Market reactions to Financial and Resources BEE deals on the JSE

Jenna Hertz
Student Number: 884724
Email: hertz.jenn@gmail.com
Supervisor: Kwasi Okyere-Boakye

A research report submitted to the Faculty of Commerce, Law and Management, University of the Witwatersrand, in partial fulfilment of the requirements for the degree of Masters of Commerce in Accountancy

Johannesburg, 2019

Declaration

I, Jenna Hertz, declare that this research report is my own unaided work. It is submitted in partial fulfilment of the requirements for the degree of Master of Commerce in the field of Accountancy at the University of the Witwatersrand, Johannesburg. All sources that I have used or referenced to have been indicated and acknowledged as such by means of complete references. This work has not been submitted before for any other degree or examination at any other institution.

Jenna Hertz

06/08/2019

Date

Abstract

In South Africa, Black Economic Empowerment (BEE) has been instrumental in the transformation of the country post-Apartheid. The involvement of key sectors in transformation is dependent on specific Industry Charters and the impact of these charters on the implementation of BEE by companies has been largely ignored by prior literature. This research examines the short-run impact of BEE equity/ownership deals on the share price performance of JSE-listed stock by calculating abnormal returns (ARs) and cumulative abnormal returns (CARs) subsequent to announcements in the resource and financial sectors.

The objective of the study is to determine whether announcements of BEE deals resulted in the creation of shareholder wealth in these specific sectors. The study further explores whether size of the issuing company was a factor in how the markets received BEE deal announcements.

The research employed a standard event study methodology which is widely used in finance literature to examine the impact of corporate events on shareholder wealth. The sample included 111 BEE deal announcements by resource sector companies during the period January 2003 until October 2018 and 75 BEE deal announcements by financial companies during the period January 2004 until October 2018. ARs and CARs were analysed over an 11 day event window.

The results of the study found that qualifying announcements had a significant positive impact on the CARs of financial sector companies and an insignificant negative impact on the CARs of resource companies over the 11 day event window. This demonstrated that BEE deals were perceived to destroy value in the resource sector and create value in the financial sector for shareholders. The difference in reaction between the two sectors was found to be significant. Furthermore, the research findings indicated that the market reacted more favourably to BEE deal announcements made by 'small' companies regardless of the sector. However, while these findings were significant for the financial sector, they were proven to be insignificant for the resource sector.

Keywords

Black Economic Empowerment (BEE), Event Study, Abnormal Returns, JSE, Resource sector, Financial Sector

Acknowledgements

First and foremost, I would like to thank my supervisor Kwasi Okyere-Boakye for his guidance, insight and support. He has made a major impact as both my lecturer and my supervisor. I greatly appreciate all he has done and all he has taught me.

I would also like to thank my colleagues in the Management Accounting and Finance Division as well as my fellow Academic Trainees for their support and friendship.

Lastly, a special thank you to my parents, Tammy and David Hertz. Although they have yet to understand my thesis or any of its content, they have been a source of inspiration throughout the course of my studies. I will always be grateful for the opportunities they have given me.

Table of Contents

List of Tables i
List of Figures ii
List of Equations iii
Chapter I – Introduction 1
1.1 Definition of Terms 1
1.2 Context of the Study 1
1.3 Purpose Statement 3
1.4 Significance of the Study 4
1.5 Research Question and Null Hypothesis 5
1.6 Structure of the Study 6
Chapter II – Literature Review 7
2.1 Introduction 7
2.2 Background to Black Economic Empowerment in South Africa 7
2.2.1 Criticism of BEE 8
2.2.2 Motives behind Engaging in BEE Deals 9
2.2.3 Measurement of Ownership and Control 10
2.3 Background to the Industry Charters 11
2.3.1 The Resource Sector 12
2.3.2 The Financial Services Sector 13
2.4 The Efficient Market Hypothesis 14
2.5 The Impact of BEE announcements on cumulative returns 15
2.5.1 Long Term Impact 15
2.5.2 Short Term Impact 16
2.5.3 Similar Studies 16
2.5.4 Other considerations 17
2.6 Conclusion 17
Chapter III – Methodology 19
3.1 Research Approach 19
3.2 Research Strategy 19
3.2.1 The Event 20
3.2.2 The Event Window 21

3.2.3 Estimation Window 21
3.2.4 Abnormal Returns (ARs) 22
3.2.5 Actual Return 22
3.2.6 Normal Returns 23
3.2.7 Control Portfolio Model 25
3.2.8 Cumulative Abnormal Returns (CAR) 26
3.2.9 Average Abnormal Returns (AARs) and Cumulative Average Abnormal Returns (CAARs) 26
3.2.10 Large versus small stock 27
3.2.11 Testing for Significance 27
3.3 Unit of Analysis 29
3.4 Population 29
3.5 Sampling 30
3.6 Data Collection 31
3.7 Validity and Reliability 32
3.8 Assumptions, Limitations and Delimitations 32
Chapter IV – Results 34
4.1 Introduction to Results 34
4.2 Tests for Normality and Descriptive Statistics 34
4.3 The Resource Sector 35
4.3.1 Description of the sample 35
4.3.2 Hypothesis 1a: Average Abnormal Returns 36
4.3.3 Hypothesis 1b: Cumulative Average Abnormal Results 38
4.3.4 Large vs Small Stock 40
4.4 The Financial Services Sector 42
4.4.1 Description of the Sample 42
4.4.2 Hypothesis 2a: Abnormal Average Returns 43
4.4.3 Hypothesis 2b: Cumulative Abnormal Returns 45
4.4.4 Large vs Small Stock 46
4.5 Comparison between the resource and financial services sector 49
Chapter V - Discussion of Results 51
5.1 Introduction to discussion of results 51
5.2 Average Abnormal Returns 51
5.3 Cumulative Average Abnormal Returns 52

5.4 Large vs Small Stock....53
Chapter VI - Conclusion....54
6.1 Introduction to Conclusion....54
6.2 Summary of Findings....54
6.3 Implications for Theory and Practice....55
6.4 Recommendation for Future Research....56
6.5 Chapter Summary....57
Appendix....58
Appendix 1: List of resource companies in the sample....58
Appendix 2: Year of deal announcement by resource company sector in the sample....60
Appendix 3: List of financial service companies in the sample....62
Appendix 4: Year of deal announcement by financial sector company sector in the sample....63
Appendix 5: Descriptive statistics for the resource sector ARs....65
Appendix 6: Descriptive statistics for the financial sector ARs....66
Appendix 7: Shapiro-Wilke Tests for Normality for resource sector ARs....66
Appendix 8: Shapiro-Wilke Tests for Normality for financial service sector ARs....67
References....68

List of Tables

Table 3-1: Control Portfolios

Table 4-1: Summary statistics over event windows for AARs in resource sector

Table 4-2: Summary statistics over event windows for CAARs in resource sector

Table 4-3: Descriptive Statistics of small versus large resource stock

Table 4-4: Mann-Whitney test for small versus large stock in the resource sector

Table 4-5: Summary statistics over event window for AARs

Table 4-6: Summary statistics over event windows for CAARs

Table 4-7: Descriptive Statistics of small versus large financial service stock

Table 4-8: Mann-Whitney test for small versus large stock in the financial services sector

List of Figures

Figure 3-1: Event Study Timeline

Figure 4-1: AARs over the event window in the resource sector

Figure 4-2: CAARs over the event window in the resource sector

Figure 4-3: AARs and CAARs for large versus small stock (resource sector)

Figure 4-4: AARs for the financial services sector

Figure 4-5: CAARs for the financial services sector

Figure 4-6: AARs and CAARs for large versus small stock (financial services sector)

Figure 4-7: AARs and CAARs for resource and financial services sector

List of Equations

Equation 3-1: Abnormal Return

Equation 3-2: Actual Returns

Equation 3-3: Expected Returns

Equation 3-4: Cumulative Abnormal Returns

Equation 3-5: Average Abnormal Returns

Equation 3-6: Cumulative Average Abnormal Returns

Equation 3-7: Test statistic for AARs

Equation 3-8: Test statistic for CAARs

Equation 3-9: Standard deviation of AAR

Equation 3-10: Standard deviation of CAAR

Equation 3-11: Wilcoxon Signed-Rank Test

Chapter I – Introduction

1.1 Definition of Terms

Abnormal Returns (AR) - equal to the difference between actual and expected return on a share.

Average Abnormal Return (AAR) - equal to the average difference between actual and expected return on all shares in the sample.

Capital asset pricing model (CAPM) - calculated as the risk free rate plus beta multiplied by the equity risk premium.

Cumulative Abnormal Return (CAR) - the sum of abnormal returns.

Cumulative Average Abnormal Return (CAAR) - the sum of average abnormal returns.

Historically Disadvantaged South Africans (HDSAs) - a South African citizen who, due to the apartheid policy that had been in place, had no franchise in national elections prior to the introduction of the Constitution of the Republic of South Africa, 1993.

Johannesburg Stock Exchange (JSE) – the oldest and largest stock exchange in Africa. It enables the buying and selling of shares in listed firms and acts as a regulator of the listed shares and the investors who use the JSE.

Stock Exchange News Service (SENS) – a service offered by the JSE which provides users with access to company announcements which have a direct impact on the movement in the market.

1.2 Context of the Study

In 1994, Apartheid ended with South Africa's first democratic election and the coming into power of the African National Congress (ANC). Following this seminal event, there remained several hundred statutes which continued to disenfranchise historically disadvantaged individuals. These laws had curtailed effective participation by the majority of the South African population in the economy and in society through systematic discrimination in the

spheres of education, access to resources and ownership. As a result of these apartheid policies, socio-economic inequality persists to this day along racial lines (Frye, Farred, & Nojekwa, 2011).

Since 1994, the redress of these inequalities has been one of the main objectives of the South African government (Ponte, Roberts, & Van Sittert, 2007). The concept of black economic empowerment (BEE) was formulated in the 1990s as an essential tool to address the legacy of Apartheid which had as its primary objective the oppression of black people in South Africa. However, there were disagreements regarding exactly how BEE was to be implemented (Ponte et al., 2007).

Originally, BEE had a predominant focus on the transfer of equity ownership to black-owned business consortiums (Russell, 2007). In contrast to the original BEE policy, the Broad-Based Black Economic Empowerment Act No.53 (B-BBEE Act) in 2003, together with the Codes of Good Practice and numerous scorecards, incorporated seven elements with only one of those elements being that of ownership (Act, 2004; Ntim & Soobaroyen, 2013). Although the BEE Commission explicitly aimed to provide a broader and more inclusive definition of BEE, Hamann, Khagram, and Rohan (2008) found that 'active black ownership and control of major listed companies remained a primary concern of the BEE Commission, with much attention given to feasible financial mechanisms to effect such a transfer of ownership.' It was argued that true economic transformation was only possible with equity ownership being principally in the hands of historically disadvantaged South Africans (HDSAs) (Hamann et al., 2008). From this, one can infer that empowerment has always been inextricably linked to the transfer of ownership which is why BEE deals are given utmost importance in the BEE context.

In 1995 less than 1% of the market capitalisation of listed firms on the Johannesburg Stock Exchange (JSE) were owned by black investors (Cargill, 1999). With the implementation of the B-BBEE Act in 2003, the value of empowerment deals began to increase substantially (Fauconnier & Mathur-Helm, 2008). Many attribute this to the introduction of 'Sector Empowerment Charters.' The evolution of BEE has been demonstrated through these industry charters which have transitioned from voluntary participation to formal industry sector charters since 2003 pursuant to the introduction of the B-BBEE Act (Alessandri, Black, & Jackson, 2011). These Charters intended to act as mechanisms by which the government could compel the private sector to relinquish ownership of up to 50% of the equity stake in their companies

and are now critical to investment decisions in most sectors in South Africa's economy (Hamann et al., 2008; Iheduru, 2008).

It is due to these charters, and the general background of specific industries in South Africa, that the adoption of BEE by different sectors is vastly different, and has yielded vastly different results (Hamann et al., 2008). For example, the Mining Charter was among the first of the charters to be released to the public and enacted. It was primarily government driven, and had the power to deny Mining Rights in the event of non-compliance. Since the implementation of the B-BBEE Act and the Mining Charter, the resource sector has been at the forefront of completing empowerment deals (Fauconnier & Mathur-Helm, 2008). Consequently, the initial Financial Services Charter was concluded voluntarily through negotiations, setting targets but no actual sanctions for non-compliance. Although the financial sector in South Africa has grown at twice the rate of the economy since 2002, empowerment in the sector is comparably low (Ponte et al., 2007).

1.3 Purpose Statement

The purpose of this research is to examine the impact of BEE announcements relating to ownership on the share price of companies listed on the JSE, specifically in the resource and financial services sectors. This research employs the use of event study methodology as described by Benninga (2008) in order to determine whether abnormal returns occur as a result of these announcements in the stock market. This will allow users to assess whether empowerment transactions have been perceived as being able to create value for shareholders in specific sectors as guided by their relevant transformation charters. This will also assess how quickly new information regarding the implementation of a BEE deal is absorbed by the market as per the efficient market hypothesis.

This study aims to fill the gap in research where the impact of BEE deal announcements on the stock market in South Africa's continuously changing economic environment have not been examined in almost a decade. Additionally, mixed results from existing literature (see Chipeta & Vokwana, 2011; Jackson, Alessandri, & Black, 2005; Strydom, Christison, & Matias, 2009; Ward & Muller, 2010; Wolmarans & Sartorius, 2009) have made it unclear whether in fact such deals do in fact create perceived value in the stock market.

BEE is intended to deliver primarily social returns in order to correct past inequalities. However, there is undoubtedly a financial as well as social impact for companies involved which does influence company decisions to implement such deals. While one needs to consider the social benefits of BEE actions, the purpose of this paper is to focus primarily on the financial impact that BEE deal announcements have on short-term share returns.

Consequently, CSR actions, such as BEE deals, can create or destroy the perception of value for shareholders under different conditions (Alessandri et al., 2011). Current literature does not assess whether value creation is impacted by the Industry Charters. This study will be the first to look at deals across specific sectors. There is currently scant research relating to the impact of Industry Charters on specific industries. Sector specific focus is particularly relevant in a South African context owing to the implementation of BEE being very different in each sector (Gilfillan, 2005; Hamann et al., 2008). As the BEE Act does not provide for any evaluation mechanism, the Industry Charters are responsible for measuring compliance (Gilfillan, 2005). This makes this study increasingly relevant for understanding the adoption of BEE in South Africa.

1.4 Significance of the Study

This study is of significance to various stakeholders, including shareholders, management, the stock market as well as policy makers. Shareholders can use this information when voting to approve these transactions. Policy makers can use this research in order to assess whether or not more regulation is required in driving empowerment transactions in specific sectors. Additionally, if the market is proven to be somewhat inefficient, opportunistic investors and hedge funds will be able to take advantage of the inefficiencies in the JSE market in order to earn above average risk-adjusted returns on these investments.

According to the National Empowerment Fund (2016), 'direct black equity control over the JSE's average market capitalisation of R14.4 trillion as at 19 February 2016 (for Listed Companies), stood at 3% (R431 billion) for shares directly held by black South Africans.' With HDSAs representing about 90% of the population (Stats, 2013) there is still vast room for improvement and it is important to understand why direct control is still so low in circumstances where the ownership element, as has been demonstrated, is fundamental to the BEE process. Whilst one cannot question the moral imperative of deals of this nature the

commercial benefits, if they are sustainable, will expedite the market's wholesale adoption thereof. If this research can help government authorities and other stakeholders to understand where these deals are perceived to create value for shareholders, companies that are self-interested will be incentivised to be socially responsible. This would result in a more inclusive capitalist economy where entities view BEE as an opportunity rather than an impediment.

1.5 Research Question and Null Hypothesis

The objective of this study is to answer the following research question:

> How do markets react to the announcement of BEE deals in the resources and financial sector?

The following hypothesis must also be stated:

> The null hypothesis is that such an event, being the BEE deal announcement, has an insignificant impact on cumulative average abnormal returns or average abnormal returns in the resource and financial sector.

Therefore, where $CAAR_t$ is cumulative average abnormal returns during the event window and AAR_t is average abnormal returns during the event window:

$H_0: CAAR_t = 0$, and $H_0: AAR_t = 0$

Hypothesis 1 is that the BEE deal announcement has a significant impact on abnormal returns in the resource sector.

$H_{1a}: CAAR_t \neq 0$, and $H_{1a}: AAR_t \neq 0$.

Hypothesis 2 is that the BEE deal announcement has a significant impact on abnormal returns in the financial sector.

$H_{2a}: CAAR_t \neq 0$, and $H_{2a}: AAR_t \neq 0$.

1.6 Structure of the Study

The outline of chapters is as follows:

The first chapter introduces the purpose and overall objective of this research. It provides the background of the study in order to contextualise the research problem and states the significance of the study.

The second chapter comprises a review of literature. This demonstrates the need for this research by looking at the significance of BEE and the Industry Charters in empowering HDSAs. It also analyses previous findings in literature relating to the topic as well as the theory behind which this research is founded.

The third chapter reviews the methodology used in this research. It defines the formulas used as well as the specific approach. It also explains the data collection and sampling process.

The fourth chapter will introduce the results. It will give an outline of the results found including various graphs and tables illustrating findings in both sectors. This will include results of significance testing.

The fifth chapter will present an analysis of the results. This will provide further insight into what the results actually mean for the purpose of the study in contrast with existing literature that is relevant to the study.

The final chapter will conclude on the research. It will provide recommendations for future studies as well as recommendations for practice. It will provide a summary of findings in the study.

Chapter II – Literature Review

2.1 Introduction

This chapter reviews the key literature examined in this study. First, the chapter begins with an overview of BEE, including a general background with regards to its implementation in South Africa, specifically focusing on ownership. Secondly, it discusses empowerment in the resource and financial services sector. Thirdly, it analyses the efficient markets hypothesis theory, which forms the main theory for this research. Lastly, the chapter considers empirical evidence from prior literature and similar studies. The chapter concludes with a brief summation of these topics.

2.2 Background to Black Economic Empowerment in South Africa

Nelson Mandela was elected as president in 1994. This signified the definitive end of the apartheid era and initiated a transition phase which would alter the social, political and economic climate of South Africa (Alessandri et al., 2011). Prior to 1995, the JSE had barred direct foreign investment, and capital was prohibited from leaving the country. With the end of Apartheid, corporations that had previously withdrawn from South Africa returned. With the JSE's renewed policy that allowed foreign membership and foreign investors to withdraw money from the market, as well as put money into the market, South African firms had to learn to be far more competitive, and a greater emphasis was placed on their ability to provide value to shareholders (Alessandri et al., 2011).

The ANC's 1994 manifesto advocated for people-centred development as well as public spending through the Reconstruction and Development Program (RDP) of 1994 (ANC, 1994; Hamann et al., 2008). The RDP, as one of its primary objectives, advocated for the de-racialisation of business ownership (Tangri & Southall, 2008). In 1996, the ANC replaced the RDP with the Growth, Employment and Redistribution (GEAR) strategy, which was characterised by the ANC leadership's attempt at rapprochement with big business and macro-economic orthodoxy. The government started to look to white-owned business, fearing that forced de-racialisation of ownership would stunt economic growth and foreign investment (Tangri & Southall, 2008). This also marked a significant deviation from the socialist ideals of

the ANC's Freedom Charter of 1955 which had called for the nationalisation of mines and banks (ANC, 1955; Hamann et al., 2008).

Many grew frustrated with the apparent lack of positive change since the end of Apartheid. By 1999, only 5.5% of the JSE capital assets were in the hands of black businessmen, a growth from only 1% in 1995 (Alessandri et al., 2011). While this signified progress, the pace of change was heavily criticized, and many blamed this on the 'market-friendly' nature of GEAR (Tangri & Southall, 2008). Prominent black businessmen and ANC leadership argued that unregulated markets were only reinforcing inequalities, and it was made clear that the State should play a primary role in empowering black people's active participation in the economy. With this, the BEE Commission was established in 2001 - led by Cyril Ramaphosa - in order to clarify and codify BEE (Haim, Ashghi, & Eshghi, 2017; Ponte et al., 2007).

The Commission argued that the private sector lacked commitment to implementing genuine change and called for greater government intervention in enforcing the economic empowerment of HDSAs (Tangri & Southall, 2008). They also criticised the fact that deals were only benefiting a politically connected elite, and the Commission began to popularise the term 'Broad-Based Black Economic Empowerment (B-BBEE)' as being inclusive of the majority of South Africans. This extended to what was known as HDSAs, which now included Africans, Indians and Coloureds who were citizens of South Africa prior to the introduction of the interim Constitution (Tangri & Southall, 2008; Wolmarans & Sartorius, 2009). It adopted industry specific charters and presented their objectives, which included having black South Africans secure a 25% ownership of listed entities within a period of 10 years.

2.2.1 Criticism of BEE

Since 1994, the legacy of Apartheid has persisted, with socio-economic inequalities remaining and even growing to be more acute (Hamann et al., 2008). During the formation of BEE, a central objective was the redistribution of wealth to HDSAs through the transfer of ownership in order to create a more inclusive economy (Sartorius & Botha, 2008).

Despite this objective, the criticism of BEE has been shown to be pervasive, with many suggesting that it is a 'sham.' Additionally, both local and foreign entities have contested - and continue to contest - its implementation. This disdain is perhaps evident from the fact that

Petrochemicals giant SASOL went as far as to list BEE as a 'risk factor' in its mandatory disclosure to the New York Stock Exchange in 2004, while Drillcorp sold its African subsidiary to avoid entering into a BEE deal (Iheduru, 2008; Sartorius & Botha, 2008; Ward & Muller, 2010)

The above-mentioned critique can be attributed to a number of reasons. First, whilst BEE is intended to be 'broad-based,' its implementation is perceived to be almost exclusively tied to the politically well connected (Hamann et al., 2008; Sartorius & Botha, 2008; Tangri & Southall, 2008; Van der Merwe & Ferreira, 2014). Secondly, there has been suggestions that BEE could hinder foreign investment in the JSE, as well as disadvantage South African firms against global competitors - given the time and effort spent managing BEE deals (Alessandri et al., 2011; Tangri & Southall, 2008). This has resulted in governmental hesitancy in pushing equity targets, resulting in many condemning BEE for not being more ambitious due to the slow pace of empowerment (Tangri & Southall, 2008). Thirdly, government has been condemned for encouraging industry to manage their own transformation charters, whilst also singling out these same industries for not being able to meet their own targets (Tangri & Southall, 2008)

2.2.2 Motives behind Engaging in BEE Deals

Despite criticism of BEE, there are various motives behind engaging in deals. The Business Press proposed that companies pursue BEE deals 'either for motivations of promoting the greater good or self-interested economic reasons, or both' (Alessandri et al., 2011). While BEE is a vitally important policy for transformation in South Africa, the government has also ensured that it is very difficult to ignore the policy when trying to effectively engage in day-to-day business in a South African environment. Thus, motives are twofold: first, to exercise social responsibility; and secondly, for operational purposes.

There are a plethora of benefits attached to BEE compliance. Practically, companies wanting to do business in South Africa need to consider and develop their BEE position. A company that has a poor BEE rating will be disadvantaged when doing business with government, state organs and the private sector. Most entities operating in the private sector have BEE preferential procurement targets that they need to meet, and so will only engage in businesses

with good empowerment scores. This can be an important competitive advantage for entities. Government pressure also plays a role in driving BEE participation. Where regulatory approval by government is required and often discretionary, BEE ratings are often a major consideration. Corporate restructurings and acquisitions are also seen as an opportunity to introduce BEE components. In addition to the above, B-BBEE certification can result in an enhanced brand awareness which can be leveraged in marketing strategies to attract new business (Bowman Gilfillan, 2005).

The business sector has an important role to play with regard to bridging the socio-economic divide in South Africa. Wolmarans and Sartorius (2009) defined Corporate Social Responsibility (CSR) as a situation whereby a business goes beyond what is legally required of them ,and within the interest of the firm in order to enact social good. They concluded that South African companies justified the use of BEE transactions as an important vehicle to give expression to their CSR objectives. This is due to the fact that the development and upliftment of the majority of the population through BEE deals is perceived to be an essential form of social responsibility (Van der Merwe & Ferreira, 2014). Jackson et al. (2005) also contended that BEE transactions represent CSR actions, as they created strategic benefits for the organisation by serving both the firm's business interests and the interests of salient stakeholders. This has been proven by a study performed by Intellidex (2015), which tracked money from BEE deals by the top 100 JSE listed companies. This study found that R52 billion has gone to charities. This demonstrates that BEE deals have a far broader impact on society, rather than a narrow impact on the equity holder. Legislation, however, is responsible for compelling entities to take the interest of these stakeholders into account when conducting business (Juggernath, Rampersad, & Reddy, 2013).

2.2.3 Measurement of Ownership and Control

This same Intellidex (2015) study defines BEE deals as being transactions where the beneficiaries are qualifying investors, and where the deal has been enabled by the company itself through either guarantees or vendor-financing. Qualifying investors were HDSAs, which typically included white women and disabled persons. The Revised BEE Act, however, limits the definition to Africans, Coloured and Indians (hereafter referred to as black investors). The

deal must have involved the transfer of equity ownership, or - as is common especially in the mining sector - the sale of unlisted assets to black beneficiaries. Companies earn points through participation by black investors in its rights of ownership which the scorecard defines in terms of both economic interest and voting rights. These rights can be held directly or indirectly.

The first wave of BEE deals focused primarily on ownership structures. This led to unscrupulous practices where companies' ownership structures would reflect majority black ownership, however management and shareholder agreements ensured that the benefits of ownership were not actually held by black shareholders. Under the current codes, ownership is calculated on an effective flow-through basis. This principle requires that black ownership is traceable to a specific black person (Gilfillan, 2005).

It is important that these deals are genuine and that equity ownership and participation is actually being transferred. Fronting practices are defined in section 1 of the BEE Act (2004) as 'a transaction, arrangement or other act or conduct that directly or indirectly undermines or frustrates the achievement of the objectives of the Act.' Fronting includes practices such as 'window-dressing', whereby HDSAs are appointed on the basis of tokenism, and are discouraged or inhibited from substantially participating where such shareholding should give them power to do so. Knowingly engaging in such practices is a statutory offence which serves to ensure that transfers of ownership are genuine in the BEE context.

2.3 Background to the Industry Charters

The B-BBEE Act of 2003 was enacted following a series of extensive discussions between the Department of Trade and Industry (DTI) and the private sector. The BEE strategy document sought to advocate for negotiations with the private sector rather than simply imposing BEE upon them (Tangri & Southall, 2008). It must be understood that there is no 'hard law' which enforces BEE upon the private sector as there are no penalties or offences in the event of non-compliance with the performances of the Act (Bowman Gilfillan, 2005).

The BEE Act allows for the creation of both a scorecard and charter for each industry sector. These can be developed by groups within that sector, and with government approval, published as a Sector Code against which all entities in that sector are evaluated in terms of BEE. This process is to ensure 'buy-in' from the private sector and is in line with what the ANC has

termed to be ‘co-operative governance’, or what is cited in literature as ‘new’ or ‘collaborative’ governance (Hamann et al., 2008). In this context such governance is characterised by:

1. multi-stakeholder initiatives whereby the responsibility to establish BEE policy through industry-specific charters rests not only on government but also on industry groups; and,

2. increased corporate social responsibility expectations and a willingness to respond to these expectations by corporations due to targets being set by them, and catering specifically towards that industry sector.

While the government has aimed to allow empowerment in industry sectors to be driven by corporate voluntarism, allowing industries to develop their own charters with little government intervention, it is argued that the BEE charters accommodate the private sector while effectively side-lining the poor. To demonstrate how state pressure has ensured that the private sector is more committed to BEE and its objectives, one needs to look at sectors where the government has chosen to be more active in the negotiation process - such as the resource sector, as well as less active - such as the financial services sector (Tangri & Southall, 2008).

BEE deals in both the resources and financial services sector constitute the majority of BEE transactions in the market (Fauconnier & Mathur-Helm, 2008). Government involvement in these sectors, although underrated at times, has been critical in the development of charters with increased targets. This has undoubtedly created a more significant response than in other sectors which are perhaps not as reliant on the government for income, such as retail and travel (Fauconnier & Mathur-Helm, 2008; Tangri & Southall, 2008).

2.3.1 The Resource Sector

The Resource Sector is comprised of companies classified under the oil, gas, and mining sectors. The sector has been a major contributor to GDP, and is highly critical to the country’s growth, with total reserves having an estimated value of over R20 trillion. It has undoubtedly developed South Africa’s economic development over the past 100 years.

The Liquid Fuels Charter was the first charter concluded between the private sector and the state. The charter required that all exploration licenses have no less than a 9% buy-in by HDSAs, and set a black ownership target of 25% in 10 years. It provided the foundation upon which the mining and financial sector charters were created with the most prominent attempt by the state to promote BEE within mining sector. The draft Mineral and Petroleum Resource and Development Bill of 2000 proposed that if a company did not have empowerment status, they would not be granted new-order mining licenses by the government, which were required in order to mine mineral deposits (Hamann et al., 2008; Tangri & Southall, 2008). In 2002, the draft Mining Sector Charter was leaked and the JSE suffered a major fall in response, with billions being wiped off of mining sector stocks. The leaked charter indicated an expectation of 51% of the industry being held by black businesses within 10 years. The reaction to the leaked charter caused the government to revise their approach and take a less intimidating stance on empowerment (Tangri & Southall, 2008). In late 2002, the Broad-Based Socio-Economic Empowerment Charter was released with a revised target of 26% ownership by 2014 (Fauconnier & Mathur-Helm, 2008). As cited by Hamann et al. (2008), the Sowetan newspaper commented that 'the mining houses still call the shots.'

Despite this, since 2003 when the Charter was made effective, the Resources Sector has been the most active in implementing BEE deals (Fauconnier & Mathur-Helm, 2008). The Revised Mining Charter - released in 2018 - increased target ownership levels to 30% in order to allow for the acquisition of new mining rights. This is well-aligned with the sector's continued dedication to transformation. The liquid fuels sector is still in the process of realigning their charter with the Amended BEE Codes, which call for increased targets.

2.3.2 The Financial Services Sector

The Financial Sector in South Africa is highly regarded worldwide for its size and sophistication. It is comprised of highly established capital markets, as well as banking and non-banking firms. According to a report done by the National Treasury (2017), the sector controls R12 trillion in total assets, which is 4 times the GDP of South Africa.

Access to finance and financial services is integral to achieving transformation in South Africa. The development of the Financial Sector Charter (FSC) in 2002 emanated from mounting government pressure to transform the sector, and was largely based on the Mining Charter. It

was a voluntary agreement by stakeholders to promote transformation and increased access to financial services. The Financial Sector Campaign Coalition (FSCC), together with members from the ANC and COSATU, were ultimately responsible for drawing up the charter. The primary members of the FSCC were the big 4 banks, who today dominate the banking sector - holding over 80% of total banking assets. The FSCC largely ignored the informal banking sector, which comprised of 8.25 million adult members, thus undermining the assertion that it is truly transformative (Hamann et al., 2008). Black bankers argued that targets set in the FSC were too low and that government should have been more involved in the process (Tangri & Southall, 2008). The FSC was made effective from January 2004. In 2013, with the introduction of the Amended B-BBEE Act, the FSC was amended in order to realign itself with the new Generic Codes. The new charter then became a section 9 sector code under the new Act.

The most noteworthy difference between the new generic codes and the new FSC was the fact that ownership and equity requirements were set at 20%, which is significantly lower than the 25% allocated in the Generic Codes. The B-BBEE Commission criticised this as portraying the financial sector as being unwilling to fast track transformation. The National Empowerment Fund (NEF) found that JSE listed companies have still been unable to meet these targets, further undermining transformation efforts. The sector faces increasing criticism that it is the least transformed, and that it refuses to transform. In terms of ownership, direct black ownership of financial sector firms is only 6%. A lack of savings in South Africa means that companies are heavily reliant on foreign investment, with the Bank Supervision Department Annual Report (2014) finding that 50% of the nominal value of banking shares in South Africa were held by foreign shareholders, as at 31 December 2014.

2.4 The Efficient Market Hypothesis

The event study is based on the efficient markets hypothesis (EMH). Since Eugene Fama's paper entitled 'Efficient Capital Markets' was released in 1970 (see Fama, 1970), the EMH has been widely accepted by academic financial economists (Malkiel, 2003). The hypothesis states that markets are extremely efficient in that stock prices reflect all relevant and publicly available historical information about a company, and that prices instantaneously change to reflect new information (Fama, 1970). Fama (1970) notes three forms of efficiency. The 'weak

form' proclaims that stock prices reflect all historically available information about a company. The 'semi strong form' asserts that, in addition to historic information, prices quickly adjust to reflect all new publicly available information about a company. The 'strong form' finds that stock prices also reflect information that is not publicly available. This means that no person should be able to earn excess risk-adjusted rates of return on the basis of insider trading. The study will test the JSE market's efficiency in seeing how quickly the announcement of BEE deals will be absorbed into the company stock prices.

2.5 The Impact of BEE announcements on cumulative returns

Previous literature has examined both the short and long-term impact of BEE announcements on cumulative returns. Short-term studies refer to studies with an event window of up to 11 days, while long-term studies would have an event window of 21 days and over (Benninga, 2008). Both perspectives are discussed below.

2.5.1 Long Term Impact

Ward and Muller (2010) conducted a thorough event study of 118 BEE deal announcements between 2000 and 2008, using a sample of 140 JSE listed entities. They found BEE deals to be value creating, reporting a peak cumulative, positive return at 10%, and positive returns thereafter for a 1 year period. They discovered that these results were limited to companies with a market capitalisation of less than R3,5bn, with larger companies reporting marginally negative cumulative abnormal returns.

These results concur with Jackson et al. (2005), who also conducted a one year study of 20 JSE listed entities and documented positive cumulative abnormal risk-adjusted returns. They found positive cumulative abnormal returns of 1,8% over a 5 day event window, and found that the JSE market index was outperformed by an equally-weighted portfolio of these BEE firms by 30.76 percent during the one year period immediately following the BEE deal announcement. The authors Jackson et al. (2005), however, did acknowledge that their results may have benefited from the fact that deals in the sample were concluded at a 10% discount on average

and that a control-portfolio model was used to remove market effects. A relatively small sample size was also used.

Chipeta and Vokwana (2011) analysed the impact of BEE transactions on both shareholder wealth and firm profitability during the period 1999 to 2009. They found, using a sample of 57 transactions, that cumulative abnormal returns were negative over the entire 50 day period. In addition to this, Chipeta and Vokwana (2011) established that investors react more positively to BEE transactions during bear market conditions.

Sennanye (2014) analysed share returns of mining companies and found the BEE announcements had largely a negative impact on share performance. Furthermore, the study found that BEE announcements made by old mining companies that existed before 1994 had greater AARs than new mining companies and that BEE announcements made before the implementation of the Mining Charter showed greater AARs than those made after its implementation.

2.5.2 Short Term Impact

Strydom et al. (2009) investigated market reactions to 254 BEE deals between 1996 and 2006 over an 11 day event window. Their results showed insignificant positive abnormal returns over the period. There were 15 statistically significant positive cumulative abnormal returns and there were 10 statistically significant negative cumulative abnormal returns. Strydom et al. (2009) concluded that these reactions could be related to transaction or firm-specific characteristics.

Wolmarans and Sartorius (2009) attempted to analyse whether BEE deal announcements created shareholder value over a 3 day event window over the period from 2002 until 2006. They used a sample of 95 companies which conducted 125 BEE transactions over the period. Their results were similar to Ward and Muller (2010), where significantly positive average abnormal returns were found, but only towards the end of the period.

2.5.3 Similar Studies

The implementation of BEE initiatives is not exclusive to South Africa. Both the USA and Malaysia have undertaken similar programmes. In Malaysia, in 1957 share ownership of Malay companies was dominated by foreigners and the Chinese. The government adopted a New

Economic Programme (NEP) to promote Malay ownership and control of the economy, and drive rapid growth. The NEP was able to increase Malay share ownership from 2.4% in 1970 to over 20% today (Mohamad-Yusof, Wickramasinghe & Zaman, 2018). Their success in this area, combined with an effective assault on poverty has drawn substantial attention from the ANC (Southall, 2007). In contrast, the USA has been unsuccessful in bridging inequalities between black and white citizens after decades of driving affirmative action policies (Sartorius & Botha, 2008).

2.5.4 Other considerations

Although the success of BEE transactions is dependent on numerous factors, Wolmarans and Sartorius (2009) identified three BEE transaction types as the selling of shares to a BEE company; the purchasing of shares in a BEE company and other transactions such as joint ventures. The researchers concluded that the different types of BEE transactions did not have a significant effect on shareholder wealth creation of the BEE deals. Additionally, the sustainability of BEE transactions is reliant on the funding of the transaction. Various funding models have been utilised by companies to enact deals such as special purpose vehicles, derivatives, third party finance, leverage buyouts and vendor finance. Vendor financing was identified to be the most sustainable form of financing due to the low interest rates and discount offered by vendors and the fact that BEE partners are protected against adverse market conditions (Nhasengo, 2016).

2.6 Conclusion

BEE in South Africa is aimed at addressing extreme economic inequality, which is amongst the highest in the world. BEE has a strong history in South Africa and has evolved and developed over an extensive period of time into what it is today. BEE transactions have been touted as a tool to alleviate poverty - which it is anticipated will, if successful, culminate in the ‘meaningful participation’ of blacks in the economy (Ponte et al., 2007).

The BEE Industry Charters are found to be key in driving and monitoring empowerment in the relevant sectors. It is for this reason that there has been varying degrees of transformation across

sectors such as the financial services and resource sectors. Research surrounding a sector specific focus on implementation of BEE is also lacking.

Current research has analysed both the long- and short-term impact of BEE deal announcements on shareholder wealth. Most studies found positive cumulative abnormal returns over the event window, however there were conflicting results in certain circumstances.

Chapter III – Methodology

3.1 Research Approach

The aim of this research is to determine the impact of BEE deal announcements made by JSE-listed companies on share price. This is in order to determine whether these announcements create or destroy perceived value for shareholders in the short-run in both the financial and resource sector. The approach used in this research allowed for hypothesis testing using numerical data and as such, is a quantitative, positivist approach (Leedy & Ormrod, 2005).

This research is an event study as it determines the impact of a specific corporate event, being the BEE deal announcement, on the behaviour of stock prices (Benninga, 2008). Event studies have become prominent in corporate finance literature in demonstrating how the magnitude of abnormal performance around a certain event can measure the impact of an event (Kothari & Warner, 2007). They are the preferred method of measuring the impact of events on shareholder wealth as they are seen to be more objective than accounting based methodologies which are known to be easily manipulated (McWilliams & Siegel, 1997).

This research has been conducted in order to add to previous studies performed by Ward and Muller (2010), Wolmarans and Sartorius (2009) and Chipeta and Vokwana (2011). Whilst all previous literature studied the impact of BEE deal announcements on JSE-listed stocks, this research focussed primarily on the resource sector and financial services sector in the short-run.

3.2 Research Strategy

The research study employed the use of a standard event study methodology. Event study methodology is known to be simple, but relatively powerful under a wide range of conditions (Brown & Warner, 1980, 1985). The first recorded event study was published by Dolley (1933) where he examined the effect of common stock split-ups on share price. Since then there have been over 500 event studies in literature with most reflecting essentially the same methodology that was developed by Fama, Fisher, Jensen, and Roll (1969). The basic statistical format of event studies has remained mostly unchanged over the past 30 years, which further lends itself to the robustness of the model (MacKinlay, 1997). Some examples of event studies include the

impact of firm-specific events such as earnings announcements, mergers and acquisitions and new debt or equity issues as well as macro-economic variables such as the impact of a recession or change in legislation (Kothari & Warner, 2007).

The approach to conducting an event study involves a number of steps. The researcher started by defining the event that is to be examined, and then specifying the period over which abnormal returns were measured. Market-related returns were estimated throughout this period in order to establish a benchmark against which to calculate abnormal returns. These abnormal returns were then accumulated to calculate cumulative abnormal returns which measured the total impact of the event announcement. The abnormal returns and cumulative abnormal returns were used to determine the impact of the BEE announcement on changes in share price. Finally, significance tests were used to establish whether the abnormal returns and cumulative abnormal returns were significantly different from zero (Benninga, 2008; MacKinlay, 1997). The approach will be defined in further detail below.

3.2.1 The Event

The first step in conducting an event study is to have a well-defined event of interest. The event date is the point in time where new information pertaining to the event reaches market participants (Benninga, 2008; Peterson, 1989). Brown and Warner (1980) found that the power of event study testing was highly sensitive to the precision with which event dates are selected. This can prove to be difficult in situations where corporate releases and press releases are on competing dates. For example, in South Africa the JSE requires that listed companies must announce any significant matters that may affect share price on the Stock Exchange News Service (SENS). However, the financial press is not obligated to report on all corporate events, or there might be a delay in press releases. Thus, it is important to take care in specifying the date that will be used as the focal point of the study (Peterson, 1989).

For the purpose of this study, the event date was the date on which the JSE listed company made an announcement that it would be engaging in a BEE deal on the SENS. This involves a deal where equity or ownership of a company is impacted, and results in empowerment of HDSAs.

3.2.2 The Event Window

Once an event date has been identified, the returns surrounding that date are then analysed for abnormal movements. This period is what is known as the event window. The event window is comprised of the event date and a number of days, weeks or months occurring both before and after the announcement is made (Benninga, 2008). Event windows can comprise of a few days to up to a month, which are seen to be short-horizon studies, while long-horizon studies typically observe abnormal returns for over a year (Kothari & Warner, 2007).

The event window used in this research was 11 days. This consisted of a pre-announcement period of 5 days, the actual event date, and a post announcement period of 5 days. This is consistent with recommendations made by Benninga (2008) as well as the event study performed by Strydom et al. (2009).

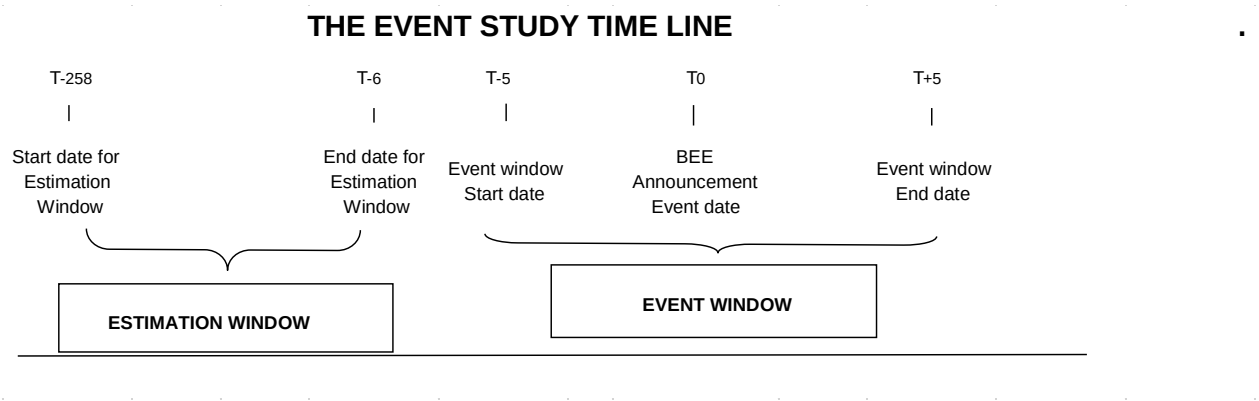
A longer event window was avoided for 2 primary reasons: first, a longer event window makes it far more difficult to control for confounding events (McWilliams & Siegel, 1997); and second, empirical studies have demonstrated that the significant effect of an event is captured in a shorter event window and that elongating this window reduces the statistical power of the analysis (Ryngaert & Netter, 1990).

3.2.3 Estimation Window

For each announcement, an estimation window needs to be selected in order to determine the stocks normal return and what constitutes normal behaviour. For the purposes of this study, an estimation window of 252 trading days was used which is consistent with the study done by Wolmarans and Sartorius (2009). This period was free of any other events that could cause abnormal returns.

The timing sequence of the event study for this research is illustrated below in figure 3-1. The BEE deal announcement event occurs at T_0. The estimation window length is 252 days at T_{-258} to T_{-6}. The event window is represented as T_{-5} to T_5, with T_{-5} to T_0 representing the pre-announcement period and T_0 to T_5 representing the post-announcement period.

Figure 3-1: Event Study Timeline



3.2.4 Abnormal Returns (ARs)

Abnormal Returns are defined as the actual returns of a security over the event window less the normal returns over the event window. The normal returns are defined as the expected return of a share, had the event not taken place (MacKinlay, 1997). The AR of stock *i* at time t is represented by Equation 3-1.

Equation 3-1: Abnormal Return

$$AR_{it} = r_{it} - E(R_{it})$$

Where:

AR_{it} = the abnormal return of stock i at period t,

r_{it} = the actual return of stock i at period t,

$E(R_{it})$ = the normal return of stock i at period t as calculated in Equation 3-3.

3.2.5 Actual Return

The actual daily return for stocks over the estimation window is calculated using Equation 3-2.

Equation 3-2: Actual Returns

$$r_{it} = \ln\left(\frac{p_{it}}{p_{it-1}}\right)$$

Where:

p_{it} = the closing share price of stock i at period t, and

p_{it-1} = the closing share price of stock i at period $t-1$.

3.2.6 Normal Returns

The choice of a benchmark against which to estimate normal returns is an important consideration in event studies. Most event studies use the Capital Asset Pricing Model (CAPM) as a benchmark in what is known as the market model. However, Ward and Muller (2012) found the use of CAPM on the JSE to be inappropriate in that beta generally maintains a negative relationship with future returns. As a result of this, market model regression analysis would be biased due to omitted variables which would also impact negatively on t-testing (Van Rensburg, 2002; Ward & Muller, 2012). Van Rensburg and Robertson (2003) supported this, and found evidence that both the size effect and value premium on JSE-listed stocks better explained variations than beta. In addition to this, they found that in a South African context consideration needs to be given to the effect of resource versus non-resource shares due to the underlying JSE financial/industrial and resource index (Van Rensburg & Robertson, 2003; Ward & Muller, 2012).

This study used a Control Portfolio Model approach to estimate normal returns. Control portfolios were built in accordance with those constructed by Ward and Muller (2010). Ward and Muller (2010) compiled a 12-parameter style model. The portfolios were constructed to represent the cross-sectional factors of firm size, growth/value and resource/non-resource as illustrated in Table 3-1.

The cross-sectional factors were organised as follows:

- Size was determined by obtaining the market capitalisation of the firm. All firms were then ranked in descending order according to their respective sizes. The highest 33.3% were classified as large stock, the middle 33.3% were classified as medium stock and the lowest 33.3% were classified as small stock. This is consistent with the study performed by Chipeta and Vokwana (2011).
- Growth/value stock was determined by obtaining the price/earnings (P/E) ratios and then ranking them in ascending order. The median P/E ratio was then determined. Companies with a higher P/E ratio than the median were classified as growth stock with the remainder being classified as value stock.
- Shares were classified into resource/non-resource shares according to the JSE/FTSE SA Sector index. This index splits the All Share Index constituents according to their sector classification (JSE, 2002). The FTSE/JSE Sector indices were obtained for all the stock. Mining and non-mining resource companies were classified as resource stock.

Table 3-1: Control Portfolios

Control Portfolios	Company Size	Value or growth companies	Resources or non-resources companies
SGN	Small	Growth	Non-resources
SGR	Small	Growth	Resources
SVN	Small	Value	Non-resources
SVR	Small	Value	Resources
MGN	Medium	Growth	Non-resources
MGR	Medium	Growth	Resources
MVN	Medium	Value	Non-resources
MVR	Medium	Value	Resources
LGN	Large	Growth	Non-resources
LGR	Large	Growth	Resources
LVN	Large	Value	Non-resources
LVR	Large	Value	Resources

Each JSE-listed share was placed into one of the 12 control portfolios according to the cross-sectional factors described. The control portfolios were re-balanced every quarter in order to track changes regarding size, P/E ratios, new listings as well as de-listings. Companies that delisted were included up until their date of delisting, after which the share price was assumed to be zero and then were excluded from the following quarter's portfolios. Newly listed shares were included in the portfolios from their date of listing in the period when the portfolios were re-balanced. Daily returns were calculated using equation 3-2 for each of the 12 control portfolios. These were used to calculate expected returns.

Each of the 12 control portfolios were equally weighted rather than value weighted. A potential issue with this could be that an equally weighted portfolio does tend to over-represent small and illiquid stocks as each firm within the portfolio is given equal importance.

3.2.7 Control Portfolio Model

The model measures the expected return of stock i in period t as the sum of the sensitivity of stock i to the returns of the 12 control portfolios described in section 3.2.5 and alpha estimate in period t. Ward and Muller (2010) summarized this in equation 3-3.

Equation 3-3: Expected Returns

$$E(R_{it}) = \alpha_{i,t} + \beta_{i,1}SGN_t + \beta_{i,2}SGR_t + \beta_{i,3}SVN_t + \beta_{i,4}SVR_t + \beta_{i,5}MGN_t + \beta_{i,6}MGR_t + \beta_{i,7}MVN_t + \beta_{i,8}MVR_t + \beta_{i,9}LGN_t + \beta_{i,10}LGR_t + \beta_{i,11}LVN_t + \beta_{i,12}LVR_t$$

Where:

$\alpha_{i,t}$ = the alpha intercept term of stock i in period t,

$\beta_{i,1} \ldots \beta_{i,12}$= the beta coefficients on each control portfolio return, and

$SGN_t \ldots SGR_t$ = the ln function stock price returns on each of the 12 control portfolios in table 3-1 in period t in accordance with Equation 3-2.

3.2.8 Cumulative Abnormal Returns (CAR)

Once Abnormal Returns were calculated for each firm for the duration of the event window, they were accumulated in order to calculate the CARs over the event window. This measured the total impact of the event on stocks. CARs were calculated in accordance with equation 3-4.

Equation 3-4: Cumulative Abnormal Returns

$$CAR_{it} = AR_{it} + CAR_{it-1}$$

Where:

CAR_{it} = the CAR of stock i in period t, and

CAR_{it-1} = the CAR of stock i in period $t - 1$.

3.2.9 Average Abnormal Returns (AARs) and Cumulative Average Abnormal Returns (CAARs)

Once the AR and CAR were calculated for each announcement event in the sample, they were averaged out in order to obtain the Average Abnormal Returns (AAR) and the Cumulative Average Abnormal Return (CAAR) for the entire sample for each day in the event window. This was done using equation 3-5 for abnormal returns and equation 3-6 for cumulative abnormal returns.

Equation 3-5: Average Abnormal Returns

$$AAR_t = \frac{1}{n}\sum_{t=1}^{n} AR_{it}$$

Equation 3-6: Cumulative Average Abnormal Returns

$$CAAR_t = \frac{1}{n}\sum_{t=1}^{n} CAR_{it}$$

Once all the CAARs and AARs were calculated, the sample was then screened for any CAARs and AARs that exceeded 40%. These event announcements were then removed from the sample in order to ensure precision of estimates which follows methodology used by Chipeta and Vokwana (2011).

3.2.10 Large versus small stock

The study was extended to include an investigation into whether size of the stock was a factor in differences in calculated AARs and CAARs. Both the resource and financial sector samples were ranked in descending order of market capitalisation within their respective industries on the date the announcement took place. The sample was then split into two equal groups comprising 'large' stock and 'small' stock. AARs and CAARs were then calculated for each sub-sample.

3.2.11 Testing for Significance

The null hypotheses were rejected (accepted) based on whether results were significantly far from (close to) zero. Tests were performed using a number of test statistics. This included the use of both parametric and nonparametric testing. This is due to the fact that standard parametric event study tests have found to be well specified and to have good testing power (Brown & Warner, 1985). Despite this, nonparametric tests are motivated by the fact that where data is not normally distributed, parametric tests under the assumption of normality may prove to be poorly specified thus yielding imprecise inferences (Corrado, 2011)

Firstly, the data was tested for normality using descriptive statistics on excel. This would assist the researcher in determining whether to place more reliance on parametric or nonparametric tests of significance.

For parametric tests of significance, the study used a two tailed t-test in order to test AARs and CAARs for significance. This was done according to equation 3-7 for AARs and equation 3-8 for CAARs. This form of parametric testing was used as it is conventionally found and suitable for use in event studies (Benninga, 2008; Brown & Warner, 1980, 1985; Ward & Muller, 2010).

Equation 3-7: test statistic for AARs

$$t_{AAR_t} = \sqrt{n}\ {AAR_t}/{S_{AAR_t}}$$

Equation 3-8: test statistic for CAARs

$$t_{CAAR} = \sqrt{n}\ {CAAR_t}/{S_{CAAR_t}}$$

Where:

S = the standard deviation of AAR and CAAR, and

n = the number of companies at period *t*

The standard deviation of AAR and CAAR are defined in equation 3-9 and equation 3-10 respectively.

Equation 3-9: standard deviation of AAR

$$S_{AAR_t} = \sqrt{\frac{1}{n-1}\sum_{i=1}^{N}(AR_{it} - AAR_t)^2}$$

Equation 3-10: standard deviation of CAAR

$$S_{CAAR} = \sqrt{\frac{1}{n-1}\sum_{i=1}^{N}(CAR_i - CAAR)^2}$$

For nonparametric tests of significance, the study used a Wilcoxon Signed-Rank Test in order to test significance of results. Sign and rank tests were found to be the most successful and

robust form of nonparametric testing for event studies and uniformly provided an improvement in testing power when compared to standard parametric tests (Corrado, 1989, 2011). The Wilcoxon signed-rank test statistic tests the null hypothesis that the median abnormal performance is equal to zero. It is useful in that it considers that both the sign and the magnitude of ARs are significant (Dutta, 2014). The use of the Wilcoxon signed-rank test in conjunction with the standard t-test is consistent with the study performed by Chipeta and Vokwana (2011).

Equation 3-11: Wilcoxon Signed-Rank Test

$$Z = \frac{W - 0.5}{\sqrt{\frac{n(n+1)(2n+1)}{6}}}$$

Where:

$$W = \left|\sum [sgn(x_2 - x_1)]\right|$$

sgn = sign of a real number

The test statistics were then compared against 1%, 5% and 10% significance levels, two-tailed critical value from the standard normal distribution. The use of both parametric and non-parametric testing increased the reliability of the results of the significance testing.

3.3 Unit of Analysis

The study used a JSE-listed company in the financial service sector that made an unscheduled BEE deal announcement from January 2004 until October 2018 or a JSE-listed company in the resource sector that made an unscheduled BEE deal announcement from January 2003 until October 2018.

3.4 Population

The population for the study encompassed all shares currently and previously listed on the JSE that made BEE announcements. The population included listed companies on the JSE from the period 2002 until 2018. Companies that delisted during the period were included up until their

date of delisting. Companies that listed during the period were included from their date of listing.

3.5 Sampling

The sampling method was purposive in that it only included companies that were listed on the JSE when the announcement was made. BEE related announcements had to be recorded on either the Dealmakers database or the Empowerdex database. The sample size was 202 BEE deal announcements in the resource sector and 159 BEE deal announcements in the financial services sector.

Not all BEE deal announcements were included as events in the sample. In order to be considered an event the following criteria had to be met:

3.5.1 Announcements had to relate to new information involving a deal.

3.5.2 Where companies made multiple announcements regarding the same deal, only the initial announcement was used.

3.5.3 Companies that engaged in a new BEE deal were only included where the announcement occurred at least one year after the previous BEE deal announcement.

3.5.4 The event date had to occur within a period where a specific industry charter was already established. Therefore, for the financial services sector, the event had to occur from January 2004 until October 2018 and for the resource sector, the event had to occur from January 2003 until October 2018. The start dates marked the period when each Industry Charter became effective.

3.5.5 The sample was screened for confounding events that occurred during the event window that could have impacted on returns. Confounding events included events such as the resignation of CEO, major company restructurings and earnings announcements. These were identified by examining the SENS announcements for each company during the event window period.

Once the sample was reduced using the above criteria, the resource sector sample comprised of 53 JSE-listed companies in the resource sector which jointly made 111 BEE deal

announcements from the period January 2003 until October 2018. A list of resource companies and their JSE ticker codes used in the study can be found in Appendix 1. A table illustrating the company and the year that BEE announcements were made that were included in the sample can be found in Appendix 2. The financial sector sample comprised of 48 JSE-listed companies in the financial sector which made a combined 75 BEE deal announcements from the period January 2004 until October 2018. A list of financial sector companies and their JSE ticker codes used in the study can be found in Appendix 3. A table illustrating the company and the year that BEE announcements were made that were included in the sample can be found in Appendix 4.

3.6 Data Collection

This research employed the use of secondary data. Event announcement dates were obtained from both the Dealmakers and Empowerdex databases. These databases had information regarding each deal transaction including the date the deal was announced, the value of the deal and the BEE party involved.

The share price data was obtained on this sample from the I-Net (BFA) McGregor Database. The daily closing share price was obtained for the entirety of the estimation window and event window to calculate actual returns for each company. Changes in company names were closely tracked for the purposes of collecting data.

For the building of the 12 control portfolios, the market capitalisation and P/E ratios for each company was obtained from the I-Net (BFA) McGregor Database.

The JSE requires that listed companies announce any significant matters that may affect share price on the SENS. Using a content search, all SENS announcements of transacting companies during the event window were obtained. The sample was then screened for any significant confounding events that occurred during the event window that could have impacted on returns during the event window.

Descriptive statistics, normality testing as well as significance testing were performed using STATA.

3.7 Validity and Reliability

Leedy and Ormrod (2005) define validity as the likelihood that one's research will measure what it is intended to in a meaningful, credible and accurate way. The measurement instrument used in this research is a classical event study. This measurement instrument has been used frequently in finance literature for measuring the impact of BEE deal announcements on share price (Chipeta & Vokwana, 2011; Jackson et al., 2005; Strydom et al., 2009; Ward & Muller, 2010; Wolmarans & Sartorius, 2009). Due to the robust methodology used in event studies there is already an established internal validity.

In order to be valid the data used in the study must also correlate with the intent of the study (Leedy & Ormrod, 2005). This will be ensured by using a short term event-window making it less likely that confounding event will occur, as well as screening the event window period for confounding events that could impact on share price.

Leedy and Ormrod (2005) define reliability as the consistency with which a measurement instrument yields certain and consistent results. Reliability relates primarily to data collection and so the use of secondary data from I-Net, Empowerdex and Dealmakers databases will ensure all data collected is reliable and suitable for the study.

3.8 Assumptions, Limitations and Delimitations

Owing to certain time constraints, this research will not test whether share price reactions differed according to the types of BEE transactions identified by Wolmarans and Sartorius (2009).

The study does not analyse the medium- or long-term impact of announcements on share price. It is difficult to assess whether value creation for shareholders is sustained past the short-term.

The study fails to analyse other aspects of the BEE scorecard. The study focusses on the ownership element only, whereas the preferential procurement, management control, employment equity and skill development aspects of the BEE scorecard are ignored.

The study is focussed specifically on the financial sector and resource sector. This form of non-probability sampling undoubtedly leads to some bias.

An underlying assumption of this event study is that JSE market processes information about the BEE deal in an efficient and unbiased manner which allows the researcher to be able to see the effect of the event on share prices.

Chapter IV – Results

4.1 Introduction to Results

The study employs a standard event study methodology as described in chapter 3. ARs and CARs associated with the announcement of BEE deals in the resource and financial services sectors were calculated. The approach involved estimating expected returns for specific companies during the event window, and then comparing this to the actual returns during the event window. These ARs were expected to describe the market reaction in relation to new information surrounding the implementation of the deal at each day in the event window. These were then accumulated in order to calculate CARS. Both ARs and CARs were averaged for each day in the event window to calculate the AARs and CAARs. These results will then be tested for significance using both nonparametric and parametric testing.

In order to investigate whether size was a factor in calculated AARs and CAARs, the sample for the resource sector and financial services sector was ranked by market capitalisation and then split into two equal groups: 'large' stock and 'small' stock. The analysis was repeated for each sub-sample.

4.2 Tests for Normality and Descriptive Statistics

Before performing significance testing, descriptive statistics were run across both the resource sector and financial sector samples. The results of the descriptive statistics are summarised in Appendix 5 for the resource sector sample and Appendix 6 for the financial sector sample. Based on the results of the descriptive statistics, the data for both samples was not normally distributed. However, these results were not sufficient to conclude non-normality which necessitated the need for normality testing using statistical tools. The Shapiro-Wilke test of normality was performed on both samples. The results of the Shapiro-Wilke Normality Tests are summarised in Appendix 7 for the resource sector sample and Appendix 8 for the financial sector sample. Based on these results the data was once again found to not be normally distributed. For this reason, the study did not rely on parametric testing as this incorrectly assumes that the sample is normally distributed. Instead, the study relied on non-parametric

significance testing which does not require a normal distribution of data (Leedy & Ormrod, 2005). Standard parametric testing was used in order to support the results of nonparametric testing and lend itself to robustness of results.

The study employed the Wilcoxon signed-rank test as a nonparametric test for significance. The Wilcoxon signed-rank test statistic tests the null hypothesis that the median abnormal performance is equal to zero. It is useful in that it considers that both the sign and the magnitude of ARs are significant (Dutta, 2014). Sign tests perform better under the alternate hypothesis and are better specified under the null hypothesis than parametric t-tests when using daily stock returns in event study hypothesis testing (Corrado & Zivney, 1992; Cowan, 1992). However, the rank test is found to be uniformly more powerful than the sign test, which supports the use of the Wilcoxon signed-rank test for the purpose of this study (Corrado & Zivney, 1992). The rank test is only proven to be less powerful than the sign test where there is a longer event window and thin trading. Due to the study having a short event window of 11 days and the study being limited to JSE-listed stocks, which negates the issue of thin trading, the rank test was used.

Despite the fact that the data cannot be proven to be normally distributed, the Central Limit Theorem provides that the size of the sample is large enough for the data to tend towards normal distribution (Brown & Warner, 1985). Many event studies tend to rely on the use of parametric t-tests which are found to perform well under a variety of conditions (Brown & Warner, 1985). In order to increase the robustness of the results of the Wilcoxon Signed-Rank Test, a parametric two tailed t-test was also used to test significance.

4.3 The Resource Sector

4.3.1 Description of the sample

The sample included 53 JSE-listed companies, in both the mining and non-mining resource sectors, which jointly made 111 BEE deal announcements from the period January 2003 until October 2018. Both the AARs and CAARs were calculated across the entire sample for each day in the event window.

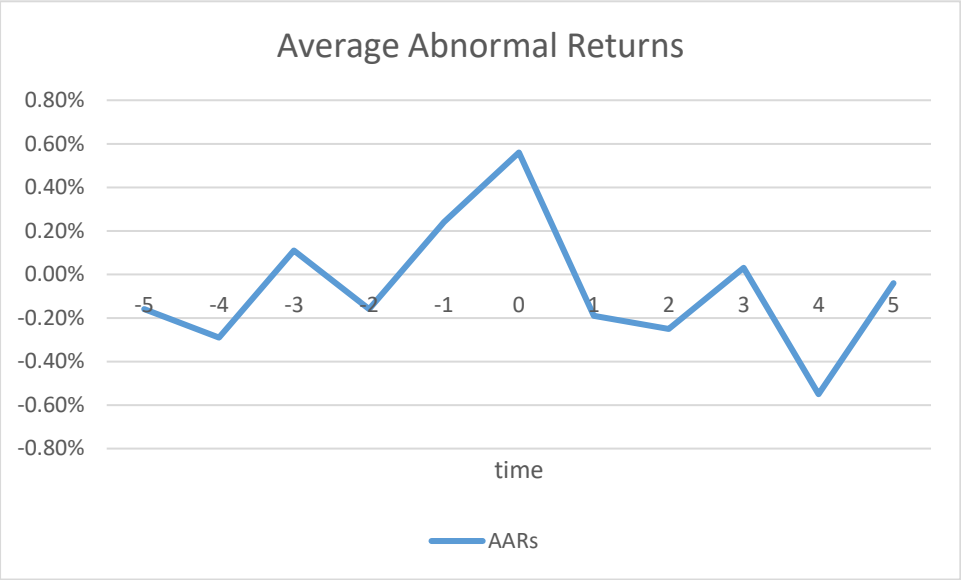
Descriptive statistics were run over ARs at each day in the event window in the resource sector in order to determine whether data was normally distributed. The results of the descriptive statistics are documented in Appendix 5. Across the event window, the sample kurtoses were above 3 suggesting that it is a Leptokurtic distribution with heavier tails and values that were concentrated around the mean value. Due to the high presence of outliers, the median value is a better indication of the centrality of the data than the mean which is between -0.003 and +0.003 during the event window. Sample skewness also ranges from being fairly symmetrical (between -0.5 and 0.5) to being highly skewed (greater than +1.96 or less than -1.96). With the data displaying a mean of -0.6% to +0.6% and a standard deviation of 2.1% to 4.3% one cannot conclude that the data is normally distributed.

Using STATA, the Shapiro-Wilke Normality Test was run across the event window in order to test for normality of the distribution of data. The results have been documented in Appendix 7. The results find that the data is not normally distributed as all test values are below a 5% significance level. From these results as well as the results of the descriptive statistics, one cannot conclude that the resource sector sample data is normally distributed.

4.3.2 Hypothesis 1a: Average Abnormal Returns

There is no clear trend in AARs during the event window. Peak positive AARs occur at t0. This suggests that the market reacted well to news of the BEE deal announcement at announcement date. Thereafter, the shares reverted to less substantial AARs as the news had filtered through the market and normal trajectory of the shares resumed. The decrease in AARs at t+1 could signify a market overreaction at t0. AARs appear to be volatile surrounding the announcement date. This could indicate uncertainty among investors regarding the BEE deal announcement. The trend in AARs in the resource sector is displayed in Figure 4-1.

Figure 4-1: AARs over the event window in the resource sector



The null hypothesis stated that BEE deal announcements by JSE-listed companies resulted in insignificant AARS during the event window. Alternate hypothesis 1a stated that BEE deal announcements by JSE-listed companies in the resource sector have a significant impact on AARs within the event window.

Both the Wilcoxon Signed-Rank test and the parametric t-test find statistically significant negative results occur at t+4 at a 5% level. Both tests find no other statistically significant results. The results of significance testing of AARs are summarised in table 4-1.

These results signify that only 1 day out of the 11 day event window has statistically significant negative returns. Based on these results, the null hypothesis cannot be rejected and the alternate hypothesis 1a must be rejected.

Table 4-1: summary statistics over event windows for AARs in resource sector

			Wilcoxon Signed-Rank Test		Parametric t-test	
time	AARs	Std.	Z	p-value	t-stat	p-value
5	-0,04%	0,023	-0,70	0,49	-0,20	0,84
4	-0,55%	0,027	-2,13	0,03**	-2,19	0,03**
3	0,03%	0,029	-0,90	0,37	0,12	0,91
2	-0,25%	0,029	-1,26	0,21	-0,90	0,37
1	-0,19%	0,032	-1,06	0,29	-0,62	0,54
0	0,56%	0,043	0,33	0,74	1,36	0,18
-1	0,24%	0,027	1,57	0,12	0,96	0,34
-2	-0,16%	0,027	-0,46	0,64	-0,61	0,54
-3	0,11%	0,021	0,18	0,86	0,57	0,57
-4	-0,29%	0,023	-1,17	0,24	-1,36	0,18
-5	-0,16%	0,028	-0,11	0,91	-0,61	0,55

Yes* = significant at a 10% level

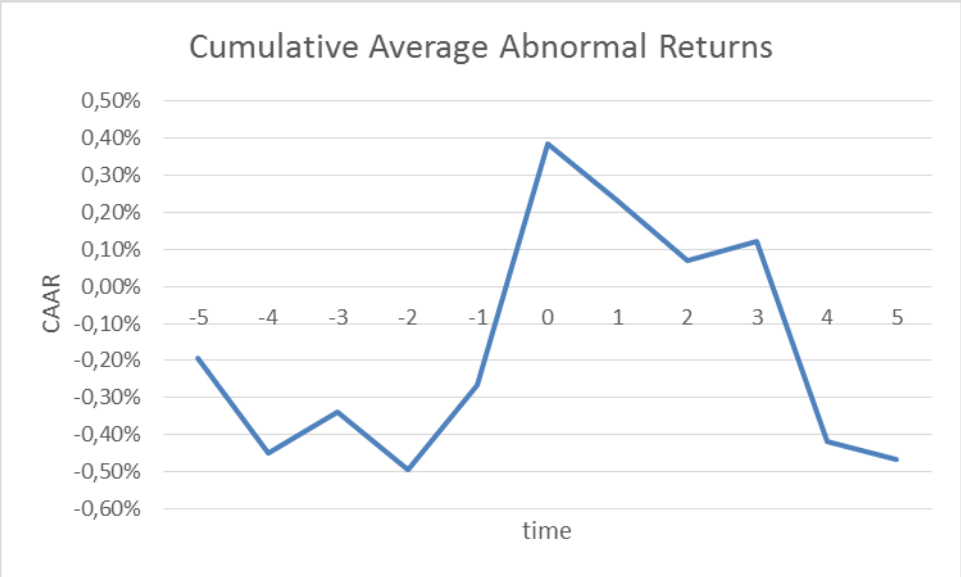
Yes** = significant at a 5% level

Yes*** = significant at a 1% level

4.3.3 Hypothesis 1b: Cumulative Average Abnormal Results

CAARs are negative in the event window before announcement date. This could be as a result of early scepticism surrounding the BEE deal announcement. There is however a steady increase in CAARs at t-2 which could indicating rising optimism about the deal closer to the event date. The most positive CAARs occur at the event announcement date. This suggests a sell-off of shares successive to the announcement and a price-fall due to the overreaction. There is no sustained increase in CAARs subsequent to announcement date which could indicate persistent disappointment among investors. This is evidence that the JSE is an inefficient market which is consistent with research by Ward and Muller (2012) who also found the JSE to be inefficient. This is also consistent with more recent studies performed by Heymans and Santana (2018) as well as Guduza and Phiri (2017) which found the JSE to be at the very least weak-form efficient. The trend in CAARs in the resource sector is displayed in Figure 4-2.

Figure 4-2: CAARs over the event window in the resource sector



The null hypothesis stated that BEE deal announcements by JSE-listed companies resulted in insignificant CAARS during the event window. Alternate hypothesis 1b stated that BEE deal announcements by JSE-listed companies in the resource have a significant impact on CAARs within the event window.

Both the Wilcoxon Signed-Rank test and the parametric t-test find no statistically significant results for CAARs over the 11 day event window. The results of significance testing of CAARs are summarised in table 4-2.

Based on these results, the null hypothesis is accepted and the alternate hypothesis 1b is rejected.

Table 4-2: summary statistics over event windows for CAARs in resource sector

			Wilcoxon Signed-Rank Test		Parametric t-test	
Event	CAARs	Std.	Z	p-value	t-stat	p-value
11 days	-0,70%	0,069	-1,41	0,16	-1,06	0,29

4.3.4 Large vs Small Stock

The resource sector sample was split into two samples comprising of small and large stock. Descriptive statistics were run over both samples and are summarised in Table 4-3. Kurtosis of small stock is below 3 indicating a Platykurtic distribution of the data. Alternately, kurtosis of the large stock is above 3 indicating a Leptokurtic distribution and thicker tails than the small stock. The small stock is slightly positively skewed and the large stock is more significantly negatively skewed.

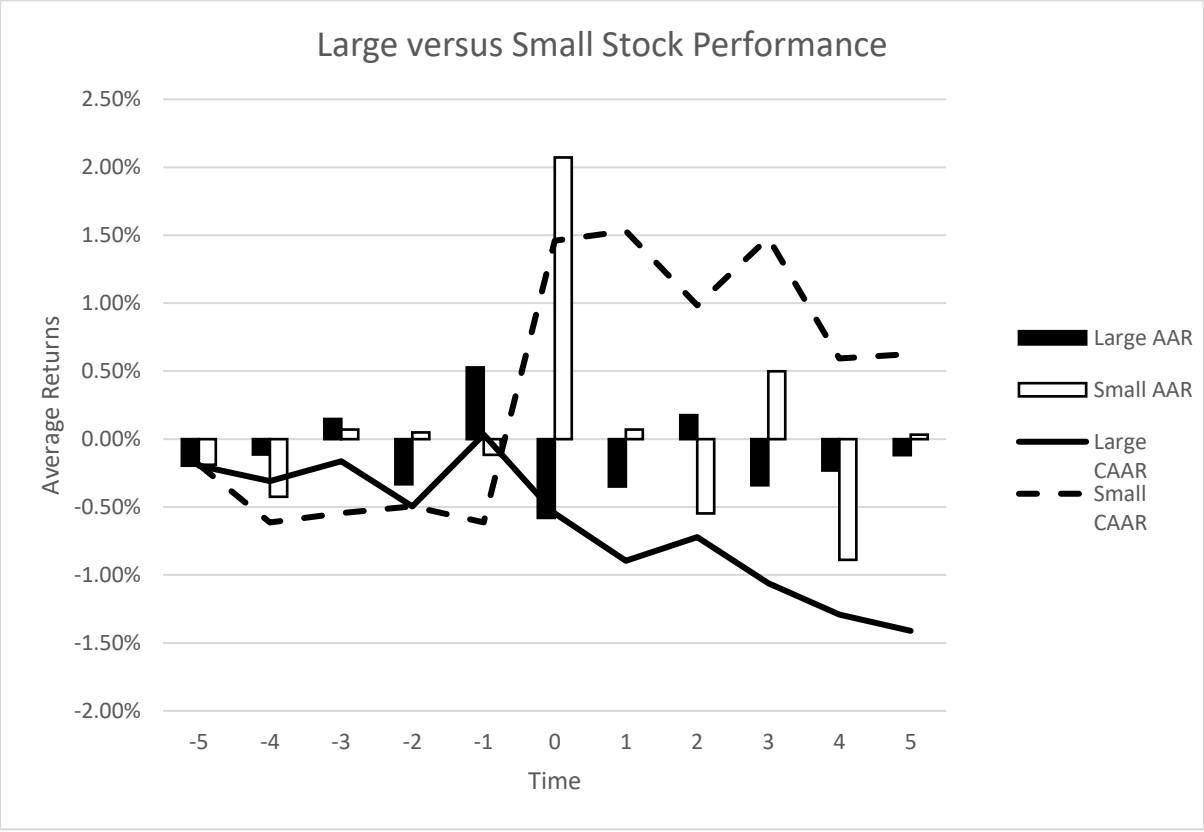
The Shapiro-Wilk Normality test was also run in order to determine whether the sample was normally distributed. These results are also summarised in Table 4-3. From the results of the Shapiro-Wilk test, one cannot conclude normality of data distribution of both the small and large stock. Due to not being able to conclude normality of both samples, nonparametric testing will be used to test significance of both samples.

Table 4-3: Descriptive Statistics of small versus large resource stock

Statistic	small	large
Median	-0,005	-0,007
Mean	0,006	-0,014
Standard deviation (n)	0,087	0,057
Skewness (Pearson)	0,729	-1,126
Kurtosis (Pearson)	0,778	3,706
Shapiro-Wilk W value	0,947	0,930
p-value (Two-tailed)	0,022	0,002

At announcement date, small stock had a much more positive AAR than large stock. This means that the market reacted more favourably to the announcement of BEE deals by small stock than large stock. AARs at announcement date are also more significant for small stock than large stock indicating that investors are more sensitive to BEE deal announcements by small companies than large companies. Large stock had peak positive CAARs at t-1. This could suggest early optimism regarding news of the BEE deal. However, sustained negative CAARs thereafter suggests a disappointment and distrust among investors leading to the consistent selling of shares of large stock. Small stock reported negative CAARs leading up to the event. This could indicate scepticism by investors leading up to the deal announcement. Peak positive CAARs occur at t+1 and then there appears to be a large amount of volatility and a downward trend in CAARs. This could signify uncertainty among investors and a sell-off of shares post-announcement which could signify distrust and loss aversion by investors and correcting an overreaction at announcement date. Trends regarding CAAR and AAR of large and small stock are illustrated in figure 4-3.

Figure 4-3: AARs and CAARs for large versus small stock (resource sector)



In order to determine whether the difference in CARs between the 2 samples was significant, the Mann-Whitney nonparametric test was run across the small and large stock CAAR values. The results of the test are summarised in Table 4-4. The test found the difference in CARs between the large and small stock to be insignificant indicating that resource sector BEE deal announcements created insignificantly more value for shareholders for small stock than for large stock.

Table 4-4: Mann-Whitney test for small versus large stock in the resource sector

U	1431,500
U (standardized)	-0,747
Expected value	1560,000
Variance (U)	29379,875
p-value (Two-tailed)	0,455
alpha	0,05

4.4 The Financial Services Sector

4.4.1 Description of the Sample

The sample included 48 companies listed on the JSE in the financial service sector which jointly made 75 BEE deal announcements from the period January 2004 until October 2018. Both the AARs and CAARs were calculated across the entire sample for each day in the event window.

Descriptive statistics were run over ARs at each day in the event window in the financial services sector in order to determine whether data was normally distributed. The results of the descriptive statistics are documented in Appendix 6. The sample kurtoses comprised of figures that were positive suggesting a Leptokurtic distribution across the sample. The majority of kurtoses are greater than 3 indicating heavier tails for the majority of the sample. The presence of outliers means that the median value is a better indication of the centrality of the data than the mean which is between -0.003 and +0.003 during the event window. Sample skewness is mostly symmetrical with 9 out of 11 days in the event window being between +1.96 and -1.96.

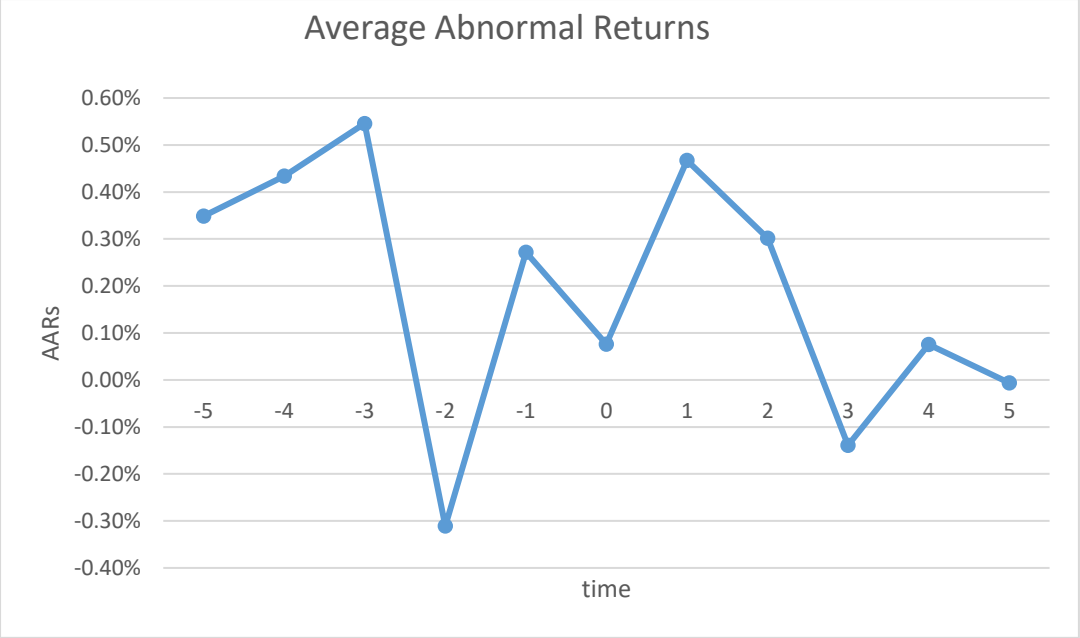
The data set has means of -0.3% to +0.5% and standard deviations of 1.6% to 2.3%. Regardless, one cannot conclude that the data is normally distributed.

Using STATA, the Shapiro-Wilke Normality Test was run across the event window in order to test for normality of the distribution of data. The results have been documented in Appendix 8. The results find that the data is not normally distributed as all test values (excluding 1) are below a 5% significance level. From these results as well as the results of the descriptive statistics, one cannot conclude that the financial services sector data is normally distributed.

4.4.2 Hypothesis 2a: Abnormal Average Returns

There is no clear trend in AARs during the event window in the financial services sector. The volatility in AARs surrounding the event date could suggest uncertainty and speculation in the market as a result of the news announcement. Peak positive AARs in the event window occur at t-3. Peak negative AARs in the event window occur at t-2. AARs appear to be more positive at the start of the event window, thereafter following a downward trend. Peak AARs occurring before announcement date could be evidence of new information regarding BEE deal announcements being leaked to the market before the actual announcement date or evidence of possible insider trading. AARs are positive surrounding the event date (t-1 until t+2) which could be an indication of the market reacting well to news of the BEE announcement at the event date however, on the event date itself the AARs are average and lower than the day before which could indicate uncertainty in the market regarding the announcement. The trend in AARs in the financial services sector is displayed in Figure 4-4.

Figure 4-4: AARs for the financial services sector



The null hypothesis stated that BEE deal announcements by JSE-listed companies resulted in insignificant AARS during the event window. Alternate hypothesis 2a stated that BEE deal announcements by JSE-listed companies in the financial sector have a significant impact on AARs within the event window.

The Wilcoxon Signed-Rank test finds statistically significant positive results at a 10% level at t+2 and statistically significant negative results at a 10% level at t-2. The parametric t-test supports this in finding statistically significant negative results at a 10% at t-2, however in addition it finds statistically significant positive results at a 5% level at t+1 and t-3 and no statistically significant results at t+2. The results of significance testing of AARs are summarised in table 4-5.

Due to the fact that only 2 days out of the 11 day event window demonstrated statistically significant returns, the null hypothesis cannot be rejected and the alternate hypothesis 2a must be rejected.

Table 4-5: summary statistics over event window for AARs

			Wilcoxon Signed-Rank Test		Parametric t-test	
time	AARs	Std.	Z	p-value	t-stat	p-value
5	-0,01%	0,023	0,01	0,99	-0,02	0,98
4	0,08%	0,021	0,04	0,96	0,31	0,75

3	-0,14%	0,018	0,00	1,00	-0,66	0,51
2	0,30%	0,017	1,86	0,06*	1,55	0,13
1	0,47%	0,019	1,10	0,27	2,13	0,04**
0	0,08%	0,022	0,01	0,99	0,30	0,76
-1	0,27%	0,017	0,88	0,38	1,36	0,18
-2	-0,31%	0,016	-1,80	0,07*	-1,70	0,09*
-3	0,55%	0,022	0,81	0,42	2,12	0,04**
-4	0,43%	0,023	1,53	0,13	1,66	0,10
-5	0,35%	0,021	0,96	0,34	1,43	0,16

Yes* = significant at a 10% level

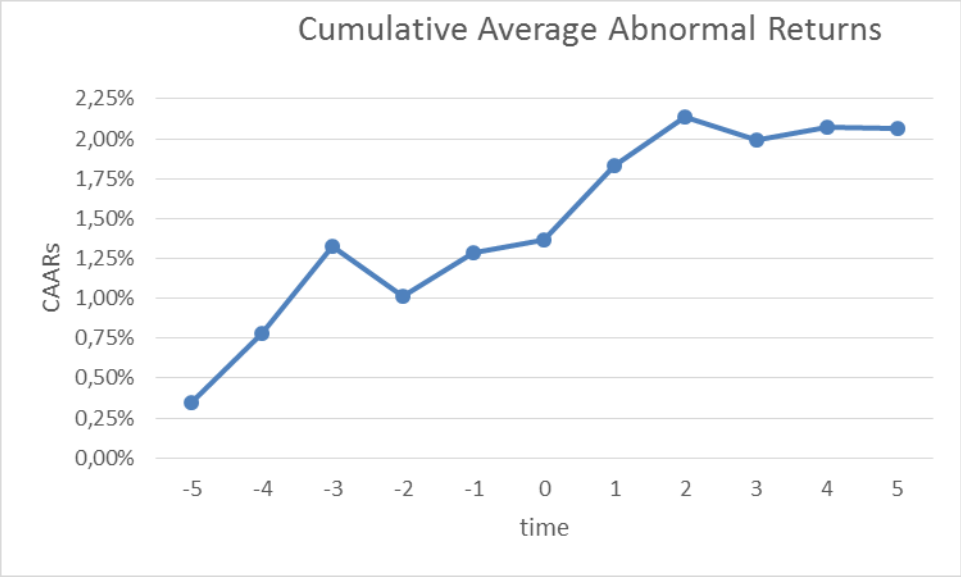
Yes** = significant at a 5% level

Yes*** = significant at a 1% level

4.4.3 Hypothesis 2b: Cumulative Abnormal Returns

There appears to be an upward trend in market reaction to BEE deal announcements in the financial services sector with CAARs becoming more positive with time in the event window. There are no negative CAARs in the event window. Peak positive CAARs in the event window occur at t+2. This could be as a result of the market interpreting the BEE deal announcement as being positive news in the financial sector and thereby choose to increase ownership in shares as opposed to selling them. This indicates an efficient market. The trend in CAARs in the financial services sector is illustrated in Figure 4-5.

Figure 4-5: CAARs for the financial services sector



The null hypothesis stated that BEE deal announcements by JSE-listed companies resulted in insignificant CAARS during the event window. Alternate hypothesis 2b stated that BEE deal announcements by JSE-listed companies in the financial sector have a significant impact on CAARs within the event window.

Both tests find statistically significant positive results over the 11 day event window. The results of significance testing of CAARs are summarised in table 4-6.

Based on these results, the null hypothesis is rejected and the alternate hypothesis 2b must be accepted at a 5% level of significance.

Table 4-6: summary statistics over event windows for CAARs

			Wilcoxon Signed-Rank Test		Parametric t-test	
Event	CAARs	Std. deviation	Z	p-value	t-stat	p-value
11 days	2,06%	0,068	2,01	0,04**	2,62	0,01**

** = significant at a 5% level

4.4.4 Large vs Small Stock

The financial services sector sample was split into two samples comprising of small and large stock. Descriptive statistics were run over both samples and are summarised in Table 4-7. Both

sample kurtoses were below 3 indicating a Platykurtic distribution in each sample, with the large stock having thinner tails than the small stock. Both the small and large stock are positively skewed. The large stock is only slightly skewed whereas the small stock is extremely skewed.

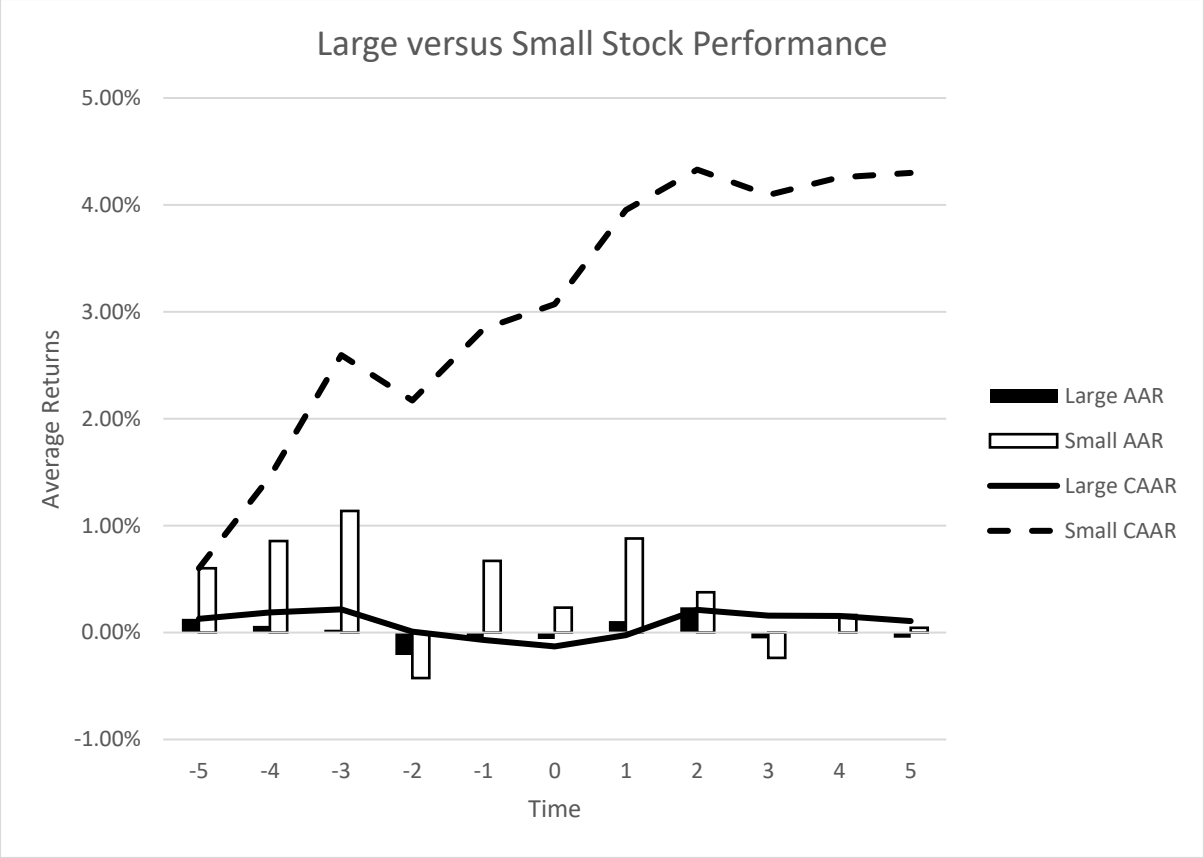
The Shapiro-Wilk Normality test was also run in order to determine whether the sample was normally distributed. These results are also summarised in Table 4-7. From the results of the Shapiro-Wilk test, one can conclude normality of data distribution of the large stock, however not of the small stock. Due to not being able to conclude normality of both samples, nonparametric testing will be used to test significance of both samples.

Table 4-7: Descriptive Statistics of small versus large financial service stock

Statistic	small	large
Median	0,013	0,001
Mean	0,043	0,001
Standard deviation (n)	0,084	0,040
Skewness (Pearson)	1,203	0,039
Kurtosis (Pearson)	1,205	-0,041
Shapiro-Wilk W value	0,889	0,988
p-value (Two-tailed)	0,002	0,947

Small stock displays consistently more positive CAARs than large stock throughout the event window. This suggests that investors view small stock announcing BEE deals as being more sustainably positive and thereby elect to increase ownership in shares as opposed to selling them. Market reaction to BEE announcement made by large stock is less significant than small stock throughout the event window. This suggests that investors are more sensitive to BEE deal announcements by large companies than small companies throughout the event window. Trends regarding CAAR and AAR of large and small stock are illustrated in figure 4-6.

Figure 4-6: AARs and CAARs for large versus small stock (financial services sector)



In order to determine whether the difference in CARs between the 2 samples was significant, the Mann-Whitney nonparametric test was run across the small and large stock CAAR values. The results of the test are summarised in Table 4-8. The test found the difference in CAARs between the large and small stock to be significant at a 5% level indicating that financial sector BEE deal announcements created significantly more value for shareholders of small stock than for shareholders of large stock.

Table 4-8: Mann-Whitney test for small versus large stock in the financial services sector

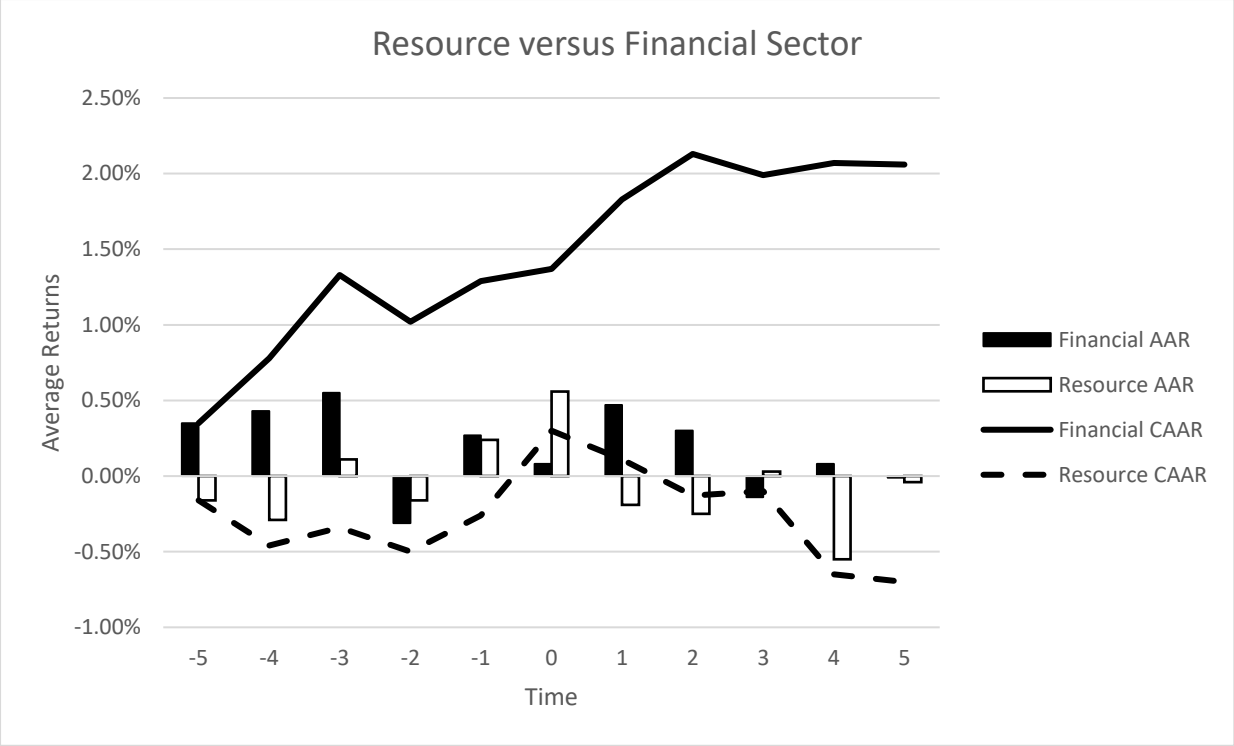
U	514
U (standardized)	0,000
Expected value	700,000
Variance (U)	8866,667
p-value (Two-tailed)	0,048
alpha	0,05

4.5 Comparison between the resource and financial services sector

Both the resource and financial sector display positive AARs at event announcement date. This indicates that the market reacts positively to new information regarding the implementation of a BEE deal in both sectors. However, the market reacts more strongly to announcements in the financial sector than the resource sector indicating that investors are more sensitive to announcements on the financial sector. Both sectors have volatile AARs surrounding the event announcement date. This indicates that both sectors create uncertainty among investors during the event window when announcing BEE deals.

Throughout the event window, the financial sector displays more positive CAARs than the resource sector. In looking at trends in the resource sector CAARs, there is a clear overreaction to the event at announcement date and a subsequent fall in price demonstrating disappointment among investors and decreasing of ownership of resource stock thereafter. In contrast, the financial sector displays an upward trend over the event window demonstrating that investors recognise sustainable benefits from BEE deal announcements and increase ownership thereafter. Trends in CAARs and AARs in the resource and financial service sector are illustrated in figure 4-7.

Figure 4-7: AARs and CAARs for resource and financial services sector



In order to determine whether the difference in abnormal returns between the full sample financial sector stock and resource sector stock was significant, the Mann-Whitney nonparametric test was run over the independent samples. The results of the test are summarised in Table 4-9. Nonparametric testing was used due to not being able to conclude normality on either sample as was tested in section 4.3.1 for the resource sector and section 4.4.1 for the financial service sector. The results of the test found the difference in CAARS between the two sectors to be significant which therefore indicates that financial sector BEE deals generate significantly greater wealth than resource sector deals.

Table 4-9: Mann-Whitney test for the full sample financial services stock and resource stock

U	5065
U (standardized)	2,504
Expected value	4162,500
Variance (U)	129731,129
p-value (Two-tailed)	0,012
alpha	0,05

Chapter V - Discussion of Results

5.1 Introduction to discussion of results

This chapter analyses the results that were discussed in Chapter IV. The data being discussed involves BEE deal announcements that were made in both the financial sector and the resource sector by JSE-listed companies within the relevant sectors. Results will be discussed and contrasted with current literature findings on relevant topics.

Current literature assumes that investors receive all BEE deals with homogenous expectations. As a result of this, one needs to consider the fact that this research will be contrasted with existing research that does not distinguish between sectors in the sample and that differences in results can occur as a result of this.

5.2 Average Abnormal Returns

The null hypothesis postulated the existence of insignificant AARs resulting from BEE announcements in the resource sector and financial service sector. Significance testing was successfully performed over the AARs in both sectors which confirmed the existence of significant AARs in both sector samples, however only for a select number of days during the event window. Based on these results, the researcher could not reject the null hypothesis.

The study performed by Ward and Muller (2010) found no trends in AARs. The study reported mostly negative results during the event window with positive reactions scattered throughout. This is more consistent with this study's findings in the resource sector which also reported mostly negative AARs.

Both sectors were found to have positive AARs at event date signifying a positive market reaction to the announcement at event date. This is consistent with current literature findings which also demonstrated value creation surrounding the event date (Alessandri et al., 2011; Jackson et al., 2005; Strydom et al., 2009).

Jackson et al. (2005) reported positive AARs during the event window which is consistent with the financial sector AARs. This could be due to the fact that the study performed by them

excluded resource sector companies which reported mainly negative AARs during the event window.

Ward and Muller (2010) reported significant and negative ARs at a 5% significance level at t-1. This demonstrated market disapproval of the transaction and possible insider trading due to the reaction occurring before the news announcement was made. In contrast, this research reported insignificant positive ARs at t-1 for both sectors. Ward and Muller (2010) reported no other significant results during the event window in this study.

5.3 Cumulative Average Abnormal Returns

The null hypothesis postulated the existence of insignificant CAARs resulting from BEE announcements in the resource sector and financial service sector. Significance testing was successfully performed over the CAARs in both sectors which confirmed the existence of significant CAARs in the financial services sector only. This allowed the researcher to reject the null hypothesis for the financial sector CAARs and accept the null hypothesis for the resource sector CAARs.

The resource sample findings had mostly negative CAARs which signified the destruction of shareholder value within the event window for resource stock. These results were insignificant. The financial sector findings had only positive CAARS which signified value creation through the announcement of BEE deals within the event window for financial service stock which were mostly significant.

Ward and Muller (2010) found positive CARs during the event window. Jackson et al. (2005) also reported significant positive results over a 3 day and 5 day window. Wolmarans and Sartorius (2009) found positive CARs during the event window that were significantly positive over a three day event window. This is consistent with results within the financial sector which also finds sustained positive, significant CAARs after the announcement date signifying value creation from BEE deal announcements.

Alessandri et al. (2011) reported negatives CARs during the event window for the sample and Sennanye (2014) reported negative CARs during the event window for deal announcements

made by mining companies. They both concluded that BEE deal announcements destroy the perception of value which is consistent with findings in the resource sector.

Strydom et al. (2009) found insignificantly positive CAARs during the event window. However, in looking at the sample various transactions were found to have significant positive or negative reactions to BEE deal announcements. They concluded that this was due to firm-specific or transaction-specific characteristics.

5.4 Large vs Small Stock

The results of this research found that small stock consistently outperformed large stock for both sector samples subsequent to announcement dates. This illustrated that despite the sector in which the deal was made, the market reacted more favourably to deal announcements by 'small' companies rather than 'large' companies.

This is consistent with the study done by Ward and Muller (2010) who found that for smaller companies, CARs were strongly positive as opposed to large companies that had slightly negative CARs. This demonstrates that their findings also concluded that the market reacted more favourably to 'small' stock BEE deal announcements than 'large' stock.

The results of this study also support the conclusion reached by Ward and Muller (2010) who stated that a possible explanation for 'large' stock having marginally negative results could be that 'many of the large-cap companies are resource companies, which export commodities in international markets and for whom BEE compliance is a necessary cost of business with little or no benefit.'

This study reported that, although 'small' resource stock had more positive CAARs, CAARs followed a downward trend following the event announcement date. This is consistent with the fact that the markets view BEE as having little benefit to resource companies. Whereas, financial sector 'small' stock was able to maintain positive CAARs over the event window proving that investors felt that BEE benefits in the sector could be better sustained.

The CAARs for large companies are relatively stable after announcement whereas those of small companies continue to rise after announcement. This is an indication of market inefficiency in the form of under-reaction.

Chapter VI - Conclusion

6.1 Introduction to Conclusion

This research examined the impact of BEE deal announcements on the short-term stock price performance of JSE-listed companies in the resource and financial service sectors. The study addressed a significant gap in BEE research where the impact of the Industry Charters on BEE adoption in firms and the resultant value creation as a consequence of these sector specific deals has largely been overlooked. This is especially important in a South African context where the structure of each sector and empowerment within each sector is so distinct.

This chapter will conclude on the study by providing a summary of findings and providing recommendations based on these findings.

6.2 Summary of Findings

The study found very different reactions to the announcement of BEE deals in the financial sector and resource sector in the short-term.

In the resource sector, there were mainly negative AARs during the event window. This was excluding the event announcement date, where peak positive AARs were reported, signifying that the market generally enjoyed news of BEE announcements by the sector. Negative CAARs post-announcement date signified market scepticism in the days leading up to the announcement. While CAARs were positive at announcement date, a downward trend post-announcement signified a correction of an overreaction by the market and subsequent sell-off of shares. This signified that the JSE is an inefficient market.. This leads one to conclude that BEE deals in the resource sector destroy the perception of value for shareholders.

In the financial service sector, there were mostly positive AARs during the event window including at event announcement date. This signifies the market generally enjoyed news of the BEE announcement by the sector. While no trends were found, significant positive results at a 10% level were reported at t+2 and significant negative results at a 10% level were reported at t-2. This could be due to market scepticism post-announcement, and a positive shareholder

reaction following the announcement. CAARs were positive and found to be statistically significant for the majority of the event window. This leads one to conclude that BEE deals in the financial services sector are perceived create value for shareholders.

The results of this research found that small stock had uniformly more positive CAARs than large stock for both sector samples subsequent to announcement dates. This illustrated that despite the sector in which the deal was made, the market reacted more favourably to deal announcements by 'small' companies rather than by 'large' companies. This could be due to smaller companies gaining more of a financial benefit from these types of transactions than large companies. These findings are consistent with small stock premium expectations as smaller stock demonstrated higher abnormal returns than large stock.

6.3 Implications for Theory and Practice

The study found that BEE deal announcements destroyed value for shareholders in the resource sector and created value for shareholders in the financial services sector in the short-term. This has several implications both in theory and in practice.

The Mining Charter has been highly criticised since the introduction of mining rights in 2002. With respect to ownership, the revised 2010 Charter required a minimum target of 26% ownership which must be structured in a certain way so that employee stock ownership plans, communities, black entrepreneurs, traditional authorities and unions all have a stake. The creation of a Special Purpose Vehicle (SPV) in order to do this is extremely costly and a separate SPV must be created for each mining right in the instance where several are required (The Mining Charter, 2010). While a report demonstrated that 90% of mining companies had met, and exceeded, the targets specified in the original Mining Charter, only 9% (as estimated by the National Union of Mineworkers) have deals that meet new criteria (Jeffery, 2016). This means that many of the costly BEE deals that have been concluded in the past had to be redone under new rules.

As per the results discussed in chapter 4 for the resource sector, the perceived value destruction of the Mining Charter is realised by the market when BEE deals are announced. In order to ensure that these deals are not perceived to destroy value for shareholders, the South African government needs to re-examine the Mining Charter and its ownership requirements so as not

to discourage the expansion of and investment in the resource sector (Jeffery, 2016). It is important that CSR actions are value creating in a financial sense and not only in a social sense, especially in driving empowerment in South Africa. Legislation needs to be re-assessed regarding sector scorecards and mining rights in order to determine whether these are actually beneficial to shareholders and other stakeholders within the resource sector, so that deals are better received by the market.

The results discussed in chapter 4 for the finance sector demonstrate that financial service companies are able to create the perception of value when announcing BEE deals. If these results are recognised by financial sector companies, management of companies within the sector may be more willing to engage in empowerment transactions and drive empowerment in what is generally regarded to be a less empowered sector. This could result in more financial sector companies being more susceptible to engaging in these types of transactions and therefore being more socially responsible.

Investors looking to earn above risk-adjusted returns can take advantage of market inefficiencies identified in the study. Investors could short resource stock on announcement of BEE deals in the resource sector, specifically where deals are made by large companies and long financial sector stock on announcement of BEE deals in the financial sector, specifically where deals are made by small companies.

6.4 Recommendation for Future Research

The following recommendations for future research are:

6.4.1 Examining sector specific BEE deal announcement impact over time in order to determine whether there has been a change in market reaction to sector announcements. This can be contrasted with developments within the industry charters in order to determine whether changes in the charters have impacted on market reaction to BEE deal announcements.

6.4.2 An analysis of the adoption of other scorecard elements in the financial and resource sectors and their impact on company performance in those sectors. This will determine the financial impact of the entire scorecard in the two sectors in the long run.

6.4.3 The study can be expanded by the inclusion of other sectors that were not included in this research. Additionally, future research can further limit the industry to which the BEE deal announcements pertain, for example, looking at the banking sector specifically rather than the entire financial services sector.

6.4.4 Future studies can contrast the financial impact of announcements according to the type of BEE transaction that the company engaged in.

6.5 Chapter Summary

This research was successful in examining the impact of BEE deal announcements on the share price of JSE-listed companies in both the resource and financial services sector. BEE deal announcements within the resource sector had a negative impact on shareholder value while BEE deal announcements within the financial services sector had a positive impact on shareholder value. The practical implications of these findings were discussed, and recommendations made for further research areas according to these results.

Appendix

Appendix 1: List of resource companies in the sample

Ticker Code (JSE)	Company Name
ACL	Arcelormittal Sa Limited
AFE	Aeci Limited
AFG	Afgem Ltd
AFL	Aflease Gold And Uranium
AFX	African Oxygen Limited
AGL	Anglo American Plc
AMS	Anglo American Plat Ltd
ANG	Anglogold Ashanti Ltd
AQP	Aquarius Platinum Ltd
ARI	African Rainbow Min Ltd
ASR	Assore Ltd
AVG	Avgold Ltd
BDM	Buildmax Ltd
BIL	Bhp Billiton Plc
BPL	Barplats Investments Ord
DMR	Diamond Core Resources
DRD	Drd Gold Ltd
EHS	Evraz Highveld Steel & V
EXX	Exxaro Resources Ltd
FSE	Firestone Energy Limited
GFI	Gold Fields Ltd
HAR	Harmony Gm Co Ltd
HLM	Hulamin Ltd
IMP	Impala Platinum Hlgs Ltd
ISB	Insimbi Ind Hldgs Ltd
JCD	Jci Ltd

LON	Lonmin Plc
MCZ	Mc Mining Limited
MML	Metmar Ltd
MND	Mondi Ltd
MTX	Metorex Ltd
MVL	Mvelaphanda Resources Ld
NHM	Northam Platinum Ltd
OMN	Omnia Holdings Ltd
PAM	Palabora Mining Co Ltd
PAN	Pan African Resource Plc
PET	Petmin Ltd
PZG	Pamodzi Gold Limited
RDI	Rockwell Diamonds Inc
RNG	Randgold & Expl Co Ltd
RSG	Resource Generation Ltd
S32	South32 Limited
SAL	Sallies Ltd
SAP	Sappi Ltd
SIM	Simmer & Jack Mines
SOL	Sasol Limited
TBX	Thabex Limited
TSX	Trans Hex Group Ltd
UAT	Union Atlantic Minerals
UCP	Unicorn Capital Pnr Ltd
WEZ	Wesizwe Platinum Ltd
WSL	Wescoal Holdings Ltd
YRK	York Timber Holdings Ltd

Appendix 2: Year of deal announcement by resource company sector in the sample

Year	'03	'04	'05	'06	'07	'08	'09	'10	'11	'12	'13	'14	'15	'16	'17	'18
ACL					1			1					1	1		
AFE		1	1			1			1							
AFG			1													
AFL	1		1													
AFX		1		1												
AGL					1				1				1			1
AMS	1		1						1		1					
ANG				1					1							
AQP				1		1										
ARI			1		1											
ASR		1	1				1		1							
AVG	1															
BDM											1					
BIL				1		1			1							
BPL		1	1													
DMR	1			1												
DRD			1													
EHS							1									
EXX						1									1	
FSE										1						
GFI					1											
HAR			1		1					1					1	
HLM												1				
IMP		1	1			1						1			1	
ISB														1		
JCD		1		1												
LON									1			1				

MCZ										1			1		1	
MML					1	1										
MND										1						
MTX			1				1									
MVL		1	1	1		1										
NHM												1				
OMN					1		1									
PAM							1	1								
PAN										1						
PET		1	1			1							1			
PZG							1									
RDI											1					
RNG	1	1														
RSG									1							
S32															1	
SAL				1				1								
SAP				1				1								
SIM				1												
SOL		1			1			1							1	
TBX					1											
TSX									1							
UAT				1												
UCP			1		1			1		1						
WEZ					1	1			1							
WSL					1									1		
YRK				1												
Total	**5**	**10**	**14**	**12**	**12**	**9**	**6**	**6**	**10**	**6**	**3**	**4**	**4**	**3**	**6**	**1**

Appendix 3: List of financial service companies in the sample

Ticker Code (JSE)	Company Name
ABG	Absa Group Limited
ACP	Acucap Properties Ltd
ACT	Afrocentric Inv Corp Ltd
AFH	Alexander Forbes Grp Hld
AFI	African Life Assurance
APA	Apexhi Properties -A-
ARD	Ardor Sa Ltd
AXL	African Phoenix Inv Ltd
BAT	Brait Se
BFS	Blue Financial Services
CAE	Cape Empowerment Trust
CDZ	Cadiz Hldgs Ltd
CML	Coronation Fund Manager Ltd
CPA	Corpcapital Ltd
CPI	Capitec Bank Hldgs Ltd
DSY	Discovery Ltd
DTA	Delta Emd Ltd
EMI	Emira Property Fund Ltd
FFB	Fortress Reit Ltd B
FSR	Firstrand Ltd
GMB	Glenrand M.I.B. Ltd
GPL	Grand Parade Inv Ltd
GRT	Growthpoint Prop Ltd
HCI	Hosken Cons Inv Ltd
HYP	Hyprop Inv Ltd
INL	Investec Ltd
LBH	Liberty Holdings Ltd

MMI	Mmi Holdings Limited
NED	Nedbank Group Ltd
OML	Old Mutual Plc
PAP	Pangbourne Prop Ltd
PGR	Peregrine Holdings Limit
PPE	Purple Group Ltd
PRA	Paramount Prop Fund Ltd
PSG	Psg Group Ltd
RAH	Real Africa Hldgs Ltd
RDF	Redefine Properties Ltd
SAC	Sa Corp Real Estate Ltd
SBK	Standard Bank Group Ltd
SCP	Stellar Cap Partners Ltd
SEB	MICROmega Ltd
SFN	Sasfin Holdings Ltd
SLM	Sanlam Limited
SNT	Santam Limited
SPE	Spearhead Prop Hldgs Ltd
SYA	Siyathenga Property Fund
TEX	Texton Property Fund Ltd
ZSA	Zurich Insurance Co Sa

Appendix 4: Year of deal announcement by financial sector company sector in the sample

Year	**'04**	**'05**	**'06**	**'07**	**'08**	**'09**	**'10**	**'11**	**'12**	**'13**	**'14**	**'15**	**'16**	**'17**	**'18**
ABG	1			1		1									
ABL		1			1										
ACP			1												
ACT					1										

AFH													1		
AFI	1														
APA			1		1										
ARD	1														
BAT	1														
BFS								1							
CAE			1												
CDZ	1						1								
CML	1														
CPA	1														
CPI				1					1						
DSY		1													
DTA														1	
EMI			1												
FFB								1							
FSR	1					1		1							
GMB		1													
GPL										1					
GRT		1	1												
HCI		1													
HYP			1												
INL		1		1											
LBH	1														
MMI		1													1
NED		1							1						
OML		1										1			
PAP		1													
PGR		1							1						1
PPE		1	1												
PRA			1												

PSG	1		1												
RAH	1														
RDF			1	1					1						
SAC					1										
SBK	1	1	1			1									
SCP													1		
SEB		1													
SFN		1		1										1	
SLM															1
SNT			1			1						1			
SPE		1													
SYA				1											
TEX											1				
ZSA		1				1									
Total	**12**	**17**	**12**	**6**	**4**	**5**	**1**	**3**	**4**	**1**	**1**	**2**	**2**	**2**	**3**

Appendix 5: Descriptive statistics for the resource sector ARs

Statistic	t+5	t+4	t+3	t+2	t+1	t0	t-1	t-2	t-3	t-4	t-5
Median	-0,001	-0,003	0,000	-0,002	-0,002	0,000	0,003	-0,001	0,000	-0,002	0,000
Mean	0,000	-0,006	0,000	-0,002	-0,002	0,006	0,002	-0,002	0,001	-0,003	-0,002
Standard deviation (n)	0,023	0,026	0,028	0,028	0,031	0,043	0,026	0,027	0,021	0,023	0,028
Skewness (Pearson)	0,274	-2,635	1,262	0,192	0,832	3,721	-0,235	-1,696	0,614	-1,237	-2,026
Kurtosis (Pearson)	1,879	13,702	5,045	5,802	5,448	24,809	2,475	12,211	2,321	3,821	11,969

Appendix 6: Descriptive statistics for the financial sector ARs

Statistic	t+5	t+4	t+3	t+2	t+1	t0	t-1	t-2	t-3	t-4	t-5
Median	0,000	0,000	0,001	0,002	0,000	-0,001	0,002	-0,001	-0,001	0,002	0,002
Mean	0,000	0,001	-0,001	0,003	0,005	0,001	0,003	-0,003	0,005	0,004	0,003
Standard deviation (n)	0,023	0,021	0,018	0,017	0,019	0,022	0,017	0,016	0,022	0,023	0,021
Skewness (Pearson)	0,399	0,909	-1,611	-0,417	1,563	0,523	1,635	-0,249	2,026	0,595	3,212
Kurtosis (Pearson)	6,696	6,794	5,394	1,144	3,425	2,782	6,585	1,831	5,230	4,671	17,714

Appendix 7: Shapiro-Wilke Tests for Normality for resource sector ARs

Variable\Test	Shapiro-Wilk	Greater than 0,05?
t5	**0,000**	**No**
t4	**< 0,0001**	**No**
t3	**< 0,0001**	**No**
t2	**< 0,0001**	**No**
t1	**< 0,0001**	**No**
t0	**< 0,0001**	**No**
t(-1)	**< 0,0001**	**No**
t(-2)	**< 0,0001**	**No**
t(-3)	**0,003**	**No**
t(-4)	**< 0,0001**	**No**
t(-5)	**< 0,0001**	**No**

Appendix 8: Shapiro-Wilke Tests for Normality for financial service sector ARs

Variable\Test	Shapiro-Wilk	Greater than 0,05?
t5	**< 0,0001**	**No**
t4	**< 0,0001**	**No**
t3	**< 0,0001**	**No**
t2	0,161	**Yes**
t1	**< 0,0001**	**No**
t0	**< 0,0001**	**No**
t(-1)	**< 0,0001**	**No**
t(-2)	**0,001**	**No**
t(-3)	**< 0,0001**	**No**
t(-4)	**< 0,0001**	**No**
t(-5)	**< 0,0001**	**No**

References

(ANC), A. N. C. (1955). Freedom Charter. Retrieved from http://www.anc.org.za/content/freedom-charter

Act, B. B. B. E. E. (2004). No. 53.(2003). *Government Gazette, 463*, 25899.

Alessandri, T. M., Black, S. S., & Jackson, W. E. (2011). Black economic empowerment transactions in South Africa: Understanding when corporate social responsibility may create or destroy value. *Long Range Planning*, *44*(4), 229-249.

Bank, S. A. R. (Producer). (2014, 8 August 2018). Bank Supervision Department Annual Report. Retrieved from https://www.resbank.co.za/Lists/News%20and%20Publications/Attachments/6736/01%20BankSupAR2014.pdf

Benninga, S. (2008). Financial modelling. *MIT Press Books*.

Brown, S. J., & Warner, J. B. (1980). Measuring security price performance. *Journal of financial economics*, *8*(3), 205-258.

Brown, S. J., & Warner, J. B. (1985). Using daily stock returns: The case of event studies. *Journal of financial economics*, *14*(1), 3-31.

Cargill, J. (1999). *Empowerment 1999: A moving experience*: BusinessMap SA.

Chipeta, C., & Vokwana, T. C. Z. (2011). The impact of Black Economic Empowerment transactions on shareholder wealth and firm profitability: evidence from the JSE. *African Finance Journal*, *13*(Special issue 1), 71-91.

Congress, A. N. C (1994). *The Reconstruction and Development Programme: A Policy Framework*. Retrieved from https://www.gov.za/sites/default/files/governmentgazetteid16085.pdf

Corrado, C. J. (1989). A nonparametric test for abnormal security-price performance in event studies. *Journal of financial economics*, *23*(2), 385-395.

Corrado, C. J. (2011). Event studies: A methodology review. *Accounting & Finance*, *51*(1), 207-234.

Corrado, C. J., & Zivney, T. L. (1992). The specification and power of the sign test in event study hypothesis tests using daily stock returns. *Journal of Financial and Quantitative analysis*, *27*(3), 465-478.

Cowan, A. R. (1992). Nonparametric event study tests. *Review of Quantitative Finance and Accounting*, *2*(4), 343-358.

Dolley, J. C. (1933). Characteristics and procedure of common stock split-ups. *Harvard business review*, *11*(3), 316-326.

Dutta, A. (2014). Parametric and nonparametric event study tests: A review. *International Business Research*, *7*(12), 136-142.

Fama, E. F. (1970). Efficient capital markets: A review of theory and empirical work. *The journal of Finance*, *25*(2), 383-417.

Fama, E. F., Fisher, L., Jensen, M. C., & Roll, R. (1969). The adjustment of stock prices to new information. *International economic review*, *10*(1), 1-21.

Fauconnier, A., & Mathur-Helm, B. (2008). Black economic empowerment in the South African mining industry: A case study of Exxaro Limited. *South African Journal of Business Management*, *39*(4), 1-14.

Frye, I., Farred, G., & Nojekwa, L. (2011). Inequality in South Africa. *Tearing us apart: Inequalities in southern Africa. Rosebank: Open Society Initiative for Southern Africa*.

Fund, N. E. (2016). *Performance Report: 3rd Quarter 2015/16*

Gilfillan, B. (2005). Black economic empowerment guide. Retrieved from http://services.bowman.co.za/Brochures/BEE/BEEBrochure-lr.pdf

Guduza, S., & Phiri, A. (2017). Efficient Market Hypothesis: Evidence from the JSE equity and bond markets.

Haim, C. M., Ashghi, G., & Eshghi, A. (2017). Business Impact of the Black Economic Empowerment. *Journal of Research in Business, Economics and Management*, *8*(2), 1370-1380.

Hamann, R., Khagram, S., & Rohan, S. (2008). South Africa's charter approach to post-apartheid economic transformation: Collaborative governance or hardball bargaining? *Journal of Southern African Studies*, *34*(1), 21-37.

Heymans, A., & Santana, L. (2018). How efficient is the Johannesburg Stock Exchange really?. South African Journal of Economic and Management Sciences, 21(1), 1-14.

Iheduru, O. C. (2008). Why 'Anglo Licks the ANC's Boots': Globalization and State–Capital Relations in South Africa. *African Affairs*, *107*(428), 333-360.

Industry, S. C. o. F. a. t. P. C. o. T. a. (2017). *1st Report on Transformation of the Financial Sector*. Retrieved from https://www.parliament.gov.za/press-releases/committees-finalises-transformation-financial-sector-report

Intellidex. (2015, 3 May 2018). The Value of BEE Deals. *Research Report June 2015*. Retrieved from http://www.intellidex.co.za/wp-content/uploads/2015/06/Intellidex-report-The-Value-of-BEE-Deals.pdf

Jackson, W. E., Alessandri, T., & Black, S. S. (2005). The price of corporate social responsibility: the case of black economic empowerment transactions in South Africa, FRB Atlanta Working Paper No. 2005-29, 1-32.

Jeffery, A. (2016). *'Re-imagining the mining industry'* (26). Retrieved from https://irr.org.za/media/articles-authored-by-the-institute/avoiding-the-sunset-jeffery-re-imagining-the-mining-industry-via-draft-charter-2013-biznews-16-august-2016

JSE. (2002, 27 May 2018). SA Sector. Retrieved from https://www.jse.co.za/services/market-data/indices/ftse-jse-africa-index-series/sa-sector

Juggernath, S., Rampersad, R., & Reddy, K. (2013). Corporate responsibility for socio-economic transformation: A focus on broad-based black economic empowerment and its implementation in South Africa. *African Journal of Business Management, 5*(20), 8224-8234.

Kothari, S., & Warner, J. B. (2007). Econometrics of event studies. *Handbook of empirical corporate finance, 1*, 3-36.

Leedy, P. D., & Ormrod, J. E. (2005). *Practical research*: Pearson Custom.

MacKinlay, A. C. (1997). Event studies in economics and finance. *Journal of economic literature, 35*(1), 13-39.

Malkiel, B. G. (2003). The efficient market hypothesis and its critics. *Journal of economic perspectives, 17*(1), 59-82.

McWilliams, A., & Siegel, D. (1997). Event studies in management research: Theoretical and empirical issues. *Academy of management journal, 40*(3), 626-657.

The Mining Charter. (2010). Republic of South Africa. Retrieved from https://archive.opengazettes.org.za/archive/ZA/2010/government-gazette-ZA-vol-543-no-33573-dated-2010-09-20.pdf

Mohamad-Yusof et al. Corporate governance, critical junctures and ethnic politics: Ownership and boards in Malaysia. Critical Perspectives on Accounting (2018), https://doi.org/10.1016/j.cpa.2017.12.006

Nhasengo, A. (2016). SUSTAINABILITY OF FUNDING MODELS USED IN BLACK ECONOMIC EMPOWERMENT TRANSACTIONS IN THE SOUTH AFRICAN MINING SECTOR. In completion of the requirements for the degree of Master of Science in Engineering with University of the Witwatersrand, Johannesburg.

Ntim, C. G., & Soobaroyen, T. (2013). Black economic empowerment disclosures by South African listed corporations: The influence of ownership and board characteristics. *Journal of Business Ethics, 116*(1), 121-138.

Peterson, P. P. (1989). Event studies: A review of issues and methodology. *Quarterly journal of business and economics*, 36-66.

Ponte, S., Roberts, S., & Van Sittert, L. (2007). 'Black economic empowerment', business and the state in South Africa. *Development and Change, 38*(5), 933-955.

Russell, A. (2007). Black economic empowerment: Anxious to shed a 'jobs for the boys' perception. *Financial Times (London), 1-2*.

Ryngaert, M., & Netter, J. (1990). Shareholder wealth effects of the 1986 Ohio antitakeover law revisited: Its real effects. *Journal of Law, Economics, & Organization, 6*(1), 253-262.

Sartorius, K., & Botha, G. (2008). Black economic empowerment ownership initiatives: a Johannesburg Stock Exchange perspective. *Development Southern Africa, 25*(4), 437-453.

Sennanye, L. E. (2014). *The impact of Black Economic Empowerment transaction announcements on share price performance of JSE listed mining companies*. Masters with Gordon Institute of Business Science.

Southall, R. (2007). Ten propositions about black economic empowerment in South Africa. *Review of African Political Economy, 34*(111), 67-84.

Stats, S. (2013). Mid-year population estimates. *Pretoria, South Africa: Stats SA*.

Strydom, B., Christison, A. L., & Matias, J. (2009). An empirical investigation of the effect of black economic empowerment transactions on share prices: 1996 to 2006, Strydom, Barry and Christison, Andrew L. and Matias, Joao, An Empirical Investigation of the Effect of Black Economic Empowerment Transactions on Share Prices: 1996 to 2006 (December 31, 2009). African Journal of Accounting, Economics, Finance and Banking Research, 5(5), 67-76.

Tangri, R., & Southall, R. (2008). The politics of black economic empowerment in South Africa. *Journal of Southern African Studies, 34*(3), 699-716.

Van der Merwe, C. M., & Ferreira, P. (2014). The association between the seven elements of the black economic empowerment score and market performance. *South African Journal of Economic and Management Sciences, 17*(5), 544-556.

Van Rensburg, P. (2002). Market segmentation on the Johannesburg stock exchange II. *Studies in Economics and Econometrics, 26*(1), 83-99.

Van Rensburg, P., & Robertson, M. (2003). Size, price-to-earnings and beta on the JSE Securities Exchange. *Investment Analysts Journal, 32*(58), 7-16.

Ward, M., & Muller, C. (2010). The long-term share price reaction to black economic empowerment announcements on the JSE. *Investment Analysts Journal, 39*(71), 27-36.

Ward, M., & Muller, C. (2012). Empirical testing of the CAPM on the JSE. *Investment Analysts Journal, 41*(76), 1-12.

Wolmarans, H., & Sartorius, K. (2009). Corporate social responsibility: the financial impact of black economic empowerment transactions in South Africa: corporate governance. *South African Journal of Economic and Management Sciences, 12*(2), 180-193.