

# CEO COMPENSATION, CORPORATE GOVERNANCE, AND PERFORMANCE OF LISTED PLATINUM MINES IN SOUTH AFRICA

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## Abstract

Executive compensation has been studied extensively in the past three decades, yet the relationship between company performance and executive compensation continues to be a debated topic judging from the number of articles in academic literature. The main objective of this study was to determine the relationship between CEO compensation, corporate governance and financial performance of listed platinum mines in South Africa. The results of the study indicated no statistics significant relationship between CEO compensation and the financial performance variables ROE and ROA. The results also indicated a positive relationship between some corporate governance variables such as board size and proportion number of independent non-executive directors, but found no statistic significant relationship between CEO compensation and proportion number of female board members.

**Keywords:** CEO, Compensation, Corporate Governance, Platinum Mines, South Africa

## 1. INTRODUCTION

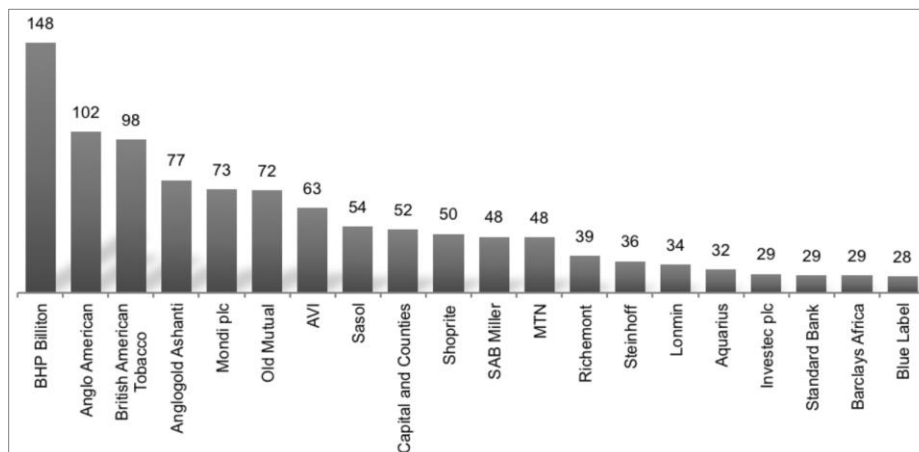
The gap between the remuneration paid to the executive directors of a company and that paid to other employees has triggered a large amount of public controversy and academic research as the subject increase making headlines in international media. According to PWC (2012), America's ten highest-paid CEOs in 1986 together pocketed \$57.88 million in compensation, and in 2012, the top 10 earned \$616.4 million, 10 times as much as the 1986 total after taking inflation into account, yet over the same 26-year period, the average weekly wages for America's workers barely increased at all.

The CEOs of the 15 largest companies in the United States were reported to have earned 520 times more than the average worker in 2007

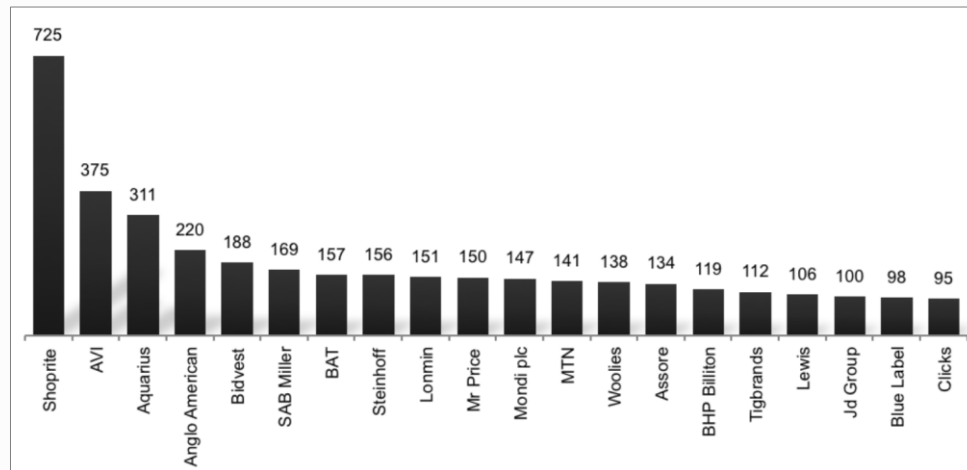
(International Labour Organisation, 2008). A study conducted by PwC (2011) of the top 40 companies listed on the Johannesburg Stock Exchange (JSE) revealed that the median pay of executive directors has increased by 23.3 percent to R4.8 million in 2010.

South Africa has one of the biggest pay gaps in the world with CEOs of the top companies listed on the JSE earning as much as 725 times their worker's average salary (Bronkhorst, 2014). PWC (2012) concur with Bronkhorst (2014) and point out that the median pay for the large-cap CEO in the financial services sector increased by roughly 4.4 percent in 2012 (R6.247 million) compared to 2011 (R5.983 million). Figure 1 and figure 2 depicts the top twenty largest CEO compensation and top twenty largest pay gaps of companies listed on the JSE during the year 2013.

**Figure 1.** Top twenty largest total CEO compensation for the year 2013



Source: Adapted from Preston (2013)

**Figure 2.** Top twenty largest pay gap (CEO to average salary pay gap) for the year 2013

Source: Adapted from Preston (2013)

From figure 1 and figure 2, it can be observed that the CEO compensation of Lonmin PLC, a platinum company that experience a complete shut down in 2012 due to labour unrest, amounted to R34 million while the wage gap between CEO compensation and other employees was 151 times. The huge gap between CEO compensation and the low salary payed to average employee has raised a questions of corporate governance in academic and business communities in that critics of CEO compensation practices argue that because the board of directors is influenced by the CEO, the board does not structure the CEO's compensation package to maximise value for outside shareholders (Core, Holthausen and Larcker, 1999).

The relationship between CEO compensation and corporate governance has been studied extensively in the past three decades with mixed findings. Core, Holthausen and Larker (1999) conducted a study on corporate governance, chief executive officer compensation, and firm performance making use of a sample of 205 publicly traded US firms during the mid-year 1982, 1983, and 1984. The results revealed that CEOs earn greater compensation when governance structures are less effective. Overall the study found that firms with weaker governance structures have greater agency problems, and that firms with greater agency problems perform worse.

Jiraporn, Pandej and Liu (2011) conducted a study on Capital Structure, CEO Dominance, and Corporate Performance in Thailand making use of a sample of 1 264 unique firms from 1992 to 2004. The results revealed that strong CEO dominance appears to exacerbate agency costs and is thus detrimental to firm value.

Brick, Palmon and Wald (2006) conducted a study on CEO compensation, director compensation and firm performance using US companies, the results indicated that excess compensation of CEO is associated with company underperformance. The study concluded that excessive compensation is due to mutual back scratching or cronyism. The study also concluded that excessive compensation has an effect on company performance that is independent of the poor governance variables.

Jeppson, Smith and Stone (2009) conducted a study on the relationship between CEO

compensation and firm performance. The study used change in net income, percentage change in net income, and total revenue as measures of firm performance. The results of the study revealed no strong relationship between CEO compensation and firm performance with the variables change in net income and percentage change in net income, but revealed a significant relationship with total revenue.

Jackling and Johl (2009) conducted a study on board structure and company performance in India, the results indicated that a greater proportion of outside directors on boards were associated with improved performance, and that large board size has a positive impact on performance thus supporting the view that greater exposure to the external environment improves access to various resources and thus positively impacts on performance. The results also showed that outside directors with multiple appointments appear to have a negative effect on performance.

Studies conducted on the relationship between CEO compensation, corporate governance and company performance in South Africa have focused exclusively on State Owned Enterprises, the banking sector, and manufacturing companies listed on the JSE. Deysel and Kruger (2015) conducted a study on the relationship between CEO compensation and company performance in the banking industry, the results indicated a long-term correlation between CEO compensation and variables such as company performance, average employee salary, general market performance and inflation.

Ngwenya and Khumalo (2012) conducted a study on CEO compensation and performance of state owned enterprises in South Africa during the period 2009 to 2011. The results indicated no significant relationship between CEO compensation and performance of state owned enterprises.

Scholtz and Smit (2012) conducted a study on executive remuneration and company performance of South African companies listed on the alternative exchange during the period 2003 and 2010, the results indicated a strong relationship between executive remunerations and some company performance variables such as total assets, turnover and share price.

The main objective of this study is to narrow the gap and to contribute to the existing body of literature by investigating the relationship between CEO compensation, corporate governance and company performance of listed platinum mines in South Africa. This study differs from previous studies conducted in South Africa in that it focuses on listed platinum mines. The reason for focusing on listed platinum mines is because this sector experienced labour disputes in 2012 which resulted in a complete shutdown of some of the platinum mines. The remainder of this paper is structured as follows: Firstly, a literature study presents the theoretical foundation of the study related to CEO compensation, corporate governance and company performance. Secondly, the sample, variables and methodology employed are outlined. Thirdly, the analysis is carried out, and lastly the results of the analysis and the recommendations are outlined.

## 2. LITERATURE REVIEW

Jensen and Meckling (1976) define the agency relationship as a contract under which one party (the principal) engages another party (the agent) to perform some service on their behalf. As part of this, the principal will delegate some decision-making authority to the agent. According to the Agency Theory, the CEO is an agent, and the shareholder is the principal. The shareholders want the company to perform as best as it can in order to maximise their returns. Agency costs arise from the conflict of interest between a principal and an agent. This conflict results, for example, when managers, who are responsible for important decisions of the firm, are not the primary claimants of the firm's net assets, and thus do not bear a major share of the wealth effects of their decisions (Jensen and Meckling, 1976; Fama and Jensen, 1983; Fama, 1980). One way to avoid agency problems would be to reward executives on the basis of financial returns to shareholders (Conyon, 2006). According to agency theory, compensation plans should be designed so that managers have sufficient incentives to make decisions that maximize shareholder wealth and thus reduce the manager-shareholder agency problem.

In South Africa, the King 111 report on corporate governance suggest that a remuneration committee should be established in a company consisting of non-executive directors to determine and monitor the remuneration of senior executives such as the CEO (Institute of Directors, 2009). Conyon (2006) mention the following four basic components of executive compensation: First, executives receive a base salary, which is generally benchmarked against peer firms. Second, they enjoy an annual bonus plan, usually based on accounting performance measures. Third, executives receive stock options, which represent a right, but not the obligation, to purchase shares in the future at some pre-specified exercise price. Lastly, pay includes additional compensation such as restricted stock, long-term incentive plans, and retirement plans. Due to missing data in some platinum mining companies, the study focused only on the cash component of the CEO compensation, namely base salary plus annual bonus.

## 2.1. Platinum group metals (PGMs) in South Africa

The platinum group metals sector is one of the largest components of the South African mining sector, measured in GDP, export earnings and contribution to the economy. South Africa accounted for 71 percent of world production of platinum (Loferski, 2013). The US which was the fifth leading producer of platinum imported 57 percent of its PGMs from South Africa and 26 percent from Russia respectively.

In 2011, the platinum group metals industry generated R84 billion in sales, was responsible

for 36 percent of the country's mining exports (17% of total merchandise exports) and had significant direct, indirect and induced multipliers into the rest of the economy, which made it a significant contributor to the fiscus (South African Year Book, 2012/13). The PGMs sector employed 194 979 people in 2011, an increase of 7% from 2010, with employees earning R30,5 billion in salaries and wages (Stats SA, 2013).

In 2013, the PGM mining industry generated R84 billion in sales, a 21.7 percent increase from sales of R69 billion in 2012. This was in spite of the wildcat strikes of 2012 which continued into 2013. Despite the significant role and contribution of the platinum mining sector to the South African economy, the platinum mining industry continues to be in crisis. The industry has been hit by a combined impact of slowing global demand, falling prices, rapidly escalating domestic production costs (that have added to the high cost structure of the industry) and the impact of the wildcat strikes that hit the industry in 2012, and continued into 2013. The platinum mining industry lost around R15.3 billion in output as a result of strikes in 2012 (Fact and Figures, 2013).

## 3. RESEARCH OBJECTIVES

The main objective of this study was to investigate the relationship between CEO compensation, corporate governance, and performance of listed platinum mines in South Africa using data for the period 2008 to 2013. The study tested the relationship between CEO compensation, corporate governance, and performance of listed platinum mining companies in South Africa using premises and variables that have been used in prior studies. The study aimed to fill up the gap and add on the existing literature on previous studies conducted on the relationship between CEO compensation, corporate governance and company performance, with particular reference to Randøy and Nielsen (2002), Lilling (2006), Ozkan (2007), Canarella and Gasparyan (2008), Guest (2009), Lin and Chang (2014), Kerkhoven (2011), and Zaichkowsky (2014).

## 4. RESEARCH METHODOLOGY

### 4.1. Data collection

The population of the study consisted of listed platinum mines in South Africa. Secondary data used in the empirical study was obtained from two sources. First, the annual reports of the listed platinum mines were downloaded from their websites to obtain information relating to board

structures and board composition. The second set of data was downloaded from the McGregor BFA website to obtain standardised financial statements of the listed platinum mines. Secondary data was downloaded for the period 2008 to 2013, thus allowing five years of uninterrupted observation. This period was deliberately chosen as it reflects the period immediately after the global financial crisis that started in the middle of 2007, and the labour unrest in the mining sector that started in 2012. Due to insufficient data, the SPSS was used to analyse the data.

## 5. DATA, VARIABLES, AND HYPOTHESES

### 5.1. Variables used to measure CEO compensation

Due to unavailability of data in other companies, the study employed three different measures of compensation namely, annual salary (compensation that is fixed at the beginning of the year), annual bonus, and total compensation (annual salary plus annual bonus).

### 5.2. Variables used to measure company performance

For the purpose of this study, only the accounting indicators return on assets (ROA) and return on equity (ROE) were used as proxies to measure platinum company's performance. The return on assets (ROA) was calculated by dividing earnings before interest and tax by total assets. Total assets in this case include only tangible assets. ROE was calculated by dividing earnings before interest and tax by total equity. The first hypothesis is therefore stipulated as follows:

*H<sub>1</sub>: There is a positive relationship between CEO compensation and financial performance of listed platinum mines in South Africa*

### 5.3. Variables used to measure corporate governance

The following variables were used to measure the effectiveness of corporate governance of listed platinum mines in South Africa:

#### **Board size (BSIZE)**

Board size refers to the total number of directors on the board which includes both executive and non-executive directors. There are various views based on the size of the board and company performance. One view is that larger boards enhance company performance because they have a range of expertise to help make better decisions, and are harder for a powerful CEO to dominate (Muttakin and Ullah, 2012; Kyereboah-Coleman and Biekpe, 2006). The other view is that large boards are less effective and more susceptible to the influence of the CEO (Avouri, Hossain and Muttakin, 2011; Core, Holthausen and Larcker, 1998; Jensen, 1993). This view is supported by studies conducted by Gill and Mathur (2011) and Liang and Li (1999) which indicates that larger board size negatively impact on the profitability of companies. Jensen (1993)

suggested that keeping boards small can help improve company performance. Studies conducted by Randøy and Nielsen (2002), Guest (2009), Ozkan (2007) and Core et al (1999) found a positive relationship between board size and CEO compensation. The second hypothesis of the study is thus stated as follows:

*H<sub>2</sub>: There is a positive relationship between board size and CEO compensation of listed platinum mines in South Africa.*

#### **Board diversity: Proportion of female board directors (PFBD)**

Board diversity has to do with the gender composition of the board, that is, the percentage number of females versus the number of males in the board. It is argued that diversity of a corporate board enhances better monitoring and increase board independence. The study conducted by Erhardt, Werber and Shrader (2003) indicated that board diversity is positively associated with firm performance. However, the study conducted by Muttakin and Ullah (2012), Dang, Nguyen and Vo (2009), and Rose (2007), states that the inclusion of female directors have no impact on company performance. Torchia, Calabò and Huse (2011) suggest that a women director's contribution to the level of firm organisational innovation depends on the number of women directors in the board. Studies conducted by Kerkhoven (2011) and Zaichkowsky (2014) did not find any significant relationship between CEO compensation and number of female board members. The third hypothesis is therefore stated as follows:

*H<sub>3</sub>: There is no positive relationship between the proportion of female board directors and CEO compensation in listed platinum mines in South Africa.*

#### **Proportion number of independent non-executive directors (PNIIndNExe):**

Agency theory suggests that a higher proportion of independent directors should lead to a better firm performance since it reduces the conflict of interest between the shareholders and management and makes management more effective through better monitoring (Fama and Jensen, 1983; Muttakin and Ullah, 2012). King 111 recommends that boards in South African companies to comprise of a majority of non-executive directors, of whom the majority should be independent (KPMG, 2009). Empirical evidence indicates that board independence have a significant positive impact on company performance (Hoque, Islam and Ahmed, 2013; Muttakin and Ullah, 2012; El-Mastry, 2010; Liang and Li, 1999). The study conducted by Lin and Chang (2014), Guest (2009), and Ozkan (2007) found a positive relationship between the proportion number of independent directors and executive compensation. The fourth hypothesis is therefore stated as follows:

*H<sub>4</sub>: There is a positive relationship between the proportion number of independent non-executive directors and CEO compensation of listed platinum mines in South Africa.*

#### 5.4. Control variables

According to Crumley (2008), one of the most important influences of compensation in literature is the size of the company. The size of the company is measured by book value of assets, level of sales and number of employees being managed (Crumley, 2008). Lilling, 2006 concur with Crumley (2008), and state that the most commonly used measures of the size of the company is the amount of sales and the number of employees. The logarithm of total assets was used as measures of size of the platinum mining companies in this study.

Debt to equity ratio was also used as control variable. According to the agency costs theory, there

are two contradictory effects of debt on profitability, firstly it is positive in the case of agency costs of equity between shareholders and managers, secondly it's effect is negative, resulting from the agency costs of debt between shareholders and lenders (Kebewar, 2013).

#### 5.5. Results

##### Descriptive statistics

Table 2 depicts the descriptive statistics of the dependent and independent variables.

**Table 2.** Descriptive statistics, n = 30, R' 000 000

Variable	Minimum	Maximum	Mean	Std. Deviation
CEOSal	410 101.00	6 861 628.00	3 577 892.30	2 176 710.49
CEOBon	0.00	7 617 000.00	1 739 016.73	2 040 882.00
CEOSB	410 101.00	11 394 112.00	5 316 90 9.03	351 166.48
PNID	36.36	80.00	56.28	10.56
PFBD	0.00	33.33	18.71	9.15
PNindNExe	55.56	157.14	93.71	28.11
BSIZE	7.00	14.00	10.70	2.07
TA	1 900 676.00	73 881 000.00	20 006 292.30	21 016 538.78
LNTA	14.00	18.00	16.17	1.09
TotLiab	26 909.00	32 510 000.00	7 922 785.30	10 399 283.19
TE	-9 662 000.00	55 815 000.00	9 939 619.83	15 316 182.75
PAT	-9 335 000.00	20 681 000.00	3 405 477.30	6 110 835.90
ROA	-12.99	91.95	18.60	23.29
ROE	-370.69	148.01	9.19	88.41
DebtRatio	0.70	260.74	45.955	23.30

Explanation of variables: CEOSal - CEO annual salary; CEOBon - CEO annual bonus; CEOSB - CEO total salary and bonus; PNID - proportion number of independent directors; PFBD - proportion number of female board directors; PNindNExe - proportion number of independent non-executive directors; BSIZE - board size; TA - total assets; LNTA - log total assets; TotLiab - total liabilities; TE - total equity; PAT - profit after interest and tax; ROA - return on assets; ROE - return on equity; DebtRatio - debt to asset ratio.

The average valid observation in table 2 is n = 30, The platinum mines included in the sample have in millions an average of R20 006 292 total assets (TA), R7 922 785 total liabilities, R3 405 477 net income after tax (PAT), and R9 939 619 total equity (TE). The average return on equity (ROE) is 9.19%, average return on assets (ROA) is 18.60%, the average debt to equity ratio (DebtRatio) is 45.955%, the average CEO compensation (CEOSB) of the sample platinum mines is R5 316 909, and the average board size consist of 11 directors, Table 3 depicts the first regression model.

**Table 3.** Regression analysis between the dependent variables (ROE; ROA) and independent variables (predictors: CEOSB, LNTA, DebtRatio)

Coefficients*					
Model	Unstandardised Coefficients		Standardized Coefficients		
Dependent Variable ROE					
	B	Std. Error	Beta	T	Sig.
(Constant)	294.725	258.121		1.142	0.264
CEOSB	7.247E-6	0.000	0.292	1.183	0.248
LNTA	-20.402	16.078	-0.250	-1.269	0.216
DebtRatio	0.126	0.337	0.090	0.373	0.712
Dependent Variable ROA					
(Constant)	96.132	58.780		1.635	0.114
CEOSB	-8.255E-7	0.000	-0.126	-0.529	0.559
LNTA	-3.852	3.661	-0.179	-1.052	0.302
DebtRatio	-0.237	0.077	-0.644	-3.084	0.005
ANOVA <sup>a</sup>					
Model	Sum of Squares	Df	Mean Square	F	Sig.
Dependent Variable ROE					
Regression	20 011.040	3	1672.985	4.058	0.017 <sup>b</sup>
Residual	206 682.797	26	7949.338		
Total	226 693.837	29			
Dependent Variable ROA					
Regression	5 018.955	3	1549.224	3.632	0.026 <sup>b</sup>
Residual	11 089.188	26	426.507		
Total	15 736.859	29			

a. Dependent Variables: ROE and ROA

b. Predictors: (Constant), CEOSB, LNTA, DebtRatio

\*Significant at the 0.05 level

The result of the first regression analysis is reported in two phases. In the first phase ROE is used as a dependent variable, while ROA is used as dependent variable in the second phase. The results of the regression in the first phase indicate no statistic significant relationship between ROE and CEOSB (0.248), LNTA (0.216), and DebtRatio (0.712). The F test for ROE is 4.058, and indicates a statistic significant relationship (0.017). In the second phase, the results indicate a statistic significant positive relationship between ROA and LNTA (0.005), and no statistic relationship between CEOSB (0.559), DebtRatio (0.302). The F test for ROA equals 3.362, and indicates a statistic positive significant relationship (0.017).

The results of the first regression analysis indicated no statistic significant relationship

between CEO compensation (CEOSB) and the financial performance variables ROE and ROA, which is in contrast with the results of the study conducted by Lilling (2006), Merhebi, Pattendan, Swan and Zhou (2006), and Canarella and Gasparyan (2008), all of whom also used the ROA as the criterion for measuring company performance and found a statistic positive significant relationship between CEO compensation and company performance. However, the results agree with the study conducted by Ngwenya and Khumalo (2012) who also found no statistic significant relationship between CEO compensation and company performance. The first hypothesis ( $H_1$ ) is therefore rejected. Table 4 depicts the second regression model.

**Table 4.** Regression analysis between the dependent variables BSIZE and independent variables (predictors: CEOSB, LNTA, DebtRatio)

<i>Coefficients*</i>					
<i>Model</i>	<i>Unstandardised Coefficients</i>		<i>Standardized Coefficients</i>		
Dependent Variable BSIZE					
	<i>B</i>	<i>Std. Error</i>	<i>Beta</i>	<i>T</i>	<i>Sig.</i>
(Constant)	-4.874	4.376		-1.114	0.276
LNTA	0.872	0.273	0.457	3.197	0.004
DebtRatio	0.001	0.006	0.040	0.227	0.822
CEOSB	2.679E-7	0.000	0.461	2.580	0.016
<i>ANOVA*</i>					
<i>Model</i>	<i>Sum of Squares</i>	<i>Df</i>	<i>Mean Square</i>	<i>F</i>	<i>Sig.</i>
Dependent Variable BSIZE					
Regression	64.889	3	21.630	9.466	0.000 <sup>b</sup>
Residual	59.411	26	2.285		
Total	124.300	29			

a. Dependent Variables: BSIZE

b. Predictors: (Constant), DebtRatio, LNTA, CEOSB

\*Significant at the 0.05 level

The results of the second regression analysis indicate a statistic significant relationship between BSIZE and CEOSB (0.016) and LNTA (0.004), but indicate no statistic significant relationship between BSIZE and DebtRatio (0.822). The F test for BSIZE is 9.466, and indicates a statistic positive significant relationship (0.000). The results are in line with

studies conducted by Randøy and Nielsen (2002), Guest (2009), Ozkan (2007) and Core et al (1999) who found a positive relationship between board size and CEO compensation. The second hypothesis ( $H_2$ ) is thus accepted. Table 5 report the results of the third regression analysis.

**Table 5.** Regression analysis between the dependent variables PFBF and independent variables (predictors: CEOSB, LNTA, DebtRatio)

<i>Coefficients*</i>					
<i>Model</i>	<i>Unstandardised Coefficients</i>		<i>Standardized Coefficients</i>		
Dependent Variable PFBF					
	<i>B</i>	<i>Std. Error</i>	<i>Beta</i>	<i>T</i>	<i>Sig.</i>
(Constant)	-17.386	19.383		-0.897	0.378
LNTA	2.290	1.207	0.272	1.897	0.069
DebtRatio	-0.069	0.025	-0.479	-2.732	0.011
CEOSB	4.24E-7	0.000	0.165	0.922	0.365
<i>ANOVA*</i>					
<i>Model</i>	<i>Sum of Squares</i>	<i>Df</i>	<i>Mean Square</i>	<i>F</i>	<i>Sig.</i>
Dependent Variable PFBF					
Regression	1 263.162	3	421.054	9.393	0.000 <sup>b</sup>
Residual	1 165.485	26	44.826		
Total	2 428.647	29			

a. Dependent Variables: PFBF

b. Predictors: (Constant), DebtRatio, LNTA, CEOSB

\*Significant at the 0.05 level

The results of the third regression analysis indicates no statistic significant relationship between PFBF and CEOSB (0.365), and LNTA (0.069), but find a statistic positive significant relationship between PFBF and DebtRatio (0.011). The F test of PFBF is 9.393, and indicates a statistic positive significant relationship (0.000). The results are in

agreement with studies conducted by Kerkhoven (2011) and Zaichkowsky (2014) who did not find any statistic significant relationship between CEO compensation and number of female board members. The third hypothesis ( $H_3$ ) is thus accepted. Table 6 report the results of the forth regression analysis.

**Table 6.** Regression analysis between the dependent variables PNIndNExe and independent variables (predictors: CEO SB, LNTA, DebtRatio)

<i>Coefficients*</i>					
<i>Model</i>	<i>Unstandardised Coefficients</i>		<i>Standardized Coefficients</i>		
Dependent Variable PNIndNExe					
	<i>B</i>	<i>Std. Error</i>	<i>Beta</i>	<i>T</i>	<i>Sig.</i>
(Constant)	147.799	62.890		2.350	0.027
LNTA	-2.264	3.917	-0.087	-0.578	0.568
DebtRatio	0.085	0.082	0.193	1.041	0.307
CEO SB	-4.027E-6	0.000	-0.510	-2.698	0.012
<i>ANOVA*</i>					
<i>Model</i>	<i>Sum of Squares</i>	<i>Df</i>	<i>Mean Square</i>	<i>F</i>	<i>Sig.</i>
Dependent Variable PNIndNExe					
Regression	10 652.064	3	3 550.688	7.524	0.001 <sup>b</sup>
Residual	12 269.365	26	471.898		
Total	22921.420	29			

a. Dependent Variables: PNIndNExe

b. Predictors: (Constant), DebtRatio, LNTA, CEO SB

\*Significant at the 0.05 level

The results of the fourth regression analysis indicate a statistic significant positive relationship between PNIndNExe and CEO SB (0.012), and no statistic significant relationship between PNIndNExe, LNTA (0.568) and DebtRatio (0.307). The F test of PNIndNExe is 7.524, and indicates a statistic significant positive relationship (0.001). The results are in agreement with the study conducted by Lin and Chang (2014), Guest (2009), and Ozkan (2007) which found a statistic positive relationship between the ratio of independent directors and executive compensation. The fourth hypothesis (H<sub>4</sub>) is therefore accepted.

## CONCLUSION

One of the major roles of the board of directors is to ensure that the interests of shareholders and managers are closely aligned in order to ensure the optimal performance of the company. The main objective of this study was to determine the relationship between CEO compensation, corporate governance and performance of listed platinum mines in South Africa for the period 2008 to 2013. Accounting-based measures, namely ROA and ROE were used to measure the financial performance against CEO salary plus bonus (CEO SB). Various corporate governance variables including board size (BSIZE), the proportion of female board directors (PFBD), and proportion of independent non-executive directors (PIndNdExe) were used as independent variables to evaluate the effectiveness of corporate governance structures in determining CEO compensation. Control variables such as debt to equity ratio (DebtRatio) and company size as measured by logarithm of total assets (LNTA) were also used during the study.

The results of the study indicated no statistics significant relationship between CEO compensation (CEO SB) and the financial performance variables ROE and ROA, which is in contrast with the results of the study conducted by Lilling (2006), Merhebi, Pattenden, Swan and Zhou (2006), and Canarella and Gasparyan (2008), all of whom also used the ROA as the criterion for measuring company performance and found a statistic positive relationship. This is of great concern considering the fact that the platinum mining industry has been hit by a combined impact of slowing global demand, falling prices, rapidly escalating domestic production costs that have added to the high cost structure of the industry. Furthermore, the platinum mining industry lost

around R15.3 billion in output as a result of wildcat strikes that hit the industry in 2012 and continued into 2013, yet the CEO compensation increased during the same period (Facts and Figures, 2013). This is also an indication of the weak governance structure within the platinum mining sector in South Africa.

With regards to board structure, the results indicated a statistic positive relationship between CEO compensation and board size (BSIZE), which is in agreement with the results of the studies conducted by Randøy and Nielsen (2002), Guest (2009), Ozkan (2007) and Core et al (1999). The study also found a statistic positive significant relationship between CEO compensation and proportion number of independent non-executive directors (PIndNdExe), which is also in agreement with the study conducted by Lin and Chang (2014), Guest (2009), and Ozkan (2007), but indicated no statistic significant relationship between proportion number of female board (PFBD) and CEO compensation (CEO SB), which is also in agreement with studies conducted by Kerkhoven (2011) and Zaichkowsky (2014).

## Limitations of the Study

The first limitation is that the data of this study was limited to a period of five years, 2008 to 2013. The second limitation is that the sample was drawn from only five listed platinum mines in South Africa, the rest of the platinum mines were excluded in the sample because of insufficient data.

## Managerial Implication and Recommendations

Based on the results obtained, it is evident that CEO compensation in listed platinum mines in South Africa is not related to company performance. This might be viewed as an indication of weak governing structures in determining a fair CEO compensation package without prejudicing the shareholders interest. However, looking closely on the relationship between CEO compensation and the corporate governance variables (BSIZE; PFBD; PIndNdExe), it is evident that some effective monitoring activities do exist

Therefore it can be concluded that corporate governance is reasonable implemented by listed platinum mines in South Africa, this might be the results of the implementation of the King 111

recommendations. However, listed platinum mines in South Africa should not become complacent, but must seek to improve their corporate governance structures to ensure that the agency and stewardship forces in the platinum mines are well managed.

It is further recommended that listed platinum mines in South Africa should maintain a reasonable board size which consists of a mixture of skills or experts since larger boards are better for company performance, but the size of the board must not be too large to manage to ensure timely resolution in decision making. The number of independent non-executive directors should consist of members who are committed to the success of the mining companies, and should not consist of members who serve in many companies as board members as this would render them ineffective as far as the monitoring role is concerned.

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