

Full Length Research Paper

# Market reaction to chief executive officers (CEOs) appointments on Johannesburg securities exchange (JSE): stock price and volume approach

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The study is aimed at assessing the market reaction to the announcement of the appointment of CEOs of companies listed on the Johannesburg securities exchange (JSE). To achieve this objective an event study was conducted. The dataset consist of 43 firms who satisfied the inclusion criteria, who have announced the appointment of CEO within the period January, 2000 to December, 2012. In this study both the volume traded and the share price were analysed in the 72-month event window. The results show that share price cumulative returns are negative at 1% significance level. In contrast, while observing the volume traded approach the cumulative returns are significantly showing positive returns. This study like the previous ones indicates the conflicting findings on the subject of CEO appointments subject.

**Key words:** CEOs appointment, event studies, market reaction, stock prices, trading volume.

## INTRODUCTION

The phrase "... *the buck stops here* ..." is claimed to have been popularised by the United States (US) President, Truman (Mathews, 1951). Arguably, at least from the President's point of view the display of this phrase indicated a commitment to accountability from his office. In corporate South Africa (SA), like elsewhere in the world, presidents to a certain extent are a proxy for chief executive officer (CEO) of a country. It should suffice to expect the same level of accountability from heads of corporate SA. However, accountability is a broad subject and it is necessary to contextualise what accountability is expected from corporate SA executives. CEOs are entrusted in creating wealth and value for their

shareholders and therefore, at least for listed companies, share price performance reflects one of the ways of creating shareholders' wealth. It should stand to reason that CEOs are or should be accountable to their respective companies' share price movements.

Across the globe, stock markets react to various corporate announcements; given the important nature of CEOs in companies, announcements of CEOs appointments is one of the significant announcements stock markets reacts to. In efficient market, announcements that are carrying vital information (good/bad) result in the (upward/downward) movement in the share prices. With this in mind, do CEOs-related corporate actions or

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activities provide for vital information? More specifically, is the appointment of a CEO in any company, important enough to elicit a market reaction to such news?

Actions of CEOs or actions regarding CEOs are of interest to many and varying stakeholders. For instance, CEOs compensation is of much importance and interest to shareholders and law-makers alike. In South Africa specifically, the compensation of CEO is both topical and controversial, for instance, Masondo and Roberts (2011) report on how South Africa's Minister of Finance has articulated his (Minister of Finance) discomfort with escalating salaries of South African business executives. Ashton (2010), for example, criticise the alarming increase in salaries of South Africa's CEOs despite declining economic activity and the financial crisis at the time. Mantshantsha (2007), Oberholzer and Theunissen (2012) and Labour Market Navigator (2012) report on how CEOs' salaries in corporate South Africa far outstrip the salaries of lowest paid employees. Finally, Labour Market Navigator (2012) further adds that this salary escalation is linked neither to profitability nor productivity. This interesting observations suggests that CEOs actions are vital and should prompt the market reaction.

Various studies have been conducted to establish the market reaction to dismissals and or appointments of CEOs with conflicting results. In the South African context no literature has been found that relates to assessing the information content of appointing CEOs. Based on this observation the study is aimed at assessing the market reaction to the announcement of the appointment of CEOs of companies listed on the Johannesburg securities exchange (JSE). To achieve this objective an event study was conducted.

The remainder of the article is organised in the following format. The next section critique the literature of market reactions to CEO announcement (appointments and dismissals); then we outline in detail the methods utilised; the following section presents and discuss the results and finally, we report on the study conclusion, highlight our recommendations and acknowledge the limitations of the study.

## Literature Review

The literature on the appointment announcements of CEOs provides inconclusive results in that some researchers report that there is no information content associated (that is, no upward or downward share price movement is observed) with the announcement; others report a negative market reaction, and the remainder of the literature reports a positive reaction to the announcements. Lubatkin et al. (1989) concluded that CEOs succession announcements convey negative information to investors, however, in events where an *outsider* is appointed, a favourable reaction is observed in particular for those firms that are financially healthy. This study on

its own confirms the contradictory nature of the subject.

Martin et al., (2009) compared the appointment of male and female CEOs, possibly with the intention to establish whether the market reaction to male female CEOs is any different to male CEO appointments. The results of their study showed that abnormal returns are not significantly different within these groups. However, the window period for this study is arguably too short (three days). These authors further reported that changes in risk for female appointments were found to be low and the perception is that female CEOs are risk averse. This observation presupposes that in high risk firms the appointment of female CEOs should be perceived as a possibility to reduce the firm's risk and therefore an appointment announcement might positively move the market. However, this assumption will have to be tested empirically. Interestingly, Lucey and Carron (2011) concur with the findings of Martin et al. (2009), in that there is a market effect when executives are appointed based on their gender. In Singapore, Kang, Ding and Charoenwong (2009) support this standpoint by reporting that investors generally respond positively to the appointment of women executives.

Lassoued and Attia (2013) studied both the share price and the volume traded post CEO announcement in the Tunisian market, authors posit that there has been significant negative market reaction when volume traded approach is utilised. In addition this study reports the negative reaction for both internal and outsider succession. This is in contradiction to Lubatkin et al. (1989) findings, regarding an outsider appointment. However, there are concerning observation regarding this study, namely, the dual role of CEO (as both CEO and chairman) is mentioned and this has a potential skewing of results and secondly, the window period is also relatively short (12-days).

Van Doorn (2011) in a Dutch study concludes that the appointment of CEOs and CFOs (chief financial officers) leads to a positive market reaction, albeit not significantly different from zero. Li (2012) in the Nasdaq and New York stock exchange (NYSE) found that CEO changes announcements have no impact on the market and stock prices. This further brings to surface the contradicting findings in this area of study. The Pakistani study conducted by Urooj et al., (n/d) using firms listed on Karachi stocks exchange also found that no movement on stock return, however, the sample used in this study is very small (ten CEO given the size of the exchange, and no clear inclusion criteria was outlined in the study) and this brings about questions regarding external validity in this study. In Indonesia, Setiawan et al. (2011) show that there is no market reaction post CEO announcement. The results of this study are based on the volume analysis and it will have been interesting to concurrently conduct the returns and observe if the results will come to the same conclusion. Charitou et al. (2010) found that the announcement of outside CEO elicit a positive market

reaction. Bonnier and Bruner (1989) report a positive reaction on CEO announcement of distressed firms, and the CEO is an outsider. The study however, does not report on either internal CEO or firms that are not distressed. In agreement, Ang et al. (2003) report a positive reaction to CEO appointment; however, this is reported to be true only for 'better-quality' CEO. Warner et al. (1988) reports that no stock reaction is detected around management change. In a South African study Bhana (2003) did a reverse study, he studied the market reaction on the dismissals of CEOs. The study concludes that the market reacts favourably where the replacement of a dismissed executive is an outsider. The concerning observation for this study is the weak control of confounding announcements. The study seem to suggest that both dismissal and appointment were announced on the same day.

Other researchers like Vafeas and Vlittis (2009) conducted the study on chief marketing officers' appointment and conclude that there is a positive market reaction especially when an executive does possess a prior marketing experience. These results add to the discussion, the human capital element and experience of executives, preceding the appointment. It was reported earlier in this article that Ang et al. (1988) referred to better quality CEO, authors were referring to those CEOs who receive a pay premium ex-ante, underscoring this observation is the assumption that CEOs are not the same in terms of what they bring to the firm. This is interpreted in the context of Vafeas and Vlittis (2009) in that we can safely assume that CEO with no prior job and/or industry experience will either have no effect to market upon their appointment announce or the market will react negatively. Yermack (2006) affirms this argument by concluding that share prices are sensitive to variables such as executive's occupation and professional qualification. However, the validity of these observations (human capital and experience) is beyond the scope of this study. It is necessary to report that all the previous studies observed in the literature that were analysed in this article used the event study methodology, the same methodology that was undertaken in the research that produced this article.

The primary aim of the study is to explore whether there are any significant abnormal (positive or negative) returns around the public announcement of appointment of CEOs. Given the inconclusive and mainly conflicting findings on the subject across the globe, the null hypothesis theorises that cumulative average abnormal returns (CAAR) due to CEO appointments' announcements are not significantly different from zero.

$$H_{01} : CAAR_t = 0$$

The alternate hypothesis states that the CAAR on CEO appointments' announcements is significantly different from zero.

$$H_1 : CAAR_t \neq 0$$

In addition, to test the trading volume before and after the public announcement of CEOs' appointments.

$$H_{02} : CAVTR_t = 0$$

The alternate hypothesis states that the CAVC on CEO appointments' announcements is significantly different from zero.

$$H_2 : CAVTR_t \neq 0$$

Where,  $CAAR_t$  is the cumulative average abnormal return during the post-transaction period or event window and  $CAVC_t$  is the cumulative average volume change during the event window.

## METHODOLOGY

### Event studies

An event study methodology was implemented in this study to test the stated hypothesis. An event study defines a technique of empirical financial research that permits a researcher to assess the financial impact (positive or negative) of a particular 'unanticipated' event (MacKinlay, 1997; McWilliams and Siegel, 1997) on a company's share price. The event of interest for this study is the public announcement of CEOs appointments. It is regarded as a powerful financial tool in efficient market hypothesis research. To this effect many researcher globally have successfully utilised this tool, for example though not exhaustive, Aharony and Swary (1980), Bowman (1983), Cox and Weirich (2002), Dey and Radhakrishna (2008), and Laidroo (2008). In South Africa researchers like Bhana (1995/1996, 2005, 2007a), Mushidzi and Ward (2004) and Ward and Muller (2010) successfully utilised the tool to assess the information content of announced corporate event. In addition, Das et al.(2008:64) argues that an event study "assess the significance of the economic event" on the market value of a firm.

Pioneering work by Bowman (1983) and Brown and Warner (1985) provide a framework of how to conduct an event study, and the approach in this article adopted this framework in conducting the research.

### Sampling

To conduct the study the population of interest was all the companies listed on the JSE, which publically announced CEO appointments in the ten year period between the 1<sup>st</sup> January, 2000 to 31<sup>st</sup> December, 2010. The target population was extracted from the McGregor BFA database of CEO appointments' announcements released by JSE Security Exchange News Services (SENS).

A population of 300 public announcements was extracted. Thereafter, a purposeful and judgmental sampling method was utilised to focus only on those announcements that were referring only to the appointment of CEOs. In order to be included in the target sample, the extracted sample of CEO appointments' announcements had to adhere to *all* of the inclusion criteria set. The inclusion criteria included the following: the announcement should include only the appointment of a CEO; no confounding

announcement (these include chairman, other directors and the resignation of an outgoing CEO, where it applied, management change, restructuring (whether financial, operational or otherwise)); the share information should be available for twelve months before announcement and three to five years after the announcement and actively trading in that period; the announcement should have been released by SENS and finally, the CEO should have stayed in the company for a minimum of three years to the maximum of five years. The sample contained 38 relevant public announcements.

### Technical analysis

The approach adopted in this was the single index model that uses the market index (JSE) to proxy for the systematic factor (Bodie et al. 2005). In this study, the method of calculating the security-specific expected returns was the capital asset pricing model (CAPM) that places an emphasis on the covariance between the market returns and the firm returns, the beta. Beta measures the volatility of the excess returns on those individual securities relative to that of the market as a whole (Hitchner, 2006).

It is acknowledged, that the use of the CAPM to calculate the securities' returns has been criticised by researchers like Drew et al. (2005), Fama and French (1992, 1996), Graham and Uliana (2001), Lee and Upneja (2008), Robins et al. (1999) and Van Rensburg (2001), amongst others, contending that a single factor beta provides little, if any, reasonable explanation for the cross-section of expected security returns, given the multiplicity of factors that explain security returns.

Notwithstanding these arguments against the model, many researchers still find the model both practical and reliable. Empirical evidence reports that the model still explains about 61% of the cross-section of returns (Drew et al., 2005). Selim (2008), for instance argues that the inclusion of risk-free rate in CAPM displays the essence of Islamic financing (no interest payment) and therefore supports the usage of the model in returns calculation. Galagedera (2007) claims that CAPM still holds if the normality of returns can be achieved, because then, the mean and the variance are sufficient to describe the return distribution. Guan et al. (2007) in support of using beta provide evidence that as measurement error (over or under-stated) in beta is reduced, the role of beta in explaining the securities' returns increases. Ingram and Margetis (2010) provide empirical evidence showing that CAPM delivers an acceptable method of estimating the market-priced risk of firms.

So it is therefore believed that enough evidence has been provided to support the usage of CAPM. Like all other models is not the best, but evidence suggests that it is still a valid and reliable tool to use when measuring securities' returns.

The most widely accepted form of CAPM is based on the following:

$$E(R)_{jt} = R_{ft} + \beta_j(R_{mt} - R_{ft}) \quad t = -11, +60 \quad (1)$$

Where:

$$\beta_j = \frac{Cov(R_j, R_{mt})}{Var(R_{mt})} \quad (2)$$

In the above formulation

$E(R)_{jt}$  = the expected return for security  $j$  on month  $t$ .

$R_{mt}$  = the market return, on month  $t$ .

$R_{ft}$  = risk-free rate in period  $t$ . Government bonds, R157 and R153 were utilised in this study.

$Cov(R_j, R_{mt})$  = is the covariance or correlation coefficient

between the returns of an individual security and the returns on the market.

$Var(R_{mt})$  = is the variance of returns on the market.

$\beta_j$  = is the relative risk of a specific security in relation to the risk of the market.

### Data Collection

Share data were extracted from McGregor BFA-Net using McGregor RAID Station. The data required included the monthly closing prices for all shares listed on the JSE which announced earnings within a ten year period from 1<sup>st</sup> January, 2000 to 31<sup>st</sup> December, 2010. The closing price data for at least twelve trading months before the interested CEO appointment announcement, this is needed to ensure that no prior similar announcement where done and to compute the abnormal returns a year before the announcement. CEO appointment announcements were extracted from the SENS, the month in which companies published this announcement is what constituted  $t_0$ . A SENS announcement platform was also reviewed to ascertain any related confounding events, as discussed earlier, which could have occurred within the event window.

### Data Analysis

The impact on the security's monthly closing price was measured over a period of 12 trading months prior (*ex-ante*) to the announcement month, and sixty trading months after (*post ante*) the announcement month (referred to as  $t-12 \dots t+60$ , the *event window*). The monthly share price return for each security in each portfolio was calculated using log-returns. Strong (1992) argues that logarithmic returns are preferred because they are theoretically better when linking together sub-period returns to form returns over a long time, and is given by:

$$R_{jt} = \log(P_{jt} / P_{jt-1}) \quad (3)$$

Where:

$R_{jt}$  = the share price return for security  $j$  for month  $t$ , and

$P_{jt}$  = the share price of security  $j$  at the end of month  $t$ .

Beta coefficients were calculated for each share in the sample by regressing the market's monthly share price return over the six years of the event window against the monthly returns of each of the 38 companies for the same period. After calculating the beta coefficients for each security, the expected return for each security for each month in the event window was calculated. This was done by using formula (1), the CAPM.

Once the expected return for security  $j$  in period  $t$  is calculated, the abnormal return for each selection for each month in the event window was calculated. Abnormal returns were calculated for each security over the 72-month event period,  $t = -12$  to  $+60$  trading months, and any significant differences found between actual returns and expected market returns were attributed to the information content of CEO appointment announcement. The abnormal return is simply the actual return of security  $j$  in the same period less the calculated expected return:

$$AR_{jt} = R_{jt} - E(R_{jt}) \quad (4)$$

Where:

$AR_{jt}$  = the abnormal return of security  $j$  in period  $t$

$E(R_{jt})$  = the expected share price return of security  $j$  in period  $t$ , as constructed by returns-generating model  
 $R_{jt}$  = actual return of security  $j$  in period  $t$

These above abnormal returns are summed and averaged cross-sectional on month  $t$  as follows:

$$AAR_t = \sum_{j=1}^N AR_{jt} / N \tag{5}$$

Where  $N$  is the number of CEO appointment announcements in the sample at month. The cumulative average abnormal returns (CAAR) for  $T$  months are calculated by:

$$CAAR = \sum_{t=-12}^{+60} AAR_t \tag{6}$$

Bamber (1987) presented an approach to use while using trading volume for event study, this approach was modified for this study. The author use the abnormal trading volume formulated as:

$$AV = V_{jt} - \bar{V}_j \tag{7}$$

In this study, the approach was to look at the *return* on volume traded, and is formulated as follows:

$$AVTR_t = \sum_{j=1}^N V_{jt} - \bar{V}_j / N \tag{8}$$

The cumulative average volume traded returns (CAVTR) for  $T$  months are calculated by:

$$CAVTR = \sum_{t=-12}^{+60} AVTR_t \tag{9}$$

The statistical analysis used to test the significance of the AAR, under the null hypothesis that they are equal to zero, the procedure by (Brown and Warner, 1985) was followed. It follows a  $t$ -distribution and is formulated as:

$$t_{AAR} = \frac{AAR_{jt}}{\sigma(AAR) / \sqrt{n}} \tag{10}$$

The statistical significance of the cumulative abnormal returns is given by:

$$t_{CAAR} = \frac{CAAR_{jt}}{\sigma(AAR) d^{0.5}} \tag{11}$$

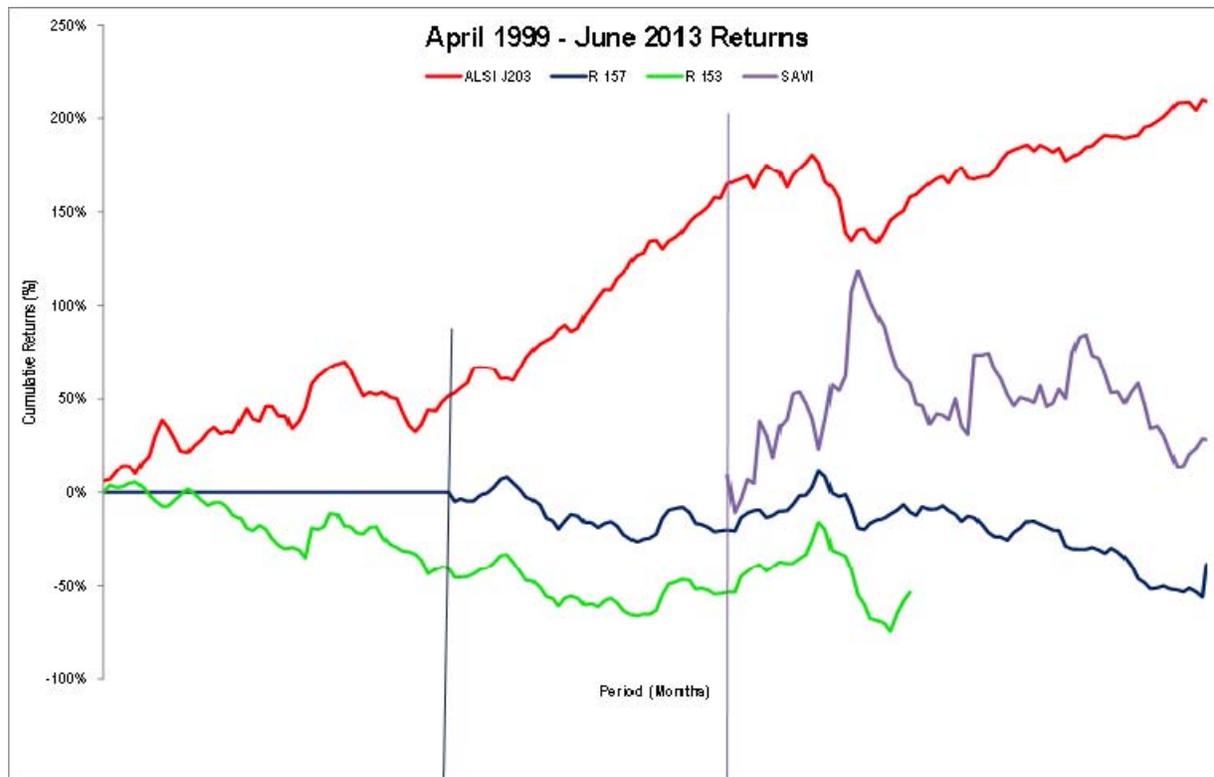
Where  $\sigma(AAR)$  is the estimated standard deviation,  $d$  stands for the total number of months for which AAR are cumulated. The significance level was set at a 1% margin of error to determine whether the CAAR differed statistically significantly from zero, ( $H_0: CAAR_t = 0$ ). In the same approach, the statistical significance for the volume traded was conducted.

## FINDINGS AND DISCUSSIONS

We begin by presenting the performance of the market for the period April, 1999 to June, 2013, the period during which all the announcements took place (Figure1). It is observed that in general terms the market had a positive performance (Bull market). In the same period government bonds R157 and R153 were generally yielding negative performance, and finally it was also observed that the market was relatively highly volatile as reflected by the South African Volatility Index (SAVI). Arguably, these observations seem to suggest that investors would have been better of investing in the market than interest yielding financial products.

The results of this study show that in general there is a significant negative cumulative average abnormal return (Figure 1 and 2) and also highly volatile. Empirical evidence supports the hypothesis that investors react unfavourably to announcements of appointments of CEO on JSE. Albeit a slightly upward performance on month  $t_1$ , this observation can be explained by many possibilities, even though this is beyond the scope of this study. It is possible that the market expected the announcement of either internal/external candidate and the expectation was not met; possibly a better-quality CEO, as coined by Ang et al. (2003) appointment announcement was expected and similarly the market expectation was not met. The results of this study are in line with the findings reported by Lassoued and Attia (2013). The interesting observation is that of the reports regarding market reaction to CEO announcements, evidence from that stock markets in Asia (Kang et al., 2009), Europe (Charitou et al, 2010; van Doorn, 2011 and Vafeas and Vlittis, 2009) and America (Lubatkin et al., 1989) concluded that there is positive market reaction surrounding the announcement. This study and that of Lassoued and Attia (2013) are coincidentally listed on African stock markets, namely Johannesburg and Tunis, respectively. However, this might as well be by chance, studies in other African stock markets will have to be conducted to ascertain if there is any emerging trend on how investors react to the announcement of CEOs.

Table 1 show that throughout the 72-months event period, only nine performance results could be found to be statistically significant at 1% significant level. These periods are significant for all the event periods that showed a positive reaction to CEO announcements. This implies that the market responds favourably to the appointment of CEOs linking the firm prospects to the executive, this further implies that there is an expectation that CEOs are viewed as worthwhile to the firm. Given this observation it is safe to argue that the AAR in the months that recorded upward movement of the market suggests that investors react positive to CEO announcements. These periods are event months  $t_{-8}$ ;  $t_0$ ;  $t_{+1}$ ;  $t_{+5}$ ;  $t_{+9}$ ;  $t_{+19}$ ;  $t_{+24}$ ;  $t_{+35}$  and  $t_{+49}$ . However, it is necessary to also look into the returns for the entire event window; it



**Figure 1.** Market performance, Government bonds performance and Volatility Index 1999 to 2013

is then observed that the market has reacted negatively, albeit not statistically significant. This observation then lead to a negative cumulative reaction (CAAR), interestingly, the significance of these findings correlates with the data-points of AAR that displayed statistically significant negative performance at 1% significant level, with the exception of  $t_0$  that show the 10% significant level. It is important to note that the cumulative negative effect of non-significant result contribute the negative performance of those periods that show statistically significant performance. The announcement month ( $t_0$ ) is the only period with considerable and significant positive returns of 17.4%, as alluded to earlier, this seem to suggest that the market links the appointment of CEOs to possibly better prospects of the firm and secondly, it affirms that appointment of CEO is a price sensitive event. What is also observed here is that once the returns are on the down-slide, they do not seem to recover quickly and much of invested capital can be eroded.

Regarding the volume traded, the general trend is the significant positive reaction for both the average volume traded and the cumulative effect, thereof. This study finding coincides with that of Kang et al., (2009), Charitou et al, (2010), van Doorn (2011), Vafeas and Vlittis (2009) and Lubatkin et al. (1989). Furthermore, coincides with the study of Setiawan et al. (2011), but contradicts that of Lassoued and Attia (2013) both studies used volume

approach to measure the market reaction to CEO announcements. (As shown in Table 2, 72-month event period volume performance results and statistical analysis).

## CONCLUSION

This study was undertaken to assess the market reaction to the announcement of CEOs, which should translate to whether value has been added or lost to the shareholders, as measured by the share price movements and the willingness of investors to buy the shares on firms in question when CEO appointments of public companies are publicly announced. To achieve this objective, the share price movement and volume traded approach were utilised. It has been proven in this study that this null hypothesis that stated that CAAR are not significantly different from zero is invalid, and therefore in line with the findings, null hypothesis is rejected in favour of the alternate hypothesis. Empirical evidence demonstrates that there is substantial negative share price reaction to CEOs appointment announcements on the JSE stock market. Similarly, it is concluded that when volume traded is used, the hypothesis that states that CAVTR are not significantly different from zero is also invalid, and therefore rejected in favour of the positive reaction. To

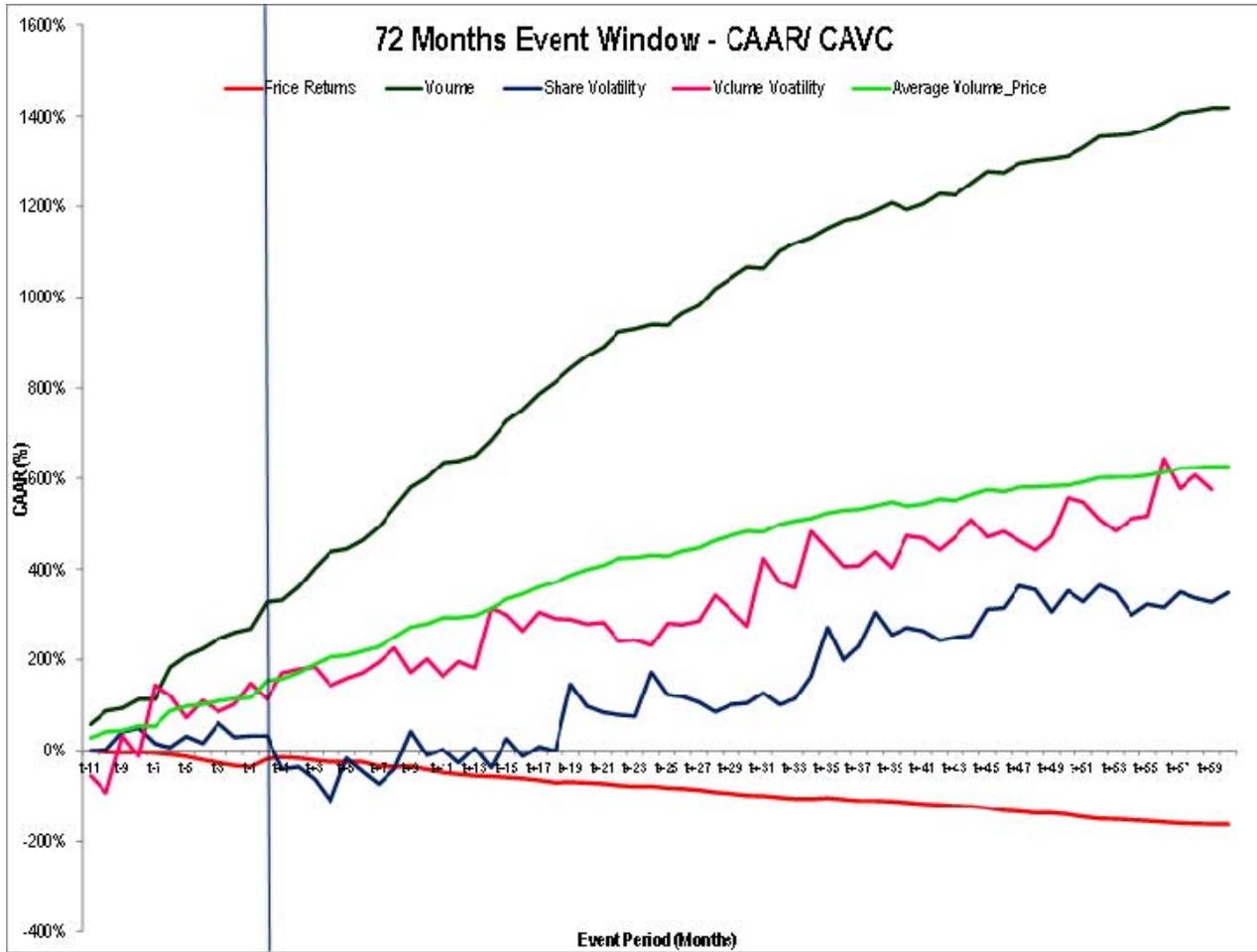


Figure 2: Share price and volume traded performance over a 72-month event window

Table 1. 72-month event period share performance results and statistical analysis

Event Month	AAR	t-statistics (2-tailed)	CAAR	t-statistics (2-tailed)	SD
			0		
t <sub>-11</sub>	-1.4%	42.98	-1%	6.97	0.143
t <sub>-10</sub>	-3.1%	42.21	-5%	6.97	0.146
t <sub>-9</sub>	-0.8%	30.33	-5%	19.47	0.203
t <sub>-8</sub>	0.8%	27.97***	-4%	-12.11***	0.220
t <sub>-7</sub>	-1.8%	42.48	-6%	10.61	0.145
t <sub>-6</sub>	-2.9%	46.41	-9%	9.72	0.133
t <sub>-5</sub>	-4.8%	37.26	-14%	6.66	0.165
t <sub>-4</sub>	-7.4%	43.93	-21%	7.30	0.140
t <sub>-3</sub>	-6.3%	30.39	-28%	7.18	0.203
t <sub>-2</sub>	-5.9%	43.94	-34%	12.85	0.140
t <sub>-1</sub>	-3.0%	42.91	-37%	25.31	0.144
t <sub>0</sub>	17.4%	4.55***	-19%	-0.24*	1.352
t <sub>+1</sub>	3.6%	17.70***	-16%	-3.41***	0.348
t <sub>+2</sub>	-2.0%	16.79	-18%	6.52	0.367
t <sub>+3</sub>	-4.3%	23.24	-22%	4.95	0.265

Table 1. Contd.

t <sub>+4</sub>	-4.0%	44.69	-26%	11.70	0.138
t <sub>+5</sub>	0.3%	22.94***	-26%	-88.69***	0.269
t <sub>+6</sub>	-0.4%	32.61	-26%	85.75	0.189
t <sub>+7</sub>	-9.0%	44.64	-35%	6.44	0.138
t <sub>+8</sub>	-1.0%	33.54	-36%	44.10	0.184
t <sub>+9</sub>	0.7%	18.31***	-35%	-32.48***	0.337
t <sub>+10</sub>	-7.2%	38.81	-42%	7.97	0.159
t <sub>+11</sub>	-6.4%	34.16	-49%	8.84	0.180
t <sub>+12</sub>	-3.4%	49.24	-52%	25.05	0.125
t <sub>+13</sub>	-3.7%	37.09	-56%	18.35	0.166
t <sub>+14</sub>	-1.8%	65.72	-58%	66.98	0.094
t <sub>+15</sub>	-1.9%	39.91	-60%	39.77	0.154
t <sub>+16</sub>	-2.7%	65.95	-62%	47.12	0.093
t <sub>+17</sub>	-3.7%	54.26	-66%	28.92	0.114
t <sub>+18</sub>	-5.2%	60.01	-71%	24.36	0.103
t <sub>+19</sub>	1.2%	24.28***	-70%	-42.06***	0.254
t <sub>+20</sub>	-1.7%	46.95	-72%	57.51	0.131
t <sub>+21</sub>	-2.1%	54.68	-74%	53.41	0.113
t <sub>+22</sub>	-3.3%	57.46	-77%	37.34	0.107
t <sub>+23</sub>	-2.7%	59.25	-80%	48.16	0.104
t <sub>+24</sub>	0.5%	30.07***	-79%	-132.45***	0.205
t <sub>+25</sub>	-3.4%	59.75	-83%	38.79	0.103
t <sub>+26</sub>	-1.6%	62.26	-84%	84.09	0.099
t <sub>+27</sub>	-3.1%	71.59	-88%	51.86	0.086
t <sub>+28</sub>	-4.9%	90.42	-92%	44.06	0.068
t <sub>+29</sub>	-2.9%	78.16	-95%	64.25	0.079
t <sub>+30</sub>	-3.7%	75.55	-99%	50.46	0.082
t <sub>+31</sub>	-1.1%	61.66	-100%	137.34	0.100
t <sub>+32</sub>	-3.8%	83.36	-104%	56.30	0.074
t <sub>+33</sub>	-2.2%	73.66	-106%	85.27	0.084
t <sub>+34</sub>	-0.7%	49.28	-107%	186.33	0.125
t <sub>+35</sub>	2.3%	23.69***	-105%	-26.05***	0.260
t <sub>+36</sub>	-3.5%	89.75	-108%	65.47	0.069
t <sub>+37</sub>	-2.9%	67.90	-111%	59.75	0.091
t <sub>+38</sub>	-0.1%	38.95	-111%	966.05	0.158
t <sub>+39</sub>	-1.5%	76.01	-113%	131.94	0.081
t <sub>+40</sub>	-2.4%	65.79	-115%	70.96	0.094
t <sub>+41</sub>	-3.2%	71.03	-118%	58.69	0.087
t <sub>+42</sub>	-1.8%	89.16	-120%	134.54	0.069
t <sub>+43</sub>	-2.8%	83.53	-123%	79.16	0.074
t <sub>+44</sub>	-0.5%	80.48	-123%	398.29	0.077
t <sub>+45</sub>	-4.2%	51.13	-128%	33.11	0.121
t <sub>+46</sub>	-5.4%	49.70	-133%	25.94	0.124
t <sub>+47</sub>	-1.9%	33.46	-135%	49.58	0.184
t <sub>+48</sub>	-3.5%	36.49	-138%	29.97	0.169
t <sub>+49</sub>	0.0%	71.21***	-138%	-100745.22***	0.087
t <sub>+50</sub>	-3.2%	48.50	-142%	44.03	0.127
t <sub>+51</sub>	-5.4%	63.92	-147%	35.33	0.096
t <sub>+52</sub>	-3.8%	46.90	-151%	37.70	0.131
t <sub>+53</sub>	-1.1%	56.14	-152%	153.87	0.110
t <sub>+54</sub>	-2.3%	110.95	-154%	150.81	0.056

Table 1. Contd.

t <sub>+55</sub>	-1.7%	89.30	-156%	162.19	0.069
t <sub>+56</sub>	-2.9%	96.52	-159%	105.11	0.064
t <sub>+57</sub>	-2.3%	72.17	-161%	98.18	0.085
t <sub>+58</sub>	-1.0%	83.04	-162%	272.06	0.074
t <sub>+59</sub>	-1.3%	90.87	-163%	217.16	0.068
t <sub>+60</sub>	-0.2%	75.49	-164%	961.66	0.082

**Notes:** The table presents the test statistics (one sample *t*-test), column 3 are the test results for the AAR, and column 5 for the CAAR test results. \*, \*\*, and \*\*\* denote statistical significance at the 10%, 5% and 1% level (two-tailed test), respectively, for the 72-month event period. Column 6 shows the standard deviation

Table 2. 72-month event period volume performance results and statistical analysis

Event Month	AVTR	t-statistics (2-tailed)	CAVTR	t-statistics (2-tailed) <sup>2</sup>	SD
t <sub>-11</sub>	0.58	1.71	0.58	1.00	2.035
t <sub>-10</sub>	0.29	1.97	0.87	2.11	0.890
t <sub>-9</sub>	0.06	0.66	0.93	8.73***	0.558
t <sub>-8</sub>	0.19	0.91	1.12	2.94***	1.261
t <sub>-7</sub>	0.00	0.00	1.12	-1082.35	0.689
t <sub>-6</sub>	0.71	2.40***	1.83	1.06	1.773
t <sub>-5</sub>	0.25	1.12	2.08	3.12***	1.355
t <sub>-4</sub>	0.16	1.35	2.24	5.04***	0.697
t <sub>-3</sub>	0.22	1.37	2.46	3.76***	0.957
t <sub>-2</sub>	0.14	1.17	2.60	5.84***	0.725
t <sub>-1</sub>	0.09	0.64	2.69	9.03***	0.840
t <sub>0</sub>	0.58	2.83***	3.27	1.63	1.232
t <sub>+1</sub>	0.04	0.30	3.31	22.89***	0.798
t <sub>+2</sub>	0.30	1.41	3.61	3.26***	1.263
t <sub>+3</sub>	0.42	1.84	4.02	2.49***	1.361
t <sub>+4</sub>	0.36	1.51	4.38	3.04***	1.432
t <sub>+5</sub>	0.06	0.45	4.45	17.14***	0.847
t <sub>+6</sub>	0.19	1.16	4.64	5.77***	0.980
t <sub>+7</sub>	0.29	1.59	4.93	3.86***	1.104
t <sub>+8</sub>	0.44	1.95	5.37	2.71***	1.362
t <sub>+9</sub>	0.43	1.45	5.80	2.94***	1.784
t <sub>+10</sub>	0.21	1.55	6.02	6.01***	0.826
t <sub>+11</sub>	0.34	1.89	6.35	3.93***	1.067
t <sub>+12</sub>	0.04	0.32	6.39	36.65***	0.662
t <sub>+13</sub>	0.11	0.73	6.50	12.13***	0.877
t <sub>+14</sub>	0.34	2.75***	6.84	3.89***	0.752
t <sub>+15</sub>	0.43	1.49	7.27	3.25***	1.740
t <sub>+16</sub>	0.25	1.02	7.53	5.61***	1.497
t <sub>+17</sub>	0.34	2.12	7.87	4.26***	0.970
t <sub>+18</sub>	0.26	1.13	8.13	5.76***	1.363
t <sub>+19</sub>	0.31	1.58	8.44	4.91***	1.174
t <sub>+20</sub>	0.26	1.37	8.70	5.81***	1.160
t <sub>+21</sub>	0.20	1.16	8.90	7.70***	1.040
t <sub>+22</sub>	0.34	1.89	9.24	4.66***	1.077
t <sub>+23</sub>	0.06	0.56	9.30	26.63***	0.629

Table 2. Contd.

t <sub>+24</sub>	0.10	0.90	9.40	16.15***	0.648
t <sub>+25</sub>	-0.01	-0.08	9.39	-212.94	0.570
t <sub>+26</sub>	0.25	1.81	9.64	6.14***	0.843
t <sub>+27</sub>	0.17	1.23	9.82	9.22***	0.828
t <sub>+28</sub>	0.38	2.54***	10.19	4.27***	0.891
t <sub>+29</sub>	0.24	1.02	10.43	6.87***	1.395
t <sub>+30</sub>	0.24	1.50	10.66	7.00***	0.940
t <sub>+31</sub>	-0.03	-0.26	10.64	-60.73	0.608
t <sub>+32</sub>	0.38	1.53	11.02	4.32***	1.512
t <sub>+33</sub>	0.17	1.40	11.19	9.88***	0.723
t <sub>+34</sub>	0.13	1.23	11.32	12.86***	0.636
t <sub>+35</sub>	0.21	0.86	11.53	8.19***	1.426
t <sub>+36</sub>	0.16	1.08	11.69	10.56***	0.885
t <sub>+37</sub>	0.07	0.80	11.76	23.32***	0.539
t <sub>+38</sub>	0.15	1.65	11.91	11.16***	0.550
t <sub>+39</sub>	0.17	1.46	12.08	9.76***	0.711
t <sub>+40</sub>	-0.15	-1.86	11.94	-11.24	0.475
t <sub>+41</sub>	0.13	0.93	12.06	13.21***	0.805
t <sub>+42</sub>	0.23	1.79	12.29	7.38***	0.759
t <sub>+43</sub>	-0.03	-0.34	12.26	-51.55	0.565
t <sub>+44</sub>	0.27	2.19	12.52	6.28***	0.729
t <sub>+45</sub>	0.26	1.54	12.78	6.56***	1.006
t <sub>+46</sub>	-0.03	-0.25	12.75	-65.47	0.618
t <sub>+47</sub>	0.20	1.76	12.96	8.26***	0.695
t <sub>+48</sub>	0.06	0.63	13.02	28.94***	0.550
t <sub>+49</sub>	0.04	0.57	13.06	39.98***	0.441
t <sub>+50</sub>	0.05	0.57	13.11	30.63***	0.572
t <sub>+51</sub>	0.20	1.11	13.31	8.57***	1.062
t <sub>+52</sub>	0.24	1.48	13.54	7.18***	0.956
t <sub>+53</sub>	0.03	0.27	13.57	62.29***	0.598
t <sub>+54</sub>	0.02	0.34	13.60	67.46***	0.441
t <sub>+55</sub>	0.10	1.07	13.70	16.55***	0.564
t <sub>+56</sub>	0.16	1.59	13.85	10.63***	0.596
t <sub>+57</sub>	0.21	0.92	14.06	8.18***	1.349
t <sub>+58</sub>	0.04	0.56	14.10	39.94***	0.450
t <sub>+59</sub>	0.06	0.65	14.17	26.35***	0.586
t <sub>+60</sub>	0.01	0.18	14.18	138.91***	0.400

**Notes:** The table presents the test statistics (one sample t-test), column 3 are the test results for the AVTR, and column 5 for the CAVTR test results. \*, \*\*, and \*\*\* denote statistical significance at the 10%, 5% and 1% level (two-tailed test), respectively, for the 72-month event period. Column 6 shows the standard deviation

sum up, the announcement of CEO appointment is to create expectation to the market, meaning the market reacts to the information of their announcement. This study suggest that firms need to pay special attention to the person(s) they are intending to appoint as CEO, because there is an expectation in the market that links the person in the capacity of CEO to the prospects of the firm.

## RECOMMENDATIONS

It is recommended that a follow-up study should be conducted with focus on both inside and outside candidate, given the conflicting evidence presented here. In addition, in line with literature observations distinction should also be made between male and female candidates and firms that are either undergoing re-structuring or are under

distress. A comparable study looking at more than one stock exchange can also be very useful, given the earlier observation that African studies indicated negative reaction to the announcement. Finally, the application of other asset pricing models might be very useful.

The following limitations in the study are acknowledged, firstly, all other mediums of disclosures besides public announcements are excluded, and only those announcements recorded on SENS were considered for the study. The sampling method used here is non-probabilistic, therefore the study is unable to test external validity, and conclusions can only be made for this sample. The limitations of CAPM for measuring expected returns, methods like market model, and/or three-factor model for expected returns could have been used, particularly given the criticism labelled against beta not being able to fully explain the securities' returns. The presence of outliers, these have a serious impact on the mean (AAR and AVTR, in this case), so it is to be observed that this will have an influence on the interpretation of results. The event window (72 months) appeared not to be able to illustrate, as to when will rectification, or price recovery occur.

### Conflict of Interests

The author(s) have not declared any conflict of interests

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