

EXAMINING THE RELATIONSHIP BETWEEN CEO REMUNERATION AND PERFORMANCE OF MAJOR COMMERCIAL BANKS IN SOUTH AFRICA

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Abstract

The relationship between CEO remuneration and firm performance continues to receive much attention. Although the focus of most of the studies is across sectors, attention is increasingly being directed towards the banking industry. At the same time, controversy around what is deemed excessive remuneration of CEOs in the light of not so impressive firm performance across sectors continues. The 2008 global financial crisis and subsequent problems in the banking industry have increased interest in the dynamics of CEO remuneration and bank performance. This study, which examines the relationship between CEO remuneration and bank performance in South Africa, aims to bring a new perspective to the on-going research and debate. The data used is for the years 2008 – 2013, and a purposive sampling method was employed to select a sample frame that consists of five major commercial banks in South Africa. The results suggest that not all measurement instruments used confirmed that a relationship between CEO remuneration and bank performance existed. In the overall, the results of the study do show that the remuneration of the CEO in the banking industry is such that it does have a significant influence on the performance of a bank.

Keywords: CEO Remuneration, Bank Performance, Regression, South Africa

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1 Introduction

Concerns over incomes inequality and what is deemed excessive - Chief Executive Officer (CEO) remuneration - continues to feature prominently in the executive remuneration discourse, and the 2008 financial crisis has made the situation in this respect no better for the banking industry, in particular. The controversy has escalated so badly that the assumed excessive CEO remuneration is described as obscene in some quarters (The Star, 2014:3). And CEO remuneration in South Africa has not escaped criticism. In fact, recently two CEOs from the banking industry, in particular, caused a public outcry with their pay which was for having been a mere nine month in their top positions. This pay caused serious discomfort amongst some industry role-players because it could not be justified, more especially, from a moral point of view, considering the situation in South Africa where incomes inequality is such a major talking point (Business Times, 2014:9).

Notably, the remuneration debate across industries remains varied with a plethora of viewpoints advanced within and outside of the academic realm. Nonetheless, there has been increased momentum to tackle this runaway problem of CEO remuneration that is being partly blamed for the global banking crisis of 2007 – 2008 (Gregg,

Jewell & Tonks, 2012). However, in South Africa, where the payment gap between executives and employees is the biggest in the world, efforts to arrest the abnormal escalation have not been made due to the absence of prescriptive measures by regulatory authorities and lack of disclosure of sensitive but essential information about key performance indicators by the banks (Business Times, 2014), (The Star, 2014:3). Unlike in South Africa, in the United Kingdom (UK) and Australia, legislation imposes binding shareholder votes when approving remuneration policies, with the Australian model demanding the removal of the board should its remuneration policy be rejected by the shareholders two years running (Business Times, 2014a:9 & 2014b:4).

Increased controversy surrounding and studies on CEO remuneration and bank performance have been approached from theoretical frameworks that include but not limited to the examination of “agency problem” by the likes of Barro and Barro (1990), Ely (1991), Houston and James (1995), Hubbard and Palia (1995), and Akhigbe, Madura and Ryan (1997). “Managerial power” was found by Dorff (2005) to be presenting a challenge to corporate governance effectiveness in the determination of executive remuneration (Crumley, 2008). A varied combination of variables such as CEO compensation (plus long-

term incentive plans and CEO age) and size (total assets and number of employees) of the organisation (Gregoriou and Rouah, 2003); bonuses and attraction and retention of executives (Beer and Katz, 2003); executive equity (Daily and Dalton, 2002), and stock based compensation and bonus (Hill & Stevens, 2001) has also been used to build theoretical frameworks used to examine CEO pay and organisational performance. Crumley (2008) added to the discourse with the use of firm-specific characteristics like performance (stock market price and return on equity) and size (sales, assets and number of employees) together with CEO characteristics (age, tenure, education and stock ownership). A search for related South African studies has proven that not much literature with these and other related approaches existed.

The aim of this study, therefore, is to add to the extant literature by means of examining the performance of a sample of major commercial banks in South Africa in relation to the pay plus bonus of their CEOs. The significant distinguishing feature of this study is the use of financial performance variables that include profitability, efficiency and asset quality measures relative to the CEO remuneration measures such as basic pay plus bonus. Noticeably, CEO characteristics have been deliberately excluded because previous studies such as those by Crumley (2008), Gregoriou and Rouah (2003), and Daily and Dalton (2002) have significantly demonstrated that they had weak or no association with CEO remuneration.

The structure of the rest of this paper include review of related literature, method used to conduct the research, results drawn from the research, analysis and discussion of the outcome of the research, and conclusion and recommendations.

2 Review of related literature

It is imperative that the raging debate surrounding the CEO pay and bank performance is clearly understood lest the contribution of this paper is not fully appreciated. The merits or the demerits of the arguments advanced on the subject continue to evolve over the years with the industry specific approach to the debate proving to be more appropriate in helping to identify the performance variables that are important to the pay-performance relationship (Sigler and Poterfield, 2001). In contrast, the approach that pooled data from a cross-section of industries has the shortcoming of using the same independent variables for all companies regardless of industry uniqueness, according to Sigler and Poterfield (2001).

Bank specific approach in various studies on CEO remuneration and organisation performance have commonly looked at the “agency problem”, “managerial power”, firm-specific characteristics such as performance (stock market price and return on equity) and size (sales, assets and number of

employees), and CEO characteristics (age, tenure, education and stock ownership). Accordingly, Akhigbe, Madura and Ryan (1997), and Barro and Barro (1990), among others, examined the difficulties that were created by the goals of management which were not aligned to those of shareholders and the attempts of the banking industry at ameliorating those difficulties (Crumley, 2008).

Dorff (2005), in his study of managerial power as it relates to executive compensation, confirmed the view that the power that the chief executive had over the directors resulted in excessive compensation. This scenario is certainly a poser to the independence and effectiveness of the board. It is for this reason therefore that the solution, as argued by Dorff (2005), lies in part in the corporate governance reform that curtails managerial power over directors through competitive elections for directors (Crumley, 2008).

The study by Joyce (2001), which tested the relationship between bank performance and CEO compensation in publicly traded banks and savings and loans institutions, gave mixed results. The study found weak support for the agency theory as it relates to the relationship between the performance of the firm and CEO salary and bonus, and that there was a small but positive relationship between the performance of the firm and CEO salary and bonus compensation. The generally weak correlation between return on assets and CEO salary and bonus compensation findings lend support to the findings of other authors such as Murphy and Salter (1975) who have not found a strong relationship between return on assets and CEO salary and bonus compensation. Furthermore, the study by Joyce (2001) was not able to support the findings of Veliyath and Bishop (1995), who found a strong relationship between stockholders equity and executive compensation.

Gregoriou and Rouah (2003), besides finding that CEO compensation increased with increasing return on assets and no tenure effect on CEO compensation, they found that CEO compensation increased with the size of firm as well as with the value of the long-term incentive plans and CEO age. Studies by Gregg, Jewell and Tonks (2012), Aduda (2011) and Crumley (2008), Hubbard and Palia (1995) found that CEO compensation increased with the size of the firm, and this supported the findings of Gregoriou and Rouah (2003).

Studies that sought to examine the relationship between firm performance and basic CEO pay plus bonus have confirmed that in fact there was indeed a relationship between bonuses and the motivation of CEO. This hypothesis about bonuses and CEO motivation is supported by Beer and Katz (2003) where the use of bonuses is better explained as possibly being the way to attract and retain executives (Crumley, 2008). Furthermore, Hill and Stevens (2001) found that in addition to stock based compensation bonus plans contributed to a relative increase in financial performance of the firm.

CEO remuneration packages remain complex and controversial. Evidence, at least in the context of South Africa, does not exist that supports the view that the bank CEO salary has been proven to be appropriate let alone optimal. There must be other considerations when structuring a bank CEO remuneration package that are aimed at attracting, retaining and motivating a talented CEO who would work in the interests of the bank's shareholders (Sigler and Porterfield, 2001). The income inequalities that exist in the country are making the determination of an optimal remuneration package a challenge in the light of competition for talent.

Most of the studies on bank CEO remuneration seem to have taken little into account regarding how the remuneration package of the CEO is initially determined upon his entry into his current position. It would not be farfetched to postulate that the competition for talent or demand-supply considerations do play a role in the determination of the CEO remuneration package. However, it remains to be seen if the remuneration package set at recruitment or retention point is, in fact, optimal in that it confirms the potential or actual contribution of the CEO. Determining bonus payment may be complicated but not as it is with the determination of the entry-point basic salary of the bank CEO when supply-demand for talent is taken into account. Therefore, optimality assessment of the entry-point basic salary ought to be considered in the subsequent studies to counter the assertion, as advanced by Crotty (Business Report, 2012), that the claim that the value created by the company in the year under review might not be attributable to extraordinary efforts and talents of the CEO but the industry developments such as commodities boom, in case of a mining company; consumption boom, in case of a retailer; or government infrastructure spend in case of a construction company. This then follows that the use of the pre-existing remuneration package levels, as it was the case with the previous studies, has the potential to limit the methodological analysis of the relationship between CEO remuneration and bank performance. As Joyce (2001) hypothesised, the level of CEO remuneration may be a function of such factors as strategic concepts; industry characteristics (e.g. barriers to entry and technological intensity), and intra-organisational politics, and as such the level of CEO remuneration may not be optimal as it is assumed.

3 Methodology

The purpose of this paper was to examine the relationship between CEO remuneration and financial performance of the five major banks in South Africa. Previously, various studies have advanced models that examined the link between the two variables, dependent (CEO remuneration) and independent (bank performance). However, inconsistency prevails in

terms of both the CEO remuneration structure and bank performance measurement methodologies. For example, to mention a select few studies, Sigler and Porterfield (2001) used CEO compensation as a dependent variable and tenure, return on assets, beta of the bank's common stock and changes in revenue as independent variables; Crumley (2008) used CEO compensation (annual salary plus bonus) as a dependent variable and independent variables that include bank performance (stock market price return, return on equity), size (sales, assets, number of employees), and CEO characteristics (age, tenure in present position, education, stock ownership by CEO); Joyce (2001) used CEO compensation (annual salary plus bonus) as a dependent variable with firm performance characteristics (return on assets, CEO tenure, CEO common stock ownership) as independent variables, and Akhigbe, Madura and Ryan (1997) used CEO compensation (annual salary, bonus, stock options) as a dependent variable and independent variables that include firm-specific characteristics (size), bank performance (earnings per share, return on assets, return on equity) and CEO-specific characteristics (age, tenure, education, CEO stock ownership).

The challenge of having consistency in the choice and type of measures or indicators of both CEO compensation and bank performance was also pointed out by other authors like Lin and Zhang (2009), Choi and Hasan (2005) and Berger et al (2005) who used such measures as profitability [return on assets (ROA) and return on equity (ROE)], efficiency [cost to capital (COI)], and asset quality [ratio of impaired loans to gross loans (also known as non-performing loans or NPL)] in their works (that also looked at governance in the banking sector, though). Barnes (1987) and Al-Shammari and Salimi (1998) in their related earlier works, according to Al-Hawari and Ward (2006:136), raised similar concerns about the problem of not having "generally accepted list of ratios or standard methods to measure financial performance".

However, profitability, efficiency and asset quality indicators are used in this study as measures of bank performance. Other bank characteristic, size, which includes sales, assets and number of employees, is used contemporaneously with the aforementioned bank performance measures.

In this study, the chosen CEO remuneration measures or indicators deliberately excluded deferred remuneration benefits such as retirement benefits (pensions, provident funds and retirement annuities), profit sharing and stock options. This was so because, according to Joyce (2001), it was pointed out by Kerr and Bettis (1987) and Finkelstein and Hambrick (1989) that valuation of long-term incentives was problematic in terms of practicability and methodology considerations. This means that CEO remuneration herein is defined as basic annual salary plus bonus because this allows for comparability with

other studies of executive remuneration as the majority of previous studies limited CEO remuneration to cash payments (Agarwal, 1981 and Joyce, 2001). Lewellen and Hunstman (1970), according to Joyce (2001), in their study of managerial pay and company performance, indicated that salary plus bonus that was used as a measure of executive remuneration in a regression analysis was an acceptable substitute for a more comprehensive measure of remuneration which includes pension benefits, stock options, stock bonus, profit sharing and deferred pay.

Furthermore, to obviate the problem of inconsistency and to ensure comparability, in this study, CEO characteristics (age, tenure in present position, education, stock ownership by CEO) have been excluded. Gregoriou and Rouah (2003) pointed out that tenure had no effect on bank performance. Similarly, Crumley (2008), in his regression analysis, found that bank CEOs in the US were not paid for their tenure, age, educational level or stock ownership. Furthermore, Daily and Dalton (2002), in their earlier study, stated that equity ownership had no effect on bank performance.

3.1 Data, variables and model

3.1.1 Data

A purposive sampling method was used to generate a sampling frame that consist of the five largest commercial banks in South Africa in terms of assets and market share. These are the banks with the largest geographic footprint coupled with the most comprehensive financial services offerings in the country, unlike the other banks which are largely niche-based. The research design of this study makes use of the data that comprises of bank specific performance characteristics and bank CEO remuneration schemes. The data collected is for a period of five years from the year 2009 to 2013. This is a period of the beginning of relative stability immediately after the global financial crisis of 2008. A five-year time-scale is consistent with cyclical reviews usually carried out by banks as seen in their reports.

3.1.2 Variables

As previously alluded to the bank performance measures of profitability, efficiency, size and asset quality are used as independent variables. Return on equity (ROE), defined as the rate of return to shareholders or the percentage return on each Rand of equity invested in the bank, and return on assets (ROA), another measure of profitability, are used as independent variables. The choice of ROE was motivated by what Kumbirai and Webb (2010) describe as “the most important indicator of a bank’s profitability and growth potential”, where Cronje (2007) asserts it could be regarded as the “ultimate

measurement of profitability”. Noting from previous studies, Bradley (2013), wrote that ROE, has been criticized for being open to manipulation by management due to the fact that it was a mere accounting figure although it logically remained the most enduring and popular as its focus was on shareholder returns - which happened to be of primary importance to the investor.

ROA, on the other hand, was used contemporaneously as a measure of profitability because it was found, according to Sigler and Porterfield (2001), to be the most comprehensive standard in the determination of bank profitability. Lin and Zhang (2009:23) and Ahmed (2009) in Kumbirai and Webb (2010:39) defined ROA as profits relative to total assets or the ability of management to acquire deposits at a reasonable cost and invest them in profitable investments. This additional profitability measure was introduced with the view to making the study more complete (Bradley, 2013).

Firm size is described by Crumley (2008) and various other studies as having one of the most important influences on remuneration. However, in this study firm size is measured by the value of total assets, level of sales or revenue and number of employees. Total assets measure is used in order to take into account the presumed contribution of the CEO in the totality of the performance of the firm.

Cost to income (COI), defined as income generated per Rand cost, was used as a measure of efficiency as explained by Kumbirai and Webb (2010) and asset quality measure, the ratio of impaired loans to gross loans or non-performing loans (NPL, as explained by Lin and Zhang (2009), were the other independent variables used in this study.

The CEO remuneration comprising of annual basic salary plus bonus was the dependent variable being examined in relation to the bank performance variables. As already pointed out basic salary and bonus were selected as the only bank performance measures to constitute the dependent variable in order to obviate issues of complexity and calibration of remuneration. Both salary and bonus are in cash.

3.1.3 Model

As already stated the study focuses on examining the relationship between CEO remuneration and bank performance and the attendant regression model specification involving a dependant variable and independent variables. The specified variables include annual basic salary plus bonus, representing the remuneration, and ROA, ROE, COI, NPL and size constituting performance.

The basic regression model is formulated as follows:

Dependent variable (Annual Basic Salary plus Bonus) = Independent variables (ROA, ROE, COI, NPL, Assets, Sales, Employees)

3.1.4 Hypothesis

The hypotheses used by Crumley (2008) in his related study were modified as specified below to test for the relationship between CEO remuneration and bank performance:

HO: 1 – A positive relationship does not exist between a return on assets (ROA) and CEO remuneration (basic salary plus bonus).

HO: 2 – A positive relationship does not exist between a return on equity (ROE) and CEO remuneration (basic salary plus bonus).

HO: 3 – A positive relationship does not exist between the rate of cost to income (COI) and CEO remuneration (basic salary plus bonus).

HO: 4 – A positive relationship does not exist between the non-performing loans (NPL) [or rate of impaired loans to gross loans] and CEO remuneration (basic salary plus bonus)

HO: 5 – A positive relationship does not exist between total assets and CEO remuneration (basic salary plus bonus)

HO: 6 – A positive relationship does not exist between sales [or revenue] and CEO remuneration (basic salary plus bonus)

HO: 7 – A positive relationship does not exist between number of employees and CEO remuneration (basic salary plus bonus)

Since the focus of this study is on the relationship between remuneration and performance these hypotheses were tested using linear least squares regression analysis. The regression analysis was used to predict CEO remuneration based on bank performance.

4 Results

In this section the statistical techniques employed to analyse and interpret the sample data are discussed and the results are outlined.

Table 1. Descriptive statistics

Variables	N	Mean	Median	Std. Deviation	Minimum	Maximum
CEO Total Remuneration (Rand in thousands)	25	13025.03	11162.00	6825.37	5079	34410
Return on Equity (ROE) (%)	25	17.26	16.34	4.95847	9.7	28.66
Total assets (Rand in millions)	25	586120.00	674000.00	310312	9000	1016000
Return on Assets (ROA) (%)	25	1.92	1.07	1.84191	0.68	6.21
Cost to Income (COI) (%)	25	54.36	57.63	7.29253	32.26	63.35
Non-performing loans (NPL) (%)	25	5.46	5.41	1.48977	2.79	8.67
Sales/Revenue(Rand in millions)	25	9587.16	8957.00	6087.282	449	21527
Number of employees	25	32008.36	34904.00	15015.63	4154	53351

Table 1 shows the descriptive statistics for sample banks for the period 2009-2013. The final sample for 2009-2013 comprised of 5 major commercial banks which resulted in 25 observations. The mean remuneration (basic salary plus bonus) of the CEOs was R13,025,030. The mean return on equity (ROE) and return on assets (ROA) for the period was 17.6% and 1.92%, respectively. The mean total assets was R586,120.00 million while the mean sales/revenue was R9,587.16 million. The mean number of cost to income (COI) was 54.36% whereas non-performing loans (NPL) had a mean number of about 5.46%. The mean number of employees was 32008.

It is evident from the above results that there are large variations among the variables. CEO total remuneration varies from a minimum of R5,079,000 to a maximum of R34,410,000. Return on equity varies from 9.7% to 28.66% whilst return on assets varies from 0.68% to 6.21%. Total assets has a minimum of R9,000 million and a maximum of R1,016,000 million. Cost to income ranges between 32.26% and 63.35% whilst non-performing loans

range between 2.79% and 8.67%. Sales/revenue are between a minimum of R449 million and a maximum of R21,527 million. Last but not least, the number of employees varies between 4154 and 53351. Although these variations show that there are significant differences between the smallest and largest values, they do not give reasons for the variability of the values.

4.1 Regression analysis

To examine the relationship between CEO remuneration and bank performance, regression analysis was used. Specified, select bank performance measures (return on equity, total assets, return on assets, cost to income, non-performing loans, sales/revenue and number of employees) were used to predict CEO remuneration. CEO remuneration in the regression is the dependent or response variable and the specified select bank performance measures are the independent or predictor variables.

H₀₁: A positive relationship does not exist between a return on assets (ROA) and CEO remuneration (basic salary plus bonus).

Hypothesis 1 test if there is a positive relationship between return on assets and CEO remuneration (basic salary plus bonus). Table 2 depicts the results of the test that was run to respond to hypothesis 1 (H₀₁). The correlation coefficient between ROA and CEO remuneration is (r=0.248) with r-square (R² = 0.062) in table 2 which implies

that ROA explains 6.2% (R² *100) variation of the remuneration. The relationship between ROA and remuneration is not significant at 5% critical level (p=0.231 > 0.05). A p-value that is at 23.1% suggests that changes in ROA are not associated with changes in the CEO remuneration. In other words, a positive relationship does not exist between a return on assets and CEO remuneration. Hypothesis 1 is therefore not rejected.

Table 2. Regression analysis: The independent variable is the returns on assets (ROA) and dependent variable is the CEO remuneration (basic salary plus bonus). Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	F	Sig.
1	.248	.062	.021	6753.824169	1.511	.231

H₀₂: A positive relationship does not exist between a return on equity (ROE) and CEO remuneration (basic salary plus bonus).

Hypothesis 2 test if there is positive relationship between ROE and CEO remuneration (basic salary plus bonus). Table 3 depicts the results of the test that was run to respond to hypothesis 2 (H₀₂). The correlation coefficient between ROE and CEO remuneration is (r=0.108) with r-square (R² = 0.012)

in table 3, which implies that ROE explains 1.2% (R² *100) variation of the remuneration. The relationship between ROE and remuneration is not significant at 5% critical level (p=0.6091 > 0.05). A p-value that is at 60.9% suggests that changes in ROE are not associated with changes in the CEO remuneration. In other words, a positive relationship does not exist between a return on equity and CEO remuneration. Hypothesis 2 is therefore not rejected.

Table 3. Regression analysis: The independent variable is the returns on equity (ROE) and dependent variable is the CEO remuneration (basic salary plus bonus). Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	F	Sig.
1	.108	.012	-.031	6931.677107	.269	.609

H₀₃: A positive relationship does not exist between the rate of cost to income (COI) and CEO remuneration (basic salary plus bonus).

Hypothesis three test if there is a positive relationship between COI and CEO remuneration (basic salary plus bonus). Table 4 depicts the results of the test that was run to respond to hypothesis 3 (H₀₃). The correlation coefficient between COI and CEO remuneration is (r=0.310) with r-square (R² = 0.096)

in table 4 which implies that ROE explains 9.6% (R² *100) variation of the remuneration. The relationship between COI and remuneration is not significant at 5% critical level (p=0.132 > 0.05). A p-value that is at 13.2% suggests that changes in COI are not associated with changes in the CEO remuneration. In other words, a positive relationship does not exist between a cost to income and CEO remuneration. Hypothesis 3 is therefore not rejected.

Table 4. Regression analysis: The independent variable is the cost to income (COI) and dependent variable is the CEO remuneration (basic salary plus bonus). Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	F	Sig.
1	.310	.096	.057	6629.317080	2.441	.132

H₀₄: A positive relationship does not exist between the non-performing loans (NPL) [or rate of impaired loans to gross loans] and CEO remuneration (basic salary plus bonus)

Hypothesis 4 test if there is a positive relationship between NPL and CEO remuneration (basic salary plus bonus). Table 5 depicts the results of the test that was run to respond to hypothesis 4 (H₀₄). The correlation coefficient between NPL and CEO remuneration is (r=0.654) with r-square (R² = 0.428)

in table 5 which implies that NPL explains 42.8% (R² *100) variation of the remuneration. The relationship between NPL and remuneration is significant at 5% critical level (p=0.000 < 0.05). A p-value that is at 0.0% suggests that changes in NPL are associated with changes in the CEO remuneration. In other words, a positive relationship does exist between non-performing loans and CEO remuneration. Hypothesis 4 is therefore rejected.

Table 5. Regression analysis: The independent variable is the non-performing loans (NPL) and dependent variable is the CEO remuneration (basic salary plus bonus). Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	F	Sig.
1	.654	.428	.403	5274.091007	17.195	.000

H₀₅: A positive relationship does not exist between total assets and CEO remuneration (basic salary plus bonus)

Hypothesis 5 test if there is a positive relationship between total assets and CEO remuneration (basic salary plus bonus). Table 6 depicts the results of the test that was run to respond to hypothesis 5 (H₀₅). The correlation coefficient between total assets and CEO remuneration is (r=0.346) with r-square (R² = 0.120) in table 6 which

implies that total assets explains 12.0% (R² *100) variation of the remuneration. The relationship between total assets and remuneration is not significant at 5% critical level, but it is significant at 10% level (p=0.090 < 0.10). A p-value that is at 9% suggests that changes in total assets are associated with changes in the CEO remuneration. In other words, a positive relationship does exist between total assets and CEO remuneration. Hypothesis 5 is therefore rejected.

Table 6. Regression analysis: The independent variable is the total assets and dependent variable is the CEO remuneration (basic salary plus bonus). Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	F	Sig.
1	.346	.120	.082	6540.648414	3.135	.090

H₀₆: A positive relationship does not exist between sales [or revenue] and CEO remuneration (basic salary plus bonus)

Hypothesis 6 test if there is positive relationship exists between Sales and CEO remuneration (basic salary plus bonus). Table 7 depicts the results of the test that was run to respond to hypothesis 6 (H₀₆). The correlation coefficient between Sales and CEO remuneration is (r=0.553) with r-square (R² = 0.306) in table 7 which implies that Sales explains 30.6% (R² *100) variation of the remuneration. The relationship between Sales and remuneration is not significant at 5% critical level (p=0.004 < 0.05). A p-value that is at 4% suggests that changes in sales [or revenue] are not associated with changes in the CEO remuneration. In other words, a positive relationship does exist between sales [or revenue] and CEO remuneration. Hypothesis 6 is therefore rejected.

in table 7 which implies that Sales explains 30.6% (R² *100) variation of the remuneration. The relationship between Sales and remuneration is not significant at 5% critical level (p=0.004 < 0.05). A p-value that is at 4% suggests that changes in sales [or revenue] are not associated with changes in the CEO remuneration. In other words, a positive relationship does exist between sales [or revenue] and CEO remuneration. Hypothesis 6 is therefore rejected.

Table 7. Regression analysis: The independent variable is the sales [or revenue] and dependent variable is the CEO remuneration (basic salary plus bonus). Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	F	Sig.
1	.553	.306	.275	5809.927094	10.122	.004

H₀₇: A positive relationship does not exist between number of employees and CEO remuneration (basic salary plus bonus)

Hypothesis 7 test if there is relationship between number of employees and CEO remuneration (basic salary plus bonus). Table 8 depicts the results of the test that was run to respond to hypothesis 7 (H₀₇). The correlation coefficient between number of employees and CEO remuneration is (r=0.246) with r-square (R² = 0.060) in table 8 which implies that employees

explains 6% (R² *100) variation of the remuneration. The relationship between number of employees and remuneration is not significant at 5% critical level (p=0.237 > 0.05). A p-value that is at 23.7% suggests that changes in the number of employees are not associated with changes in the CEO remuneration. In other words, a positive relationship does not exist between the number of employees and CEO remuneration. Hypothesis 1 is therefore not rejected.

Table 8. Regression analysis: The independent variable is the number of employees and dependent variable is the CEO remuneration (basic salary plus bonus). Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	F	Sig.
1	.246	.060	.019	6758.576667	1.477	.237

The following Table 9 is a summary of regression results of hypotheses 1 to 7. The results are based on the 5% significant level and 10% significant level.

Table 9. Summary of Findings

Hypothesis	Variable tested	Methodology	Results
H01	Return on assets (ROA) and CEO remuneration	Regression	Accept Null
H02	Return on equity (ROE) and CEO remuneration	Regression	Accept Null
H03	Cost to income (COI) and CEO remuneration	Regression	Accept Null
H04	Non-performing loans (NPL) and CEO remuneration	Regression	Reject Null
H05	Total assets and CEO remuneration	Regression	Reject Null
H06	Sales [or revenue] and CEO remuneration	Regression	Reject Null
H07	Number of employees and CEO remuneration	Regression	Accept Null

A regression analysis was employed with the view to predicting CEO remuneration based on bank performance. This procedure was used to either accept or reject the Null Hypothesis. Null hypothesis one, two, three and seven were accepted. Conversely, null hypothesis four, five and six were rejected.

5 Limitations of the study and suggestions for future research

It is acknowledged that this study, same as it is the case with other studies, this study is limited in its theoretical, methodological and empirical domains (Joyce, 2001). It is recognised that the sample consisted of only five major commercial banks. There is a possibility that the findings might differ if the research focused on a random sample of all registered publicly traded banks.

Similarly, in its definition of CEO remuneration (basic salary and bonus), this study did not include deferred forms of compensation such as stock options, stock bonus, pension and other long deferred forms of compensation (Joyce, 2001). As Joyce (2001) also pointed out, previous studies such as that by Lewellen and Hunstman (1970) have shown that cash compensation (salary plus bonus) is acceptable substitute for a more comprehensive measure of compensation that includes pension benefits, deferred pay, stock options, stock bonus, and profit sharing. With a bigger sample, variations in compensation structures might be more pronounced and thus making cash compensation (basic salary plus bonus) approach not acceptable. Future studies should, therefore, focus on a more comprehensive measure of compensation that includes pension benefits, deferred pay, stock options, stock bonus and profit sharing. It is possible that a study that uses a more comprehensive measure of compensation could provide valuable insight into the relationship between executive compensation and company performance (Joyce, 2011).

Another limitation of the study is that regression or correlation analyses cannot be interpreted as establishing cause-and-effect relationships. A more comprehensive study using a larger sample, longer study period, characteristics of CEO of major commercial banks and peripheral factors such as human capital characteristics, industry characteristics and intra-organisational politics which might give different results must be considered.

6 Conclusions and recommendations

Some extant empirical research supports the view that agents such as CEOs can influence the behaviour of their employees, and therefore, the performance of their firms (Joyce, 2001). Based on this agency theory, it would be in order to expect some level of association between certain firm specific factors and CEO remuneration. However, the results of this study, which examined the relationship between CEO remuneration and the performance of the largest five commercial banks in South Africa, have proven to be not entirely consistent with the hypothesis that there was a relationship between bank specific performance measures and CEO remuneration.

The results of the analysis have revealed that a positive relationship between CEO remuneration (basic salary and bonus) and bank performance as measured by return on assets (ROA) does not exist. This finding is very close to the findings of other authors such as Murphy and Salter (1975); Aupperle, Figler, and Lutz (1991); Akhigbe, Madura, and Tucker (1995); Madura, Martin, and Jessel (1996), and Joyce (2001) who have not found a strong relationship between return on assets and CEO remuneration. Accordingly, this study failed to support the findings of such authors as Lilling (2006) and Canarella and Gasparyan (2008) whose studies, though not specific to the banking industry, also used ROA as a measure of firm performance but found a positive relationship.

The number of employees, return on equity (ROE) and cost to income (COI) have also been found to be insignificant in predicting changes in the CEO remuneration. In other words, association between CEO remuneration and number of employees, ROE and COI does not exist. The fact is that, in this study, no association existed between CEO remuneration and number of employees and this contrasts with the findings of the study by Joyce (2001) who found instead that a strong relationship existed. CEOs in the banking industry in South Africa were not paid for the number of employees, level of return on equity and costs incurred for income generated.

Non-performing loans (NPL), total assets and sales or revenue indicate that a relationship with the CEO does exist. CEOs in the major commercial banks in South Africa were compensated for positively managing non-performing loans and increasing total assets and sales or revenue.

This study contributed to the literature in the area of executive compensation by examining the association between CEO remuneration and performance for a select number of generally accepted measures for major commercial banks, designated as such in terms of size (assets and turnover/revenue). In addition, the study has brought to the fore the significance of non-performing loans (NPL) as predictor variable of CEO remuneration which should be included in future research.

Although no positive relationship was found between CEO remuneration and bank performance as measured by return on assets, return on equity and cost to income, these variables remain important factors in managerial and organisational performance and investor relations. It remains important for management to ensure that assets utilisation is maximised in order to yield a good return for the benefit of shareholders and other stakeholders such as bank employees.

The variable, number of employees in the organisation, as a predictor of CEO remuneration remains contentious. Not enough research exist that support the idea that CEOs in the commercial banking industry were paid for the number employees in their organisations.

Lastly, there continues to be a lot to learn about the determinants of CEO remuneration, as indicated by the above suggestions for future research. However, it is hoped that other researchers will address some of these issues in future research.

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