



Market reactions to female director appointments onto JSE-listed company boards

A dissertation submitted by

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ABSTRACT

Societal imbalances in relation to gender is not a new discovery but rather a debate that has constantly prevailed. Females have consistently been associated with more traditional roles such as family and household responsibilities however, a business case exists that the inclusion of females onto corporate boards proves to be beneficial. The board of directors is responsible for value maximisation and research has shown that its' composition can impact the value of firms as a whole and how they are perceived by the market.

Research into African markets is minimal which is one of the gaps the study aimed to achieve in determining the reaction within South Africa. This study contrasted the markets reaction between males and females being appointed onto company boards. It also assessed whether there was a difference based on the role females were appointed into, such as executive or non-executive. In order to further assess the reaction, it was broken down into industry specific announcements and their reactions.

The findings identified that there was a negative reaction towards females however, it was not statistically significant. The reaction differed to that of males, which may indicate that the Johannesburg Stock Exchange is not entirely efficient and may have a slight bias however, the cause was not determined within this study. It was also evident that companies had a preference for females in non-executive positions and less in executive positions. The reaction tended to differ amongst the industries but still remained largely negative.

KEYWORDS

Females on company boards, South African market reactions, efficient market hypothesis, tokenism, critical mass

DECLARATION

I, Valencia Hewlett, declare that this research report is my own work except where I have included the necessary acknowledgements and references. It is submitted in partial fulfillment of the requirements for a Masters in Commerce at the University of the Witwatersrand. It has not been submitted before or for any degree or examination in any other university.

Valencia Hewlett

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CHAPTER I - INTRODUCTION

A company's primary objective is wealth maximisation (Jensen, 2001) which is the responsibility of management. The board of directors act on behalf of shareholders to determine, influence and monitor the strategic and operational direction of the company which is driven by the executive directors and senior management to ensure the creation of value (Du Plessis, Saenger, & Foster, 2012; Jensen, 2001).

Campbell and Mínguez-Vera (2008, p.437) define the board of directors as "...an internal governance mechanism via its appointment, supervision and remuneration of senior managers, as well as its collective determination of overall corporate strategy." The board, therefore, plays an integral role in the value maximization process and an effective board influences the long-run market value of a firm (Jensen, 2001).

Studies have indicated that the composition of the board has the ability to influence the value of the firm and would consequently have an impact on market perceptions (Campbell & Mínguez-Vera, 2008). The composition of a board warrant careful consideration as their role in an entity is pivotal to the success of the company (Pastore, Tommaso, & Ricciardi, 2017).

It has been argued that improved diversity would positively impact board independence as a heterogeneous group of directors with varying race, cultural background and gender would ask a wider array of questions than if compared to a homogenous board with similar background (Institute, 2016; Marinova, Plantenga, & Remery, 2016). This does not only improve business processes but also has the potential to influence public perception and consequently, the market.

One aspect of board composition which warrants research attention is the gender diversity of the board. Historically, boards mostly comprised of only males and in modern boards, several research articles concluded that females remain under-represented on listed company boards globally (Cook & Glass, 2011; Erhardt, Werbel, & Shrader, 2003; Kang, Ding, & Charoenwong, 2010)

To encourage greater participation of females in the direction of corporates, a wide range of initiatives to include female participation on listed company boards have been introduced globally. Countries such as Italy, Norway and Germany have introduced mandatory quotas, laws and corporate governance codes in order to promote female board presence (Pastore et al., 2017; Sudeck & Iatridis, 2014). The research undertaken into Africa and specifically South Africa

revealed very limited results which indicated that there is a gap to fill in terms of understanding the dynamic or attitudes towards females in top positions which adds to the relevance of the study (Booyesen & Nkomo, 2010; Nkomo & Ngambi, 2009).

Global initiatives include the 2X challenge as well as the Sustainable Development Goals (SDGs) driven by the United Nations. The 2X challenge is an initiative driven by the need to invest in women in order to invest in the world as a result of females being dubbed as the emerging market (Corporation, 2018). The aim is to provide women in developing country markets with improved access to quality employment opportunities, enhance participation and access in the economy (Corporation, 2018). The SDGs promote gender equality and seeks to empower all women and girls (Sachs, 2018) . This includes providing equal opportunities and effective economic participation at all levels of decision making which includes managerial positions (Sachs, 2018)

If women are represented on the board more adequately, they are able to have a direct impact on the performance of the entity (Du Plessis et al., 2012). Females possess varying skillsets to that of males, and as such, their greater involvement in decisions and strategies may impact companies in unanticipated ways. The inclusion of female perspective in decision making is seen positively as it is expected that improved female representation will improve the decision making of the board, the performance of an entity and consequently increase shareholder value (Sudeck & Iatridis, 2014).

Some studies have indicated that the involvement of females on boards will lead to an improvement in the overall corporate governance of the entity, an improvement in the boards' ability to monitor the actions of management as well being able to influence the company's performance both financially and socially (Rossi & Cebula, 2015).

The European Commission has identified that a business case exists whereby female representation has the potential to influence the performance of an entity which indicates that with an increased female presence, there is increased productivity and profitability within the entity (Marinova et al., 2016). Thus, female inclusion on boards could affect investor perceptions and in turn, affect the share prices of listed companies (Cook & Glass, 2011).

The promotion of female presence could generate returns which have not yet been quantified (Rossi & Cebula, 2015). It was noted that at a minimum, improving the board composition in terms of female representation is entirely beneficial and does not destroy shareholder value (Campbell & Mínguez-Vera, 2008). Cook & Glass (2011, p.503) note that '...investors react positively to the naming of a new leader...' however, the market reaction to the leader based on their gender has

not been sufficiently researched. The 'emerging' group of females has the potential to impact market reactions to female appointments, however, this may be offset due to the negative attitudes towards women in these societies which will be further discussed in chapter 2 (Sachs, 2018).

1.1. PROBLEM STATEMENT

Prior literature has indicated that due to under-representation of females, the markets react positively to female board appointments in the short term (Sudeck & Iatridis, 2014). The research conducted in various countries has, however, resulted in inconclusive evidence on the general market reaction. This may be as a result of firm performance not only being influenced by gender diversity (Dwyer, Richard, & Chadwick, 2003).

Some firms are of the opinion that if no business case truly exists for gender diversity, then there is no reason to encourage increased female participation amongst company boards (Carter, Simkins, & Simpson, 2003). This business case, however, has not been well developed and theorized to convince investors that it holds (Du Plessis et al., 2012) and as such, this area of research continues to grow (Lückerath-Rovers, 2013).

As a result, there are concerns as to whether the issue of gender diversity should be encouraged because morally it would be the right thing to do, or, whether it is believed that shareholder value can be enhanced (Liu, Wei, & Xie, 2014). However, if the potential increase in shareholder value is not understood, then females are simply being viewed as tokens (Liu et al., 2014).

While prior research has been conducted in these developed countries, market reactions to female appointments remain under-researched in South Africa (SA) as they are typically under-represented in leadership positions (Viviers, Mans-Kemp, & Fawcett, 2017). This is an important area of research as the JSE is the largest and oldest stock exchange in Africa and as SA is an emerging market, this information is useful (Jefferis & Smith, 2005; Mlambo & Biekpe, 2007). Emerging markets generally have negative attitudes towards females (Booyesen & Nkomo, 2010; Ismail & Manaf, 2016; Pastore et al., 2017; Sudeck & Iatridis, 2014) and as a result, it is imperative that we understand whether this a difference in market reaction between males and females, and whether females are favoured in executive or non-executive positions (Ismail & Manaf, 2016).

1.2. RESEARCH QUESTIONS

The main research question is as follows:

- How does the market react to female appointments onto JSE listed boards?

The sub-questions which will be addressed through this study are:

- How does the market react to female executive appointments onto JSE listed boards?
- How does the market react to female non-executive appointments onto JSE listed boards?
- How does the market react to male appointments onto JSE listed boards?

1.3. PURPOSE

The purpose of the paper is to establish what the SA markets reactions are in response to the appointment of female directors in JSE listed companies. This is contrasted against what the reaction is toward male appointments to identify whether a bias exists. It will provide information as to whether the benefits of a gender-diverse board are factored into when determining securities prices.

1.4. SIGNIFICANCE OF STUDY

This study contributes to the body of knowledge that exists surrounding market reactions to the appointment of female directors and more specifically to those in SA. This is beneficial as the effect of females on company boards is not well developed (Pastore et al., 2017). It provides assistance to companies when determining board compositions as social and economic value could be added to the entity as a whole through female inclusion. It assists in providing a basis for the market reactions within developing countries as well as identify whether the role of the director (executive or non-executive) has an impact on market reaction.

1.5. ASSUMPTIONS, LIMITATIONS AND DELIMITATIONS

The assumptions used in this study are as follows:

- All the female appointments are based on skills and experience and not because they are viewed as a token¹

¹ A token is a person who is seen to be a representative of a specific category (gender) and judged based on the subgroups generalisations and not assessed based on skill (Joecks, Pull, & Vetter, 2013; Lee & James, 2007)

- The markets' reaction to the appointment is purely an appreciation of the added value of the female perspective and not the skills they possess
- Females in other non-director roles in the organization are disregarded

The limitations of the study are that there is no prior research which has been conducted in SA. This impacts the study as there is no available information for which a comparison can be made. As such it is difficult to ascertain whether the methodology used and conclusions drawn would still be applicable in an emerging market as the prior literature has largely been conducted in developed countries. A further limitation is that it is not possible to identify which female appointments were carried out as a result of tokenism and as such an assumption will have to be made to account for this

The delimitations of the study is that we are only using listed entities and excluding unlisted entities as their share prices are not publicly available which makes it difficult to obtain and consequently, the short-term effects cannot be established. This study will not look at the appointments of management and personnel who are not members of the board. The gender balance within the company itself is not considered.

The study next presents a background to the research problem and provides a South African context. This will be followed by the literature review delving into some of the causes of perceptive biases and the global market trends in response to female directorships appointments. It also considers the efficient market hypothesis as well as the benefits of female representation. It is followed by the methodology which is used to provide an appropriate analysis of market reaction to female appointments. Lastly, the study focuses on the results, a discussion of the results and finally, the conclusion.

CHAPTER II – BACKGROUND AND LITERATURE REVIEW

2.1. BACKGROUND

Globally, there have been initiatives and regulations to increase female presence on boards. This section reviews some of these globally as well as in a South African context. This is essential in understanding what other factors may have potentially contributed towards the specific market reaction in SA.

The Italian government introduced a “pink quota” which led to a significant increase in female presence on their listed company’s boards from 11.6% in 2012 to 30% in 2016 (Pastore et al., 2017). Norway, similar to Italy, imposed a gender quota on all listed companies requiring 40% female representation or face dissolution which achieved an adequate balance of female to male representation on supervisory boards (Sudeck & Iatridis, 2014). These quotas resulted in 45% of female representation in 2012 (Sudeck & Iatridis, 2014). Globally, regulation has been propagated to address lack of female representation and this is likely because left on their own, companies will not drive the change and markets will continue not to price in the contribution of females into company value.

SA currently has an economically active population of females of 45.3 % which indicates that there is a large population of women in the workplace (*Commission for Employment Equity, 2017/2018*). However, according to the most recent census conducted in SA in 2011, it was discovered that women held only 16.6 % of the directorships and 19.3 % of these were executive managerial positions amongst the listed South African companies (Du Plessis et al., 2012). The historic trend shows that the [women in directorship positions has increased steadily from 7.1% in 2004 to 16.6% in 2010 (Du Plessis et al., 2012). In 2008, 39.6% of the JSE-listed companies had no women and only 7.8% of all the CEO’s were women (Du Plessis et al., 2012). This indicates that female representation does exist in SA, however, it is quite minimal.

In Italy, only 27 % of women held directorships in listed companies but this was a result of undergoing the first board appointment given the new law (Pastore et al., 2017). This comparison indicates that SA, with respect to the under-representation of females in listed companies, seems to be in line with global trends.

Some SA legislation and initiatives to improve female inclusion include the Employment Equity Act of 1998, the National Policy Framework for Women’s Empowerment and Gender Equality

1996, as well as the Commission for Gender Equality which was created by the SA Constitution. Research conducted by Mathur-Helm indicated that the policies and legislation imposed by the government do little to advance women's growth in the workplace but instead hinder it (Mathur-Helm, 2005). This is due to a wide array of factors such as non-conducive working environments for women, a past filled with discrimination based on race and gender as well as perceptual bias as women are not viewed as 'focused business women' (Mathur-Helm, 2005).

In SA, females reaching top positions of power remains uncommon due to its' patriarchal society (Du Plessis et al., 2012). Although 52% of the population is female however only 44.8% is economically active (Du Plessis et al., 2012). As such, females reaching top management corporate positions is not common as women are not yet considered to be professional equals (Du Plessis et al., 2012). This may also be influenced by the history of SA and is an important consideration as a post-apartheid regime is an environment within which businesses are operating in (Du Plessis et al., 2012).

The lack of women on the boards of JSE companies cannot be solely attributed to insufficient women being available. It may be as a result of an inadequate skill set or not being registered with the Institute of Directors in Southern Africa (IODSA) which only had 26 % being females as at 2011 which was an increase from 19% in 2007 (Du Plessis et al., 2012). According to the 2019 IODSA integrated report it was noted that this percentage has almost doubled as female membership is now up to 34.8%. This highlights that the pool for females amongst the director job title has grown but still remains quite small in comparison to their male counterparts.

Evidence exists that females face a "glass ceiling" which limits their progression into senior managerial positions in the workplace (Gregory, Jeanes, Tharyan, & Tonks, 2013). Biased attitudes and stereotypes contribute to these ceilings as they are based on perceptions and assumptions instead of practical ability and actual behavior (Gregory et al., 2013). This glass cliff makes it harder for females to perform at their best or even to be perceived as performing effectively in their duties (Terjesen, Sealy, & Singh, 2009) and is said to impede high achieving women (Arayssi, Dah, & Jizi, 2016).

Some researchers have gone so far as to suggest that this glass cliff exists because females are usually appointed once a company is in trouble (Lückerath-Rovers, 2013). As such, as little to no evidence proves that this glass ceiling has broken, it indicates that certain biases still exist (Terjesen et al., 2009). These perceptions are heightened through theories such as critical mass and token status (Gregory et al., 2013).

Those above the glass are visible to the investment community and thus their involvement is observable and can be measured (Gregory et al., 2013). The efforts of those below the ceiling are not observable and can only be measured once they are appointed into more visible roles such as the board of directors (Gregory et al., 2013). As more females become visible, it is important to determine how the markets are reacting to the value-adding proposition of female directors.

While the pool is small, there is an increasing trend of growth amongst the number of females sitting on company boards (Du Plessis et al., 2012). As more females play meaningful roles on boards, their perspectives will influence the performance of companies which leads to the question of whether investors are pricing in the contribution of female directors.

2.2. LITERATURE REVIEW

The announcements of changes in directorships negatively affects the value of a firm (Lee & James, 2007). Consequently, the appointment of females onto listed company's boards is a critical area of research as it establishes whether a perceptual bias exists or institutional investors are indifferent to the gender of director appointments (Cook & Glass, 2011; Gregorič, Oxelheim, Randøy, & Thomsen, 2017). If the existence of a perceptual bias can be established, the interpretation of whether it is a perceived bias due to lack of value creation or the inability to quantify this value, can be understood.

2.2.1. FEMALE PERCEPTION

Company boards as mentioned before, are male-dominated and in such an environment-specific gender roles are prevalent (Terjesen, Couto, & Francisco, 2016; Wolfers, 2006). The role of women has evolved throughout the years although, they remain under-represented (Nieto, 2018). The evolution and advancement of females has largely been driven by public policy (Terjesen et al., 2009). This is as the structures and practice of organisations is heavily influenced by the societal demand for gender diversity (Gregorič et al., 2017)

The societal attitudes towards the role of females are deeply rooted (Campbell & Mínguez-Vera, 2008). Historically, the role of females in society has been defined as solely family and household responsibilities, whereas males have the responsibility to work and provide an income (Nieto, 2018; Terjesen et al., 2016; Terjesen et al., 2009). This may be one of the causes of females' roles in companies being underestimated as a corporate position is not what females were 'meant' to hold in society (Nieto, 2018).

These attitudes are influenced by the perception that females do not have masculine traits such as being aggressive, competitive and assertive which results in them being excluded from certain occupations such as the top management of companies (Cook & Glass, 2011). This is as any occupation is generally associated with a particular gender based on it being dominated by that specific gender (Lee & James, 2007).

A leadership role has always been understood to be a masculine philosophy of who looks like a leader and as a result, a female is not a leader (Terjesen et al., 2009). This is as females are not associated with the more masculine attributes of power and control (Ismail & Manaf, 2016) and are rather advised to 'manage like a man' (Gregory et al., 2013). This can be placed under gender role theory which prescribes that based on gender, the effectiveness of an individuals' influence and behaviour is determined (Terjesen et al., 2016).

This is further supported by the fact that male employees are strategically placed within a company to inherit an executive role whereas a female is not (Terjesen et al., 2009). As such, in assessing a male or female, it is dependent on how far they have deviated from these expectations and if they act in accordance, they are perceived as better (Terjesen et al., 2016).

This makes it hard for females to even be considered for directorships if they have not had adequate exposure nor experience which is what is often needed in taking up a directorship role of a company (Terjesen et al., 2009). In order to be considered for a directorship, candidates need to have a vast network of human capital (Terjesen et al., 2009). If individuals have a higher educational level, it is assumed that they have a higher quality of human capital (Ismail & Manaf, 2016; Terjesen et al., 2009). However, a presumption exists whereby females lack an adequate level of human capital which discourages board selectors from appointing them (Ismail & Manaf, 2016; Terjesen et al., 2009).

If females are appointed, they may be outsiders and as such, it is more difficult for those on the outside or 'outgroups' to join in groups such as a male collective which has been dubbed the 'old boys club' (Du Plessis et al., 2012; Terjesen et al., 2009). This is exacerbated by the fact that females make specific contributions which could be different from those of their male counterparts and as such they would always be seen as different and as an outsider (Terjesen et al., 2009).

Females have been subject to a theory known as status characteristics theory, which assesses the standards of ability amongst groups of lower status (which in this case is females) and holds them to a higher standard (Terjesen et al., 2009). In light of this, for females to be perceived as having a high ability to carry out work, they would need to provide much more evidence to support

this whereas a male would not need to provide this additional evidence (Cook & Glass, 2011; Terjesen et al., 2009).

It has been found that current female directors tend to have more advanced degrees than males which indicates that females are under significantly more scrutiny in 'proving' that they should be on company boards (Terjesen et al., 2009). This may also be linked to the previous perception around the societal norm of the role of females.

Females in top management positions are rare and as such, this has caused individuals to rely on stereotypes which are inconsistent with leadership roles as there is no frame of reference (Lee & James, 2007). These biases increase when females do not conform to their perceived gender role expectations (Lee & James, 2007; Nieto, 2018).

Gender diversity has the potential to enhance shareholder value however, when a male is appointed to a directorship, no expectation exists for an immediate increase in shareholder value however, the same cannot be said for females (Terjesen et al., 2009). This may be due to the mis-assessment of females' ability and the existence of perceptual biases (Wolfers, 2006)

The lack of females on company boards, as addressed above is a global phenomenon (Terjesen & Singh, 2008). This has also resulted in only a select few females being consistently recycled amongst company boards as the talent pool remains small for female directors (Terjesen et al., 2009). This is an issue because if the same skilled directors are over-utilised, this may lead to these individuals not fulfilling their duties adequately (Du Plessis et al., 2012). It is therefore important to identify what these factors are which have contributed towards this under-representation which is largely based on perceptual biases (Terjesen et al., 2009).

If there is no gender bias, then the market should react positively or negatively based on the individual's attributes, their new role and their potential impact on performance (Ismail & Manaf, 2016). The board of a company is generally under the careful watch of the shareholders. In terms of accountability theory, individuals who have an expectation of scrutiny are more likely to self-correct and are less likely to act on any biases (Dobbin & Jung, 2010). As such, it is important to understand what theories could indicate any perceptual biases which exist in relation to the board selection processes.

2.2.2.THE SUPPORTING THEORIES

2.2.2.1. CRITICAL MASS THEORY

The critical mass theory follows that the influence of a certain subpopulation can only take effect once a certain threshold is attained (Du Plessis et al., 2012; Joecks et al., 2013; Lückerath-Rovers, 2013). Female board presence per critical mass theory is understood as only being effective once a certain number of women has been appointed which means that if one woman is appointed, her influence is minimal (Lückerath-Rovers, 2013). The advantages of a more diverse board will only be achieved once a critical mass has been achieved (Joecks et al., 2013).

In applying this theory, the market may consider, for example, that only one female on a board consisting of 9 males tends to be negligible, resulting in negative or no reactions to a female appointment. Sudeck (2014, p.75) goes on to note that "... there must be a threshold of at least three women on the board in order to enhance the level of firm innovation." This supports critical mass by adding that the influence of female presence is only effective once the "magic number" of 30% has been reached, which may be a key consideration in the determination of market reaction (Joecks et al., 2013; Sudeck & Iatridis, 2014).

In China, it was found that the impact on firm performance is more significant when there are three or more females directors on the board (Liu et al., 2014). This indicates that critical mass theory holds, identifying that one representative is a token, the second, constitutes a presence and the third is a voice (Liu et al., 2014). This concludes that the more women directors there are on a board, the greater the impact on firm performance and shareholder value creation.

Higher performance expectations and increased scrutiny usually occur for those groups of individuals that are in the minority and as such females on company boards will be looked at under a microscope (Kang et al., 2010). If females increase on boards above the critical mass, it has the potential to normalise female board presence as well as place females in a position whereby gender is no longer seen as a barrier but rather, a workspace where they feel free to raise any opposing views or concerns (Terjesen et al., 2009).

The contributions of females will therefore only be more significant if they are large relative to the size of the (Terjesen et al., 2009). This is as the 'magic number' of 3 females to reach a critical mass does not take consider the total number of male directors (Joecks et al., 2013; Terjesen & Singh, 2008). In assessing the efficacy of a board, it is important to note that share price is not considered (Dobbin & Jung, 2010). It, therefore, would not be appropriate to assume one female on a board of 10 males would have any effect, if at all (Dobbin & Jung, 2010).

It has also been suggested that for those individuals who attain positions which are not in line with societal expectations, negative consequences are expected and perhaps irrespective of the number of females appointed, the reaction will still be negative (Kang et al., 2010; Nieto, 2018). However, if at least three females are appointed then at least their influence becomes more pronounced (Lückerath-Rovers, 2013).

This theory has been contested by some as it is based on a gender-neutral assumption however, it is unlikely that the conditions for females in corporations are the same as those for males and as such this 'magic number' may not be applicable (Gregory et al., 2013). The hope exists that in the future as female directors become less rare and unique that the markets' reaction irrespective of gender should be the same (Gregory et al., 2013; Lee & James, 2007)

2.2.2.2. TOKEN STATUS THEORY

Part of the critical mass theory is the concept of tokens who are understood to be representatives of their specific category (Joecks et al., 2013). Women today are still seen as tokens and fall prey to negative consequences and perceptual biases as a result of their under-representation in relation to males in directorships (Joecks et al., 2013; Lee & James, 2007). This theory suggests that these tokens are perceived to fit generalizations closely linked to femininity instead of those qualities associated with leadership and management roles (Lee & James, 2007; Nieto, 2018). As a result of this 'token status', females are prevented from being viewed as equals even in the event that they adopt the ideal masculine traits (Gregory et al., 2013)

As males dominate management positions, investors are influenced by female appointments due to their rarity (Lee & James, 2007). Females are consequently always perceived to be tokens and requiring a critical mass in order to be seen as value-adding within company boards (Lee & James, 2007). This is indicative of female exclusion largely as a result of perceptual bias and not based on skillsets. It is then understood that through greater female inclusion in the workforce in comparison to their counterparts, females would be seen less as a rarity reducing this "token status" and need for a critical mass (Erhardt et al., 2003; Lee & James, 2007).

The current board composition indicates that there is a dominant group which tends to control those in the minority as well as the group culture also known as a skewed group dynamic (Joecks et al., 2013). This will result in the few being viewed as tokens (Joecks et al., 2013). A skewed group creates additional issues as the tokens will be subject to stereotyping and unnoticed in terms of potential contributions to the board (Joecks et al., 2013). As such, female token

perspectives may not be adequately expressed until a critical mass is reached (Joecks et al., 2013).

Issues can arise when females are appointed indiscriminately and without careful consideration (Nieto, 2018). This is as it could end up being counterproductive and reduce firm performance instead of enhancing its value as the female directors selected were not chosen based on skill sets, but solely to be a token on the board (Nieto, 2018) or for cosmetic reasons (Pastore et al., 2017). Even in instances where females conform to masculine characteristics, they are still judged as tokens and are not considered to be equals (Cook & Glass, 2011; Gregory et al., 2013).

If females are appointed in consequence of a quota, they may not integrate well their male counterparts as they will not be seen as an addition to the board in terms of value but purely to satisfy the quota (Nieto, 2018; Pastore et al., 2017). This is as they are being appointed to create an appearance of an inclusive environment and as such, their contributions are minimal (Nieto, 2018). It may also result in the board as a whole being inefficient as the skills of the females appointed may not have been adequately assessed (Liu et al., 2014). As such, appointments in consequence of quotas may not be the most appropriate way to increase female presence on company boards (Pastore et al., 2017)

As a result, females are first seen as embodying a sex-role stereotype before any consideration is given to them as individuals with certain skills and capabilities which could add value to the firm (Erhardt et al., 2003; Terjesen et al., 2009). This is exacerbated by the fact that if they are considered to be tokens, they will face additional pressures which may negatively influence the performance of the entity (Dobbin & Jung, 2010). Those in the majority (males) may also underestimate the contributions of those in the minority (females) and stigmatize them (Dobbin & Jung, 2010). This influences the minority as they may feel judged as a collective and not as an individual which could lead to underperformance as they are not rewarded for the effort they put in (Dobbin & Jung, 2010).

It has also been suggested that female token managers are linked to their femininity and not necessarily their leadership qualities (Liu et al., 2014). This is because those in the majority perceive these tokens as a typical stereotype. However, with an increase in the number of females on company boards it is likely that their ability to influence others would also increase (Liu et al., 2014; Terjesen et al., 2016)

2.2.2.3 SOCIAL PROOFING

In assessing the effects of females on boards it is important to consider how that society considers women as this will impact the reaction upon announcement (Nieto, 2018). Where no reaction is assessed this may be due to the country having a strong patriarchal dominance and as such, no value is attached to female appointments (Nieto, 2018). As such it is important to factor in that an individuals' decision-making process is affected by behavioural biases (*CFA Institute*, 2016).

Social proof in behavioral finance relates to individuals following the beliefs of a group for social acceptance (*CFA Institute*, 2016). This is noteworthy as the value added by female board presence is minimal as they may fall prey to this bias and as such, the market would not see the benefit of the female appointment (*CFA Institute*, 2016; Rossi & Cebula, 2015). Female board members are at risk of suppressed opinions, especially if they are contradictory to the majority, as individuals would prefer to keep their views in line with the majority for this perceived social acceptance (*CFA Institute*, 2016; Joecks et al., 2013).

As such, female presence would not contribute to the value of the board. The behaviour of females may be affected as they may also fall victim to social proofing and prefer this social acceptance instead of expressing their opposing views (*CFA Institute*, 2016). A more diverse board is less susceptible to this bias as a result of their differing perspectives which results in a more effective decision-making process (*CFA Institute*, 2016; Dwyer et al., 2003). As such, the existence of social proofing has the potential to influence the efficiency of the market and would also need to be considered.

It is generally harder for people who are considered outsiders to join the inner circles which could result in fewer females being comfortable to raise contradictory views on company boards during decision-making processes (Terjesen et al., 2009). However, it is possible that through the inclusion of the minority there exists the potential to mitigate any out-group biases especially if those on the minority are at least 3 or more (Terjesen et al., 2009). Therefore, with the inclusion of females on company boards it is important to consider all the advantages of their appointments and not solely on the profitability of the company (Adams, de Haan, Terjesen, & van Ees, 2015).

Social identity theory prescribes that individuals are drawn to others who are similar to them and as a result, if they are different, there is a tendency to divide (Dobbin & Jung, 2010). This may hinder the efficacy amongst a board of predominantly males and cause unnecessary conflict (Dobbin & Jung, 2010; Sudeck & Iatridis, 2014)

SA is considered to be an emerging market and as the research indicates, there is generally a negative attitude towards females in power and control in emerging markets (Ismail & Manaf, 2016) which could indicate a negative reaction or no reaction in SA. As female presence amongst company boards remains low, identifying any statistically significant results becomes difficult (Gregory et al., 2013). As such, the above discussion leads to the following hypothesis:

H_0 : The market will not react to the appointment of female directors to JSE-listed boards.

2.2.3. THE BENEFITS OF FEMALE BOARD REPRESENTATION

A board of directors should consist of a wide range of individuals to provide a broad range of knowledge, experience and diverse perspectives in order to enhance performance (*CFA Institute*, 2016; Nieto, 2018; Terjesen et al., 2016). This is as they have the potential to make better decisions as they would collectively have a vast barrel of information at their disposal which would prompt substantial discussions (Adams et al., 2015; Ismail & Manaf, 2016). The board also needs to ensure that their decision-making process is effective as their decisions have direct financial and non-financial implications on firm performance (Dwyer et al., 2003).

However, the decision-making process may become lengthy as a result of various opinions which increases the likelihood of conflict amongst the board (Adams et al., 2015) which can result in the process no longer being effective (Campbell & Mínguez-Vera, 2008). It is crucial that the firm continuously aligns the interest of the shareholders with management in terms of agency theory and as such, an increase in board diversity can increase board independence (Marinova et al., 2016)

A company's' boards main responsibility is to undertake strategic decisions in order to steer the board in a way that is beneficial for all stakeholders (Adams et al., 2015; Kang et al., 2010; Terjesen et al., 2016). This includes making those decisions which will increase the market value of the firm in the long term whilst considering the interests of all stakeholders (Jensen, 2001). Evidence suggests, that females tend to be better at strategic planning than males which should be considered during the board selection process (Badru & Ahmad-Zaluki, 2018; Kang et al., 2010).

The introduction of diversity amongst company boards has a direct impact on company performance as discussed above, it has the potential to provide an improved decision-making process which could encourage other board members to be open to change (Dwyer et al., 2003; Nieto, 2018). It also allows for an enhanced and more effective corporate governance over the

entity as a result of the wide range of experiences and opinions. This is as a questioning culture develops which reduces the likelihood of management decisions being made without careful consideration (Kang et al., 2010). These additional discussions also result in better implementation of change as well as being more effective when it comes to problem-solving (Dobbin & Jung, 2010).

A gender-balanced board sends a signal to the market that the company values the success of the women within the company (Terjesen et al., 2009). It can be used as an instrument by board selectors to convey potential to the market which investors may agree and reward them with a positive market reaction as they anticipate improved firm performance (Badru & Ahmad-Zaluki, 2018). Given this signal, investors would only react positively if they also agreed that increased female inclusion would improve firm value (Badru & Ahmad-Zaluki, 2018; Ismail & Manaf, 2016).

When a company has a gender imbalanced board, it is a signal to the public that a bias exists in terms of gender (Terjesen et al., 2016). This further indicates that the firm does not value females, and in essence, an issue of business ethics and corporate governance arises as a result of gender composition (Terjesen et al., 2016). Low representation also re-emphasises that females are perceived to be less qualified and reinforces such stereotypes (Lee & James, 2007).

As females are considered to be outsiders, this places them in a unique position whereby they have the potential to resolve existing agency problems provided that they are appointed on the basis of their expertise (Lin, Pope, & Young, 2003). It has also been suggested that even when it comes down to ethical behavior, differences exist between females and males indicating that females tend to be more ethical than their male counterparts (Adams et al., 2015; Ismail & Manaf, 2016; Pastore et al., 2017; Terjesen et al., 2016).

Women face a host of difficulties when attempting to advance in the workplace and are still under-represented in the global sphere (Rossi & Cebula, 2015). This is what sparked the introduction of all the various initiatives as discussed in chapter 1 and 2 of this study however, all the various literature remains contradictory (Adams et al., 2015). Studies have found that a typical investor would reduce their investment in an entity after the appointment of females which indicates that gender bias does exist (Dobbin & Jung, 2010) and would consequently reduce market prices (Lee & James, 2007).

In order to make investment decisions, investors rely on the information which companies make available to them and as a result, companies need to carefully monitor the signals they send to the market (Ismail & Manaf, 2016). Boards have used the appointment of members to send

signals to the market and based on this assumption, we presume that the market in turn, will react to the appointment of board members and more importantly consider their gender (Dobbin & Jung, 2010). As a result of the perception that women on boards have an adverse influence on subjective measures such as share price which is based on the behaviour of the stock market, this further supports that a bias does exist (Dobbin & Jung, 2010). As such we expect the market to have a reaction to the appointment of females onto company boards. Thus, the above discussion leads to the following alternative hypothesis:

H_1 : The market will react to the appointment of female directors to JSE-listed boards.

The bias based on gender has been termed 'gender typing' (Cook & Glass, 2011). This occurs when the characteristics of a particular gender are commonly associated with management positions (Cook & Glass, 2011; Nieto, 2018). This bias is one of the main causes for female under-representation amongst top management positions as they are female, and are viewed to not assist in value creation (Campbell & Mínguez-Vera, 2008)

Studies have shown that female board involvement leads to an improvement in the overall corporate governance of the entity (Rossi & Cebula, 2015). Good corporate governance exists when there is a positive relationship between shareholder value creation and board diversity (Carter et al., 2003). As such, with improved corporate governance, the firm is able to influence the market by making it known that internal business processes are in order and is considered to be a worthy investment.

It is important to note that with improved diversity, there is a larger scope of experiences and opinions at play which results in the corporate governance processes and strategies of these companies are more effective (Nieto, 2018). If there is a greater representation, it could result in improved performance due to ensuring improved governance and appointing directors with an appropriate mix of skills and experience (Lückerath-Rovers, 2013).

An increased female representation can signal to employees within the entity that they can also achieve such a status which improves staff morale and increases competitiveness (Du Plessis et al., 2012). This will influence and inspire these females to improve their own abilities which foster a competitive culture and creates networking opportunities which improves the company as a whole (Du Plessis et al., 2012; Terjesen & Singh, 2008).

This is as the tone is set at the top, which encourages female participation and further motivates improved performance within lower levels of staff and consequently, increases firm performance

in the long term (Dwyer et al., 2003). It also enhances the entities reputation as it is likely that the inclusion of women is highly favoured by the general society (Du Plessis et al., 2012; Marinova et al., 2016) and will make company boards seem more competent given their diversity (Kang et al., 2010).

Female inclusion provides an opportunity for board selectors to acquire talents from a larger pool of candidates as it will include both females and males (Arayssi et al., 2016). This will allow for the best possible candidate to be selected which should bring value to a firm. In ensuring the long-term sustainability of companies, it may be more beneficial to not only focus on increasing female board presence, but rather find an adequate balance between males and females (Arayssi et al., 2016). This is also because one of the contributing factors towards a company's survival is its response to societal expectations as this provides both legitimacy and conformity (Lückerath-Rovers; Pastore et al.).

The inclusion of female directors could add a wide range of benefits for a company (see Table 1 below) however, this may not be easily isolated within a set of financial statement (Terjesen et al., 2009). It also possible that even with all these advantages identified, the rewards may not materialize (Kang et al., 2010).

Given all these benefits, there is a basis for change within company boards (Terjesen & Singh, 2008) as it will be advantageous for their societal conscience as it raises their social profile and improves performance in the long term (Arayssi et al., 2016). Perhaps it would also be worthwhile for investors to also place focus on long-term financial performance as well as non-financial performance measures (Ismail & Manaf, 2016). Lastly, it is important to note that the value-add of females may not be fully reflected in typical accounting terms but at best, the cost of increased diversity at a minimum will be zero (Gregory et al., 2013).

2.2.4. GLOBAL MARKET REACTIONS

It is important to note that interpreting market reactions can be quite complex and as such, there are instances whereby these investors are not able to appropriately measure how successful the candidate would perform in a leadership role (Cook & Glass, 2011). This is indicative of markets being influenced and their reactions being distorted in response to directorship appointments consciously and subconsciously (Cook & Glass, 2011). The financial markets are however, an appropriate proxy for providing insights as it is a continuous measure of the value of firms based on market perceptions which will indicate whether a bias exists against females (Wolfers, 2006).

Females are considered to have a solo outsider status due to their rarity, which tends to attract attention and skepticism amongst investors who use the stereotypes as discussed above to assess their leadership capabilities (Gregory et al., 2013; Joecks et al., 2013). Research has indicated that the markets do exhibit in the short term, gender bias in relation to female announcements (Gregory et al., 2013). The study went on to find that an appointment of a new chief executive officer (CEO) creates uncertainty and that the markets react more negatively and are more uncertain if the appointee is female (Carter et al., 2003; Gregory et al., 2013).

Similar studies undertaken in line with this paper show that shareholders are indeed more sensitive to changes in leadership, especially in relation to the gender of these appointments (Lee & James, 2007). Findings have indicated that these shareholders tend to react more negatively to female appointments especially when they are appointed to executive positions (Lee & James, 2007). In contrast, Ismail & Manaf observed that investors in Malaysia reacted positively towards female appointments indicating that they appreciate that females can improve firm performance (Ismail & Manaf, 2016). This indicates that markets behave differently with respect to the appointment of females.

In terms of the Spanish market Campbell & Minguez-Vera (2010, p.37) found that '... the stock market reacts positively in the short term to the announcement of female board appointments, suggesting that investors on average believe that female directors add value.' This is in support of the legislature requiring female representation, which proves that there was an element of economic sense in its introduction and not solely a social rationale (Campbell & Minguez -Vera, 2010). It is noteworthy that as a result of this positive reaction, the focus should be on an appropriate balance of females and males on the board and not only on female board presence to maximize firm value (Campbell & Mínguez-Vera, 2008).

Germany introduced a code of conduct for increased female representation and the findings indicated that the response of the market is significantly positive as it rewards female board appointments (Sudeck & Iatridis, 2014). These findings corroborate that investors believe that females add value to company boards and consequently increase shareholder value (Sudeck & Iatridis, 2014). This supports that shareholder value will not be diminished as a result of increased gender diversity (Sudeck & Iatridis, 2014).

It is noteworthy that majority of studies undertaken to evaluate market reactions have concluded that female appointments are appreciated by investors and entities are rewarded as a result of this (Campbell & Mínguez-Vera, 2008; Campbell & Minguez -Vera, 2010; Ismail & Manaf, 2016;

Lee & James, 2007; Sudeck & Iatridis, 2014). These studies are all reflective of more developed countries than those countries which are still considered to be developing such as SA. As such, the market reactions in SA to female board appointments is essential to add to the continuing dialogue as well as a possible proxy for other developing countries.

2.2.5. THE EFFICIENT MARKET HYPOTHESIS

It is clear from other markets, as presented in the previous sections, that female appointments are received positively and affect share prices. The incorporation of the value-add of females into the share price of JSE companies will depend on the efficiency of the market. That is to say, how accurately can the value-add of female appointments be measured and how quickly is this value incorporated into share prices? This section reviews the efficient market hypothesis and discusses empirical results from studies on the JSE.

Those individuals placed on boards are responsible for shareholder wealth and value creation and it can be concluded that this would be represented within the performance of the company's share price (Nthoesane & Kruger, 2014). When announcements are made with crucial information, it should result in a change in the share price if the market is efficient (Nthoesane & Kruger, 2014). However, it is important to consider whether the announcement might not have resulted in a reaction at all if the market does not perceive their position, for example a non-executive director, to be vital enough to warrant a reaction (Kang et al., 2010; Nthoesane & Kruger, 2014).

To determine whether value was added or lost it can be assumed that the announcement and the subsequent reaction should reflect this value (Nthoesane & Kruger, 2014). However, evidence suggests that an announcement of any individual may not warrant a reaction but rather based on who was appointed, how they are perceived by the market and the position with which they are appointed into is more important (Nthoesane & Kruger, 2014). This could be as a result of the reaction being dependent on how prominent and important the director is perceived to be (Ismail & Manaf, 2016) as well as the reactions being different based on the position of their appointment (Kang et al., 2010).

The appointment onto company boards is usually a signal to the market based on unobservable characteristics which investors and shareholders typically use in making their decisions (Badru & Ahmad-Zaluki, 2018; Dobbin & Jung, 2010). The signal that arises after a female appointment is usually associated with a high level of corporate governance and a sound board structure (Badru & Ahmad-Zaluki, 2018). An appointment also generally indicates or provides a signal in relation

to the company's future failure or success however, an appointment alone is not a guarantee for success (Pastore et al., 2017).

The efficiency of a market is important as it has an effect on the pricing and allocation of capital resources whilst simultaneously incorporating risk (Jefferis & Smith, 2004). As such, a price in an efficient market will reflect all the available information and its' intrinsic value (Jefferis & Smith, 2004). The changes in a share price adequately reflect how investors determine the impact of company decisions in the short and long-term economic viability of the company as a whole (Cook & Glass, 2011).

The efficient market hypothesis states that asset prices are fully reflective of available market information which indicates that the capital market is efficient (Timmermann & Granger, 2004). This means that once new information becomes available, it is quickly distributed and factored into securities prices without delay (Malkiel, 2003). This forms the basis of this study as the announcement of female directors will immediately be reflected in the share prices of these JSE-listed companies (Malkiel, 2003).

An efficient market is defined as one which does not over-compensate investor returns in instances where a minor risk was undertaken (Malkiel, 2003). In the context of this study this implies that female directorship announcements, if viewed as more riskier, will compensate shareholders for this risk and subsequently a higher return reflected in a higher share price (Malkiel, 2003). In other words, the market is efficient if profits are unable to be made when trading on the basis of available information (Timmermann & Granger, 2004).

The different types of market efficiency include; weak-form efficiency, semi-strong form efficiency and strong-form efficiency (Heymans & Santana, 2018). Strong form efficiency assumes that all information (public and private) is accounted for in the share price and provides the strongest level of market efficiency whereas with weak-form efficiency, prices reflect all past security market information which limits manipulation of trades for profit (Heymans & Santana, 2018; Phiri, 2015; Timmermann & Granger, 2004). Semi strong form efficiency is when the securities prices fully include publicly available information such as information contained in a company's financial statements and is stronger than weak form efficiency (Guduza & Phiri, 2017; Heymans & Santana, 2018; Phiri, 2015). As information is typically considered to be random, it is expected that the changes in price should also be random and unpredictable (Malkiel, 2003).

The JSE is one of the largest African stock markets (Mlambo & Biekpe, 2007) and is considered an efficient market as it regulates its market efficiently through its high-frequency trading platforms

(Gilbertson & Roux, 1977; Guduza & Phiri, 2017). This indicates that there are no instances whereby investors can earn excess returns (Heymans & Santana, 2018). However, studies indicate that the JSE is actually weak form efficient (Guduza & Phiri, 2017; Jefferis & Smith, 2004; Mlambo & Biekpe, 2007; Mlonzi, Kruger, & Nthoesane, 2011; Phiri, 2015).

The JSE is also one of the oldest stock exchanges in Africa but it is important to factor in that most African markets may lack the capacity to deal with the complex capital dynamics as they have poor regulatory and legislative frameworks (Mlambo & Biekpe, 2007). In consequence, most of these markets have been characterized as illiquid, being extremely volatile and have instances of thin trading (Mlambo & Biekpe, 2007). This is corroborated by evidence which identifies the JSE as being illiquid (Jefferis & Smith, 2004).

This implies that the securities prices are random in nature in periods of efficiency but also have periods of predictability (Heymans & Santana, 2018; Jefferis & Smith, 2004). This means that the JSE has periods of informational inefficiency (Heymans & Santana, 2018). In a market which is inefficient, this means that the prices do not reflect future information and price changes which provides investors and entrepreneurs with an opportunity to make profits and exploit the market (Jefferis & Smith, 2004; Mlonzi et al., 2011; Timmermann & Granger, 2004).

If the market reaction is indicative of an underestimation of the value-add of females, it is inconsistent with the understanding that profits incentivize the market or that discrimination should not persist (Wolfers, 2006). Sudden changes in directorships or poorly managed successions creates feelings of ambiguity which makes investors uneasy as certainty is preferred (Lee & James, 2007).

The efficiency of the JSE has implications for individuals and institutional investors as it is linked to the decision-making process in terms of the trades to be made (Phiri, 2015). Research conducted indicates that firms who appoint women are less favoured by these very same institutional investors (Dobbin & Jung, 2010). If the JSE is weak-form efficient, then it means the markets will either not know how to price the information of female appointments or there will be considerable delays in realizing the value of such appointments.

However, all the efficiency tests conducted on the JSE are inconclusive, but it does follow the random walk theory (Jefferis & Smith, 2004). Research has suggested that in emerging markets, it is possible that the market may not react to the idea of women in power (Ismail & Manaf, 2016). If this holds true, then there will likely be no short-term market reactions to the appointment of females onto the board.

If there is any sort of mispricing in the market as a result of a gender bias given that it is a weak form, it can be expected that it will correct in the long-term (Gregory et al., 2013). This is as any initial over-reaction and investor skepticism will reduce as more information would later become available (Gregory et al., 2013). This further emphasizes that initially, females are systematically undervalued (Gregory et al., 2013).

2.3. CONCLUSION

This chapter was aimed at identifying possible explanations for differing market reactions towards female appointments on corporate boards. SA has quite a large economically active population of women however, their rise to corporate boards has been hindered which could be due to SA being a patriarchal society. Supporting theories against females on boards was the critical mass theory which suggests that three women need to be present on the board in order to exert any real influence. Token status indicated that females are not appointed due to value-add but for cosmetic reasons and social proofing suggested that males prefer males as they identify better with them.

The literature suggests that there are numerous benefits to be realized through the appointment of females which should support that females add value to company boards. Globally, there are mixed reactions to female board appointments which illustrates that the understanding of how SA, a developing country, markets would react is necessary. The African market is quite under-researched with respect to female board appointments and this study is aimed at providing a base case or some information into how African and developing markets are expected to act. This is also as the efficient market hypothesis and its conclusions may not hold within these markets. As such, due to the little attention paid to these markets, this study aims to reduce the informational gap.

CHAPTER III - METHODOLOGY

This study establishes the market reaction to the announcement of female board appointments in a SA context. This was examined using an events study methodology in order to assess the impact of female director announcements on share prices (Kothari & Warner, 2007). Event studies are an appropriate method in testing market efficiency when conducting capital market research (Kothari & Warner, 2007) and has been used by similar studies in different countries to assess their markets reactions to female appointments (Ismail & Manaf, 2016; Kang et al., 2010; Pastore et al., 2017; Sudeck & Iatridis, 2014).

It also provides the ability to assess the financial impact of an unanticipated event such as the announcement of additional directors (Mlonzi et al., 2011; Nthoesane & Kruger, 2014). It has been identified as a powerful financial instrument in testing market efficiency and successful in determining how events are perceived by the market and it measures how the value of the firm is impacted by the event (Mlonzi et al., 2011; Nthoesane & Kruger, 2014).

The share price is a more true and correct representation of the value that the market places on the appointments (Kothari & Warner, 2007) and as such, investors can rely on the share prices as they cannot be easily manipulated (Malkiel, 2003). Given that the JSE is actually weak form efficient (Guduza & Phiri, 2017; Jefferis & Smith, 2004; Mlambo & Biekpe, 2007; Mlonzi et al., 2011; Phiri, 2015) it is unclear as to whether female appointment will be correctly valued, if at all. If the market does react, it may indicate that the efficiency of the JSE has improved. This study also looked at the market reaction in relation to male appointments to assess whether there is a difference based on gender. This chapter further elaborates on how the market reaction was executed with an events study approach

3.1. SAMPLE AND DATA

For purposes of this study, the data was gathered from all the listed and companies on the Johannesburg Stock Exchange (JSE) who have appointed female directors within the past 15 years (1 January 2003 - 30 June 2019). This period was selected as it is assumed to best represent a substantial period of time with an adequate number of events to be identified This was done in order to appropriately understand the market perception of female appointments onto these boards and as listed company information is easier to obtain this has aided the data collection process.

Data was also gathered in relation to the positions held by females in their directorships which is whether they are largely placed in executive or non-executive positions. This was collected using EquityRt and Osiris. The event is defined as the day of the actual announcement of the female director and it was analysed over an 11-day event window period being 5 days prior and 5 days post announcement (-5, +5) with $t=0$ representing the event day. Prior literature mostly made use of a 21-day event windows (Ismail & Manaf, 2016; Kang et al., 2010; Pastore et al., 2017; Sudeck & Iatridis, 2014) whereas a few, used periods such as 72-month 16-day event windows (Mlonzi et al., 2011; Nthoesane & Kruger, 2014). This period was selected as we are measuring the short-term effect of the announcement on the share price and we believe it best captures this. To ensure that the data selected is free from market noise, companies which made other material announcements within the event window were disregarded.

To select the sample, female appointments of all companies were identified within the period of 1 January 2003 to 30 June 2019. The daily closing share prices for each of the companies were downloaded within this same period. Each appointment date was corroborated with the announcement date to identify the correct announcement date per appointment. For instances where there were simultaneous male appointments or other announcements, these were disregarded. This resulted in a sample of 86 companies listed on the JSE which gave rise to 179 valid female announcements. Of the 179 female appointments identified, 160 are non-executive appointments and 19 were executive appointments.

The same process was followed for male appointments and 95 valid announcement dates were identified. Less male appointments were identified as the market reaction for males is not the focus of this study.

3.2. RESEARCH DESIGN

Central to the event study methodology is the determination of the significance of deviations of returns from expectation around the event window (Campbell & Minguez -Vera, 2010; Cook & Glass, 2011; Gregory et al., 2013; Ismail & Manaf, 2016; Kang et al., 2010; Lee & James, 2007; Lin et al., 2003; Mlonzi et al., 2011; Nthoesane & Kruger, 2014; Pastore et al., 2017; Schmid & Dauth, 2014; Sudeck & Iatridis, 2014).

The valuation effect of firm i on day t is measured by the abnormal returns which is the *ex post* return, $AR_{i,t}$ calculated as the actual returns, $R_{i,t}$ minus expected returns:

$$AR_{i,t} = R_{i,t} - E(R_{i,t}) \quad (1)$$

Where $AR_{i,t}$ is the abnormal return on the share price for firm i on event day t , $R_{i,t}$ is the actual *ex post* return and $E(R_{i,t})$ is the normal return. The normal return is equivalent to the expected return if the event (previously defined as the announcement of the female director) does not occur and is calculated using a market model of the normal share price behavior.

The expected returns $E(R_{i,t})$ was determined using the market model which is represented by the following expression:

$$E(R_{i,t}) = \alpha + \beta R_{mt} \quad (2)$$

Where α and β are determined 240 to 6 trading days prior to the date of the announcement. In the selection of the sample, those companies who did not have 240 trading days prior to announcement date were disregarded. The market model was used as it uses the return of any firm's stock to the return of a specific market portfolio where R_{mt} is the return of the market on day t using the return on the JSE All Share Index (ALSI) as the market proxy. The α is a stable component of the share returns of firm i and remains constant over time and β is the beta or systematic risk associated with firm i and is also constant over the event window.

The average abnormal returns from the sample gathered is expected to fluctuate around zero if the announcements have no impact on the share prices. The following expression is used to estimate the average abnormal return during day t ,

$$AAR_t = \frac{1}{N} \sum_{i=1}^N AR_{i,t} \quad (3)$$

where N is the number of events.

The average abnormal returns across days was be summed to calculate the cumulative average abnormal returns, $CAAR_{(T_1, T_2)}$ where T_1 and T_2 are the actual days in the event period. The expression is the following:

$$CAAR_{(T_1, T_2)} = \sum_{t=T_1}^{T_2} AAR_t \quad (4)$$

The null hypothesis (H_0) maintains that there are no abnormal returns within the 11-day event window which indicates that the market does not react to female directors onto JSE listed boards. The alternative hypothesis (H_1) refers to the presence of abnormal returns within the 11-day event window which would suggest that there is a market reaction to female appointments.

We make use of a student t-test table in order to obtain the respective critical t values needed and to draw inferences on the statistical significance of AARs and CAARs. An analysis of the data (skewness and kurtosis) was used to determine the normal distribution of returns as required. If the data is not normally distributed, a non-parametric version of the event studies was considered.

In order to determine the significance of the results both the AAR and CAAR was tested using cross sectional testing. In order to test $H_0: AAR = 0$ the test statistic is defined as:

$$t_{AAR_t} = \sqrt{N} \frac{AAR_t}{S_{AAR_t}} \quad (5)$$

Where S_{AAR_t} is the standard deviation across the companies at time t :

$$S^2_{AAR_t} = \frac{1}{N-1} \sum_{i=1}^N (AR_{i,t} - AAR_t)^2 \quad (6)$$

The test statistic for testing $H_0: CAAR = 0$ is represented by

$$t_{CAAR} = \sqrt{N} \frac{CAAR}{S_{CAAR}} \quad (7)$$

Where S_{CAAR} is the standard deviation of the cumulative abnormal returns across the sample:

$$S^2_{CAAR} = \frac{1}{N-1} \sum_{i=1}^N (CAR_i - CAAR)^2 \quad (8)$$

The significance levels used are 1%, 5% and 10% which will provide 99%, 95% and 90 % confidence level in the data gathered. For any instances below a 90 % confidence level, these will be disregarded as it will be considered a random event.

The computation of the expected returns and abnormal returns was executed on an excel spreadsheet in order to determine the average abnormal returns and cumulative average abnormal returns per valid announcement.

3.3. RELIABILITY AND VALIDITY

The use of an events study methodology is considered an acceptable model in determining the influence of an event and is considered to be robust and valid. In using this methodology, it is best to express the relationship between share prices and directorship appointments. As this study has made use of real-world data gathered through EquityRt it has a high level of external validity. This study has evaluated the relationship between female appointments to JSE listed company boards (independent variable) and the share price (dependent variable). A sufficiently

large sample size is used to determine reliable conclusions on the population of female appointments.

CHAPTER IV – RESULTS AND ANALYSIS

This chapter aims to provide the results and an in-depth analysis of the results in applying the methodology above. It first presents the overall market reaction to female appointments and then compares it to the reaction towards male appointments. It then breaks down the reaction towards females further into looking at whether there is a difference based on the position a female is appointed to (executive or non-executive). Lastly, it provides an analysis given 4 frequent industries within the selected sample being banking, mining, retail and the telecommunications industry to assess if there is an industry-specific reaction towards female appointments.

4.1 DESCRIPTIVE STATISTICS

Table a below presents the descriptive statistics prevalent in the data set used within this study at each date within the event window. The mean for each day within the event window varies for each day with the following exceptions day -5, day -3 and day +3 which are all the same. The mean and the median are also quite different which could indicate that the data is not normally distributed. This is as data sets which are normally distributed have the same mean and median or they within the same range.

The data is also widely dispersed as each days' standard deviation is far in relation to the sample average. The minimum and maximum values in relation to the mean indicates that there are outliers within the sample. The data is leptokurtic as it has high values which suggests that it is highly peaked. It is also negatively skewed as most values are lower than the mean on each day.

Table 1: Summary of descriptive statistics

Statistics	pre5	pre4	pre3	pre2	pre1	Event day	post1	post2	post3	post4	post5
Mean	-.0023	.00033	-.0023	.0045	-.0019	-.0005	-.0007	-.0025	-.0023	.0016	.0001
Median	-	-	-.0009	.0025	-.0005	.00002	-.0007	-.0014	-.0013	-.0014	-.0004
Standard deviation	.02092	.01851	.0203	.0209	.0206	.0187	.0247	.0236	.0200	.0392	.0180
Maximum	.083	.1036	.0393	.0866	.0515	.0516	.0671	.0646	.0602	.4381	.0741

Minimum	-0.1013	-0.0642	-0.109	-0.0616	-0.0911	-0.0711	-0.1743	-0.1858	-0.0967	-0.0967	-0.0702
Skewness	-0.5029	.7843	-	.7103	-0.8794	-0.4084	-1.8003	-2.6273	-0.7574	7.7498	.2716
			1.1813								
Kurtosis	7.2248	8.8925	7.9148	5.3751	6.5230	4.4507	16.9582	22.8247	6.5397	87.8686	5.0804

4.2. OVERALL MARKET REACTION

4.2.1. MARKET REACTION TOWARDS FEMALES

The sample consisted of 179 valid female announcements which were free from market noise. The results have indicated that there is a significant positive reaction two days before the announcement day (figure one). This then reverses one day before the announcement and negative returns are observed until four days post-announcement whereby a positive return is generated. This reaction on day -2 may be as a result of information leakage to investors (Sudeck & Iatridis, 2014). Consequently, it may result in a market under-reaction as the rest of the market learns of the information more slowly which has not yet been efficiently captured in the share price (Sudeck & Iatridis, 2014). The study done by Campbell and Minguez-Vera in Spain also had a positive reaction on day -2 but proceeded to have negative CAARs within their event window (Campbell & Minguez -Vera, 2010).

Figure 1: Reaction observed on each day within the event window to female board appointments

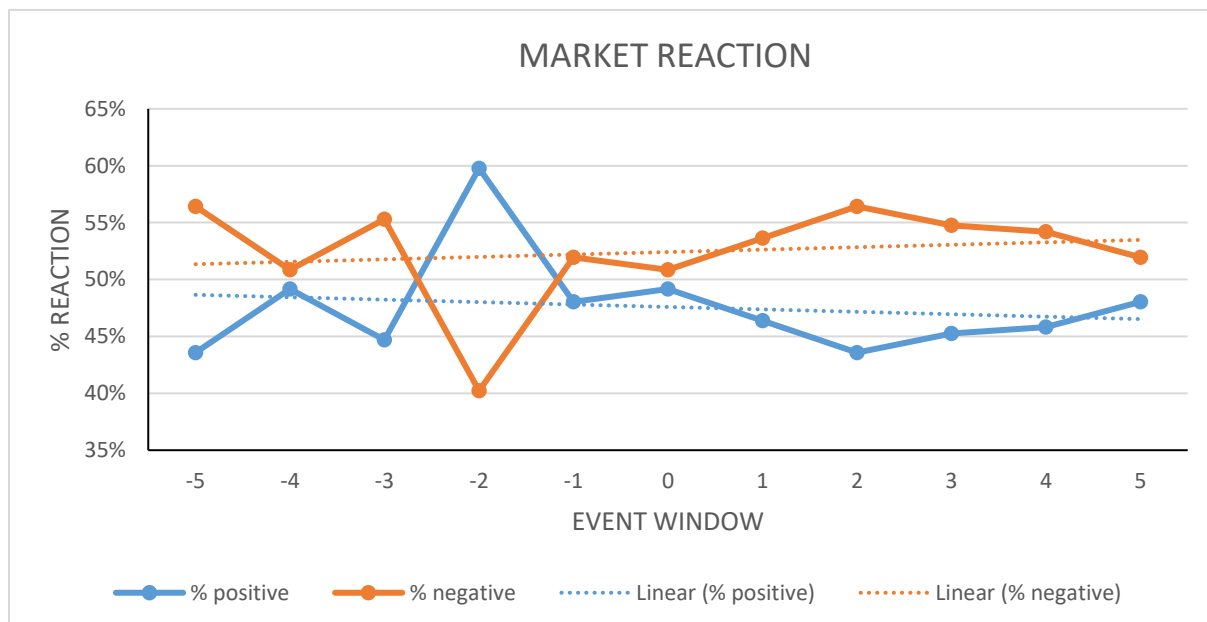


Table two below presents the average abnormal returns (AAR) and the cumulative average abnormal returns (CAAR) over the 11 days of the event window from day -5 to day 5. Figure two and three demonstrate the plots of the AAR and CAAR respectively. Positive AARs are observed on day -4, -2, 4 and 5. On day -2, the AAR of 0,45% is significant (at the 1, 5 and 10% significance level when using the t-test). This suggests that 59,8% of firms had positive reactions and 40,2% firms had negative reactions. This is supported by figure one above as the significance of the returns displayed on day -2 is significant at the 1, 5 and 10% significance level which indicates an initial positive anticipation of the board appointment.

Table 2: Females average abnormal returns (AAR) and cumulative average abnormal returns (CAAR) during the event period from day -5 to day 5.

DAY	N	AAR	T-VALUE	CAAR	+/- ²
-5	179	-0,0023	-1,4830	-0,0023	78:101
-4	179	-0,0030	0,2382	0,0020	88:91
-3	179	-0,0023	-1,5352	-0,0043	80:99
-2	179	0,0045*	2,8901	-0,0002	107:72
-1	179	-0,0020	1,2860	-0,0018	86:93
0	179	-0,0050	-0,3862	-0,0023	88:91
1	179	-0,0070	-0,3862	-0,0030	83:96
2	179	-0,0025	-1,4146	-0,0055	78:101
3	179	-0,0023	-1,5093	-0,0078	81:98
4	179	0,0016	0,5329	-0,0062	82:97
5	179	0,0005	0,3862	-0,0057	86:93

* Significant at the 1,5 and 10% significance level

This infers that the investors anticipate the appointment of women two days before the announcement date and react positively which could be as a result of information leakage (Sudeck & Iatridis, 2014). However, figure one above illustrates that the market remains reacts

² Total number of positive firms to negative firms

more negatively than positively within the event window. This is also evident amongst the CAARs as presented in figure three, as the CAARs are consistently within the entire event window with the exception of day -2 of 0,2%.

This could be indicative of tokenism or the number of females on the board not reaching a critical mass (Terjesen & Singh, 2008) and consequently having little to no impact on the returns as their level of influence increases with the number of females present (Willows & van der Linde, 2016). This was also found in a study conducted in Spain whereby all the CAARS were negative within the event window (Campbell & Minguez -Vera, 2010) which suggests an overall negative reaction. Nthoesane and Kruger undertook a study relating to how the SA market reacted to corporate events and identified that the reactions were generally negative which could explain the results found within this study (Nthoesane & Kruger, 2014).

None of the CAARs observed were identified to be statistically significant which suggests that the value add of females is not appreciated by the market as they may solely be appointed as tokens, or that the SA market is not efficient, as it does not efficiently and quickly incorporate this new information (Nthoesane & Kruger, 2014). The lack of statistically significant results may be as a result of only a few females reaching these positions which is not sufficient enough to create significance (Gregory et al., 2013)

A study conducted about earnings announcements and the markets reactions within SA also found that all the CAARs were also negative which once again could provide a reason for the reactions observed in SA given its' specific market (Mlonzi et al., 2011). The insignificance of the results could also potentially indicate that the appointment of females onto company boards is simply not a price sensitive event within the SA markets (Nthoesane & Kruger, 2014).

The positive abnormal return observed on day -2 may be due to the markets anticipation of a new director and the subsequent decline may be as a result of becoming aware that the director will be female (Campbell & Minguez -Vera, 2010). This further suggests that the market is not of the opinion that female board appointments has the potential to impact firm performance nor is there a benefit as a result of the appointment (Lin et al., 2003).

The decreasing trend seems to correct the market over-reaction on day two indicating that there is some form of bias against female board appointments. It could also be as a result of the belief that females are generally appointed when a firm is in distress which results in a negative reaction (Lückerath-Rovers, 2013). The root cause of the bias is however not known and as such, no adequate conclusion can be made. The results observed are contradictory to studies done in

Malaysia, Germany and in Italy which all had an overall positive reaction which could potentially be explained by the fact that SA is still an emerging market (Ismail & Manaf, 2016; Pastore et al., 2017; Sudeck & Iatridis, 2014).

Figure 2: Average abnormal return (AAR) of the market

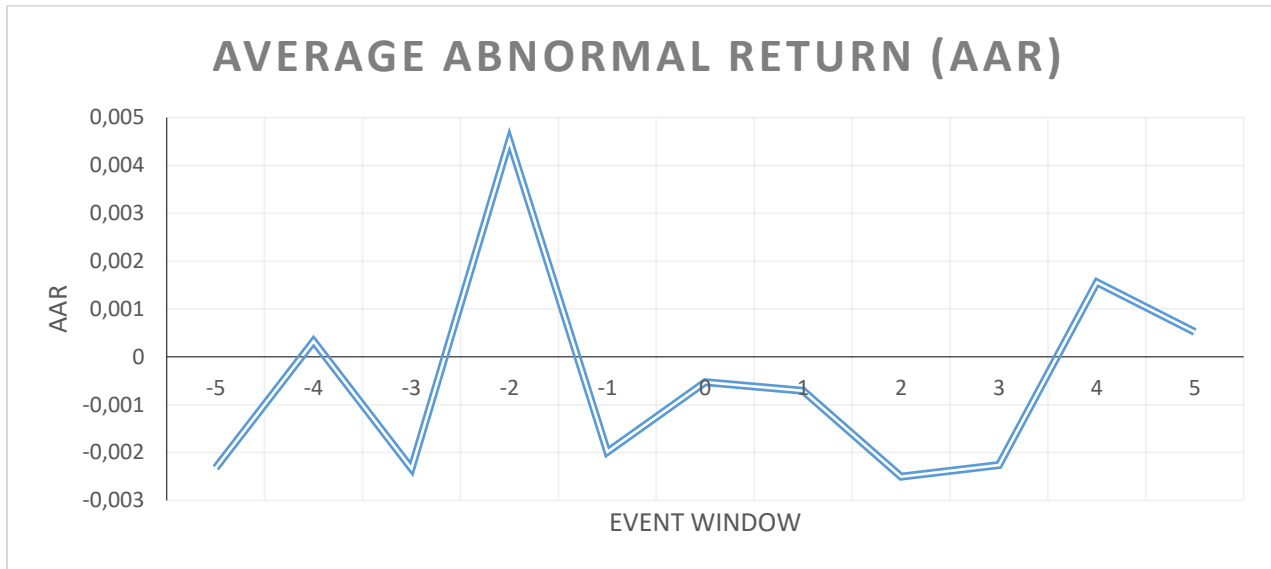
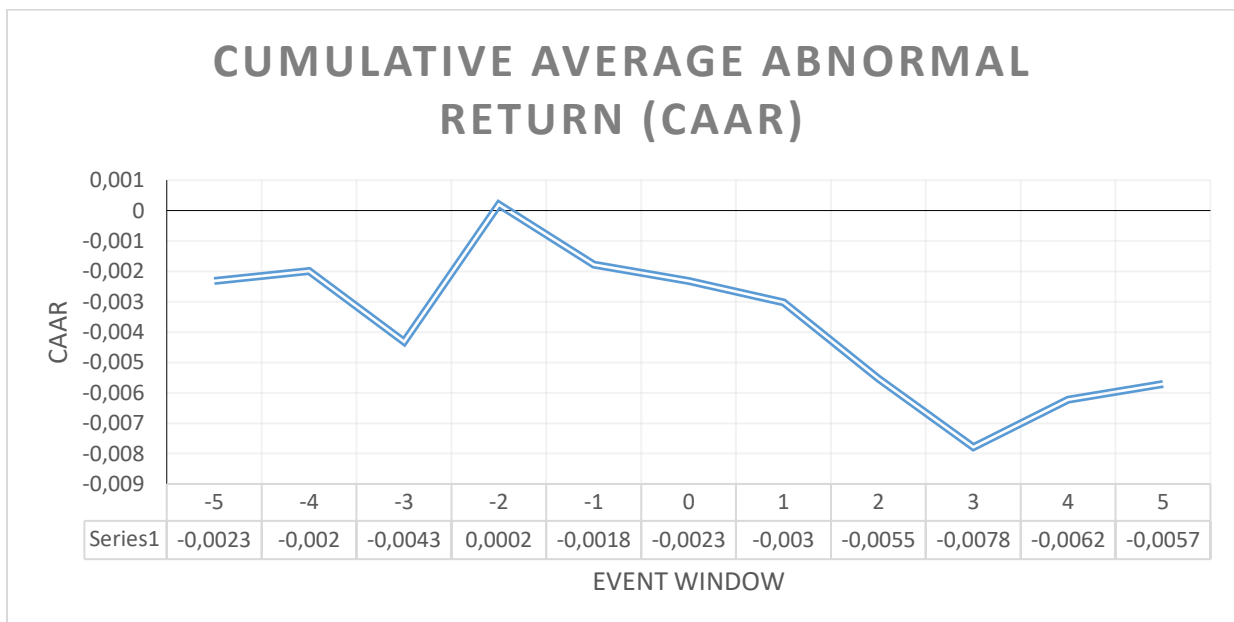


Figure 3: Cumulative average abnormal return



4.2.2. MARKET REACTION TOWARDS MALES

The overall market reaction for males is different from that of females which is in line with expectations. This is as a result of the markets generally reacting more negative to female appointments than male (Gregory et al., 2013) and that share prices are generally negative as a result of increased gender diversity (Dobbin & Jung, 2010).

On the announcement day, statistically significant returns are observed at the 5 and 10% significance level which shows that initially, the market rewards the appointment of males to company boards. The day two post announcement date has also generated a return which is significant at the 10% significance level. It is interesting that the market reaction for males is also negative. This may be as a result of the weak-form efficiency of the JSE and its inability to accurately incorporate announcements into share prices (Phiri, 2015). This may also indicate that the market may lack confidence in the appointee however, the market's reaction cannot be solely due to an appointment as there are a wide array of factors which influence share prices (Guduza & Phiri, 2017; Heymans & Santana, 2018; Jefferis & Smith, 2005; Malkiel, 1989; Phiri, 2015; Timmermann & Granger, 2004).

Table 3: Male announcements average abnormal returns (AAR) and cumulative average abnormal returns (CAAR) during the event period from day -5 to day 5.

DAY	N	AAR	T-VALUE	CAAR	+/-
-5	95	0,0055*	2,8161*	0,0787	59:36
-4	95	-0,0013	-0,7206	0,026	47:48
-3	95	0,0023	1,2371	0,0127	70:25
-2	95	-0,0018	-1,124	-0,0239	46:49
-1	95	-0,0013	-0,6086	-0,0429	41:54
0	95	0,0051**	2,6388**	0,053	59:38
1	95	-0,0041	-1,8257	0,0328	37:58
2	95	-0,0036***	-2,2286***	-0,0021	39:56
3	95	0,0002	0,0823	0,0306	49:46
4	95	-0,0004	-0,1739	0,0717	43:52
5	95	0,0019	0,9535	0,1402	52:43

* Significant at the 1, 5 and 10% significance level

** Significant at the 5 and 10% significance level

*** Significant at the 10% significance level

Table 3 above presents the AARs and the CAARs over the 11 days of the event window from day -5 to day 5. Only three of the CAARs were negative which suggests that the overall average reaction is more positive which would be in line with expectations as typically males 'should' occupy such roles (Augustine, Wheat, Jones, Baraldi, & Malgwi, 2016; Ndinda & Okeke-Uzodike, 2012; Nkomo & Ngambi, 2009). However, the positive to negative firm ratio in the last column indicates that only on five out of the eleven days do firms react more positively than negatively which contradicts the outlook provided by the CAARs.

Figure 4: Reaction observed on each day within the event window to male board appointments

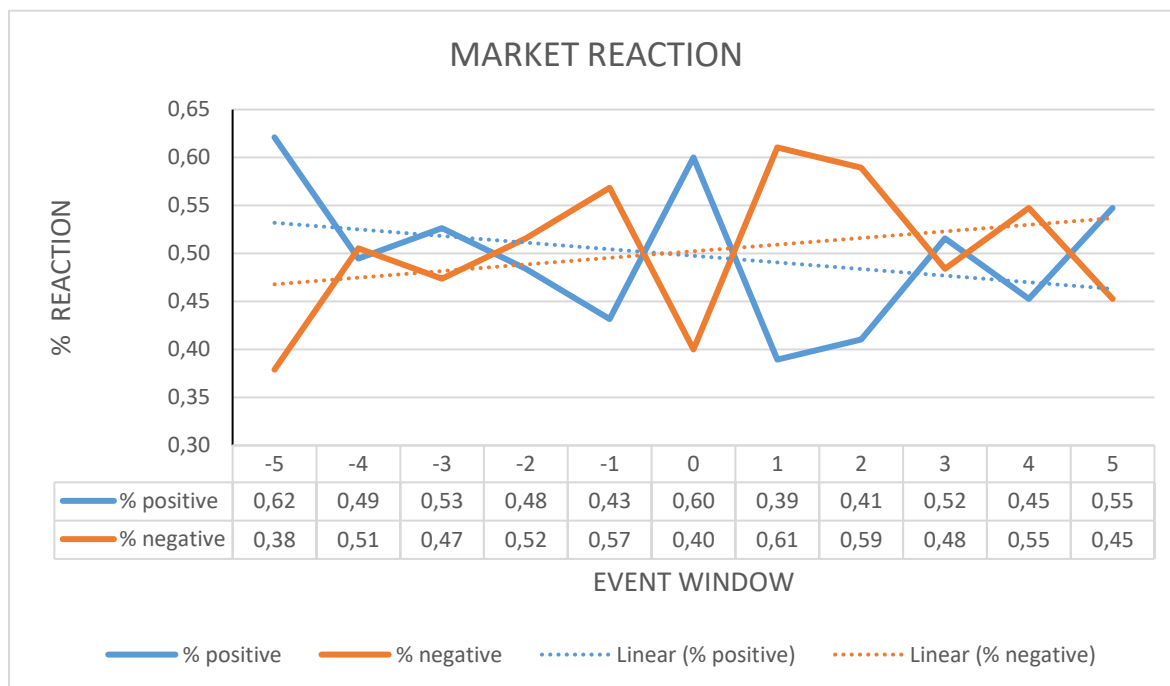


Figure four above displays the market's overall reaction towards males which is more erratic than the female market reaction displayed in figure one. This could be as a result of the uncertainty which may be attached to a male appointment such as the quality of the individual appointed (Ismail & Manaf, 2016; Nthoesane & Kruger, 2014) which could be negative, the inherent uncertainty that comes with a new board appointment (Lee & James, 2007) or the fact that a particular board appointment is not necessarily a guarantee for success (Pastore et al., 2017). The reactions may have been positive due to the patriarchal ideology prevalent in emerging

markets which favours males in management positions (Booyesen & Nkomo, 2010; Campbell & Mínguez-Vera, 2008; Phiri, 2015).

Figure five and six below illustrate of the AAR and CAAR respectively for male board appointments. Positive AARs are observed on day -5, -3, 0, 3 and 5. On day -5, the AAR of 0,54% is significant (at the 1, 5 and 10% significance level when using the t-test). This suggests that 62,1% of the companies had positive reactions and 37,9% had negative reactions. This may be as a result of potential information leakage (Sudeck & Iatridis, 2014).

On day 0, the AAR was 0,5% which was significant (at the 5 and 10% significance level) and 60% was a positive reaction with 40% being negative. This indicates that on announcement day, the market rewards the appointment of males which could mean that in the short term a gender bias may exist (Gregory et al., 2013). Lastly, on day two, an AAR of -0,35% was observed and statistically significant at the 10% confidence level. On this day, 58,9% of the announcements resulted in a negative reaction and 41,1% was a positive reaction. This is interesting as it is a negative return, almost as if the market is attempting to correct the initial over-reaction on announcement day however, the reason is not definite.

Figure 5: Average abnormal return of the market towards male announcements

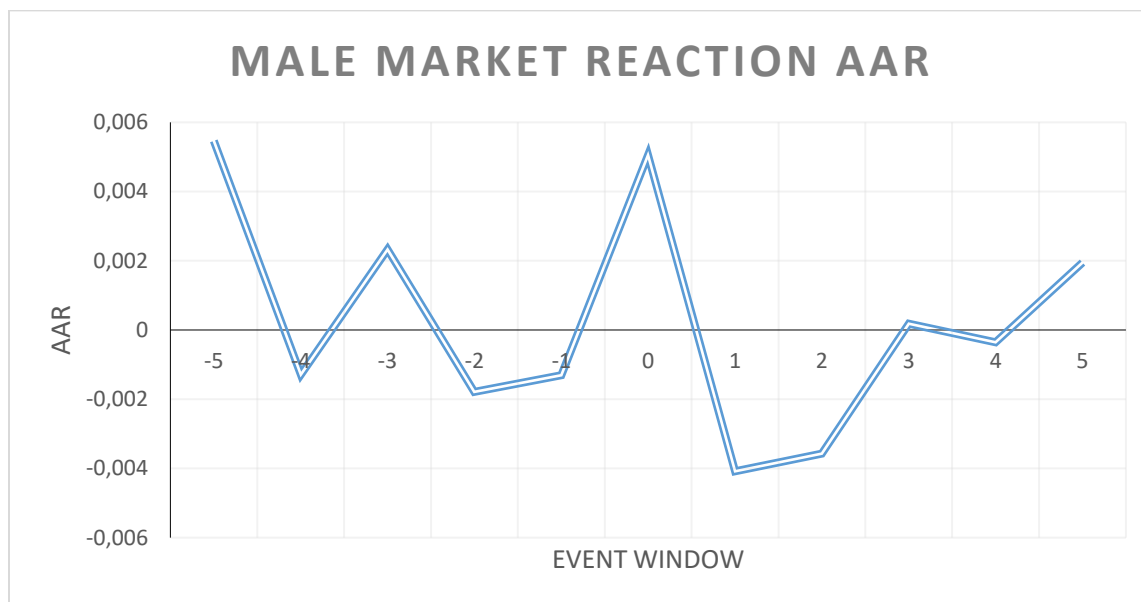
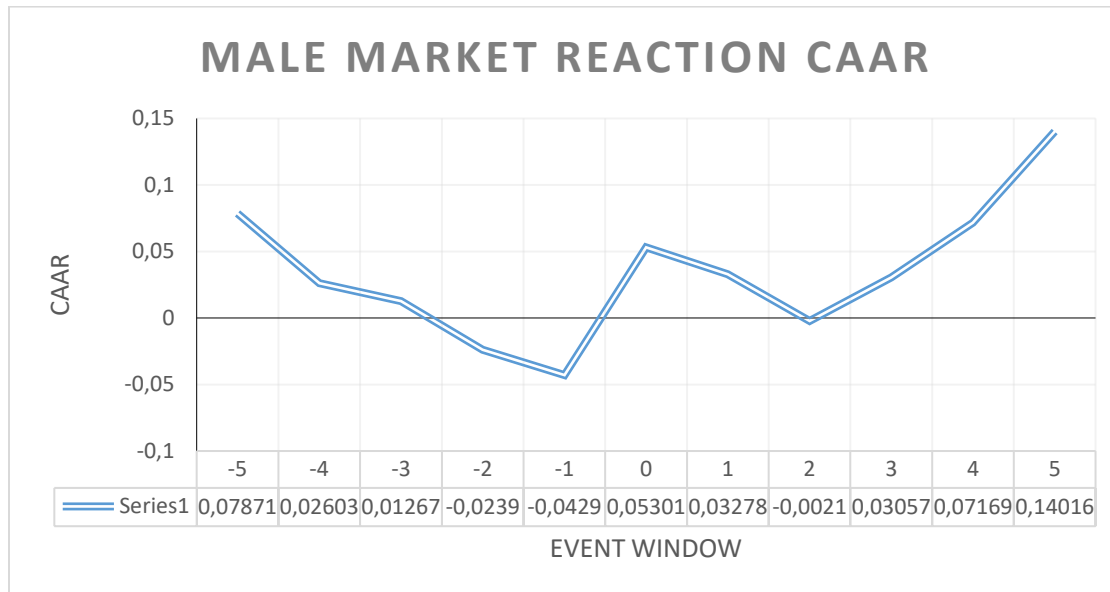


Figure 6: Cumulative average abnormal returns to male board appointments



The positive abnormal returns generated on announcement date indicates that initially, the market rewards firms who appoint male directors which may be as a result of males consistently dominating board positions within SA (Booyesen & Nkomo, 2010). As observed in figure six, the CAARs are positive which emphasizes that males are preferred in board positions which once again is expected given that SA is an emerging market (Booyesen & Nkomo, 2010).

4.3. DISCUSSION OF FINDINGS

The differences in the reaction between males and females indicates that there is a potential bias against females as the market is more negative towards females. However, the root cause of the difference in the reaction is unclear as the share prices and consequently the returns observed are impacted by the level of efficiency within the JSE. If the efficient market hypothesis does hold, the over/under-reactions should correct in the long term (Gregory et al., 2013).

The results are therefore not in support of either of the hypotheses as the results are statistically insignificant. As such, neither of the hypotheses can be accepted for any of the research questions identified in chapter one. Although a few instances of significance were observed, it is not sufficient in order to accept or reject either hypotheses due to the lack of strong evidence (Tukur & Balkisu, 2014).

Given the evidence provided, it seems as though the market underreacts to the appointment of females and overreacts to the appointment of males even in light of the statistically insignificant results. This may be as a result of the JSE being weak form efficient and as such, the security

prices are not truly reflective of all available information and in addition to this, these female appointments, especially if they are not in a vital role (executive), may also not warrant a significant reaction which could further explain the results (Nthoesane & Kruger, 2014).

In answering the research questions, the market has an overall negative reaction to the appointment of females (Gregory et al., 2013). This may be as a result of the market under-valuing females and maintaining perceptual biases against them as is expected in patriarchal countries (Ndhlovu & Spring, 2009) resulting in the benefits of female board presence not being realized (Mori, Golesorkhi, Randøy, & Hermes, 2015). This could also be as a result of the number of the females on the board were not enough to constitute a critical mass in order to have any influence or be seen as having influence (Joecks et al., 2013).

Since only one day of returns was considered to be significant (day -2 pre announcement) this may be indicative of the appointment of females not warranting a reaction from the market as they are merely tokens (Cook & Glass, 2011; Joecks et al., 2013; Willows & van der Linde, 2016) and are not seen as equals in management positions in SA (Mori et al., 2015; Ndinda & Okeke-Uzodike, 2012).

4.3.1. REACTION TOWARDS AN EXECUTIVE OR NON-EXECUTIVE APPOINTMENT

The sub-questions which needed to be addressed through this study were whether the market reaction towards female board appointments would be different based on the announcement relating to an executive or non-executive appointment. The results indicated that the market is more negative towards female executive appointments than it is towards non-executive appointment. Of the 179 appointments selected in the sample, 160 were non-executive appointments and 19 were executive appointments.

This is in-line with expectations and with what was suggested by the literature that most females would be appointed as non-executive directors as it is more of a monitoring role and not an operational one (Terjesen et al., 2009). This emphasizes that they are not seen to fit the leadership role and could just be appointed as a token (Cook & Glass, 2011) which gives the appearance of an inclusive environment when in fact, it is not (Nieto, 2018)

4.3.2 EXECUTIVE APPOINTMENTS

Within the 19 executive appointments, a total of 17 companies were included. Only 2 companies had at least 2 female executives on their board whilst the remaining 15 companies only had 1

female executive appointment. This indicates that companies shy away from appointing females in executive positions (Terjesen & Singh, 2008). The reactions observed could therefore be explained by tokenism and a critical mass not being reached which limits female influence (Du Plessis et al., 2012; Lückerath-Rovers, 2013; Terjesen et al., 2016). As the total number of female executives are few, this places them with higher performance expectations and greater scrutiny up until an executive female appointment is considered less rare (Kang et al.).

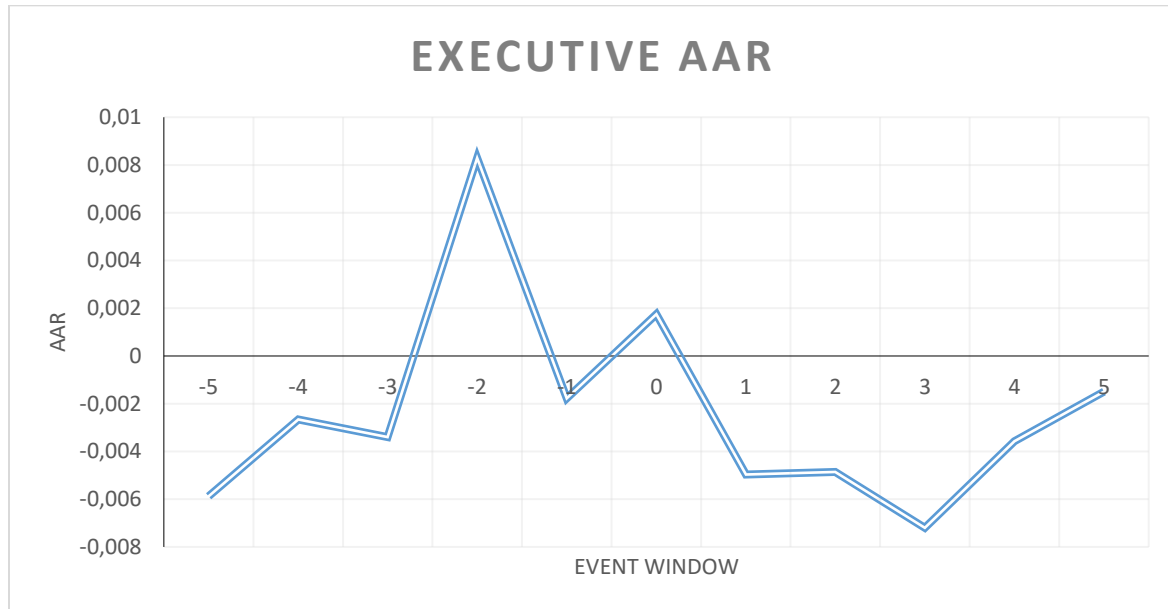
Table 4: Average abnormal returns and cumulative average abnormal returns for executive board appointments of females

DAY	N	AAR	T-VALUE	CAAR
-5	19	-0,0059	-1,483	-0,0059
-4	19	-0,0027	0,2382	-0,0085
-3	19	-0,0034	-1,5352	-0,0119
-2	19	0,0083**	2,8901	-0,0037
-1	19	-0,0018	-1,286	-0,0054
0	19	0,0018	-0,3793	-0,0037
1	19	-0,005	-0,3862	-0,0086
2	19	-0,0049	-1,4146	-0,0135
3	19	-0,0072	-1,5093	-0,0207
4	19	-0,0036	0,5329	-0,0243
5	19	-0,0015	0,3862	-0,0258

** Significant at the 5 and 10% significance level

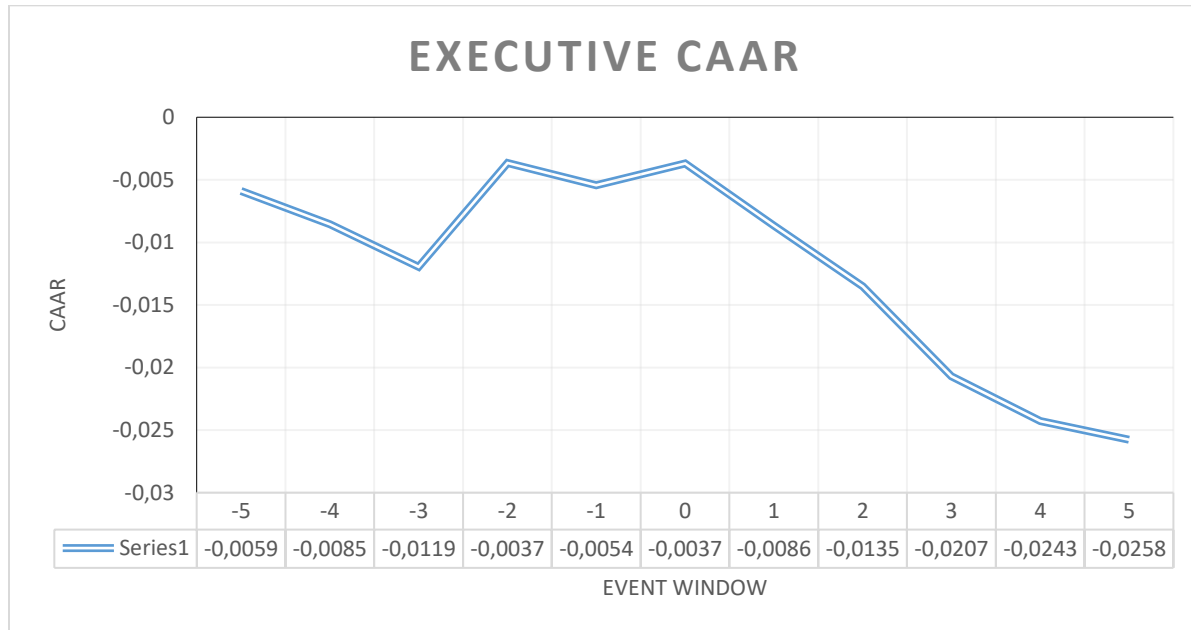
Table four above displays the AARs and the CAARs for the executive female board appointments. The only statistically significant abnormal return (at the 5 and 10% significance level) is observed on day -2 (0,82%) which is in line with the initial market reaction. Positive abnormal returns are observed on day -2 up until the announcement date. Thereafter, the AARs are all negative as shown in table five above and in figure seven below. This can be explained by the bias that females do not have the abilities of power and control which are usually assigned to men and as such, an unfavourable reaction persists (Ismail & Manaf, 2016; Liu et al., 2014; Terjesen et al., 2016).

Figure 7: Average abnormal returns for female executive board appointments



The CAARs follow a decreasing trend (table five), which indicates that the market is more negative to a female executive appointment as evidenced in figure eight below. This is further suggested by the fact that only two of the eleven days within the event window generated a positive abnormal return. In addition to this, the observations are supported by the literature, as individuals who have deviated from societal expectations, females in executive positions, tend to draw a more negative consequence or in this case reaction (Kang et al., 2010; Terjesen et al., 2016).

Figure 8: Cumulative average abnormal returns for female executive appointments



4.3.2.1. NON-EXECUTIVE APPOINTMENTS

The sample of 160 non-executive board appointments consists of 74 companies. Only two companies within this sample had 1 other executive female appointment. One company consisted of seven female non-executive appointments which was the largest number of females recorded within one company. This indicates that firms prefer to appoint females in non-executive positions instead of executive positions. 25 of these companies only had one female non-executive director appointment which leans towards the theory of tokenism as these females may have been appointed for cosmetic reasons.

Table 5: Total number of female non-executive on each companies' board

Number of females	Total	% of Companies
1	25	34%
2	30	41%
3	6	8%
4	10	14%

5	2	3%
6	0	0%
7	1	1%
	74	

Since the bulk of female non-executive appointments is between one and two appointees per company, this further emphasises that a critical mass has not yet been reached (Joecks et al., 2013). This explains why the AARs are not statistically significant for the entire market. The way in which a market reacts is however, dependent on the prominence on the person appointed which influences the significance of the returns (Ismail & Manaf, 2016). It is important to note that ten companies had at least four non-executive females appointed to their board which does indicate that some companies do see the value add of females.

The AARs and the CAARs for the non-executive female board appointments is displayed in table seven, figure nine and ten below. The only statistically significant abnormal return (at the 5 and 10% significance level) is observed on day -2 (0,4%) which is in line with the initial market reaction. Positive abnormal returns are observed on day -4, -2, 4 and 5 as reflected in figure 9. Based on the AARs the market is less negative as 4 days within the 11-day event window reflect positive abnormal returns. This highlights that females, although not preferred in management positions, are appreciated slightly in non-executive positions (Kolev, 2012).

The CAARs follow a decreasing trend (table seven), apart from the increase on day -2, which indicates that the market is still overall negative towards the appointment of females. Given the spike on day -2, the market is less negative towards non-executive appointments which is in line with expectations.

Table 6: Average abnormal returns and cumulative average abnormal returns for non-executive board appointments of females

DAY	N	AAR	T-VALUE	CAAR
-5	160	-0,0019	-1,1493	-0,0019
-4	160	0,0007	0,4630	-0,0013
-3	160	-0,0022	-1,4571	-0,0033
-2	160	0,0041**	2,3949	0,0007
-1	160	-0,0020	-1,2214	-0,0013

0	160	-0,0008	-0,5400	-0,0021
1	160	-0,0002	-0,1257	-0,0022
2	160	-0,0022	-1,1801	-0,0043
3	160	-0,0017	-1,0828	-0,0061
4	160	0,0022	0,6831	-0,0041
5	160	0,0008	0,5395	-0,0034

** Significant at the 5 and 10% significance level

Figure 9: Average abnormal returns for female non-executive appointments

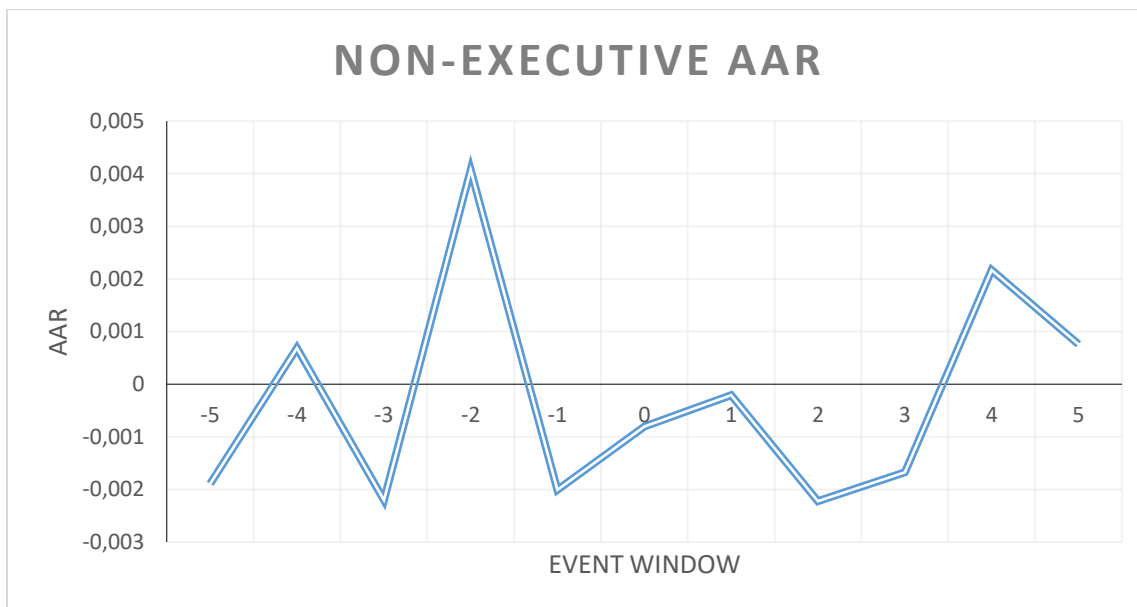
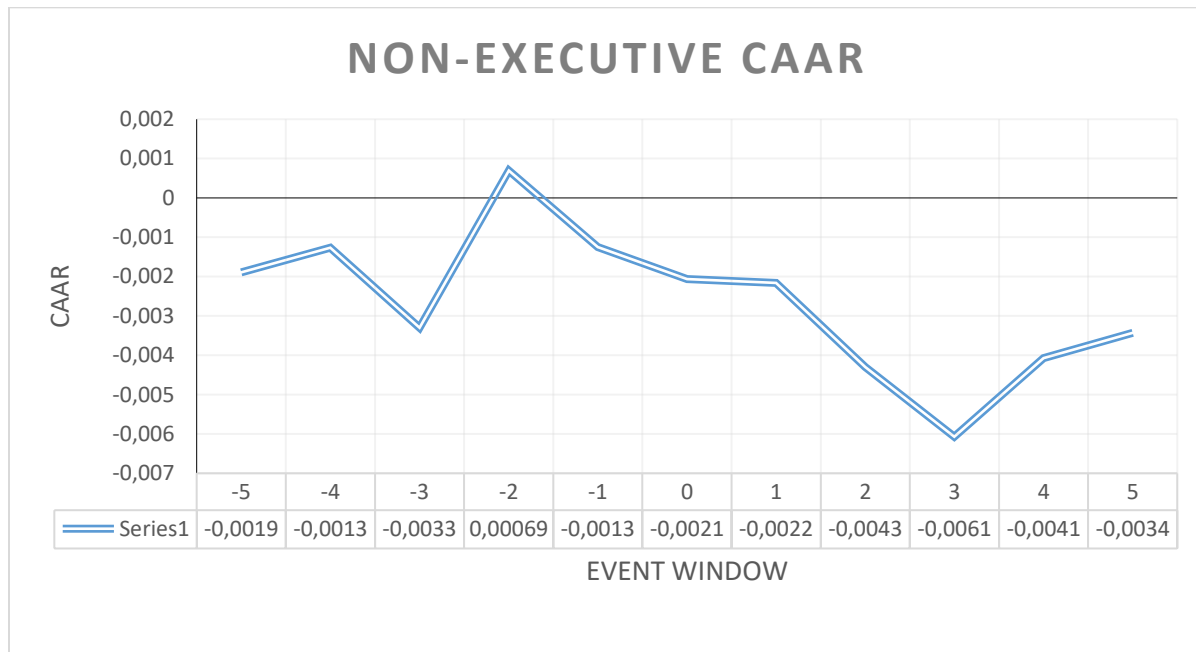


Figure 10: Cumulative average abnormal returns for female non-executive appointments



4.4 INDUSTRY SPECIFIC REACTIONS

The results were further broken down to identify whether different industries would have differing market reactions. The industries observed based on the sample were banking, mining, retail and telecommunications.

4.4.1 BANKING INDUSTRY

Within the sample, 24 announcements of females were identified within the banking industry with only one announcement as an executive appointment. This sample was made up of six companies which means that on average each companies' board had 25% female representation. None of the AARs were statistically significant at any of the significance levels.

The positive reaction observed on day -2 is in line with the markets' reaction however it drops on day -1 and remains negative until the announcement date as seen in figure eleven below. Between day 1 and 3 there are positive abnormal returns observed post announcement day which reduces once again from day 4. This suggests that within the banking industry, the benefits of

females on company boards is taken into consideration during the board selection process. This is as there 6 days within the 11-day event window which have positive abnormal returns.

The CAARs follow an increasing trend from the announcement date up until day 4 as seen in figure 12, which once again suggests that within this industry, females are seen to add value. This industry had one company which had seven female non-executives on their company board which infers that the industry has begun to appreciate the value add of females.

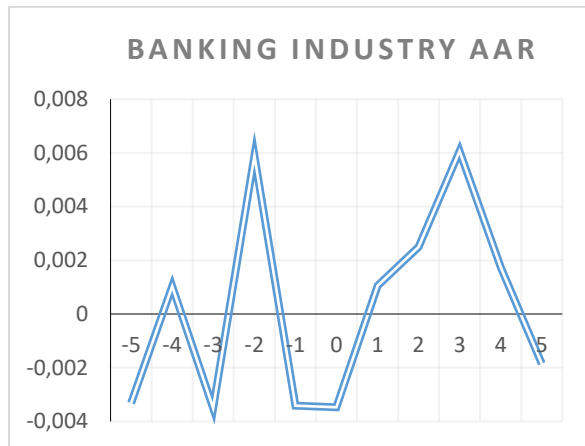


Figure 11: Average abnormal returns

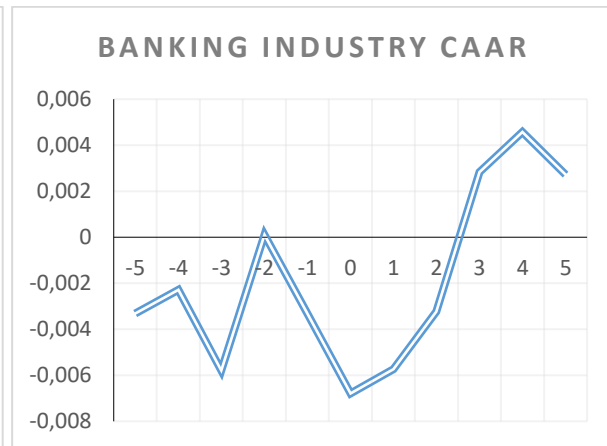


Figure 12: Cumulative average abnormal returns

4.4.2 MINING INDUSTRY

20 announcements within the sample fell under the mining industry from 9 companies which indicates that not many females sit on these company boards. Apart from the positive abnormal return observed on day -2 in figure 13, the remainder of the returns are negative until day 4 after the announcement. None of these returns were considered statistically significant in terms of the significance levels selected.

The CAARs (figure 14) follow a decreasing trend after the announcement date indicating that female appointments are not valued in this industry. Only one of the announcements was an executive appointment. This suggests that females may be appointed for cosmetic reasons or as tokens since their inclusion does not add value in the eyes of investors. The average female directors on these board is two which explains the underreaction by the market as a critical mass has not been reached.

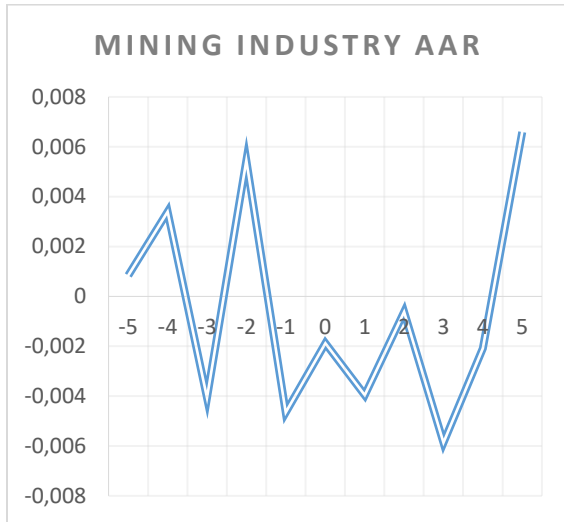


Figure 13: Average abnormal returns

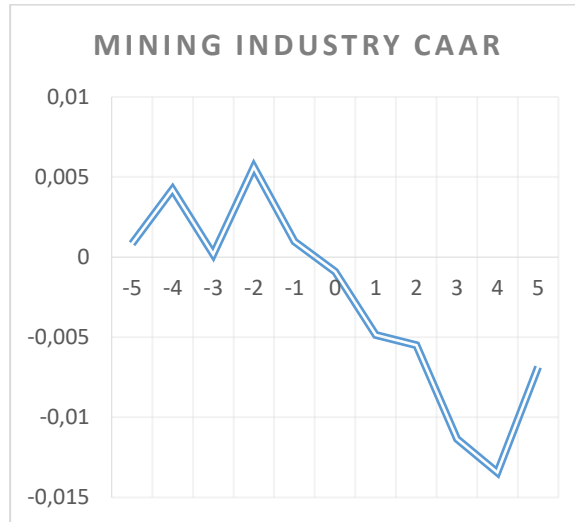


Figure 14: Cumulative average abnormal returns

4.4.3 RETAIL INDUSTRY

The retail industry had 24 female announcements within the sample amongst 11 companies which could be indicative of a preference for females within retail. Two of the announcements were executive appointments. Day -5 and day 5 are the only days within the event window to have statistically significant returns at both the 5 and 10% confidence level amongst the AARs. These were 0.96% and 0.59% respectively as reflected in figure 15 below.

The CAAR graph in figure 16 below provides evidence that statistically significant abnormal returns were generated on day -5, -1, 0, 2, 3, 4 and 5 at a 5 and 10% significance level. Day -4 and day -3 only have significant returns at the 10% significance level. It is interesting to note that none of these CAARs were positive, in fact, it follows a negative trend. This may be indicative of the fact that females are not seen to add value as the market systematically under-values them. The sudden increase from day 4 to 5 may suggest that the market corrects the initial under-reaction as more information becomes available.

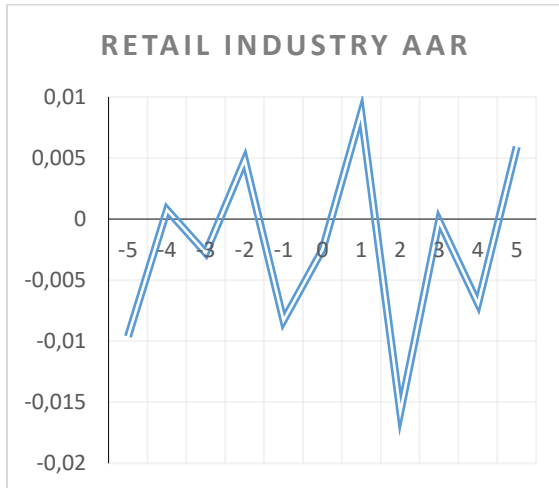


Figure 15: Average abnormal returns

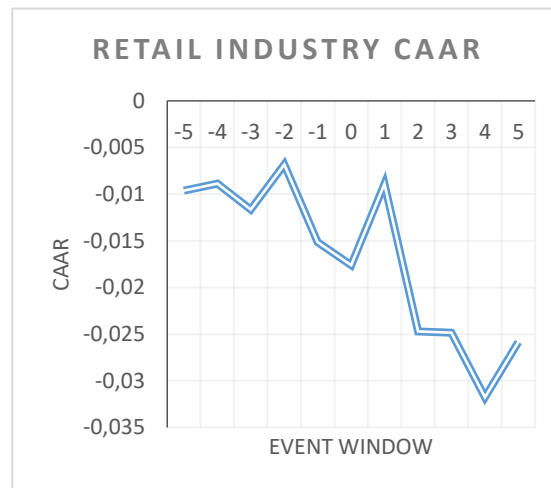


Figure 16: Cumulative average abnormal returns

4.4.4 TELECOMMUNICATIONS INDUSTRY

Only ten announcements were included within this sample with only one executive appointment amongst five companies. The returns for the telecommunication industry are erratic but not statistically significant at any of the significance levels. Negative AARs are observed on day -5, -3, -1, 0, and 2 as seen in figure 17 below.

Only 2 days (day -4 and -2) have positive CAARs with the remainder being negative up until day 4 (which becomes positive) which indicates once again that the market initially reacts negatively to female appointments. It seems that by day 4, once additional information has been received the markets correct the underreaction.

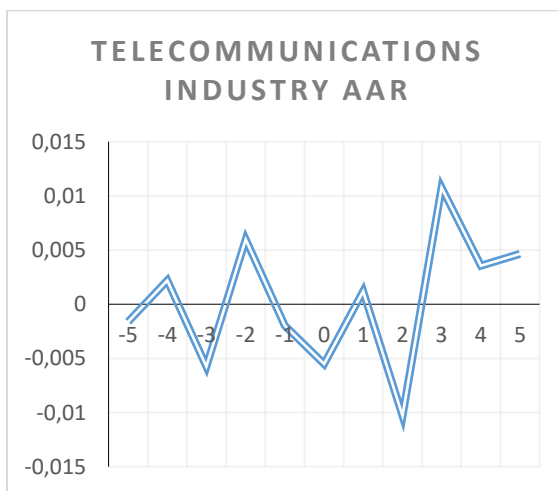


Figure 17: Average abnormal returns

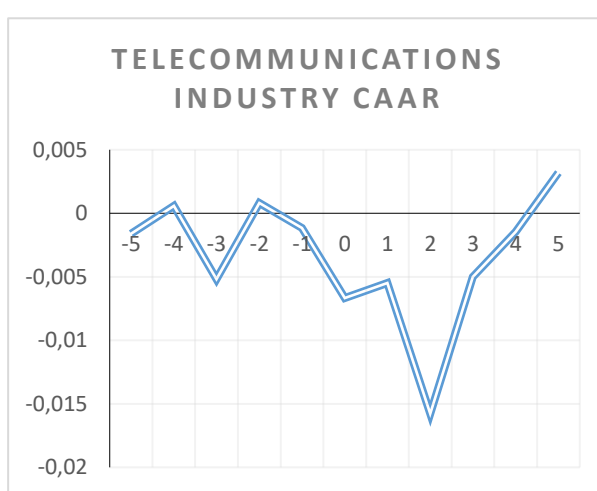


Figure 18: Cumulative average abnormal returns

4.5 CONCLUSION

This section was aimed at providing a detailed understanding of the results in relation to the markets reactions to female board appointments. By evaluating each industry, we observe that the market reaction per industry does change however they are all consistent. They all experience a positive AAR on day -2 and experience and overall negative reaction as observed in the CAAR graphs with the exclusion of the banking industry.

The results therefore do not support or reject the hypotheses which could be for a variety of reasons such as token status, critical mass theory or it may be due to the JSE being weak-form efficient. Another possible explanation could be that many perceptual biases persist given that SA is still an emerging market and as discussed above in chapter two, the market would not necessarily react to women being appointed to positions of power and consequently, there would be no short-term market reaction.

As this study was carried out to assess only the short term reaction, this usually provides evidence of the perception of the capabilities of the candidates and does not reflect the actual abilities and as such a gender stereotype persists (Gregory et al., 2013). The persistent negative reaction may be indicative of females' ability not being adequately assessed but as there is a lack of strong evidence, no final conclusions can be drawn.

CHAPTER V – CONCLUSION

This study was conducted in order to obtain empirical evidence about the markets' reaction to female director appointments amongst JSE listed company boards. This study was conducted in response to a call for increase in gender diversity with no evidence stemming from African stock markets. Discrimination amongst company boards diminishes through the introduction of gender diversity (Erhardt et al., 2003). However, the introduction of females on company boards may have adverse consequences if their appointment was wrongly motivated by societal pressures calling for increased equality (Campbell & Minguez -Vera, 2010).

Numerous studies have indicated that as a result of increased gender diversity amongst company boards, there will be a wider variety of ideas generated by board members and improved communication due to diverse perspectives (Terjesen & Singh, 2008). SA is an emerging economy (Guduza & Phiri, 2017) and an understanding of its markets is imperative in growing the research around African markets.

The literature suggested that there are multiple factors which could lead to the market reacting in a particular way which may indicate that it is difficult to attribute a particular cause for a specific market reaction. Research showed that the list of benefits as a result of female board presence is endless which suggested that females should be appointed in order to capitalize and maximise value creation within companies (Du Plessis et al., 2012).

Globally, the markets' reaction has been mixed. This is as some countries such as Italy introduced quotas which had a positive reaction (Pastore et al., 2017) however, this study does not suggest that this is appropriate as it may result in tokenism (Liu et al., 2014) and an overregulation of the market (Sudeck & Iatridis, 2014). This may result in boards being ineffective which undermines the primary role of the board (Liu et al., 2014).

SA and its markets are unique, as it is the largest in Africa however, it is mixed in terms of its efficiency (Jefferis & Smith, 2005). This emphasizes the need for this study as it was aimed at providing a greater level of understanding into these developing markets.

The results indicated that the market responds negatively to the appointment of females although it is not statistically significant. As the reaction was not statistically significant, they may have only been appointed for cosmetic reasons (Pastore et al., 2017). This may also be as a result of

investors underestimating the value add of females which has the potential to drive down these share prices (Kolev, 2012).

There was no or little market reaction observed in the short term which could suggest that a more significant reaction could be observed with a larger event window. It might also be more evident in the long term as inefficient markets, such as SA, may correct and more accurately incorporate the board announcements into company share prices.

A smaller sample of male announcements were selected in order to enrich the results and to provide an adequate comparison between the market's reaction between males and females. It was found that the market's reaction is more erratic and slightly more positive than that of females. On announcement date, the market's reaction was also positive and statistically significant which indicates a more positive reaction towards males than females. 62,1% of all companies maintained a similar sentiment towards males.

When contrasted between females appointed in executive and non-executive positions, it is evident that the market reacts slightly more negatively to females appointed in executive positions rather than in non-executive positions. The reasons for the reaction may be due to females falling prey to the perceptual biases as discussed in chapter 2 above. This could also be influenced by the lack of a critical mass being achieved on these company boards to the point where they have real influence. This is as most of the boards have an average of one female on the company board in an executive position. However, amongst those who were in a non-executive role, one company had 7 females present. This suggests that there is a preference for females in non-executive roles over executive.

The industries prevalent within the sample were banking, mining, retail and telecommunications. The banking industry was the only industry identified to have some positive CAARs which may be indicative of the shift in perception as the rarity of females amongst banking boards reduces. The mining industry had a positive CAAR leading up to announcement day however, post announcement date, it followed a decreasing trend. The retail industry had no positive CAARs observed with only 2 days within the event window providing statistically significant returns. The telecommunications industry was erratic but not significant.

Given the weak form efficiency of the JSE, the results provided evidence that the market begins to correct the underreaction from day 4 post announcement which indicates that it self corrects once more information becomes available (Heymans & Santana, 2018). The direct cause of the

reaction (perceptual biases or the efficiency of the market) was not examined within this study and therefore, provides an area of future research.

It would also be interesting to observe whether the inclusion of females influenced the long-term value of the firm which may prove a business case for gender diversity. A limitation of this study is that an 11-day event window was selected and perhaps if a longer period such as 21 days perhaps were used this would provide a different view given the efficiency of the JSE. Given that there have not been multiple tests within African markets it would be worthwhile to investigate whether other emerging markets act in a similar or dissimilar way in order to better understand African markets.

As the results do not support or reject the hypotheses, additional research would assist in enhancing the understanding of developing markets such as SA. An additional area of research would be assessing the market's reaction in a few of the larger African economies over the short and longer term and including a cross sectional regression analysis to strengthen the results identified.

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