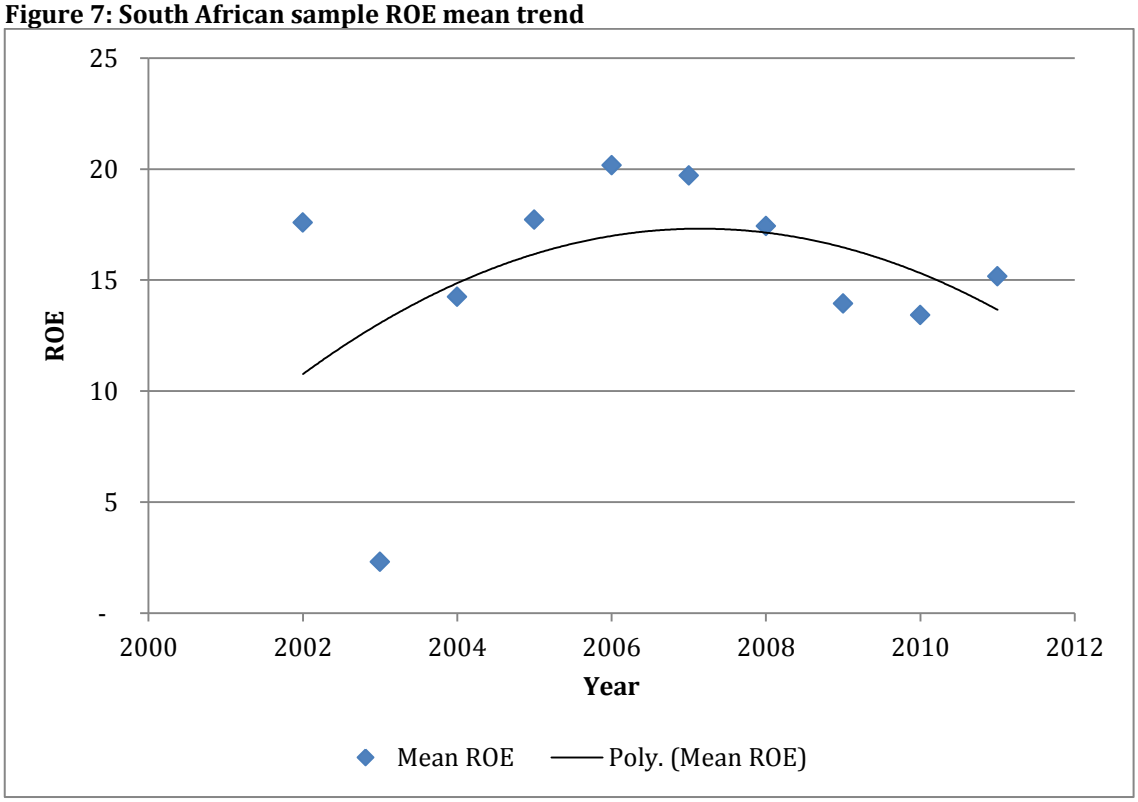


The United States and South African bank EVA® trends are almost exact opposites of each other with South African banks maximising their EVA® in 2007 in the same year that United States banks incurred their largest destruction of EVA®. These opposite trends are again reflected in the longer term polynomial trend lines where the United State sample has a concave shape bottoming in 2007 as against the South African Sample with a convex shape peaking in 2007.

5.6. Return on Equity sample description

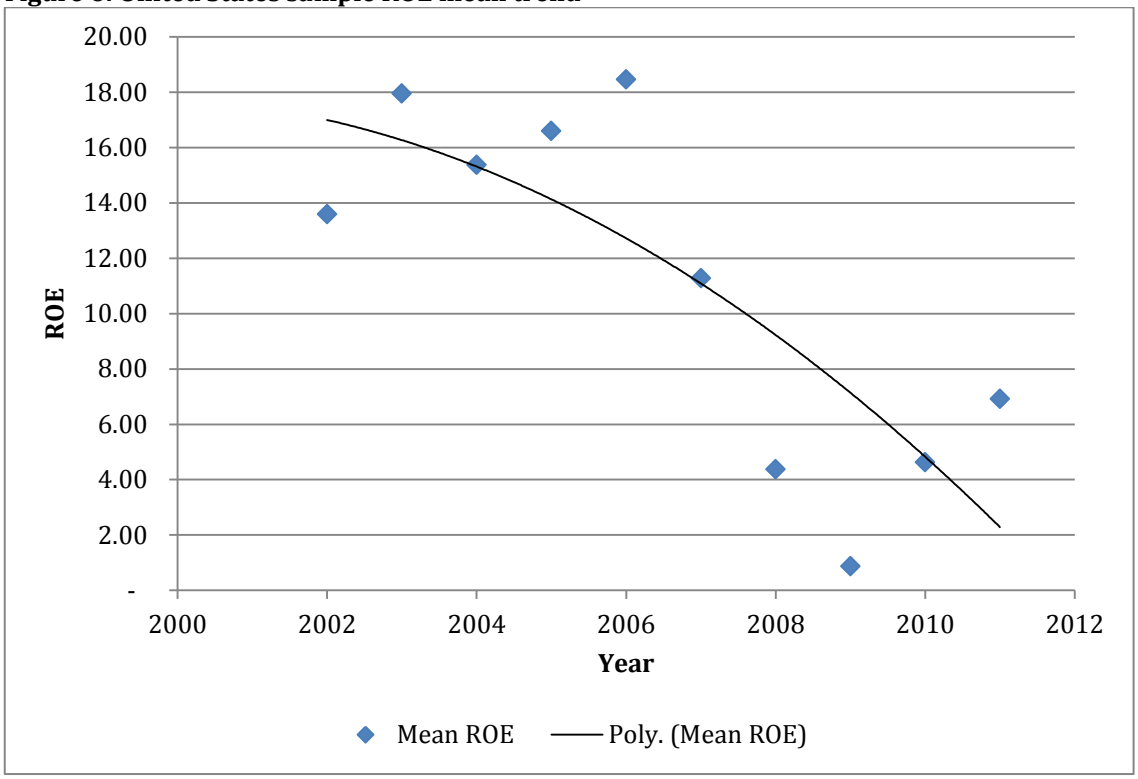
The polynomial trend line for the average returns on equity at South African banks starts at 18%, steadily rising to a peak at 2006 of 20% and slowly declines to 15% in 2011. The South African sample ROE and EVA® trend lines follow the same shape, steadily rising and peaking at 2007 and then steadily declining thereafter.

Figure 7: South African sample ROE mean trend



The United States ROE trend has shown an accelerating decline over the sample period with a net reduction in ROE of 15% over the sample period from 17% ROE in 2002 to almost 2% ROE in 2011. The United States sample ROE declines at a faster rate than the South African sample.

Figure 6: United States sample ROE mean trend

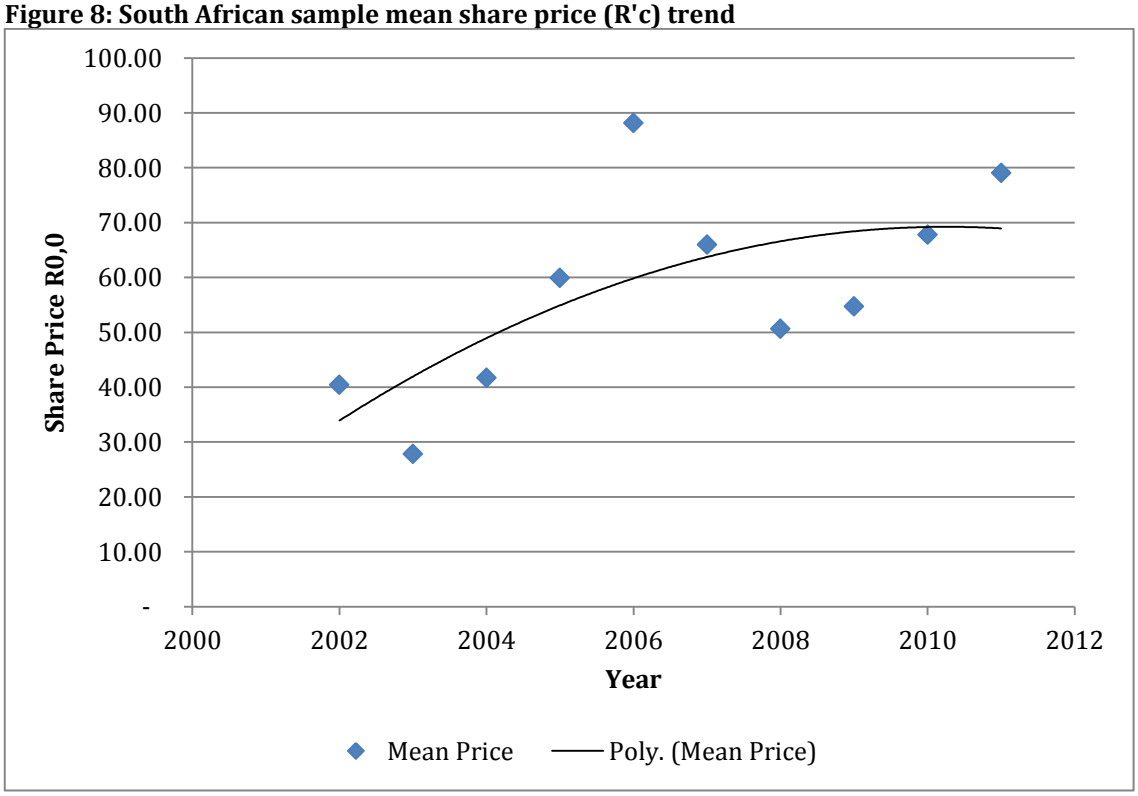


The South African bank sample is far more stable in comparison to the United States sample maintaining a range of 13%-20% except for 2003. In comparison the United States sample declines dramatically from 18,5% down to 1% from 2006 to 2009. By the end of the sample period at 7% the US banks are still well below the ROE of their South African counterparts at 15%.

5.7. Share price sample description

The polynomial trend line for South African bank's share price rises from 2002 until 2010, where the average share price levels off in spite of a sharp drop in average share price from 2007 to 2009. The mean bank share price doubles over the sample time period.

Figure 8: South African sample mean share price (R'c) trend



In the United States bank sample, mean share price rises from $75 in 2002 peaking in 2006 at $133, thereafter falling dramatically to $25 in 2001. In contrast to the doubling in average share price for the South African banks, the United States banks experienced a decline of 66% over the same period.

Figure 9: United States sample mean share price ($) trend

The United States banks experienced a deep and sustained decline in share prices during the financial crisis. In comparison the South African banks are only 10% below their pre crisis high. It is notable that the United States banks have continues to experience a decline in share price falling below the 2007/2008 level, in comparison the South African banks have experienced three successive years of increasing share price.

5.8. Tests for normality

A Pearson's correlation makes the assumption that both variables are approximately normally distributed (Lund Research Ltd, 2012).

Table 9: Test for normality of EVA® data

Tests of Normality						
	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
EVA	.320	68	.000	.479	68	.000

In table 9 the Shapiro-Wilk test for normality on the EVA® data returns a significance of 0.00, below the threshold of p=0.05. Therefor the EVA® data cannot be assumed to be normally distributed (Lund Research Ltd, 2012).

Table 10: Test for normality of remuneration data

Tests of Normality						
	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Remuneration	.108	148	.000	.924	148	.000

In table 10 the Shapiro-Wilk test for normality on the remuneration data returns a significance of 0.00, below the threshold of p=0.05. Therefor the remuneration data cannot be assumed to be normally distributed (Lund Research Ltd, 2012).

Neither the EVA® nor the Remuneration data was found to be normally distributed as assessed by Shapiro-Wilk's test (p > .05). To calculate confidence intervals or hypothesis tests using Pearson's correlation coefficient it is necessity to assume both variables have a normal distribution. However, Spearman's correlation coefficient does not require the assumption of normality therefore chose to use Spearman's in place of Pearson's coefficient. Spearman's correlation gives as much information as Pearson's coefficient and has the advantage of having wider validity (Altman, 1991). Spearman's correlation is the nonparametric version of the Pearson product-moment correlation, measuring the strength of association between two ranked variables (Lund Research Ltd, 2012).

5.9. Research Question 1 SA bank correlations pre 2007

The relationship between executive remuneration and EVA®, ROE and share price for the South African bank sample group before 2007 was investigated using the Pearson product-moment correlation coefficient.

Table 11: South African bank correlations 2002-2006

Correlations						
			Remuneration	EVA	ROE	Price / Share (C)
Spearman's rho	Remuneration	Correlation Coefficient	1.000	.592**	.293	.346*
		Sig. (2-tailed)	.	.000	.067	.029

		N	40	39	40	40
**. Correlation is significant at the 0.01 level (2-tailed).						
*. Correlation is significant at the 0.05 level (2-tailed).						

Table 11 above describes the remuneration correlations for South African banks before the onset of the financial crisis. Executive remuneration is strongly correlated with EVA® and moderately correlated with share price.

According to (Pallant, 2010) the following guidelines indicate the strength of the relationship: small or weak, r =.10 to .29, medium or moderate r =.30 to .49, and strong, r =.50 to 1. Therefore the change in executive remuneration exhibited a moderate relationship to share price and a strong relationship to EVA.

The executive remuneration at South African banks before 2007 was strongly correlated with EVA® with a less than 1% chance the strength of the relationship happened by chance if the null hypothesis was true. A weaker moderate correlation relationship between share price and remuneration was also found. At a 5% chance that the strength of the relationship occurred by chance if the null hypothesis was true.

5.10. Research Question 2 US bank correlations pre 2007

The relationship between executive remuneration and EVA®, ROE and share price before 2007 was investigated for the United States bank sample group.

Table 12: United States bank correlations pre 2002-2006

Correlations						
			Remuneration	EVA	ROE	Price / Share (C)
Spearman's rho	Remuneration	Correlation Coefficient	1.000	-.131	.067	.712**
		Sig. (2-tailed)	.	.421	.682	.000
		N	40	40	40	40
**. Correlation is significant at the 0.01 level (2-tailed).						
*. Correlation is significant at the 0.05 level (2-tailed).						

Table 12 above describes the remuneration correlations for United States banks before the onset of the financial crisis. Executive remuneration is strongly correlated with share price.

The executive remuneration at United States banks before 2007 was strongly correlated with share price at a 0.01 level with less than a 1% chance that the strength of the relationship happened by chance if the null hypothesis was true.

5.11. Research Question 3 SA bank correlations post 2006

The change in correlation between executive remuneration, ROE, EVA® and share price was examined in South African bank sample group comparing correlations before and after 2007.

Table 13: South African bank correlations 2002-2006

Correlations						
			Remuneration	EVA	ROE	Price / Share (C)
Spearman's rho	Remuneration	Correlation Coefficient	1.000	.592**	.293	.346*
		Sig. (2-tailed)	.	.000	.067	.029
		N	40	39	40	40
**. Correlation is significant at the 0.01 level (2-tailed).						
*. Correlation is significant at the 0.05 level (2-tailed).						

Table 13 above describes the remuneration correlations for South African banks before the onset of the financial crisis. Executive remuneration is strongly correlated with EVA® and moderately correlated with share price.

Table 14: South African bank correlations 2007-2011

Correlations						
			Remuneration	EVA	ROE	Price / Share (C)
Spearman's rho	Remuneration	Correlation Coefficient	1.000	.663**	.052	.380*
		Sig. (2-tailed)	.	.000	.752	.016
		N	40	40	40	40
**. Correlation is significant at the 0.01 level (2-tailed).						
*. Correlation is significant at the 0.05 level (2-tailed).						

Table 14 above describes the remuneration correlations for South African banks after the onset of the financial crisis. Executive remuneration is again strongly correlated with EVA® and moderately correlated with share price.

The relationship between EVA® and executive remuneration at South African banks before 2007 was already strong and the strength of the relationship increased in the post 2007 period with a less than 1% chance that the strength of the relationship happened by chance if the null hypothesis was true. The relationship between executive remuneration and share price strengthened slightly over the same period. ROE was only weakly correlated with executive remuneration before 2007 and even less correlated after 2007.

5.12. Research Question 4 US bank correlations post 2006

The change in correlation between executive remuneration, ROE, EVA® and share price was examined in United States bank sample group comparing correlations before and after 2007.

Table 15: United States bank correlations 2002 - 2006

Correlations						
			Remuneration	EVA	ROE	Price / Share (C)
Spearman's rho	Remuneration	Correlation Coefficient	1.000	-.131	.067	.712**
		Sig. (2-tailed)	.	.421	.682	.000
		N	40	40	40	40
**. Correlation is significant at the 0.01 level (2-tailed).						
*. Correlation is significant at the 0.05 level (2-tailed).						

Table 15 above describes the remuneration correlations for United States banks before the onset of the financial crisis. Executive remuneration is strongly correlated with share price.

Table 16: United States bank correlations 2007 - 2011

Correlations						
			Remuneration	EVA	ROE	Price / Share (C)
Spearman's rho	Remuneration	Correlation Coefficient	1.000	.205	.338	-.061
		Sig. (2-tailed)	.	.295	.079	.759
		N	28	28	28	28
**. Correlation is significant at the 0.01 level (2-tailed).						
*. Correlation is significant at the 0.05 level (2-tailed).						

Table 16 above describes the remuneration correlations for United States banks after the financial crisis. Executive remuneration has no correlations with any of the constructs in this research.

Significant change occurred between the correlation of executive remuneration with regards to ROE, EVA® and share price for the United States bank sample group before comparing the pre and post 2007 data. The correlation between executive remuneration and share price fell from a strong to a non-existent correlation after 2007. From 2007 onwards no statistically significant relationship exists between remuneration and any of the variables being tested.

5.13. Research Question 5 failed bank correlations

For the United States bank sample group, is there is a statistically significant correlation between the bank's executive remuneration alignment to ROE or share price and likelihood of the bank failing during the financial crisis.

All bank failures during the financial crisis occurred after 2007 before the failed banks could report their 2008 results. Within the sample of all the banks that failed every bank that failed was also based in the United States.

Table 17: Bank crisis survivor correlations 2002-2006

Correlations						
			Remuneration	EVA	ROE	Price / Share (C)
Spearman's rho	Remuneration	Correlation Coefficient	1.000	.292*	.205	.156
		Sig. (2-tailed)	.	.010	.072	.173
		N	78	77	78	78
**. Correlation is significant at the 0.01 level (2-tailed).						
*. Correlation is significant at the 0.05 level (2-tailed).						

Table 17 above describes the remuneration correlations for all banks in the sample that survived the financial crisis, before the crisis occurred. Executive remuneration has only a weak correlation with EVA.

The executive remuneration data set pre 2007 for both South African and the United States banks that survived the financial crisis only had a statistically significant weak relationship between remuneration and the EVA® variable. The

EVA® remuneration relationship has a less than 5% chance that the strength of the relationship happened by chance if the null hypothesis was true. The South African bank 2002-2006 sample had a high correlation with EVA® may have influenced the findings, the group was refined to only include United States banks.

Table 18: United States bank crisis survivor correlations 2002-2006

Correlations						
			Remuneration	EVA	ROE	Price / Share (C)
Spearman's rho	Remuneration	Correlation Coefficient	1.000	.002	-.065	.659**
		Sig. (2-tailed)	.	.993	.731	.000
		N	30	30	30	30
**. Correlation is significant at the 0.01 level (2-tailed).						
*. Correlation is significant at the 0.05 level (2-tailed).						

Table 18 above describes the remuneration correlations for the United States banks in the sample that survived the financial crisis, before the crisis occurred. In this sample executive remuneration has a strong correlation with share price.

The executive remuneration dataset for pre 2007 United States banks that survived the financial crisis had a statistically significant strong relationship between remuneration and the share price variable. The share price remuneration relationship has a less than 1% chance that the strength of the relationship happened by chance if the null hypothesis was true.

Table 19: Failed United States bank correlations 2002-2006

Correlations						
			Remuneration	EVA	ROE	Price / Share (C)
Spearman's rho	Remuneration	Correlation Coefficient	1.000	-.183	.286	.412
		Sig. (2-tailed)	.	.468	.250	.090
		N	18	18	18	18
**. Correlation is significant at the 0.01 level (2-tailed).						
*. Correlation is significant at the 0.05 level (2-tailed).						

Table 19 above describes the remuneration correlations for the United States banks in the sample that were bankrupt or merges during the financial crisis,

before the crisis occurred. In this sample executive remuneration has no correlation with any of the constructs being examines in this research.

The executive remuneration dataset for failed United States banks that did not survive the financial crisis had no statistically significant relationships between remuneration and any other variables.

5.14. Summary of results

The statistics indicate that executive remuneration alignment clearly and consistently differs between countries according to the measures of corporate performance examined in the study. United States bank executive remuneration is strongly aligned to equity based incentives in comparison to South African banks being strongly aligned towards EVA®.

The results of question one revealed that executive remuneration at South African banks correlated strongly with EVA® before the financial crisis. Question two contrasted the South African banks and their United States counterparts before the onset of the financial crisis and found the United States data executive remuneration strongly correlated with share price and had no correlation with EVA®. After the financial crisis in the post 2007 period, South African banks increased the degree of correlation between EVA® executive remuneration, while over the same period the United States sample banks lost their previous correlation between executive remuneration and share price. Post 2007 the executive remuneration at United States banks had no statistical significant relationships with any of the constructs under study.

Analysing the differences between the United States banks that survived the financial crisis and those that failed during the crisis the surviving banks had a stronger relationship between remuneration and share price than those banks that failed.

Table 20: Summarised United States remuneration correlations

Correlation Metric	All US bank pre crisis	Survivor US bank pre crisis	Failed US bank pre crisis	Survivor US bank post crisis
EVA	-0.131	.002	-0.183	0.205
ROE	0.67	-.065	0.286	0.338

Share price	0.712**	.659**	0.412	-0.061

**. Correlation is significant at the 0.01 level (2-tailed).
*. Correlation is significant at the 0.05 level (2-tailed).

Executive remuneration is strongly correlated to the share price for the United States sample banks before the financial crisis. The banks that later failed has no statistically significant correlation. After the crisis surviving banks have loose correlations with all the constructs under study.

Table 21: Summarised South Africa remuneration correlations

Correlation Metric	SA bank pre crisis	SA bank post crisis
EVA	0.592**	0.663**
ROE	0.293	0.052
Share price	0.346*	0.380*

**. Correlation is significant at the 0.01 level (2-tailed).
*. Correlation is significant at the 0.05 level (2-tailed).

In contrast to the United States sample the South African bank sample are strongly correlated with EVA®, this relationship strengthens in the aftermath of the financial crisis.

The following chapter discusses the result of the findings presented in this chapter in the context of the academic theory described in the research's literature review.

6. Chapter Six: Discussion of research results

6.1. Introduction

Chapter six discusses the results of the research results presented in chapter five within the context of the academic literature presented in chapter two and the research objectives. Data on executive remuneration were gathered from publicly available filings and databases and tested for correlation with standardised financials and annual reports where required.

6.2. Sample Demographics

Executive remuneration at banks in both countries displayed strong positive growth in the period 2002 to 2006. From 2007 onwards, executive remuneration trends diverge with the United States remuneration plummeting 50%, while remuneration at South African Banks continued to grow until falling by 17% in 2009. United States mean bank executive remuneration rapidly fell to 2002 levels in 2007, with a negligible net gain of 7% over the period 2007 to 2011. The slump from 2007 onwards in United States executive remuneration stands in strong contrast to the experience of steady increase South African bank executive's remuneration over the same period.

Within the sample data the banks that failed during the financial crisis did so after 2007. All the failed banks within the sample were all based in the United States.

6.3. Discussion of research question 1 findings regarding SA bank correlations pre 2007

Question one examined the relationship between executive remuneration and EVA®, ROE and share price for the South African bank sample group in the time period between 2002 and including 2006. In table 11 the executive remuneration at South African banks before 2007 was found to be strongly correlated with EVA® and a moderate correlation between share price and remuneration and only a weak relationship with return on equity.

The close correlation of the South African bank executive remuneration to EVA® is in line with the FSB's recommendation to align executive recommendation with

economic efficiency performance measures as these performance measure have the ability to take into account at least a part of the risk such activities pose (Basel Committee on Banking Supervision, 2010). The weak correlation between executive remuneration and share price as well as the lack of alignment to ROE indicate that management and shareholders have avoided the use of simple equity incentives to align the interests of principles and agents. By avoiding simple equity based remuneration incentives bank executives are not as incentivised to focus on increasing equity return through increasing leverage, and therefore "seek bigger and riskier bets" (Haldane, 2011, p. 6). The close correlation between executive remuneration and EVA® is consistent with South Africa's internationally highly regarded financial services and corporate governance (World Economic Forum, 2012)

6.4. Discussion of research question 2 findings regarding US bank correlations pre 2007

The relationship between executive remuneration and EVA®, ROE and share price in the period 2002 to 2007 before the financial crisis was investigated for the United States bank sample group. The analysis presented in table 12 found that executive remuneration at United States banks before and including 2006 was very strongly correlated with share price with no correlation towards EVA® or return on equity.

The very strong correlation between executive remuneration and share price pre 2007 correlation United States banks are contrast dramatically with the South African bank's very strong relationship between EVA® and executive remuneration. The findings suggest that the United States banks made extensive use of short-term equity incentives to align the interests of management and shareholders. The finding aligns with Crotty's (2009) data contrasting the bonus pools at the investment banks at the height of the boom in 2006 with the losses that occurred a year later.

Crotty's (2009), (Haldane, 2011) and the FSB emphasise their concern that it is rational for the executives at banks to engage in a high risk high return strategy if

there is no possibility their bonuses would have to be returned should the downside materialise (Basel Committee on Banking Supervision, 2011).

6.5. Discussion of research question 3 findings - SA bank correlations post 2006

Research question 3 examined the change in correlation between executive remuneration, ROE, EVA® for the South African bank sample group before 2007 as depicted in table 13 and after 2006 as depicted in table 14.

The relationship between EVA® and executive remuneration at South African banks before 2007 was already strong and slightly increased in strength from 2007 onwards. The relationship between executive remuneration and share price also strengthened slightly over the same period. The relationship between executive remuneration and ROE was only weakly correlated with executive remuneration before 2007 and this correlation continued to weaken after 2007.

These results suggest that in response to the financial crisis, South African banks had increased their alignment of their executive remuneration policies to EVA®. It is logical to suggest that this increasing strength of correlation between executive remuneration policies and EVA® was a result of high standards of corporate governance.

6.6. Discussion of research question 4 findings - US bank correlations post 2008

The change in correlation between executive remuneration, ROE, EVA® and share price was examined in United States bank sample group, comparing correlations before and after 2007. Table 15 depicts correlations for the United States bank samples pre 2007 and table 16 depicts correlations for the United States bank samples post 2007.

In the pre 2007 United States bank sample group the only strong correlation was between executive remuneration and share price. Significantly, the correlation relationship between executive remuneration and share price fell from a strong to a non-existent correlation after 2007. No other statistically significant relationship

existed between remuneration and any of the variables being tested from 2007 onwards.

The lack of a strong relationship between executive remuneration and ROE, EVA® and share price may be a result of executives exerting managerial power, as described by Bhagat & Romano, (2009). In this case the bank executives may have succeeded in delinking the variable portion of their salary from unflattering performance indicators. Crotty's (2009), (Haldane, 2011) and the FSB emphasise the risk associated in aligning executive remuneration to equity, emphasising that, in banks, this alignment can incentivise unnecessarily risky decisions to maximise executive's remuneration.

6.7. Discussion of research question 5 finding - failed bank correlations

The United States bank sample group was analysed for a statistically significant correlation between the bank's executive remuneration alignment to ROE or share price and likelihood of the bank failing during the financial crisis.

The executive remuneration data set pre 2007 depicted in table 17, consisting of both South African and the United States surviving banks that survived had a statistically significant but weak correlation relationship between remuneration and the EVA® variable. The correlation with EVA® was probably driven by the South African bank sample with its strong correlation between EVA® and executive remuneration.

The executive remuneration dataset for pre 2007 in table 18 consisting of only United States banks that survived the financial crisis had a statistically significant strong relationship between remuneration and the share price variable.

The executive remuneration dataset for failed United States banks in table 19 that did not survive the financial crisis had no statistically significant relationships between remuneration and any other variables. No South African banks failed during the time sample time period.

The lack of correlation between EVA® and executive remuneration could not be considered a useful indicator of a bank's propensity to fail during a financial crisis

as neither the United States banks that survived nor those that failed during the crisis had any significant relationships between executive remuneration and EVA®.

6.8. Research hypothesis

The literature and research was based on a strong linkage between pay incentives and performance using principle agent theory. Equity based incentives provided the most common and direct mechanism to align the interests of the agent and principle. Because of bank's unique capital structure, explicit depositor guarantees and impact in society if they are to fail both academic and regulatory authorities repeatedly highlighted the danger of performance incentives based on equity incentivising executives to take decisions that increase executive remuneration at the cost of incurring disproportionate to shareholders and greater society. Remuneration based on share price or return on equity (ROE) is examples of these misaligned incentives that contributed to the failure of the banking system in the United States. The financial crisis of 2008 has highlighted the dangers of incorrectly aligned performance incentives in the financial services industry.

The BIS recommends that incentives be based on broader measures of financial performance that at least partially take into account the risk incurred in generating returns, such as Economic Value Added (EVA®). The South African financial sector had a strong correlation between executive remuneration and EVA® that strengthened after the financial crisis. The South African financial sector was also relatively stable in contrast with the financial sector in the United States. Comparing the bank executive remuneration alignments between the two country sample groups lends support to the argument that incorrectly aligned incentives contributed to the financial crisis in 2008. If incorrectly aligned incentives contributed towards the instability of the financial system, then the United States financial sector has not improved its remuneration policies as the remuneration at surviving banks does not correlate with EVA®, ROE or share price.

7. Chapter Seven: Conclusions and Recommendations

7.1. Summary of main findings

The failure of the banks in the United States had many causes, with excessive risk contributing towards the crash in 2008. South African banks, with their highly rated governance and internationally recognised stability, provide a useful contrast to United States banks. Academics and regulators have presented strong arguments drawing attention to the danger of misaligned incentives and the need for driving behaviour that benefits society, shareholders and management in the long run. The adage "correlation does not imply causation" still holds true when contrasting the remuneration correlations of United States and South African banks. There is substantial evidence that South African Banks are markedly better governed than their United States counterparts. The remuneration policies form an important part of corporate governance in that they drive the behaviour of executives, and therefore the long term survival of the firms run by these executives relies on correctly designed incentives that offset returns to reflect the risk incurred.

7.2. Recommendations

Large banks are special types of organisations due to their size as well as their disproportionate cost to society should they fail. The recommendations of the BIS regarding the aligning executive pay to risk adjusted measures of performance certainly has merit, as borne out by the contrasting experience of South African and United States banks during the financial crisis. Risk adjusted measures of performance such as EVA® should be calculated on an on-going basis using publically available information and indexed to executive pay, therefore ensuring that managerial power does not overwhelm the interests of long term shareholders and society. Publically available disclosure of EVA®, the data used to in the calculations as well as a wider disclosure of executive remuneration as required in King III and SEC rules, would shift power towards company boards and raise public awareness where managerial power is gaining the upper hand in remuneration negotiations.

7.3. Suggested for future research

The research identifies a possible link between EVA and a globally competitive financial market. South African banks demonstrated a high correlation of executive pay and EVA, a correlation that strengthened after the advent of the financial crisis. Further research would shed light on whether this change has been the result of relatively strongly rated aspects of South Africa's corporate governance landscape and highly developed financial market.

The research only focuses on one type of risk-adjusted measure of return, namely Economic Value Added. Additional risk adjusted measures of return, such as risk-adjusted return on capital, may yield more insight or accuracy in adjusting banks profits to account for risk.

One of the relevant significant differences between the South African and United States banks is high standard of corporate governance and soundness exhibited by South African banks as described by the World Economic Forum's competitiveness report. The research pointed to a possible link between bank executive remuneration and the institutional and financial market pillars in the competitiveness report. Further research into this could answer to whether any of the report's pillars have a relationship that correlates to a countries' banks' risk adjusted profit.

7.4. Concluding statement

Misaligned incentives within the United States banks are accepted by both academics and regulators as one of the causes of the 2008 financial crisis and subsequent economic downturn. The three United States banks that failed catastrophically over course of the crisis displayed no correlations between executive remuneration any of the constructs, unlike their surviving compatriots.

South African banks seem to have been held to a higher standard in terms of corporate governance and been widely recognised for their stability over the financial crisis. South African bank executive remuneration correlated strongly with EVA®, and this correlation strengthened after the financial crisis.

Executive remuneration based on short-term equity has been recognised by both academic literature as well as bank regulators as a cause of the financial crisis. The difference in remuneration alignment between the failed and surviving banks is concerning, as current United States banks have not been able to realign their executive remuneration in the wake of the financial crisis.

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