



UNIVERSITEIT VAN PRETORIA
UNIVERSITY OF PRETORIA
YUNIBESITHI YA PRETORIA



GORDON INSTITUTE
OF BUSINESS SCIENCE

University of Pretoria

Board gender diversity and financial performance

Rebone Edith Matlala

20035421

A research project submitted to the Gordon Institute of Business Science,
University of Pretoria, in partial fulfilment of the requirements for the degree of
Masters of Business Administration.

09 November 2011

ABSTRACT

There is much debate amongst academics regarding the contribution of women on corporate boards, particularly, the effect on financial performance. There has been a stride post democracy to ensure equality in South Africa. Although there has been progress, the percentage of women on corporate boards is still microscopic. The purpose of this study was to examine the effect of board gender diversity on financial performance of publicly listed companies. Similar studies have been conducted in other countries with equivocal results implying that results are country-specific.

Quantitative research methodology was employed, where financial ratios ROE, ROA and Tobin's Q, of companies with gender diverse boards were compared to those of companies whose boards are not considered gender diverse. Gender diverse boards are defined in this study as boards with 25 percent or more female representation on boards. Differences in financial performance of companies with gender diverse boards across industries were also examined.

ROE and ROA mean scores were higher for the gender diverse group, whereas, mean scores of the market-based ratio Tobin's Q were higher in the group whose boards were not gender diverse. Market-based results are subjective and influenced by investors and analysts perceptions. Tobin's Q was higher in industries with lower percentages of women on boards; however, these results were not statistically significant.

Keywords: Boards, gender diversity, Financial Performance, ROE, Tobin's Q.

DECLARATION

I declare that this research project is my own work. It is submitted in partial fulfilment of the requirements for the degree of Masters of Business Administration at the Gordon Institute of Business Science, University of Pretoria. It has not been submitted before for any degree or examination in any other University. I further declare that I have obtained the necessary authorisation and consent to carry out this research.

Signature: _____

Name: **Rebone Edith Matlala**

Date: 09 November 2011

ACKNOWLEDGEMENTS

I would like to express gratitude to the following people for their guidance and support during the writing of this report:

- To my mother, who was always prepared to put everything on hold for me. Thank you mom for the massive role you have played in my life, you have put your needs secondary to allow me to achieve my goals. Without your love and support, this research would not have been possible.
- To my brothers, Vusi, Bongani and Fana and my sister in law, Connie; I could count on you in times of need and you were my pillars of strength. Thank you for believing in me.
- To my children, Andile and Thato for their patience and understanding during this journey. I recall when they whispered to each other “don’t disturb mommy, she is studying.” Thank you for allowing me the time to achieve this, I love you two very much.
- To my friend Louis Mphahlele, for his assistance. People like you are few indeed; thank you for helping me take this big leap in my career. My deepest gratitude goes out to you.
- To my friend Seth Mukwevho, for always reminding me of the ultimate goal. Seth you have become more than a friend during this MBA, you have been like a brother whom I could always rely on, thank you.
- To my friend Terrence Taylor, for helping me crystallise the topic, critically assessing and shaping the direction of this research until the final product.

Thank you for the many contributions you made into this research and the life lessons.

- To the BWA Midrand Office for providing the reports with data needed to conduct this study.
- Finally, to my research supervisor Dr. Mandla Adonisi for his dedication to this research. You have made the journey painful and yet rewarding with many lessons. Thank you for providing an enabling atmosphere for me to deliver beyond my expectations.

CONTENTS

LIST OF FIGURES.....	iii
LIST OF TABLES.....	iii
LIST OF APPENDICES	iii
CHAPTER 1: INTRODUCTION TO RESEARCH PROBLEM	1
1.1. Background	1
1.2. Research Problem.....	5
1.3. Research Objectives	6
1.4. Research Purpose and Scope.....	7
1.5. Research Structure	7
CHAPTER 2: LITERATURE REVIEW.....	8
2.1. Boards.....	8
2.1.2. Board Composition	9
2.2. Diversity	10
2.2.1. Gender diversity	11
2.2.2. Gender differences	13
2.2.3. Resource-dependency theory	15
2.2.4. Percentage of women on the board	16
2.3. Mediating role of board processes	18
2.3.1. Board working structure	18
2.3.2. Board decision-making culture.....	19
2.4. Board effectiveness.....	19
2.4.1. Dimensions of board effectiveness	21
2.5. Board gender diversity and financial performance	22
2.6. Summary.....	23
CHAPTER 3: RESEARCH QUESTIONS	27
3.1. Overview	27
CHAPTER 4: RESEARCH METHODOLOGY	30
4.1. Overview	30

4.2. Research design	32
4.3. Population	33
4.4. The unit of analysis	34
4.5. Sampling method and size	34
4.6. Data collection.....	35
4.7. Data analysis.....	36
4.8. Limitations	38
CHAPTER 5: RESULTS	39
5.1. Overview	39
5.2. Findings from the data.....	39
5.3. Findings from statistical analysis	42
5.3.1. Variables in the analysis	42
5.3.2. First research question.....	43
5.3.3. Second research question	49
CHAPTER 6: DISCUSSION OF RESULTS	54
6.1. Overview	54
6.2. Descriptive analysis.....	54
6.3. First research question.....	55
6.3.1. Accounting-based measures of performance.....	56
6.3.2. Market-based measures of performance	59
6.4. Second research question.....	62
6.4.1. Industry differences by accounting ratios	64
6.4.2. Industry differences by market ratio	65
6.5. Possible reasons for the differences in the results	67
CHAPTER 7: CONCLUSIONS.....	69
7.1. Summary of findings.....	69
7.2. Research limitations	70
7.3. Suggestions for future research	71
7.4. Stakeholder Implications	73
7.5. Concluding remarks	74
REFERENCES.....	75

LIST OF FIGURES

Figure 1: Elements affecting board effectiveness.....	20
Figure 2: The model of effects of diversity on performance	23
Figure 3: Percentage of woman on boards with minimum 25 percent women representation.	63

LIST OF TABLES

Table 1: ROE, ROA and Tobin's Q for all companies	40
Table 2: Description of variables and industrial sectors in the study	42
Table 3: Descriptive statistics for all companies	43
Table 4: Wilcoxon scores for financial performance as measured by ROE.....	45
Table 5: Wilcoxon scores for financial performance as measured by ROA.....	46
Table 6: Wilcoxon scores for financial performance as measured by Q.....	47
Table 7: Kruskal Wallis test for analysis of variance using ROE	49
Table 8: Kruskal Wallis test for analysis of variance using ROA	51
Table 9: Kruskal Wallis test for analysis of variance using Q	52

LIST OF APPENDICES

Appendix 1: Top 70 companies with minimum 25% women on boards	79
Appendix 2: Raw data: accounting and market ratios	82

CHAPTER 1: INTRODUCTION TO RESEARCH PROBLEM

1.1. Background

Both practitioners and academics have been in discussions regarding gender diversity in the workplace. The term diversity often provokes intense emotional reactions from individuals who associate the term with ideas such as affirmative action and hiring quotas (Milliken & Martins, 1996). Diversity in gender, race, ethnicity and viewpoints can provide companies with some benefits including additional knowledge, fresh ideas and insights to aid problem solving, better product positioning, enhanced strategic planning, new knowledge or opinions and even additional accountability (Arfken, Bellar, & Helms, 2004).

Previously, organisations were challenged by requirements to comply with gender diversity at top management and board level because there were very few women meeting the requirements. Women were more likely to work part-time or settle for lower paid but convenient jobs, and hence participation in on-the-job training for more senior positions would not have produced any return on investment. In recent years, women have invested in education and adopted a work pattern that is similar to that of men (Singh, Terjesen, & Vinnicombe, 2008). Despite the progression of women's careers, advocates for the status quo still defend the relative lack of gender diversity on corporate boards as a function of too few women having the requisite qualities and experiences to serve on boards.

However, careful consideration of the criteria for selection reveals that often male board members also fail to meet these criteria (Daily & Dalton, 2003).

Burgess and Tharenou (2002) reviewed the state of women's representation on boards and the reasons why women are needed on boards. They acknowledged women's lack of board experience, at the same time drawing attention to the consistency of literature findings that suggest that women have high levels of education. Based on the ideology that women need to be twice as good as men in order to compete, women aspiring to corporate boards therefore, may be driven to acquire more extensive human capital than their male counterparts in order to overcome the 'glass ceiling' and to attract attention of director selectors (Singh et al., 2008). This may suggest that the playing field may be equal in that more women are now able to compete with men for selection onto corporate boards.

Large corporate boards in the US, UK, and other countries have traditionally been composed mainly of males from similar backgrounds, forming an 'old boys club' (Singh et al., 2008). Homogenous boards like that of 'old boys clubs' lack certain qualities that women directors may bring to the board. The main diversity argument for women on corporate boards is that women exert positive impact on tasks of qualitative nature such as strategy (Bilimoria, 2000). Women are expected to be more socially oriented than men, and therefore, have the potential to broaden discussions (Burgess & Tharenou, 2002). It has been empirically shown that the presence of women on boards may enhance a company's financial performance (Campbell & Mínguez-Vera, 2008; Carter, Simkins, & Simpson, 2003).

Carter et al., (2003) examined the relationship between board diversity and firm value in the US. After controlling for size, industry and other corporate governance measures, their findings indicate significant positive relationship between the fraction of women and minorities on the board and firm value. Campbell and Minguez-Vera (2008) examined the relationship between board gender diversity and financial performance of companies in Spain, their findings illustrate that gender diverse boards improve company financial performance.

In the US, an organisation called Catalyst reported that Fortune 500 companies with women directors tend to have stronger financial performance, as measured by return on sales, return on equity and return on investment (Joy, Carter, Wagner, and Narayanan, 2007). Despite the presence of evidence in support of gender diversity and its value, the advancement of women onto corporate boards has been slow in many countries (Smith, Smith, & Verner, 2006).

South Africa

South Africa (SA) has been engaged in conversations about diversity since the advent of democracy in the 1990s. Women were appointed in leadership positions in government post 1994. Government focused on equality as a means to redress the inequalities of the apartheid regime, with preference given to previously disadvantaged individuals. Gender diversity in the workplace has received much attention with a notable progress on the percentage of women in the workplace, due mainly to legislation. Statistics SA asserts that 41% of the adult working

population in SA is composed of women (statssa, 2010). However, when moving up the corporate ladder, the proportion of women in the workplace decreases dramatically.

Business Women's Association (BWA), the largest association of business and professional women in the country, initiated the 'women in corporate leadership census' in SA. The BWA annual census confirms that women holding directorship positions are still a minority on the boards of South African publicly listed companies. The BWA census report revealed that women representation on boards is very miniscule at 16.6% (BWA South African Women in Leadership Census 2010, 2010).

Daily and Dalton (2003) argued for gender diversification of boards to become a business imperative based on three key reasons. Firstly, organisations need to leverage all available resources to compete effectively, women make up half of the working population, expanding the amount of resources at companies' disposal and should therefore, be considered for board positions. Their different experiences and perspectives may assist the board in considering a wider variety of customer needs and interests. Secondly, the addition of women to boards can send a powerful signal about possible career paths within the organisation, as female board members can serve as role models for aspiring female employees. Finally, inclusion of women to corporate boards positively affects the profitability of a company (Daily & Dalton, 2003).

1.2. Research Problem

Empirical studies conducted to examine the effect of board gender diversity on financial performance provide mixed or inconsistent evidence. While it is argued that the presence of women on boards may enhance financial performance (Campbell & Mínguez-Vera, 2008; Carter, et al., 2003), an opposing view suggests that gender diversity may negatively influence financial performance (Rose, 2007). To clarify the role and the impact of board gender diversity on financial performance, the field would benefit from additional empirical studies such as this one.

Although studies were conducted in countries such as the US, UK, Spain and Norway, among other countries (Adams & Ferreira, 2009; Brammer, Millington, & Pavelin, 2007; Campbell & Mínguez-Vera, 2008; Erhardt, Werbel, & Shrader, 2003), the researcher could not find any published study conducted using SA companies. In addition, some of the studies were not specific regarding percentage of women on the board, there was no control for industry and there were inconsistencies regarding measures of company performance employed.

Although there is overwhelming evidence regarding the qualities women bring to the board, it is still unclear how gender diverse boards affect companies' financial performance. The inconsistency of the evidence in different countries also suggests that research results may be country specific. Interest has emerged in SA, with a notable participation of organisations such as BWA conducting studies to determine the status of women in executive management and the board. South

African companies appoint women to top positions or even to the board, as a way to comply with legislation and achieve target numbers. That being said, the number of women in top positions is still very low. Therefore, a study that will empirically examine the effect of having women directors on financial performance of companies, may illuminate the business case for board gender diversity.

Due to the lack of conclusive evidence regarding the impact of gender diverse boards on company performance, this study will compare financial performance of companies with gender diverse boards to the financial performance of companies whose boards are not gender diverse, in order to examine which group performs better as measured by accounting-based and market-based ratios.

1.3. Research Objectives

The objectives of this research are:

- To establish whether companies with gender diverse boards perform better when compared to companies with boards that are not gender diverse, as measured by accounting-based and market-based ratios.
- To assess the differences in financial performance of companies with gender diverse boards across industries as measured by accounting-based and market-based ratios.

1.4. Research Purpose and Scope

The purpose of this research is to establish the association between gender diverse boards and financial performance of SA publicly listed companies. In this study, gender diverse boards are defined as boards comprising of 25 percent or more female representation. This figure was adopted from the BWA census that listed the top 70 South African publicly listed companies with 25 percent or more women representation on their boards. This study will also assess the differences in financial performance of such companies across industries.

1.5. Research Structure

The remainder of the research report is organised as follows. Chapter two presents the theoretical base for the relationship between board gender diversity and company financial performance. Chapter three restates the research objectives in the form of research questions in an attempt to crystallise what the researcher wants to examine based on a literature review, and chapter four discusses the data and empirical methodology employed. The results of the empirical analysis are presented in chapter five, followed by a discussion of the results in chapter six and chapter seven concludes the paper.

CHAPTER 2: LITERATURE REVIEW

2.1. Boards

Boards are defined as “the apex of the firm’s decision control system” (Fama and Jensen, 1983, p.311). The role of a board of directors has evolved over the years, it has moved from merely serving legal requirements to actually driving the company forward to meet its ambitions (Van der Walt & Ingley, 2001). A board of directors provide an important corporate governance mechanism (Campbell & Mínguez-Vera, 2008), that is, the quality of corporate monitoring and decision-making.

Boards are different to other groups or teams. Forbes & Milliken (1999) bring to the fore the characteristics that differentiate boards from other teams. They identified four distinctive features; firstly, boards are responsible only for monitoring and influencing strategy; secondly, there are many outsiders serving on a part-time basis; thirdly, board size on average is larger than that of other groups and finally, boards function episodically (Forbes & Milliken, 1999). By virtue of being a large group of outsiders meeting episodically, the quality of meetings is important, well established systems and processes are fundamental for the productivity and effectiveness of the board. Board processes such as effective decision-making, are therefore vital as it may be particularly difficult to stick to established processes due to the episodic nature of board meetings. In SA, the board charter sets out a

minimum of four board meetings per year as per the King III requirements (IODSA, 2010) further confirming the episodic nature of boards.

2.1.2. Board Composition

Some literature refers to board composition as the balance between executives and non-executives (Brammer, Millington, & Pavelin, 2009). In this study, board composition refers to the characteristics of board members in terms of gender, age, inside/outside director and educational background. A growing body of evidence demonstrates that boards are relatively homogenous when compared to the environment or society in which they operate, symptomatic of poor corporate governance and missed opportunities (Brammer et al., 2009; Singh & Vinnicombe, 2004). Therefore, diverse boards that better resemble the environment and society in which they operate may place companies in a better position to compete.

In terms of age, women directors are generally younger than their male counterparts by approximately four to five years (Simpson, Carter, & D'Souza, 2010), implying that women not only influence board diversity in terms of gender but also in terms of age, contributing to the diversity of views on the board.

Cohen & Bailey's (1997) review of what makes teams work, focused on the differences that exist amongst groups or teams. They argued that a group (board) with a certain composition may be better at performing one task than another, because the two tasks require two different set of skills for their effective performance. Therefore, diverse boards are argued to have an added advantage

pertaining to skills and abilities brought about by the inclusion of women to the board, enabling boards to be effective in performing different tasks.

2.2. Diversity

The definition of diversity is unclear as reflected in the multiplicity of meanings in literature (Herring, 2009). Generally, diversity refers to policies and practices that seek to include people, who are considered in some way, different from traditional members (Herring, 2009). Traditional members are people from similar backgrounds in terms of race or gender. In their study of understanding the effects of diversity in organisational groups, Milliken & Martins (1996) categorised diversity into observable (demographic) and non-observable (cognitive) dimensions. Demographic dimensions include age, race or ethnic background, and gender; and cognitive dimensions include education level, functional background, technical abilities, tenure in the organisation or socioeconomic background, and personality characteristics or values (Milliken & Martins, 1996).

Whilst most companies acknowledge the importance of making diversity a business imperative, it is often not a top business priority (Robinson & Dechant, 1997). Other business initiatives that present more compelling factual evidence of return on investment, take precedence over diversity initiatives. Robinson & Dechant (1997) conducted a literature review to build a business case for diversity with a focus on workplace diversity in terms of age, race and gender. In their work, they outline, describe and update the competitive and business reasons for

managing diversity. They identified cost savings as one of the reasons for managing diversity. When diversity is not noticeable in top positions or at board level, there is practically no one that serves as a model for aspirant diverse workforce. The perceived lack of opportunity for career growth is the primary reason professional and managerial women leave their jobs (Robinson & Dechant, 1997). This leads to increases in costs due to recruitment and training of new staff.

Robinson & Dechant (1997) further emphasised the benefits of diversity, stating that diversity enhances understanding of the market; hence a diverse board will be better able to create strategies to penetrate diverse markets. Diversity increases creativity and innovation, as these characteristics are not randomly distributed in the population. Lastly, diversity can also enhance problem solving, because the varieties of perspectives that emerge during discussions require evaluation. The above arguments are considered as they apply to gender diversity.

2.2.1. Gender diversity

Board gender diversity is essential because it presents a diversity of ideas in the boardroom. Simpson et al., (2010) examined the theoretical reasons why the presence of women on boards may or may not add value. One reason to include women on boards is that women embody a large pool of human capital that is available to an organisation. Even if only the most qualified women are selected, the pool of potential directors will increase (Simpson et al., 2010), this might minimise the current practice of one director for multiple companies. Singh et al.,

(2008) present a counter argument to this idea, stating that women may not have the right kind of human capital to become a director because they are highly educated with experience in medicine and academics and lack business experience. It is however important to highlight that this argument only holds for other industries, because education and experience in medicine and academics will serve as a needed human capital for relevant industries such as healthcare.

Another reason for inclusion of women on boards is that women, by virtue of their gender, are usually a minority on the board and therefore more of an outsider, less beholden to management and hence serve as better monitor of managers (Simpson et al., 2010). Adams & Ferreira (2009) found that women directors increase the ability of the board to monitor CEO performance.

Stephenson, (2004) discusses the findings of the Canadian conference board, which tracked the progress of Canadian companies with two or more women on the board between the years 1995 – 2001. The conference board concluded that boards with more women surpass all-male boards in their attention to audit and risk oversight and control. This could mean that when women are present on boards, the 'old boys club' norms are questioned and the decisions that are usually made outside the boardroom are now scrutinised by the minority (non-traditional members) in the boardroom seeking more clarity and understanding.

The business case for women directors implies that women are not substitutes for men directors of equal ability and qualifications; however, women may have unique attributes that may increase performance of the board, and ultimately performance

of a company (Simpson et al., 2010). Some of the attributes of women directors include providing new ideas and better communication (Milliken & Martins, 1996) and knowledge of female market segmentation (Simpson et al., 2010). Therefore, board gender diversity is beneficial as women bring along qualities that were previously absent on the board. The qualities that women possess are indicative of existing differences between the genders.

2.2.2. Gender differences

The behaviour of men and women in leadership roles has been debated extensively by academics. Gender differences in the context of leadership can be consequential, because differences can influence people's views about whether women should become leaders and advance to higher positions in organisational hierarchies (Eagly & Johannesen-Schmidt, 2001).

A study by Nielsen & Huse (2010) on the contribution of women on boards, uncovers underlying reasons that explain board behaviour. The authors applied the theory of gender-based differences of leadership to the context of boards by drawing on the work of Eagly & Johannesen-Schmidt (2001). They argue that directors are highly accomplished professionals with established track records as leaders, who bring their own leadership style and behaviour to the boardroom. Therefore, when examining board gender diversity, it is important to review gender differences in leadership roles.

Eagly & Johannesen-Schmidt (2001) analysed traditional thinking about leadership styles of men and women and presented their own framework for understanding these issues. They explain that facets of gender roles that are important to understanding leadership pertain to agentic and communal attributes (Eagly & Johannesen-Schmidt, 2001). Men possess more agentic characteristics than women, which include being assertive, controlling and more confident in a work setting. Agentic behaviours include speaking assertively, competing for attention, influencing others, initiating activity directed to assigned tasks, and making problem-focused suggestions.

Women on the other hand possess communal characteristics evident in their concern with the welfare of other people. In a work setting, communal behaviours include speaking tentatively, not drawing attention to oneself, accepting others' direction, supporting and soothing others, and contributing to the solution of relational and interpersonal problems (Eagly & Johannesen-Schmidt, 2001). Having gender diverse boards brings the different characteristics together and might draw on the strengths of both genders.

Leaders occupy roles defined by their specific position in a hierarchy and at the same time function under the constraints of their gender roles (Eagly & Johannesen-Schmidt, 2001). These differences could create stereotypes which may lead to the questioning of the capability of women leaders. At the same time these differences when embraced might enhance board working relationships between the genders and ultimately contribute to board effectiveness.

2.2.3. Resource-dependency theory

Another corporate governance theory referred to in literature is the resource-dependency theory, which emphasises the interdependence between organisations and entities in their external environment that control important resources (Hillman, Shropshire, & Cannella Jr., 2007). The pressure on companies for board gender diversity arises from a number of different stakeholders that companies depend upon, such as shareholders and society, and only a few organised interests argue against such board appointments (Hillman et al., 2007). Board's composition may also affect company reputation and credibility. Thus, board gender diversity adds legitimacy to an organisation (Milliken & Martins., 1996). This implies that gender diverse boards are beneficial to organisations over and above their effect on financial performance.

Terjesen, Sealy, & Singh (2009) conducted a research review that examines how corporate board gender diversity influences board effectiveness that in turn affects performance. These authors stated that diversity scholars use the resource dependency framework to argue that the increasingly complex and ever changing environment requires leadership from individuals who can provide a breadth of resources, including legitimacy and open channels of communication among other things. Women directors may be able to provide important and unique connections to the market due to their enhanced understanding of the market as consumers, and their presence may offset the pressure created by important stakeholders.

2.2.4. Percentage of women on the board

When discussing gender diversity, it is important to highlight the issue of critical mass. Critical mass theory (Kanter, 1977) suggests that the nature of group interactions depend on size. When the size of a subgroup reaches a certain threshold, also known as critical mass, the subgroup's degree of influence tends to increase. Therefore, this theory suggests that when the minority group reaches critical mass, a qualitative change will take place in the nature of group interactions (Torchia, Calabro, & Huse, 2011)

It is argued that solo women on the board have to fight to be taken seriously, some of these women are appointed to the board as a means to meet shareholder's expectations, and they are subsequently subjected to tokenism (Konrad, Kramer, & Erkut., 2008). Konrad et al., (2008) identified three reasons why numbers make a difference; firstly, multiple women help to break the stereotype that solo women experience. Secondly, more women help to change an all-male communication dynamic. Finally, research on influence and conformity indicates that the number 'three' may somewhat be a magic number in group-dynamics (Konrad et al., 2008). The significance of having a critical mass is that people with minority opinions are considerably more likely to voice their opinions against a strong majority when they know they have an ally in the room (Konrad et al., 2008).

Torchia et al, (2011), assessed whether an increased number of women on corporate boards result in a build-up of critical mass that substantially contributes to firm innovation. Their results suggest that women directors' contribution to the level of company innovation becomes evident when the critical mass of three is

reached, and that board strategic tasks have a relevant mediating effect on this relationship.

The argument regarding critical mass is somewhat lacking in that the impact of the opinions of three women in a board of eight directors will most probably differ to the impact of the opinions of three women in a board of 20 directors. Therefore, the number of women on boards should be relative to the size of the board, expressed as a percentage of the board.

Proportions of women in different industries

Some literature suggests that women board members are mainly found in high numbers in certain industries. According to Brammer et al., (2009), industries that predominantly serve final consumers rather than business customers, tend to serve relatively high proportions of women. These include consumer goods manufacturing (clothing and household goods), retail, banking, utilities and media. Hillman et al., (2007) tested the hypothesis which states that, firms in industries with greater female employment bases are positively associated with female representation on boards. Their findings support the above-mentioned hypothesis, therefore the nature of industry is likely to affect the value of benefits from female representation on boards.

2.3. Mediating role of board processes

According to empirical evidence, processes are mediators of the relationship between different types of diversity and effectiveness within teams (Milliken & Martins, 1996). Forbes & Milliken (1999) among other scholars have recognised the role of board processes as a mediator in the relationship between board composition and firm-level outcomes. They argued for three key board processes as having potential to impact on board task performance. These are effort norms, cognitive conflict and the use of knowledge and skills. Nielsen & Huse (2010) further distinguished between two types of board processes that have a strong influence on the exchange of information and decision-making, that is, board working structure and board decision-making culture.

2.3.1. Board working structure

Board working structure relates to the routines that facilitate interaction between board members, these are the norms and rules that support the board's decision-making processes (Nielsen & Huse, 2010). Forbes & Milliken (1999) referred to similar board process as effort norms, which entails ensuring preparation, participation and analysis. Adams & Ferreira (2009) conducted an analysis of the impact of women on boards; they found that women have better board meeting attendance than men on the same board. These findings suggest that women may play an important role in board operations leading to board effectiveness.

2.3.2. Board decision-making culture

Board decision-making culture relates to the ability of board members to exchange knowledge and information effectively. Open debate and conflict are two aspects of board's decision-making culture (Nielsen & Huse, 2010). The advantages related to knowledge, perspective, creativity, and judgement brought forward by heterogenous groups in enhancing the quality of decision making may be superior to those related to the smoother communication and coordination associated with homogenous groups (Francoeur, Labelle, & Sinclair-Desgagné, 2008) .

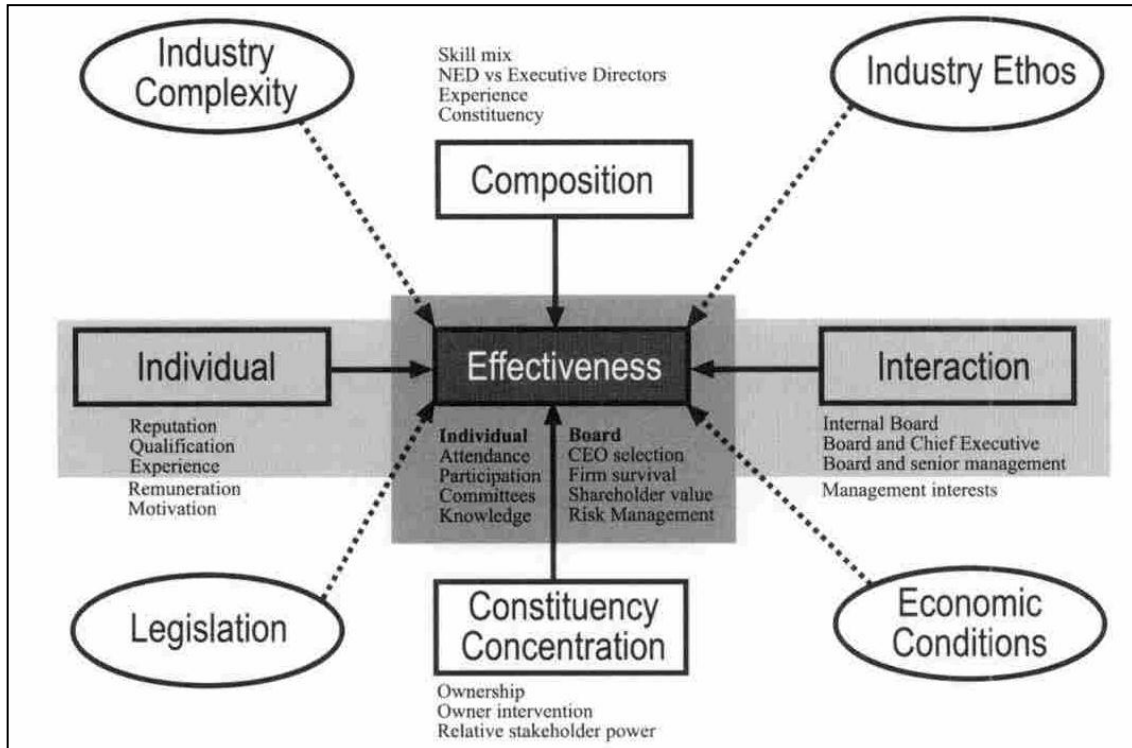
Conflicts have a dual nature, they can be both beneficial as well as detrimental to the group (board) (Minichilli, Zattoni, & Zona, 2009). In addition to being different from men, women directors have different backgrounds to that of their male counterparts. Women are more likely to be from non-business backgrounds, they may possess a better understanding of segments of some markets that may improve creativity and quality of the decision-making processes (Singh & Vinnicombe, 2004). Therefore, by including women, the decision-making culture of the board may positively change.

2.4. Board effectiveness

As boards grasp the strategic significance of the changing circumstances faced by their organisations, and seek to provide appropriate leadership to ensure business survival and success, increasing importance is attached to improving board

effectiveness (Van der Walt & Ingley, 2001). **Figure 1** shows the different factors which influence board effectiveness.

Figure 1: Elements affecting board effectiveness



Source: Van der Walt, N. and Ingley, C. (2001). Evaluating board effectiveness: The changing context of strategic governance. *Journal of Change Management*, 1 (4), 313-331.

The elements which influence board effectiveness include controllable factors such as internal dynamics of the board, board composition, constituency concentration and individual factors related to the directors themselves; and uncontrollable factors such as industry ethos, industry complexity, legislative environment and

economic conditions (**Figure 1**) (Van der Walt & Ingley, 2001). The model illustrates that there are factors that companies and board members can remodel in order to compel board effectiveness, and those are the controllable factors. On the other hand, there are other forces at play that may have an impact on board effectiveness which are not under the control of the company. Therefore when assessing board effectiveness, it is essential to keep in mind that certain external forces that may supersede the internal factors may be at play and consequently impact on company performance.

Most of the empirical work done examines the influence of controllable factors such as board composition on board effectiveness (Adams & Ferreira, 2009; Campbell & Mínguez-Vera, 2008; Erhardt et al., 2003). Attendance, participation and knowledge elements of board effectiveness on the individual level (Van der Walt & Ingley, 2001) relate to the mediating processes previously alluded to. Therefore, processes play a major role as a mediator between board attributes and board effectiveness.

2.4.1. Dimensions of board effectiveness

Nielsen & Huse (2010) further chose operational and strategic control as the main dimensions of board effectiveness. They elucidated that operational control tasks refer to board's responsibility to supervise managerial decisions regarding the firm's financial and accounting situation, requiring strong quantitative background knowledge and skills.

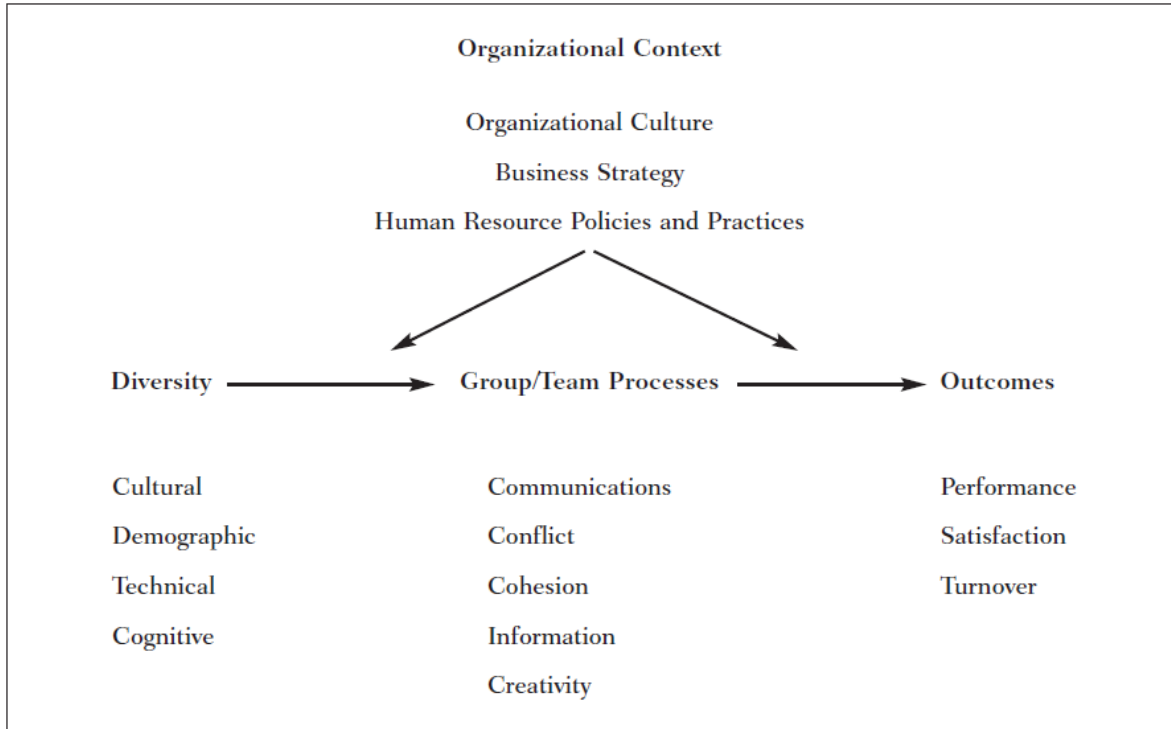
Strategic control on the other hand, refers to monitoring managerial decisions regarding firm' strategy and organisational practices and policies such as health, safety, and the environment, and assumes more analytical and visionary skills (Nielsen & Huse, 2010). They further conclude that women directors are more valued for their ability to provide strategic input and productive discourse (Bilimoria, 2000), that is, presentation of different perspectives and viewpoints generating numerous alternatives to strategy.

Board effectiveness also acts as a mediator or intervening construct between board processes and firm performance (Forbes & Milliken, 1999). Therefore, it can be argued that women's contribution to boards, which is apparent when examining board processes, has a potential to drive organisational performance.

2.5. Board gender diversity and financial performance

The theory base for diversity-performance relationship is derived from Kochan and Colleagues (Kochan, Bezrukova, Ely, Jackson, Joshi, Jehn, Leonard, Levine & Thomas, 2003). Their model of effects of diversity on group processes and outcomes states that diversity (demographic and cognitive) enhances processes (communications, conflict, cohesion, information and creativity) leading to outcomes such as performance and satisfaction, (**Figure 2**). This model is all encompassing, referring to diversity types over and above demography. Because gender diversity is a subset of demographic dimension of diversity, the model will apply to this research.

Figure 2: The model of effects of diversity on performance



Source: Kochan, T. Bezrukova, K. Ely, R. Jackson, S. Joshi, A. Jehn, K. Leonard, J. Levine, D. and Thomas, D. (2003). The effects of diversity on business performance: report of the diversity research network. *Human Resource Management*, 42 (1), 3-21.

2.6. Summary

The results based on studies conducted on gender diversity and corporate performances are mixed (Simpson et al., 2010). On the one hand, empirical evidence suggests that there is no significantly positive relationship between the percentage of women on boards and several accounting measures of financial

performance, and in some cases the empirical evidence shows significantly negative relationships (Shrader, Blackburn, & Iles., 1997). A study of Danish firms by Smith et al., (2006) failed to find a significant link between women on boards and accounting measures of firm performance, results that are consistent with the findings of Rose, (2007) that no significant association exists between women on Danish boards and firm performance.

On the other hand, Erhardt et al., (2003) reports that the percentage of women on the boards of large US companies positively correlates to two accounting measures of performance, return on assets and return on investment. Carter et al., (2003) found a positive and significant relationship between Tobin's Q and the percentage of women on the boards of Fortune 1000 firms, after controlling for size, industry and other corporate governance measures. Campbell & Mínguez-Vera, (2008) found that women on the board have a positive effect on firm value as measured by Tobin's Q.

Discrepancies regarding the design of the studies exist where some studies did not control for size and industry variables. Most importantly, the studies were based on a percentage of women on the board, which is not made explicit. Other reasons could be due to utilisation of different estimation methods employed by various researchers.

Tobin's Q is the most frequently used measure of company value in empirical studies. It is defined as the sum of the market value of stock and the book value of debt divided by the book value of total assets (Campbell & Mínguez-Vera, 2008).

Tobin's Q as a measure of firm value reflects the market's expectations of future earnings and is thus a good proxy of firm's competitive advantage (Wernerfelt & Montgomery, 1988). Accounting measures, such as return on equity and return on assets are based on events that have already occurred, as opposed to Tobin's Q, which is forward-looking and based on market performance.

Kang, Ding and Charoenwong (2010) studied the association between appointing women to the board and company performance of Singaporean companies. They used a standard financial event study method to assess whether there were differences in return and share price after appointment of women directors. Their findings showed that there was a positive effect on the stock market after the announcement of women director appointment and some companies were able to maintain those returns (Kang et al, 2010). Positive effects on the stock market are indicative of the power of market influence on company performance.

Contrary to the arguments of Kang et al, (2010) there is a concept of 'Glass cliff'. The concept emerges from evidence suggesting that where women had been appointed to the boards of top 100 companies of the London Stock Exchange, those companies had also suffered from poor stock market performance (Haslam, Ryan, Kulich, Trojanowski, 7 Atkins, 2010). It is argued that this negative outcome could be indicative of a second wave of discrimination that women must overcome (Ryan & Haslam, 2007). They extend the metaphor of 'glass ceiling', and argue that women rather than men are more likely to find themselves on a 'glass cliff' such that their leadership positions stand a greater risk of failure. This may

suggest that women are intentionally appointed to boards of failing companies, and not because their presence negatively influences returns.

Campbell & Mínguez-Vera, (2008) further articulate that arguments for women representation can be grouped into ethical aspects, where they state that it is immoral to exclude women from boardrooms based on gender; and economical aspects, based on the proposition that firms that fail to elect the right candidate for the board damage their financial performance. Norway is one of the countries with a higher proportion of women on corporate boards (Nielsen & Huse, 2010) and they benefit from a strong economy. That being said, Norway' strong economy could be attributed to other factors beyond board gender diversity of companies.

In summary, the literature reviewed suggests that boards that are gender diverse may have an impact on the financial performance of a company due to the improved interaction amongst board members. Women are said to bring a new perspective to the board that may contribute to the competitive advantage of the company. It is however, not easy to conclude that board gender diversity positively impacts financial performance based on the available empirical evidence because of lack of consistency. It is therefore imperative to conduct a study that will review empirical evidence in aid of answering the research questions.

CHAPTER 3: RESEARCH QUESTIONS

3.1. Overview

Empirical studies discussed in the previous chapter have shown that gender diverse boards affect company performance in terms of both market-based and accounting-based measurements. This study will examine both historical and anticipated future financial performance of companies by analysing both accounting-based and market-based measurements. This research will focus on both accounting-based and market-based measurements for the following reasons:

Accounting-based measurements:

- Accounting-based measurements are backward-looking (based on assessments of how the company has performed in the recent past, therefore they are based on historical data);
- Accounting-based measurements are based on self-reported company data that is compiled in accordance with prevailing legally enforceable accounting principles; and
- Accounting-based measurements provide an objective analysis of company performance.

Market-based measurements:

- Market-based measurements are forward-looking (do not only reflect company's current position but also the potential to be successful in the future) (Devers, Cannella Jr, Reilly & Yoder, 2007);
- Market-based measurements are heavily influenced by market reactions that reflect investor perceptions and behaviour (Fama, 1991). Amongst other things, these are shaped by market sentiment, in particular confidence, behaviour and beliefs of other investors and analysts' views about a company's prospects. Although activities of a company are important, these perceptions are often well beyond the company's control; and
- Market-based measurements provide a subjective measure of company performance.

To measure financial performance of companies, the accounting-based measurements used in the study were profitability ratios ROE and ROA. ROE is the most important ratio in the suite of ratios; it relates the increase in value of the business during the year to the total value of the business at the end of the year (Graham, 2007). ROA explains how well the business has been able to use its assets to generate profits (Graham, 2007). One market-based measurement used in this study which has been used extensively in other studies is Tobin's Q, as a measure of company value it reflects the market's expectations of future earnings.

Based on the research objectives and the literature review, the following research questions were formulated:

1. The first research question was stated as follows:

Is there a link between gender diverse boards and financial performance of SA publicly listed companies? Specifically, do companies with a minimum of 25 percent women representation on the board perform better than those with less than 25 percent, as measured by ROE, ROA and Tobin's Q?

2. The second research question was stated as follows:

Are there differences in financial performance of companies with gender diverse boards across industries?

CHAPTER 4: RESEARCH METHODOLOGY

4.1. Overview

The aim of this study is to establish a link between gender diverse boards and financial performance of companies listed on the JSE. A few empirical studies discussed in chapter two have been conducted to assess the relationship between board gender diversity and financial performance. Of note were the mixed results of empirical studies with some authors concluding that results may be country-specific (Carter, D'Souza, Simkins, & Simpson, 2010). In South Africa, women have only recently been actively involved in the workplace, with very few women at the top of the corporate ladder. The progression is very slow, and the contribution of these women to company performance is not known. Therefore, this study was designed to compare financial performance of companies with gender diverse boards to that of companies whose boards are not gender diverse, in order to analyse differences in performance.

In this study, two variables were assessed, namely, gender diverse boards and financial performance. Gender diverse board is a categorical variable defined as boards with 25 percent or more female representation on the board. Companies were selected from the BWA 2010 census report list of top 70 companies with 25 percent or more women directors and the comparative sample accessed from JSE. Financial performance is a numerical continuous variable that was measured using accounting-based ratios ROE and ROA, and the market-based ratio Tobin's Q.

Return on equity was measured by dividing net profits by equity:

$$\text{ROE} = \frac{\text{Net profits}}{\text{Equity}}$$

Return on assets was measured by dividing net profits by total assets:

$$\text{ROA} = \frac{\text{Net profits}}{\text{Total assets}}$$

Tobin's Q was measured by the sum of the market value of stock and the book value of debt divided by the book value of total assets:

$$Q = \frac{\text{stock (market)} + \text{Debt (book)}}{\text{Total Assets (book)}}$$

Different sources were used to access company information. McGregor BFA website was the primary source and when data was not available, financial statements were downloaded from annual reports accessed from companies' websites. McGregor BFA is the pre-eminent provider of stock market, fundamental research data and financial news to the corporate market at large. BWA's

classification according to sectors was utilised in order to compare financial performance of these companies across industries.

4.2. Research design

The research design was quantitative in nature, the methodology employed was that of a descriptive comparative study in which data were collected to compare two groups of entities. Published financials from McGregor BFA and companies' websites were downloaded for comparison purposes. Financial ratios of companies with gender diverse boards were compared to financial ratios of companies whose boards were not gender diverse in order to analyse differences. Data from companies' income statements and balance sheets was used to calculate the selected financial ratios, ROE, ROA and Tobin's Q.

This study was designed to compare the financial performance of two groups of companies to determine whether companies with gender diverse boards perform better than companies with boards that are not gender diverse.

The research followed the process below:

- One sample of companies was selected from the BWA census' top 70 companies with 25 percent or more female representation on boards;
- The comparator sample was selected from similar industries from both the main board and Alt-X board of the JSE;

- Factsheets were downloaded from McGregor BFA website which contained published financial statements and information on share prices;
- The companies' websites were used to download annual reports of companies where data was not available in McGregor database;
- Mathematical calculations to compute the ratios were carried out on Microsoft Excel; and
- Statistical analyses were conducted using SAS software.

4.3. Population

A population is defined as the total collection of elements about which we wish to make some inferences (Blumberg, Cooper, & Schindler, 2008, p.228). The study population was a list of all publicly listed companies with 25 percent or more female representation on the board from BWA census and companies with less than 25 percent of women on boards selected by industry from JSE. The BWA report is based on an annual census focusing on women in executive management and boards. It contains a list of top 70 companies with 25 percent or more board seats occupied by women, the 2010 list was constructed from 2009 financial results of publicly-listed companies (**Appendix 1**). When 2011 BWA report was released, there were still 70 companies with 25 percent or more board seats occupied by women, the companies sampled in this study also appeared on the 2011 BWA report.

4.4. The unit of analysis

The unit of analysis is the level at which the research is performed and which objects are researched (Blumberg, *et al*, 2008). It is the major entity that is being analysed. The unit of analysis in this study is therefore the board.

4.5. Sampling method and size

There were two sets of samples selected for the purposes of the study. The criterion that all companies had to meet in order to qualify for the study was a listing on the JSE main board and Alt-x board. For the gender diverse sample, companies were selected from BWA list of companies with 25 percent or more board seats occupied by women, and for the sample that is not gender diverse, selection was made directly from JSE, conveniently matching selected industrial sectors to be analysed from the BWA report. Therefore the sampling method employed was a non-probability purposive judgement sampling, whereby companies were selected on the provision that they meet the inclusion criteria.

Six industrial sectors were selected from the BWA 2010 census report on the basis that each industrial sector must comprise a sufficient number of companies for the analysis. Specifically, each industrial sector must at least have three companies, to allow for comparison purposes. The sectors were software and computer services, construction and materials, travel and leisure, support services, mining and general retailers. All the other industrial sectors in the BWA report comprised

one or two companies and were therefore deemed not sufficient for inclusion in the study.

Companies were disqualified and excluded from the study when their financial data was not available from both McGregor BFA website and their companies' website. The BWA list of 70 companies also included 18 state-owned enterprises, which were excluded from the sample because of unavailability of financial information. It was assumed that JSE-listed companies which were not on the BWA list of top 70 companies did not meet the minimum 25 percent women representation on boards' criterion and hence by default, their boards were considered not gender diverse. After sorting the inclusion and exclusion criteria, the outcome was two groups, each comprising 32 companies.

BWA's classification according to sectors which is similar to that of JSE was followed to assess differences across industries. The sampling method was therefore also in line with stratified sampling, where populations are divided into homogenous subgroups to include elements of the population in each sub-population (Blumberg, *et al*, 2008). The sub-populations in this study were the industrial sectors which were used in the analysis of the second research question.

4.6. Data collection

The data collection method was observational. Archival financial data was downloaded from McGregor BFA and companies' websites. A list of the target populations was obtained from BWA census report and the JSE. Financial data

was collected from the year 2003, which was in line with the commencement of the BWA census which has been running since 2004. This was a retrospective longitudinal study comparing financial data of companies with a minimum of 25 percent women representation to companies with less than 25 percent women on boards. Financial data was collected for the period 2003 to 2010 as per available BWA reports.

All the BWA reports were downloaded from the BWA website except for the 2009 and 2011 BWA census reports, which were collected from BWA offices in Midrand, Gauteng South Africa. Companies' website addresses were accessed from McGregor BFA. McGregor BFA was the primary source of financial data, and where information was not available; companies' websites were used to access annual reports that contained financial data required. Financial statements that were used were income statements and balance sheets, and market data such as share prices that were required to calculate market values of equity were also available from the McGregor excel downloadable factsheets.

4.7. Data analysis

According to Blumberg, et al (2008) data analysis involves reducing accumulated data to a manageable amount, looking for patterns and using statistical techniques. In order to analyse the first research question, average ROE, average ROA and Tobin's Q were calculated for all companies as stipulated in the overview section of this chapter. Although data was collected from 2003 for most companies,

averages used for statistical purposes were taken from the year 2008 to 2010. The main reason for this three year period was the fact that most companies did not appear on the 2003 to 2008 BWA census, which means that their boards were not gender diverse then. Another reason is that most companies were not listed on JSE at the time and hence their financials were not available. A closer examination of the BWA report also revealed that the BWA criteria have changed, the 2010 report included all subsidiaries in the census. This is a new practice and has had an impact on the BWA results which are significantly different from past reports.

The average ROE, ROA and Tobin's Q ratios of companies with gender diverse boards were compared to similar ratios of companies whose boards were not gender diverse according to this study's definition of gender diversity. After running descriptive statistics, it was clear that the data did not conform to normal distribution and hence, two sample T tests which measure the difference between means of the two samples (Albright, Winston, and Zappe, 2009) could not be used. The alternative, non-parametric tests Wilcoxon scores, were therefore utilised.

In order to analyse the second research question, one way analysis of variance (ANOVA), used to test the differences between means when there are several distinct populations was considered (Albright, *et al*, 2009). ANOVA was selected to analyse the differences across the industrial sectors. Due to non-conformity to normal distribution and small sample sizes, non-parametric alternative, the Kruskal Wallis test was used.

4.8. Limitations

The research has several limitations. The definition of gender diversity employed is limited, it focuses on boards with 25 percent or more women representation based on BWA report. However, gender diversity definition does not necessarily have to be within these boundaries. The study will also focus on the percentage of women on the board regardless of characteristics such as educational background and experience; this could be a future research opportunity.

Due to its descriptive nature, the study does not explain why gender diversity influences financial performance, it only makes a comparison. In the study, companies were compared across industries; however, no control for size has been taken into consideration, which could influence the findings. The sample size is too small due to unavailability of financial data on some of the selected companies.

CHAPTER 5: RESULTS

5.1. Overview

This chapter presents the findings of this research. The first section presents the actual average values of ROE, ROA and Tobin's Q exhibited by companies in the data set. The final section presents the statistical outputs from the data analysis. This section is further subdivided to focus on the findings related to each research question. Wilcoxon scores test was used to analyse the first research question and Kruskal-Wallis analysis used to analyse the second research question.

5.2. Findings from the data

The data was collected as outlined in chapter 4. **Table 1** depicts the calculated average values of ROE, ROA and Tobin's Q for companies with a minimum of 25 percent women on the board and the comparative group with less than 25 percent women representation on the board.

Table 1: ROE, ROA and Tobin's Q for all companies

Companies ≥ 25 % women	ROE	ROA	Q	Companies < 25 % women	ROE	ROA	Q
Software & Computer Services							
Datacentrix Holdings	30%	17%	1.81	Gijima	31%	9%	1.23
Spescom	11%	4%	0.84	UCS	11%	6%	1.03
Paracon Holdings	15%	12%	1.91	Securedata	6%	3%	1.04
Silverbridge Holdings	24%	15%	1.08	Isa Holdings	27%	20%	1.86
Adapt IT Holdings	26%	17%	0.96	Convergenet	9%	6%	0.65
Business Connexion Group	8%	5%	1.09	Comp clear	18%	16%	2.41
EOH Holdings	25%	10%	1.45	Datatech	1%	0%	0.68
Support Services							
Mix Telematics Africa	10%	6%	1.14	Micromega	10%	6%	0.66
Adcorp Holdings	22%	11%	1.42	Morvest	-28%	-13%	0.70
Workforce Holdings	8%	3%	0.76	Dialogue	-52%	-7%	0.59
Rare Holdings	-6%	0%	0.87	Lonrho	-19%	-13%	9.78
Primeserv Group	17%	9%	0.71	Kelly	27%	10%	1.33
Metrofile Holdings	31%	10%	1.70	Excellerate	13%	6%	0.87
Travel & Leisure							
Spur Corporation	13%	10%	2.32	Famous brands	32%	17%	3.13
Gooderson Leisure Corporation	11%	8%	0.67	Queensgate	-8%	-7%	0.40
Cullinan Holdings	18%	5%	1.86	The Don	-2%	-1%	0.68

Construction & Materials							
Group Five	18%	4%	1.08	Aveng	6%	3%	1.12
Brikor	-13%	-4%	0.72	African Brick	-52%	-26%	0.74
Sea Kay Holdings	-66%	-10%	0.95	Protech	36%	12%	0.95
Mazor Group	27%	23%	1.07	Afrimat	13%	9%	0.87
Wilson Bayly Holmes	34%	9%	1.33	Basilread	20%	7%	0.96
Mining							
Impala Platinum	21%	15%	2.17	Lonmin	3%	1066%	8.74
Anooraq Resources Corporation	232%	-59%	2.60	Bauba	946%	-41%	0.63
Merafe Resources	20%	13%	1.29	Miranda	-4%	-3%	0.56
Petmin	19%	14%	1.17	Sentula mining	9%	4%	0.73
Platmin	-3%	-3%	5.93	Eastplats	1%	1%	7.83
Simmer & Jack Mines	3%	14%	0.91	Randgold	143%	44%	1.94
Keaton Energy Holdings	0%	0%	1.63	Hwange	4%	3%	3.16
General Retailers							
Woolworths Holdings	33%	12%	2.63	Mr Price	35%	19%	3.74
African & Overseas Enterprises	8%	6%	0.23	TFG	26%	15%	2.02
Hardware Warehouse	9%	4%	1.05	Alert steel	-26%	-2%	0.98
Rex Trueform clothing company	15%	12%	0.29	Truworhts	40%	31%	4.75
AVERAGE	20%	6%	1.43	AVERAGE	-19%	38%	2.09

5.3. Findings from statistical analysis

The first subsection will present the variables that were used in the analysis, the different categories and the industrial sectors used in the study. The final subsection presents the statistical analyses that were performed.

5.3.1. Variables in the analysis

Table 2: Description of variables and industrial sectors in the study

Variables	Description
ROE	Return on equity
ROA	Return on assets
Q	Tobin's Q
>=25% woman	25% or more board women
<25% woman	Less than 25% board women
<i>Alpha</i> (α)	0.05 presenting 5% level of significance
Industrial Sectors	
SCS	Software and Computer Services
SS	Support Services
CM	Construction and Material
TL	Travel and Leisure
MIN	Mining
GR	General Retailers

5.3.2. First research question

- The first research question was stated as follows:

Is there a link between gender diverse boards and financial performance of SA publicly listed companies? Specifically, do companies with a minimum of 25 percent women representation on the board perform better than those with less than 25 percent, as measured by ROE, ROA and Tobin's Q?

Descriptive statistics

Table 3 presents a summary describing the data. There were 32 companies analysed for all variables. The standard deviation data points were low indicating very minimal variance in the data, therefore the data was not spread far out from the mean.

Table 3: Descriptive statistics for all companies

Variable	Minimum 25% Board women			Less than 25% board women		
	ROE	ROA	Q	ROE	ROA	Q
Count	32	32	32	32	32	32
Mean	0.1951	0.0607	1.4271	-0.1924	0.3751	2.0862
Median	0.1650	0.0950	1.1150	0.0900	0.0600	1.0050
Std. Dev	0.4285	0.1372	1.0162	1.7232	1.8830	2.4300

Also highlighted in Table 3 was the mean ROE, for companies with 25 percent or more board women showed a higher performance at 0.1951, compared to the mean ROE of companies with less than 25 percent of board women at -0.1924, consistent with the median. The mean and median for ROA observed were contradictory; the median indicates a better ROA performance at 0.0950 for companies with 25 percent or more women on the board compared to 0.0600 for companies whose boards are not gender diverse.

Tobin's Q on the other hand showed that market expectation of future earnings for companies with 25 percent or more females on the board was lower at 1.4271 than that of companies with less than 25 percent females on the board at 2.0862. However, it is important to note that the average ratio of both groups was above 1.0, which means that companies from both samples were not undervalued, the market values them higher compared to their book value.

Statistical analysis

In order to analyse the first research question, the Wilcoxon two-sample non-parametric test procedure was followed. Although there were observations that were clear outliers, for the purposes of running the statistical tests, there was no need to remove these observations because non-parametric tests are not influenced by outliers.

Financial performance as measured by ROE

Table 4: Wilcoxon scores for financial performance as measured by ROE

Wilcoxon Scores (Rank Sums) for Variable ROE Classified by Variable Company					
Percentage Women	N	Sum of Scores	Expected Under H0	Std Dev Under H0	Mean Score
>=25% woman	32	1139.50	1040.0	74.4478	35.6093
<25% woman	32	940.50	1040.0	74.4478	29.3906

Wilcoxon Two-Sample Test	
Statistic	1139.5000
Normal Approximation	
Z	1.3298
One-Sided Pr > Z	0.0918
Two-Sided Pr > Z	0.1836
t Approximation	
One-Sided Pr > Z	0.0942
Two-Sided Pr > Z	0.1884
Z includes a continuity correction of 0.5.	

The results illustrated in **Table 4** indicate that companies with gender diverse boards perform better than companies with boards that are not gender diverse, when measured by ROE. The mean ROE for companies with gender diverse

boards was higher at 35.6093 compared to the mean ROE at 29.3906 of companies whose boards are not gender diverse.

The *p-value* at 0.0942 is greater than α , therefore there is not enough statistical evidence to suggest that there is a significant difference in financial performance between companies with a minimum 25 percent of board women and companies with less than 25 percent of board women as measured by ROE.

Financial performance as measured by ROA

Table 5: Wilcoxon scores for financial performance as measured by ROA

Wilcoxon Scores (Rank Sums) for Variable ROA Classified by Variable Company					
Percentage Women	N	Sum of Scores	Expected Under H0	Std Dev Under H0	Mean Score
>=25% woman	32	1110.50	1040.0	74.396621	34.703125
<25% woman	32	969.50	1040.0	74.396621	30.296875

Wilcoxon Two-Sample Test	
Statistic	1110.5000
Normal Approximation	
Z	0.9409
One-Sided Pr > Z	0.1734
Two-Sided Pr > Z	0.3468

Wilcoxon Two-Sample Test	
t Approximation	
One-Sided Pr > Z	0.1752
Two-Sided Pr > Z	0.3503
Z includes a continuity correction of 0.5.	

The results illustrated in **Table 5** indicate that companies with gender diverse boards performed better than companies with boards that are not gender diverse, when measured by ROA. The mean ROA for companies with gender diverse boards was higher at 34.7031 compared to the mean ROA at 30.2968 of companies whose boards are not gender diverse.

The *p-value* at 0.1752 is greater than α , therefore there is not enough statistical evidence to suggest that there is a significant difference in financial performance between companies with a minimum 25 percent board women and companies with less than 25 percent of board women as measured by ROA.

Financial performance as measured by Q

Table 6: Wilcoxon scores for financial performance as measured by Q.

Wilcoxon Scores (Rank Sums) for Variable Q Classified by Variable Company
--

Percentage Women	N	Sum of Scores	Expected Under H0	Std Dev Under H0	Mean Score
>=25% woman	32	1072.50	1040.0	74.466569	33.515625
<25% woman	32	1007.50	1040.0	74.466569	31.484375

Wilcoxon Two-Sample Test	
Statistic	1072.5000
Normal Approximation	
Z	0.4297
One-Sided Pr > Z	0.3337
Two-Sided Pr > Z	0.6674
t Approximation	
One-Sided Pr > Z	0.3344
Two-Sided Pr > Z	0.6689
Z includes a continuity correction of 0.5.	

The results illustrated in **Table 6** indicate that companies with gender diverse boards perform better than companies with boards that are not gender diverse, when measured by Q, although the differences in the mean scores for Tobin's Q were small. The mean Q for companies with gender diverse boards was higher at 33.5156 compared to the mean Q at 31.4843 of companies whose boards are not gender diverse.

The *p-value* at 0.3344 is greater than α , therefore there is not enough statistical evidence to suggest that there is a significant difference in financial performance between companies with a minimum 25 percent of board women and companies with less than 25 percent of board women as measured by Tobin's Q.

Therefore, although the mean scores for the test indicate that companies with 25 percent or more women on the board perform better than companies with less, these results were not statistically significant at a significance level of 5%.

5.3.3. Second research question

- The second research question was stated as follows:

Are there differences in financial performance of companies with gender diverse boards across industries?

The sample sizes in each industrial sector were very small, the population was not normally distributed, and hence non-parametric techniques were used to measure the differences of the populations being studied. The Kruskal Wallis test was used to assess the differences in the means.

Financial performance differences as measured by ROE

Table 7: Kruskal Wallis test for analysis of variance using ROE

Wilcoxon Scores (Rank Sums) for Variable ROE Classified by Variable Sector					
Sector	N	Sum of Scores	Expected Under H0	Std Dev Under H0	Mean Score
CM	5	78.50	82.50	19.253718	15.700000
GR	4	63.50	66.00	17.537058	15.875000
MIN	7	107.50	115.50	21.921322	15.357143
SCS	7	139.00	115.50	21.921322	19.857143
SS	6	95.50	99.00	20.697125	15.916667
TL	3	44.00	49.50	15.456364	14.666667

Kruskal-Wallis Test	
Chi-Square	1.1941
DF	5
Pr > Chi-Square	0.9454

The mean scores of companies in the different industrial sectors did not exhibit much difference (**Table 7**). The software and computer services sector performed better compared to the other industries with a mean score of 19.8571.

The *p-value* at 0.9454 is greater than α , therefore there is not enough statistical evidence to suggest that there is a significant difference in financial performance across industrial sectors of companies with a minimum 25 percent board women as measured by ROE.

Financial performance differences as measured by ROA.

Table 8: Kruskal Wallis test for analysis of variance using ROA

Wilcoxon Scores (Rank Sums) for Variable ROA Classified by Variable Sector					
Sector	N	Sum of Scores	Expected Under H0	Std Dev Under H0	Mean Score
CM	5	62.00	82.50	19.236039	12.400000
GR	4	68.50	66.00	17.520955	17.125000
MIN	7	117.50	115.50	21.901194	16.785714
SCS	7	151.00	115.50	21.901194	21.571429
SS	6	84.50	99.00	20.678121	14.083333
TL	3	44.50	49.50	15.442172	14.833333

Kruskal-Wallis Test	
Chi-Square	3.5298
DF	5
Pr > Chi-Square	0.6189

Table 8 illustrates many differences in mean scores as measured by ROA compared to the ROE results seen in Table 7. Software and computer services still outperformed the other industries as measured by ROA.

The *p-value* at 0.6189 is greater than α , therefore there is not enough statistical evidence to suggest that there is a significant difference in financial performance

across industrial sectors of companies with a minimum 25 percent board women as measured by ROA.

Financial performance differences as measured by Q.

Table 9: Kruskal Wallis test for analysis of variance using Q

Wilcoxon Scores (Rank Sums) for Variable Q Classified by Variable Sector					
Sector	N	Sum of Scores	Expected Under H0	Std Dev Under H0	Mean Score
CM	5	61.50	82.50	19.266083	12.300000
GR	4	46.00	66.00	17.548320	11.500000
MIN	7	159.00	115.50	21.935400	22.714286
SCS	7	122.50	115.50	21.935400	17.500000
SS	6	81.00	99.00	20.710417	13.500000
TL	3	58.00	49.50	15.466291	19.333333

Kruskal-Wallis Test	
Chi-Square	6.1785
DF	5
Pr > Chi-Square	0.2892

An interesting turn of events is observed with the Tobin's Q results in **Table 9** showing a better performance in mining industrial sector at a mean score of

22.7142. These results are somewhat related to the Tobin's Q results seen in the first research question which contradicts the accounting-based measurements.

The *p-value* at 0.2892 is greater than α , therefore there is not enough statistical evidence to suggest that there is a significant difference in financial performance across industrial sectors of companies with a minimum 25 percent board women as measured by Q.

Therefore, although the mean scores for the test indicate that software and computer services sector perform better and mining performed better as measured by Q, these results were not statistically significant at a significance level of 5%. There was not enough evidence to suggest that there were differences in financial performance of gender diverse companies across industrial sectors.

.

CHAPTER 6: DISCUSSION OF RESULTS

6.1. Overview

This chapter follows a structure similar to chapter five with discussions arranged according to research questions. The research findings are interpreted and their implications discussed. The findings are also compared and contrasted to findings from previous studies, with possible explanations postulated for the similarities and differences encountered. The final section discusses possible reasons for the differences in the results of this study.

6.2. Descriptive analysis

The results of the descriptive statistics presented a bigger picture, which will be discussed before delving into probabilities and statistical significance. As noted in the previous chapter, accounting-based measurement ROE, which focuses on historical performance of the companies, was higher in the gender diverse group compared to the group that is not gender diverse. These results were consistent with research that suggests that gender diversity on boards is associated with better financial performance. The results are therefore in support of the argument which states that women bring qualities that were previously absent on the board (Nielson and Huse, 2010). These qualities may enhance board performance generating an effect on company performance.

The market-based ratio Tobin's Q presents a different picture; average ratios from both groups are above 1.0, which means that market expectations of future earnings of companies from both groups are positive, although much better on the group whose boards are not gender diverse. This contradiction between accounting-based and market-based measurements may bring about interesting analysis in the South African context, since literature indicates that empirical results may be country-specific. Investors and analysts' perceptions regarding women as leaders in SA influence the share price and subsequently Tobin's Q, because of the subjectivity of these measures. Next, the results of the research questions with statistical significance tests are discussed.

6.3. First research question

The first research question was formulated to assess whether companies with gender diverse boards perform better by comparing financial ratios of companies with gender diverse boards to those of companies whose boards are not gender diverse. The findings of this research question showed that there are indeed differences between the financial performances of companies with gender diverse boards compared to those of companies with no gender diversity on the board. However, these results were not statistically significant and hence the results were inconclusive.

As previously stated in the literature review, the results of empirical studies are mixed. Some found a positive relationship between gender diverse boards and

financial performance, some found no relationship, and others found a negative relationship (Carter et al, 2010). These differences in results present a challenging task to reach a conclusion in relation to previous research.

6.3.1. Accounting-based measures of performance

Although accounting-based measurements of performance may be affected by reporting distortions due to tax laws and accounting standards (Campbell & Minguez-Vera, 2008), they are reliable because they provide an objective performance measure (Ryan & Haslam , 2005). It is however, important to keep in mind that both measurements methods have strengths and weaknesses which have been alluded to in chapter 3.

The mean scores of accounting-based measurements ROE and ROA were higher in the gender diverse group compared to the group that is not gender diverse. Stronger return on equity suggests that companies with gender diverse boards were able to increase returns for equity holders, that is, the value of the business grew in the period under review. Stronger return on assets means that the companies have been able to use their assets effectively to generate profits.

Although the mean ROE was higher in the gender diverse group, a *p-value* of 0.0942 for the ROE results implies that there is not enough statistical evidence to suggest statistical significance. Therefore, it could not be concluded in this study that companies with gender diverse boards perform better than companies with boards that are not gender diverse. The results of this study do not fully support

results of several previous studies which found that companies with high proportions of women on the board tend to beat their counterpart's performance (Joy et al, 2007; Carter et al, 2010; Erhardt et al, 2003 & Francoeur et al; 2007).

Consistent with Joy et al (2007) of the Catalyst study that assessed financial performance of companies with gender diverse boards as measured by accounting ratios including ROE, the results illustrated that stronger than average results prevailed at companies where at least three women served on the board. This is in alignment with the theory of critical mass at board level. The results of this study also indicated better performance of companies with gender diverse boards, although the results were not statistically significant. The Catalyst study did not report statistical significance on their results.

The ROA results of this study did not illustrate a significant difference in financial performance between companies with gender diverse boards and companies with boards that are not gender diverse. However, Carter et al, (2010) conducted a study assessing financial performance of US companies with gender and ethnic minorities on boards. The regression results of their study indicated a positive and significant relationship between the number of women on boards and ROA. They have acknowledged that due to no finding of a negative relationship between board diversity and company performance, they do not dispute the business case for board gender diversity.

In collaboration with studies that found a positive relationship between board gender diversity and financial performance, Erhardt et al, (2003) examined a

sample of US companies and found a link between the percentage of females on the board and accounting-based measurements ROA and ROE. Their research supports the notion that board of director diversity may be important beyond the effects of workforce diversity. These results support the normative viewpoint that gender diversity is a policy worth pursuing, even if no significant relationship is found between diversity and performance.

As stated previously, empirical results are mixed. Although there is a wealth of evidence suggesting a positive relationship between board gender diversity and financial performance, Shrader et al (1997) could not find any association between a higher percentage of women on boards and financial performance. They tested the hypothesis that stated that the percentage of women on the board of directors is related positively to companies' financial performance. Among other measures, ROA and ROE were utilised as measures of performance. Shrader et al, (1997) concluded that women directors are disadvantaged by the type of board committee assignments that they are traditionally given; they tend to be given assignments that have less instrumental impact for the organisation. That could explain the lack of association of the presence of women directors and financial performance.

In SA, these results should be explored further; the government is leading by example by appointing more women onto boards of state-owned enterprises. However, state-owned enterprises do not publish their financials; as a result, these companies are excluded from empirical studies, thereby further minimising the number of companies available for assessment.

Private companies are still lagging behind in terms of percentage of women on boards. The 25 biggest JSE-listed companies by market capitalisation represent 75.8% of the total JSE market capitalisation; only two out of the 25 companies have 25% or more women directorships (BWA, 2010). This contradicts research on organisational legitimacy which states that larger and more visible organisations experience more pressure to comply from societal expectations (Hillman et al, 2007). Is the South African society content with the status quo to an extent that no pressure is placed upon large organisation to comply?

With fewer companies available for analysis, the study population was not representative of all SA publicly listed companies and hence it was difficult to deduce and make inferences about SA companies as a whole. The inconclusive results of this study can be beneficial in that the results do not dispute the link between board gender diversity and financial performance; these results provide more reason to carry out further studies investigating the contribution that women make to financial performance. Therefore, the study results do contribute to the current body of knowledge by bringing empirical evidence from South Africa.

6.3.2. Market-based measures of performance

The mean scores of the market-based measurement Tobin's Q were above 1.0 for both the gender diverse group and the group that is not gender diverse. Contrary to the accounting-based results that showed higher mean scores on the gender

diverse group, Tobin's Q results illustrated higher mean scores for the group that is not gender diverse. These results were also not statistically significant.

Tobin's Q is a ratio that compares the market value of a company to its book value. When the ratio is one, it means that the market values the company in line with its book value. Companies with a Tobin's Q ratio above 1.0 are expected by investors to be able to create more value by using available resources effectively, while those with Tobin's Q ratio of less than 1.0 are associated with poor utilisation of available resources.

Countries such as Singapore have a society that is accepting of the nature of women's higher status and contribution to decision-making (Kang et al, 2010). South African society on the other hand seems to be evolving slowly. Market-based measures are influenced by societal views. The future performance expectation by SA investors and analysts of companies with boards that are not gender diverse is better than that of companies with gender diverse boards. Although some women might have shattered the corporate glass ceiling and are operating at board level, market-based results of this study which is in favour of companies whose boards are not gender diverse, suggests that investors and analysts still question these women's capabilities.

Several studies assessed financial performance of gender diverse boards using Tobin's Q. Campbell and Minguez-Vera (2008) examined the relationship between female boardroom participation and company value. Their findings demonstrated a positive link between board gender diversity and firm value as measured by

Tobin's Q. Contrary to the results of this study, Campbell and Minguez-Vera (2008) results suggest that Spanish investors do not penalise companies which increase their female board representation. It was also concluded that the presence of women does not in itself affect company value. However, diversity, which is a balance of males and females on the board, has a positive influence on company value.

Consistent with the results of this study, Rose (2007) studied Danish firms and could not find any significant link between company performance as measured by Tobin's Q and female board representation. However, female representation in the study by Rose (2007) was very low at 4%, meaning that critical mass was not achieved; this could have contributed to the inability of the study to establish a significant link.

According to Rose (2007), a plausible reason why gender diversity as measured by Tobin's Q does not seem to be pivotal for companies' financial performance is that, board members not originating from the traditional 'old-boys club' may have decided to assimilate into the traditional circles, suppressing any special feature stemming from their unconventional background. In other words, there might be a process of socialisation where the new board members (women) adopt the norms and behaviours of the conventional board members, "joining the club", instead of bringing their distinctive qualities.

Similar to this study, Haslam, et al, (2010) investigated the relationship between women representation on company boards and subjective and objective measures

of performance. Consistent with the 'glass cliff' research, they found a negative relationship between women's presence on boards and subjective stock-based measures (Tobin's Q) of performance. Companies with male-only boards enjoyed a valuation premium of 37% relative to companies with women on their boards. Their results support claims that women's presence on boards can lead to a devaluation of companies by investors, and therefore perceptions and investment are not aligned with the underlying realities of company performance (Haslam et al, 2010). Could this be the case in the seemingly male-dominated SA society?

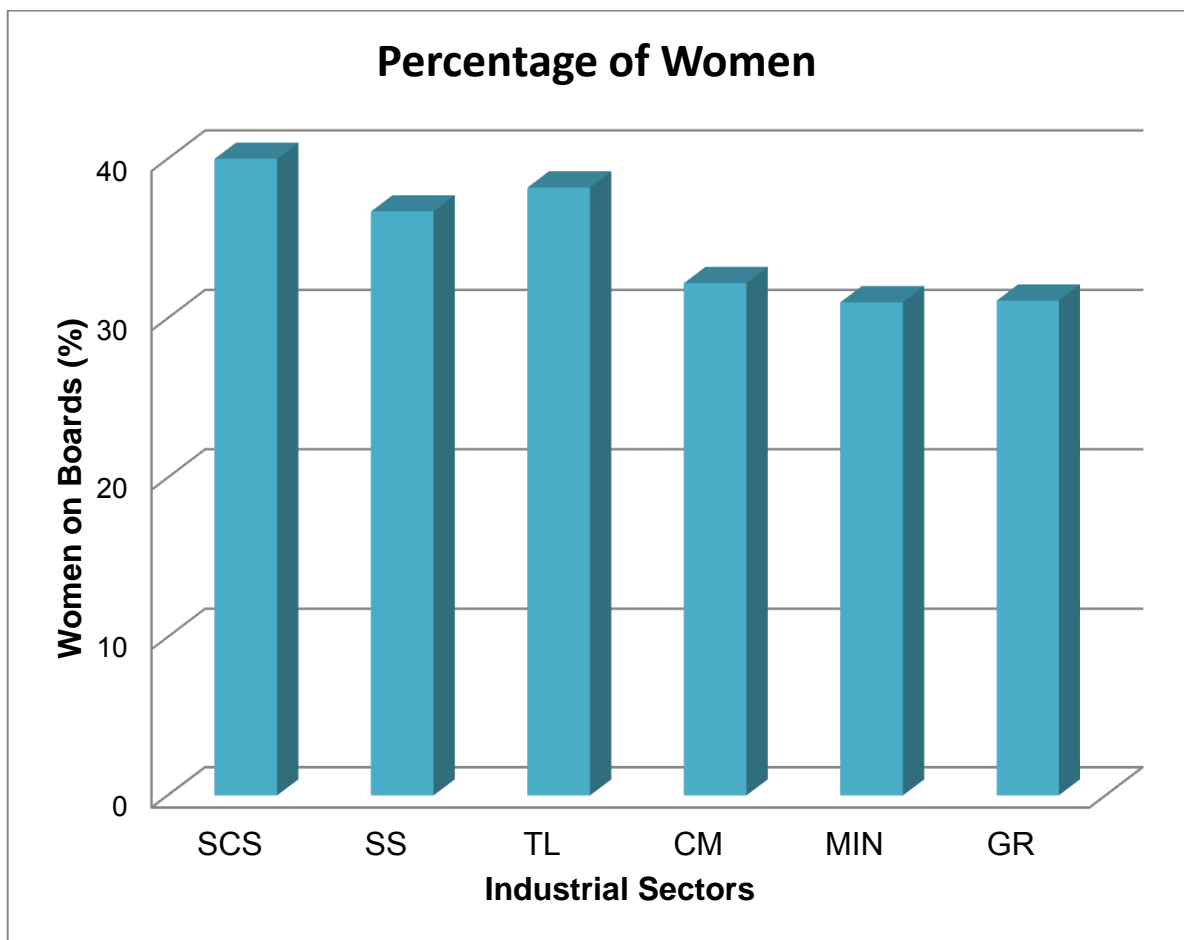
Recalling that market-based measurements are influenced by sentiments, one aspect that could be deduced from these results was that South African investor sentiments were more positive for companies with less women on boards. It was interesting to have findings that suggest that better ROE and ROA does not necessarily change the views of investors and analysts who influence the market. Being a male-dominated society where women and people of colour were discriminated against in the past, SA needs to learn from countries such as Norway and Singapore to become more accepting of the majority of the population (women) when they are involved in decision-making. These results are country-specific, and the culture and beliefs of this country will influence perceptions about women on boards, and most importantly, the translation onto the bottom line.

6.4. Second research question

The second research question was formulated to assess the differences in financial performances of companies with gender diverse boards across industries. The findings of the second research question demonstrated mainly similar performances across industries with minor differences in financial performance of companies; again, these differences were not statistically significant.

Figure 3 depicts graphically the data sourced from BWA 2010 report that was used in this study

Figure 3: Percentage of woman on boards with minimum 25 percent women representation.



Source: (2010). *BWA South African Women in Leadership Census 2010*. Johannesburg: Businesswomen's Association.

Figure 3 graphically demonstrates that there are more women on boards of Software and Computer Services, Support Services and, Travel and Leisure industrial sectors.

Contrary to expectation, in this study, business-to-consumer industries such as general retailers had a lower percentage of women on their boards. Because of the nature of the industry wherein there is interaction with the final consumer, there could be value derived from having more women on the boards (Hillman et al, 2007). Women are deemed to have a better understanding of the business-to-consumer market, as opposed to the business-to-business industries such as mining. Contrary to expectations as well, there were numerous mining companies with gender diverse boards, although the percentage was lower in comparison to other sectors with gender diverse boards. Therefore, the characteristics of this study population do not support current body of knowledge.

6.4.1. Industry differences by accounting ratios

While analysing the results, one aspect that stood out was that not only does software and computer industrial sector comprise a higher percentage of women; it has also outperformed other sectors in financial performance as measured by accounting-based measures. These findings were in line with the theory of critical mass, that is, a higher percentage of women on the board have a positive impact on financial performance. However, these findings were not statistically significant and hence the results were inconclusive.

In alignment with Konrad et al, (2008), all companies analysed under the software and computer service industry had a critical mass of three women and above, with the exception of one company. On the other hand, three out of the four companies sampled under general retailers did not reach critical mass of three. It was understood that having a minimum of three women on the board presents a clear shift with normalisation and removal of gender concerns (Konrad et al, 2008). A possible argument could be made in this research suggesting that the general retailers sector did not perform well, probably due to the lack of critical mass at board level.

6.4.2. Industry differences by market ratio

An interesting observation when examining the mean scores was the higher mean score of the mining industry, followed by travel and leisure and the software and computers industrial sectors as measured by Q. The mining industry is perceived to be male dominated, yet it is highly valued by the investor community. The results support the notion that companies with male dominated boards are expected to perform well in the future or rather they are upheld by society.

Therefore, although the mean scores for the statistical test indicated that the software and computers sector outperformed other industries as measured by accounting measurements, the results took a questionable turn, the mining industry outperformed other industries when measured by Tobin's Q, which means mining

is expected to have a great future performance regardless of its current accounting-based performance.

Brammer et al, (2009) found that there is an influence of a company' stakeholder environment in determining whether female presence on the board enhances or harms the reputation of the company. They observed an emerging pattern which indicated that the presence of women on boards is favourably viewed in those sectors that operate to the final consumer. On the contrary, this study showed that the retail sector, which mainly operates to the final consumer, had a lower percentage of women on boards regardless of the industry being a business-to-consumer industry. The influence of the companies' stakeholder environment seems to support the current situation evident in the lower number of female board representation.

Women representation on boards of SA companies is still very low. There have been several reasons attributed to this lack of sufficient representation such as lack of experience and education. There are few women coming through the executive pipeline and subsequently being appointed on the board. With more than 15 years post democracy, most women are on par with their male counterparts, that is, the education gap is filled. However, there is still the "old boys club" running many large organisations in SA.

6.5. Possible reasons for the differences in the results

Some of the possible reasons for the differences encountered in the results of this study could be due to the following reasons:

- Women have not been in board positions long enough to make an impact. This was partly the reason the study only focused on three years, that is 2008 to 2010, because after studying BWA reports from 2004, it was apparent that there is no consistency in terms of the percentage of women on company boards.
- Some of the companies with gender diverse boards were not gender diverse in 2007, suggesting that board women tenure is not long enough. This constraint also led the study to diverge from investigating the trends, that is, assessing the impact of women board director impact on financial performance post appointment, which would have better illustrated the financial contribution of board women.
- There were no controls such as size and risk in place for comparing the two groups. Growth in terms of ROE for larger and mature companies is very conservative when compared to younger and smaller companies. This applies to Tobin's Q as well, and investor and analysts' views about companies in this regard would differ.
- The data used was in the middle of the 2007 financial recession, the impact was felt in SA in 2008 and 2009. The effects of recession are still felt in the stock market, and probably affected Tobin's Q results.

- In terms of difference across industries, some industries felt the recession worse than other industries; this could be one of the forces which influenced the results.
- The sample sizes of the industrial sectors were very small, ranging from three to nine, there was not much variance as well. Larger sample sizes might have painted a different scenario.

CHAPTER 7: CONCLUSIONS

The purpose of this concluding chapter is to highlight the main findings of this research and the implications thereof, and to bring forth identified limitations of the study. Future research studies are suggested and the managerial implications thereof elucidated.

7.1. Summary of findings

As far as it could be established, this is the first study undertaken in SA that specifically examines the association between companies with gender diverse boards and financial performance.

The question, “Do companies with gender diverse boards perform better than those whose boards are not gender diverse?” could now be answered with some degree of analytical weight, especially when looking at ROE.

The findings of this research suggests that companies with gender diverse boards, that is, with 25% or more women on their boards, perform better than those companies with less than 25% women. These results are consistent with previous studies, supporting the business case for gender diversity on corporate boards. It is not the women on boards who would make a difference, rather the balance of men and women who bring different thinking and reasoning to the boardroom that would add value (Campbell & Miguez-Vera, 2008).

Although statistically not significant, the results of the market-based ratios presented an interesting argument. Companies with less than 25% women on the board had higher mean scores for Tobin's Q. As Tobin's Q depicts not only the current but the future expectation of performance, and is highly influenced by investor sentiments (subjective), it is clear that the market has positive sentiments on companies without or with less women representation on their boards. The same companies that seem to be highly valued by the market do not seem to be performing well in comparison to the companies with gender diverse boards.

In terms of differences in financial performance across industries, the focus was limited to the companies with gender diverse boards only. Hillman et al (2007) suggest that industries which serve the final consumer are expected to have a higher percentage of women. Contrary to expectation, the business-to-consumer industry, general retailers, had a lower percentage of women on their boards. Software and computer services had a higher percentage of women and were the industrial sector which outperformed all the other sectors, as measured by accounting-based ratios. However, when examining Tobin's Q, market forces seem to have had an influence, whereby the industry with a lower percentage of women on boards, that is mining, showed better Tobin's Q ratio.

7.2. Research limitations

There are important limitations in the study that need to be addressed. The BWA report, from which the sample was drawn, has included subsidiaries of companies

starting from 2010, whereas the comparison companies were accessed from JSE, and some might not include their private subsidiaries. The other limitation was the reliance on secondary or archival data; this meant that this study had to investigate as per the boundaries of the available data only. There was minimal control employed such as company size which might have presented a different picture if carried out. Due to its quantitative nature, the study will only illustrate a possible link between board gender diversity and financial performance. However, it does not fully explain the reasons underpinning the link.

7.3. Suggestions for future research

Given the paucity of research in SA in this field, further research will be valuable. The role of boards have changed and become a more important part of leadership giving the company direction. This study has opened up the avenue for future studies to further explore the links between board gender diversity and financial performance. The following recommendations are made to ensure that follow-up research is vigorous:

- To increase the sample size, by adding more JSE-listed companies;
- To expand the number of years under review;
- To assess financial performance using more accounting measures including gearing, efficiency and liquidity ratios;
- To compare not only the average for the period, but year on year data;

- To determine if board composition has an impact on CEO tenure, as the introduction of a new CEO may have an impact on financial performance;
- To examine whether board members who sit on the boards of many different companies have equal commitments to each company, or whether there is a conflict of interest;
- To determine the characteristics of women on the boards of successful companies;
- To establish causality between board gender diversity and financial performance;
- To employ non-financial measures of performance of companies with gender diverse boards. By examining other indicators, the complete impact of gender on all relevant stakeholders could be examined;
- Case studies could reveal interesting insights into the nature of the decision process in corporate boards, since quantitative studies may experience severe difficulties in understanding board member's interpersonal relations;
- Changes in percentages and performance measures over time should be considered, that is, studying trends of companies with women on boards;
- Although racial diversity plays a significant role in SA, it was not considered in this study as the focus was exclusively on gender diversity; this is an avenue that could be explored studying the effects of ethnic diversity on financial performance.

7.4. Stakeholder Implications

Government has already led by example with State-owned enterprises where government is a shareholder, leading in terms of percentage of women on boards. However, to drive change, there is more that needs to be done to ensure that corporate boards are representative of the society in which these companies operate. Perhaps employment equity status should be enforced according to job grading level, and specifically reported for board composition as well. Certain organisations only understand forced transformation.

A united society can play a vital role in communicating and standing up for a country which considers everyone who lives in it. Organisations have an obligation towards the environment in which they operate, they engage in sustainability activities and report on these, gender diversity need to be one of the sections which are thoroughly reported on.

Organisations need to start asking themselves what role they have played in improving gender equality higher up the corporate ladder, although the results of this study are inconclusive and hence do not support this, there is enough literature carried out which supports the business case for gender diversity. This initiative should be driven from all sides to be successful; the organisation might be missing out on the richness of a diverse talent pool available. In order for more empirical studies to be carried out, more data is required, which and can only be made available when women board appointments are taking place. To benefit from the increasingly important assets that women bring to companies, corporate boards

must not only recognise those assets, but also develop a plan to ensure that their boards become more gender diverse.

7.5. Concluding remarks

Although the results of this study were not statistically significant, most, there is no indication of a negative association either. This implies that the business case for women on boards can be explored, especially with the available theory suggesting that women play an important role in contributing to the effectiveness of boards.

The lack of sufficient growth in numbers of women on corporate boards is disappointing, given the views of diversity and inclusiveness supported in academic and business literature. There is now more interest with BWA putting SA on the global map to compare to other countries in terms of women in business. While in the spotlight, SA needs to do more to ensure a shared vision among all South Africans.

REFERENCES

- Adams, R. B., & Ferreira, D. (2009). Women in the boardroom and their impact on governance and performance. *Journal of Financial Economics*, 94(2), 291-309.
- Albright, S.C., Winston, W.L., & Zappe, C.J. (2009). *Data Analysis and Decision-making with Microsoft Excel*. South Western Cengage learning.
- Arfken, D. E., Bellar, S. L., & Helms, M. M. (2004). The ultimate glass ceiling revisited: The presence of women on corporate boards. *Journal of Business Ethics*, 50(2), 177-186.
- Bilimoria, D. (2000). Building business case for women corporate directors. In Burke, R.J., & Mattis, M. *Women on Corporate boards of directors: International challenges and opportunities*, (eds) Kluwer, Dordrecht, The Netherlands, 25 - 40.
- Blumberg, B. Cooper, D.R. and Schindler, P.S. (2008). *Business Research Methods*. Berkshire: McGraw-Hill Education.
- Brammer, S., Millington, A., & Pavelin, S. (2007). Gender and ethnic diversity among UK corporate boards. *Corporate Governance: An International Review*, 15(2), 393-403.
- Brammer, S., Millington, A., & Pavelin, S. (2009). Corporate reputation and women on the board. *British Journal of Management*, 20(1), 17-29.
- Burgess, Z., & Tharenou, P. (2002). Women board directors: Characteristics of the few. *Journal of Business Ethics*, 37(1), 39-49.
- (2010). *BWA South African Women in Leadership Census 2010*. Johannesburg: Businesswomen's Association.
- Campbell, K., & Mínguez-Vera, A. (2008). Gender diversity in the boardroom and firm financial performance. *Journal of Business Ethics*, 83(3), 435-451.
- Carter, D. A., Simkins, B. J., & Simpson, W. G. (2003). Corporate governance, board diversity, and firm value. *Financial Review*, 38(1), 33-53.
- Carter, D. A., D'Souza, F., Simkins, B. J., & Simpson, W. G. (2010). The gender and ethnic diversity of US boards and board committees and firm financial performance. *Corporate Governance: An International Review*, 18(5), 396-414.

- Cohen, S. G., & Bailey, D. E. (1997). What makes teams work: Group effectiveness research from the shop floor to the executive suite. *Journal of Management*, 23(3), 239.
- Daily, C. M., & Dalton, D. R. (2003). Women in the boardroom: A business imperative. *Journal of Business Strategy*, 24(5), 8.
- Devers, C. E., Canella Jr, A. A., Reilly, G. P., & Yoder, M. E. (2007). Executive compensation: a multidisciplinary review of recent developments. *Journal of Management*, 33, 1016-1072.
- Eagly, A. H., & Johannesen-Schmidt, M. (2001). The leadership styles of women and men. *Journal of Social Issues*, 57(4), 781.
- Erhardt, N. L., Werbel, J. D., & Shrader, C. B. (2003). Board of director diversity and firm financial performance. *Corporate Governance: An International Review*, 11(2), 102-111.
- Fama, E.F. and Jensen, M.C. (1983). Separation of ownership and control. *Journal of Law and Economics* , 26, 301-25.
- Fama, E. F. (1991). Efficient capital markets: II. *Journal of Finance*, 46, 1575-1617.
- Forbes, D. P., & Milliken, F. J. (1999). Cognition and corporate governance: Understanding boards of directors as strategic decision-making groups. *Academy of Management Review*, 24(3), 489-505.
- Francoeur, C., Labelle, R., & Sinclair-Desgagné, B. (2008). Gender diversity in corporate governance and top management. *Journal of Business Ethics*, 81(1), 83-95.
- Graham, M. (2007). *Understanding financial statements*. Cape Town: Cape Business Seminars.
- Haslam, S. A., Ryan, M. K., Kulich, C., Trojanowski, G. & Atkins, C. (2010) Investing with prejudice: The relationship between women's presence on company boards and objective and subjective measures of company performance. *British Journal of Management*, 21, 484-497.
- Herring, C. (2009). Does diversity pay?: Race, gender, and the business case for diversity. *American Sociological Review*, 74(2), 208-224.
- Hillman, A. J., Shropshire, C., & Cannella Jr., A. A. (2007). Organizational predictors of women on corporate boards. *Academy of Management Journal*, 50(4), 941-952.

IODSA. (2010). Retrieved April 26, 2011, from www.iodsa.co.za:
http://www.iodsa.co.za/downloads/documents/Board_charter.pdf

Joy, L. Carter, M.L. Wagner, H.M. and Narayanan, S. (2007). *The Bottom line: Corporate Performance and Women Representation on Boards*. Catalyst.

Kang, E., Ding, D.K., and Charoenwong, C. (2010). investor reactions to women directors. *Journal of Business Research*, 63, 888-894.

Kanter, R.M. (1977). Some effects of proportions on group life. *American Journal of Sociology*, 82(5), 965-990.

Kochan, T., Bezrukova, K., Ely, R., Jackson, S., Joshi, A., Jehn, K., . . . Thomas, D. (2003). The effects of diversity on business performance: Report of the diversity research network. *Human Resource Management*, 42(1), 3-21.

Konrad, A.M. Kramer, V. and Erkut, S. (2008). The Impact of three or more women on Corporate Boards. *Organizational Dynamics* , 37 (2), 145-164.

Milliken, F. J., & Martins, L. L. (1996). Searching for common threads: Understanding the multiple effects of diversity in organizational groups. *Academy of Management Review*, 21(2), 402-433.

Minichilli, A., Zattoni, A., & Zona, F. (2009). Making boards effective: An empirical examination of board task performance. *British Journal of Management*, 20(1), 55-74.

Nielsen, S., & Huse, M. (2010). The contribution of women on boards of directors: Going beyond the surface. *Corporate Governance: An International Review*, 18(2), 136-148.

Robinson, G., & Dechant, K. (1997). Building a business case for diversity. *Academy of Management Executive*, 11(3), 21-31.

Rose, C. (2007). Does female board representation influence firm performance? the danish evidence. *Corporate Governance: An International Review*, 15(2), 404-413.

Ryan, M. K., & Haslam, S. A. (2007). The glass cliff: exploring the dynamics surrounding the appointment of women to precarious leadership positions. *Academy of Management Review*, 32, 549-572.

Ryan, M. K., & Haslam, S. A. (2005). The glass cliff: Evidence that women are over-represented in precarious leadership positions. *British Journal of Management*, 16, 81-90.

- Shrader, C. B., Blackburn, V. B., & Iles, P., (1997). Women in management and firm financial performance: An exploratory study. *Journal of Managerial Issues*, 9(3), 355.
- Simpson, W. G., Carter, D. A., & D'Souza, F. (2010). What do we know about women on boards? *Journal of Applied Finance*, 20(2), 27-39.
- Singh, V., Terjesen, S., & Vinnicombe, S. (2008). Newly appointed directors in the boardroom:: How do women and men differ? *European Management Journal*, 26(1), 48-58.
- Singh, V., & Vinnicombe, S. (2004). Why so few women directors in top UK boardrooms? evidence and theoretical explanations. *Corporate Governance: An International Review*, 12(4), 479-488.
- Smith, N., Smith, V., & Verner, M. (2006). Do women in top management affect firm performance? A panel study of 2,500 danish firms. *International Journal of Productivity & Performance Management*, 55(7), 569-593.
- statssa. (2010). Retrieved January 03, 2011, from www.statssa.gov.za:www.statssa.gov.za/publications/p0302/p0302/2010pdf
- Stephenson, C. (2004). Leveraging diversity to maximum advantage: The business case for appointing more women to boards. *Ivey Business Journal*, 69(1), 1-5.
- Terjesen, S., Sealy, R., & Singh, V. (2009). Women directors on corporate boards: A review and research agenda. *Corporate Governance: An International Review*, 17(3), 320-337.
- Torchia, M., Calabro, A., & Huse, M. (2011). Women directors on Corporate boards: From tokenism to Critical Mass. *Journal of Business Ethics*, 102, 299-317.
- Van der Walt, N., W., & Ingley, C. (2001). Evaluating board effectiveness: The changing context of strategic governance. *Journal of Change Management*, 1(4), 313.
- Wernerfelt, B., & Montgomery, C. A. (1988). Tobin's q and the importance of focus in firm performance. *American Economic Review*, 78(1), 246.

APPENDICES

Appendix 1: Top 70 companies with minimum 25% women on boards

Company Name	Sector	Total Directors	Women Directors	Women as a % of directors
Airports Company South Africa	State Owned Enterprise	11	7	63.6
Spescom Limited	Software & Computer Services	13	8	61.5
Mix Telematics Africa (Pty) Ltd	Support Services	5	3	60.0
Datacentrix Holdings Limited	Software & Computer Services	9	5	55.6
Alexkor Limited	State Owned Enterprise	6	3	50.0
Simeka Business Group Limited	Software & Computer Services	8	4	50.0
South African Post Office	State Owned Enterprise	27	13	48.1
Paracon Holdings Limited	Software & Computer Services	19	9	47.4
South African Broadcasting Corporation Limited	State Owned Enterprise	13	6	46.2
Spur Corporation Limited	Travel & Leisure	16	7	43.8
Adcorp Holdings Limited	Support Services	28	12	42.9
Air Traffic and Navigation Services	State Owned Enterprise	7	3	42.9
Independent Development Trust	State Owned Enterprise	7	3	42.9
Rolfes Technology Holdings	Chemicals	19	8	42.1
TCTA	State Owned Enterprise	12	5	41.7
Group Five Limited	Construction & Materials	10	4	40.0
Impala Platinum Holdings Limited	Mining	10	4	40.0
Rex Trueform Clothing Company	General Retailers	5	2	40.0
SA Forestry Company Limited	State Owned Enterprise	10	4	40.0
Keaton Energy Holdings Limited	Mining	18	7	38.9
Mutual and Federal Insurance Company Limited	Nonlife Insurance	13	5	38.5
South African Express (Pty) Ltd	State Owned Enterprise	13	5	38.5
Gooderson Leisure Corporation	Travel & Leisure	8	3	37.5
Transnet Limited	State Owned Enterprise	11	4	36.4
Workforce Holdings Limited	Support Services	25	9	36.0



Company Name	Sector	Total Directors	Women Directors	Women as a % of directors
Industrial Development Corporation of South Africa	State Owned Enterprise	28	10	35.7
Anooraq Resources Corporation	Mining	9	3	33.3
Brikor Limited	Construction & Materials	6	2	33.3
Cape Empowerment Trust	Equity Investment Instruments	18	6	33.3
Cargo Carriers Limited	Industrial Transportation	9	3	33.3
Clicks Group Limited	Food & Drug Retailers	9	3	33.3
Cullinan Holdings	Travel & Leisure	9	3	33.3
Development Bank of South Africa	State Owned Enterprise	27	9	33.3
Land and Agricultural Development Bank of South Africa	State Owned Enterprise	12	4	33.3
South African Airways (Pty) Ltd	State Owned Enterprise	24	8	33.3
Kagiso Media Limited	Media	22	7	31.8
CEF (Pty) Ltd	State Owned Enterprise	16	5	31.3
Sea Kay Holdings Limited	Construction & Materials	16	5	31.3
Silverbridge Holdings Limited	Software & Computer Services	16	5	31.3
Woolworths Holdings Limited	General Retailers	13	4	30.8
JSE Limited	General Financial	43	13	30.2
Adapt IT Holdings Limited	Software & Computer Services	10	3	30.0
Armaments Corporation of South Africa	State Owned Enterprise	10	3	30.0
Merafe Resources Limited	Mining	10	3	30.0
Pinnacle Technology Holdings Limited	Technology Hardware & Equipment	570	168	29.5
African and Overseas Enterprises	General Retailers	7	2	28.6
Astrapak Limited	General Industrials	7	2	28.6
Business Connexion Group	Software & Computer Services	7	2	28.6
Cipla Medpro South Africa Limited	Pharmaceuticals & Biotechnology	7	2	28.6
Denel (Pty) Ltd	State Owned Enterprise	14	4	28.6
Finbond Group Limited	General Financial	7	2	28.6
Mazor Group Limited	Construction & Materials	7	2	28.6
Palabora Mining Company Limited	Industrial Metals	7	2	28.6
Rare Holdings Limited	Support Services	7	2	28.6

Company Name	Sector	Total Directors	Women Directors	Women as a % of directors
Primeserv Group Limited	Support Services	18	5	27.8
Adcock Ingram Holdings Limited	Pharmaceuticals & Biotechnology	22	6	27.3
EOH Holdings Limited	Software & Computer Services	11	3	27.3
Metropolitan Holdings Limited	Life Insurance	59	16	27.1
Wilson Bayly Holmes	Construction & Materials	15	4	26.7
Nedbank Group Limited	Banks	19	5	26.3
PSV Holdings Limited	Industrial Engineering	27	7	25.9
Eskom Holdings Limited	State Owned Enterprise	12	3	25.0
Glenrand M.I.B. Limited	Nonlife Insurance	12	3	25.0
Hardware Warehouse Limited	General Retailers	4	1	25.0
Metrofile Holdings Limited	Support Services	8	2	25.0
Oceana Group Limited	Food Producers	28	7	25.0
Petmin Limited	Mining	20	5	25.0
Platmin Limited	Mining	8	2	25.0
Simmer and Jack Mines Limited	Mining	8	2	25.0
Total Client Services Limited	Software & Computer Services	8	2	25.0

Source: (2010). *BWA South African Women in Leadership Census 2010*. Johannesburg: Businesswomen's Association.

Appendix 2: Raw data: accounting and market ratios

Software and Computer Services (Companies with minimum 25% board women)

	2010	2009	2008	Average
Datacentrix Holdings				
Net Profits	R 80 405	R 120 419	R 101 865	
Equity	R 383 152	R 360 625	R 294 476	
ROE	21%	33%	35%	30%
Total Assets	R 590 254	R 610 333	R 548 529	
ROA	14%	20%	19%	17%
# Shares	195798			
Share Price	R 4.39			
Equity (market)	R 859 553			
Debt	R 207 102			
Tobin's Q	1.81			
Spescom				
Net Profits		R 8 736 454	R 7 366 554	
Equity		R 85 685 497	R 67 550 910	
ROE		10%	11%	11%
Total Assets		R 226 453 781	R 214 302 866	
ROA		4%	3%	4%
# Shares		72521540		
Share Price		R 0.69		
Equity (market)		R 50 039 863		
Debt		R 140 768 284		
Tobin's Q		0.84		
Paracon Holdings				
Net Profits	R 57 730	R 56 449	-R 672	
Equity	R 263 467	R 238 924	R 215 296	
ROE	22%	24%	0%	15%
Total Assets	R 343 534	R 313 792	R 296 468	
ROA	17%	18%	0%	12%
# Shares	335688			
Share Price	R 1.72			
Equity (market)	R 577 383			
Debt	R 80 067			
Tobin's Q	1.91			
Silverbridge Holdings				
Net Profits	R 13 556	R 6 200	R 9 807	
Equity	R 53 911	R 39 713	R 32 968	
ROE	25%	16%	30%	24%
Total Assets	R 84 735	R 66 028	R 50 481	
ROA	16%	9%	19%	15%
# Shares	34675			



Share Price	R 2			
Equity (market)	R 60 681			
Debt	R 30 824			
Tobin's Q	1.08			
Adapt IT Holdings				
Net Profits	R 13 100	R 9 077	R 7 102	
Equity	R 50 504	R 32 759	R 28 044	
ROE	26%	28%	25%	26%
Total Assets	R 124 741	R 42 117	R 35 506	
ROA	11%	22%	20%	17%
# Shares	95697			
Share Price	0.48			
Equity (market)	R 45 935			
Debt	R 74 237			
Tobin's Q	0.96			
Business Connexion Group				
Net Profits	R 127 299	R 108 163	R 122 415	
Equity	R 1 550 643	R 1 418 393	R 1 526 813	
ROE	8%	8%	8%	8%
Total Assets	R 2 457 092	R 2 337 953	R 2 576 695	
ROA	5%	5%	5%	5%
# Shares	300614			
Share Price	R 5.90			
Equity (market)	R 1 773 623			
Debt	R 906 449			
Tobin's Q	1.09			
EOH Holdings				
Net Profits	R 104 396	R 77 835	R 60 988	
Equity	R 446 266	R 307 803	R 242 783	
ROE	23%	25%	25%	25%
Total Assets	R 1 135 127	R 845 819	R 511 572	
ROA	9%	9%	12%	10%
# Shares	78890			
Share Price	R 12.16			
Equity (market)	R 959 302			
Debt	R 688 861			
Tobin's Q	1.45			

Software and Computer Services (Companies with less than 25% board women)

	2010	2009	2008	Average
Gijima				



Net Profits	R 161 362	R 111 334	R 113 214	
Equity	R 497 173	R 427 687	R 319 533	
ROE	32%	26%	35%	31%
Total Assets	R 1 614 527	R 1 522 853	R 1 178 160	
ROA	10%	7%	10%	9%
# Shares	961565			
Share Price	R 0.91			
Equity (market)	R 875 024			
Debt	R 1 117 354			
Tobin's Q	1.23			
UCS				
Net Profits	R 39 642	R 27 446	R 95 809	
Equity	R 513 812	R 497 639	R 506 589	
ROE	8%	6%	19%	11%
Total Assets	R 933 155	R 979 314	R 1 000 000	
ROA	4%	3%	10%	6%
# Shares	285356			
Share Price	R 1.89			
Equity (market)	R 539 323			
Debt	R 419 343			
Tobin's Q	1.03			
Securedata				
Net Profits	R 17 044	R 6 630	R 8 699	
Equity	R 191 157	R 181 100	R 183 387	
ROE	9%	4%	5%	6%
Total Assets	R 423 644	R 391 645	R 423 216	
ROA	4%	2%	2%	3%
# Shares	232216			
Share Price	R 0.89			
Equity (market)	R 206 672			
Debt	R 232 487			
Tobin's Q	1.04			
Isa Holdings				
Net Profits	R 14 603	R 11 366	R 9 659	
Equity	R 47 112	R 43 722	R 42 084	
ROE	31%	26%	23%	27%
Total Assets	R 61 175	R 59 328	R 57 458	
ROA	24%	19%	17%	20%
# Shares	188235			
Share Price	R 0.53			
Equity (market)	R 99 765			



Debt	R 14 063			
Tobin's Q	1.86			
Convergenet				
Net Profits	R 25 575	R 41 443	R 42 242	
Equity	R 513 065	R 510 253	R 310 930	
ROE	5%	8%	14%	9%
Total Assets	R 727 504	R 778 410	R 524 499	
ROA	4%	5%	8%	6%
# Shares	893991			
Share Price	R 0.29			
Equity (market)	R 259 257			
Debt	R 214 439			
Tobin's Q	0.65			
Comp clear				
Net Profits	R 7 481	R 6 509	R 10 906	
Equity	R 43 148	R 46 251	R 45 687	
ROE	17%	14%	24%	18%
Total Assets	R 49 635	R 52 321	R 50 711	
ROA	15%	12%	22%	16%
# Shares	41369			
Share Price	R 2.73			
Equity (market)	R 112 937			
Debt	R 6 487			
Tobin's Q	2.41			
Datatech				
Net Profits	R 7 481	R 6 509	R 10 906	
Equity	R 718 779	R 622 399	R 678 283	
ROE	1.04%	1.05%	1.61%	1.23%
Total Assets	R 1 902 044	R 1 675 999	R 1 884 319	
ROA	0.39%	0.39%	0.58%	0.45%
# Shares	41369			
Share Price	R 2.73			
Equity (market)	R 112 937			
Debt	R 1 183 265			
Tobin's Q	0.68			

Support Services (Companies with a minimum 25% board women)

	2010	2009	2008	Average
Impala Platinum				
Net Profits	R 4 715 000	R 6 020 000	R 17 596	



			000	
Equity	R 45 733 000	R 42 803 000	R 45 303 000	
ROE	10%	14%	39%	21%
Total Assets	R 62 571 000	R 57 680 000	R 62 109 000	
ROA	8%	10%	28%	15%
# Shares	600440			
Share Price	R 198			
Equity (market)	R 119 025 221			
Debt	R 16 838 000			
Tobin's Q	2.17			
Anooraq Resources Corporation				
Net Profits	-R 35 532	-R 13 486	-R 14 296	
Equity	R 209 508	-R 1 329	R 4 734	
ROE	-17%	1015%	-302%	232%
Total Assets	R 1 014 215	R 15 174	R 16 954	
ROA	-4%	-89%	-84%	-59%
# Shares	201743			
Share Price	R 9.07			
Equity (market)	R 1 829 809			
Debt	R 804 707			
Tobin's Q	2.60			
Merafe Resources				
Net Profits	R 278 704	-R 152 325	R 1 027 691	
Equity	R 2 575 005	R 2 333 536	R 2 479 338	
ROE	11%	-7%	41%	15%
Total Assets	R 3 817 608	R 3 403 899	R 3 754 350	
ROA	7%	-4%	27%	10%
# Shares	2476656			
Share Price	R 1.48			
Equity (market)	R 3 665 451			
Debt	R 1 242 603			
Tobin's Q	1.29			
Petmin				
Net Profits	R 107 717	R 118 364	R 380 353	
Equity	R 1 241 421	R 1 119 101	R 1 007 858	
ROE	9%	11%	38%	19%
Total Assets	R 1 596 337	R 1 473 330	R 1 342 035	



ROA	7%	8%	28%	14%
# Shares	570718			
Share Price	R 2.64			
Equity (market)	R 1 506 696			
Debt	R 354 916			
Tobin's Q	1.17			
Platmin				
Net Profits	-R 55 417	-R 773		
Equity	R 834 396	R 453 029		
ROE	-7%	0%		-3%
Total Assets	R 1 108 878	R 550 162		
ROA	-5%	-0.1%		-3%
# Shares	749681			
Share Price	R 8.41			
Equity (market)	R 6 304 817			
Debt	R 274 482			
Tobin's Q	5.93			
Simmer & Jack Mines				
Net Profits	-R 736 363	R 2 670 146	-R 167 684	
Equity	R 1 706 205	R 4 526 804	R 2 086 754	
ROE	-43%	59%	-8%	3%
Total Assets	R 3 685 026	R 4 088 518	R 4 017 564	
ROA	-20%	65%	-4%	14%
# Shares	1221318			
Share Price	R 1.14			
Equity (market)	R 1 392 303			
Debt	R 1 978 821			
Tobin's Q	0.91			
Keaton Energy Holdings				
Net Profits	R 5 975	R 4 841	-R 4 658	
Equity	R 454 350	R 437 189	R 336 738	
ROE	1%	1%	-1%	0.35%
Total Assets	R 473 408	R 445 349	R 353 905	
ROA	1%	1%	-1%	0%
# Shares	144841			
Share Price	R 5.20			
Equity (market)	R 753 173			
Debt	R 19 058			
Tobin's Q	1.63			

Support Services (Companies with less than 25% board women)

	2010	2009	2008	Average
Lonmin				
Net Profits	124000	-227000	355000	
Equity	R 3 082 000	R 2 802 000	R 2 594 000	
ROE	4%	-8%	14%	3%
Total Assets	R 4 824 000	R 4 213 000	R 4 135 000	
ROA	3890%	-1856%	1165%	1066%
# Shares	202292			
Share Price	R 199.75			
Equity (market)	R 40 407 827			
Debt	R 1 742 000			
Tobin's Q	8.74			
Bauba				
Net Profits	-R 25 772	-R 8 224	-R 8 021	
Equity	R 1 491	R 24 115	R 745	
ROE	-1729%	-34%	-1077%	-946%
Total Assets	R 36 307	R 49 849	R 22 741	
ROA	-71%	-16%	-35%	-41%
# Shares	16012			
Share Price	R 4			
Equity (market)	R 58 284			
Debt	R 25 435			
Tobin's Q	0.63			
Miranda				
Net Profits	-15947	-11905	-9120	
Equity	R 353 326	R 348 778	R 337 817	
ROE	-5%	-3%	-3%	-4%
Total Assets	R 383 907	R 362 897	R 345 239	
ROA	-4%	-3%	-3%	-3%
# Shares	284511			
Share Price	R 0.65			
Equity (market)	R 184 932			
Debt	R 30 581			
Tobin's Q	0.56			
Sentula Mining				
Net Profits	R 245 872	R 278 531	R 113 567	
Equity	R 2 914 614	R 2 264 021	R 1 979 633	
ROE	8%	12%	6%	9%



Total Assets	R 5 051 291	R 4 950 431	R 4 373 578	
ROA	5%	6%	3%	4%
# Shares	586559			
Share Price	R 2.65			
Equity (market)	R 1 554 381			
Debt	R 2 136 677			
Tobin's Q	0.73			
Eastplats				
Net Profits	R 13 352	R 5 650	R 4 160	
Equity	R 1 041 179	R 629 512	R 708 536	
ROE	1%	1%	1%	1%
Total Assets	R 1 126 975	R 706 850	R 872 227	
ROA	1%	1%	0%	1%
# Shares	907590			
Share Price	R 9.63			
Equity (market)	R 8 740 092			
Debt	R 85 796			
Tobin's Q	7.83			
RandGold				
Net Profits	R 750 479	R 34 743	-R 41 631	
Equity	R 174 455	R 734 530	R 670 016	
ROE	430%	5%	-6%	143%
Total Assets	R 569 073	R 796 128	R 732 733	
ROA	132%	4%	-6%	44%
# Shares	90645			
Share Price	R 7.85			
Equity (market)	R 711 563			
Debt	R 394 618			
Tobin's Q	1.94			
Hwange				
Net Profits	R 2 589	R 140 754 057 849	R 13 417 616 085	
Equity	R 52 498	R 5 015 899 390 599	R 288 472 202 925	
ROE	5%	3%	5%	4%
Total Assets	R 127 204	R 6 744 565 964 534	R 390 022 620 584	
ROA	2%	2%	3%	3%
# Shares	114642			
Share Price	R 3			
Equity (market)	R 327 876			



Debt	R 74 706		
Tobin's Q	3.16		

Mining (Companies with a minimum 25% board women)

	2010	2009	2008	Average
Mix Telematics Africa				
Net Profits	R 66 088	R 69 085	R 52 504	
Equity	R 649 822	R 657 427	R 598 018	
ROE	10%	11%	9%	10%
Total Assets	R 1 048 423	R 1 103 534	R 998 929	
ROA	6%	6%	5%	6%
# Shares	657000			
Share Price	1.21			
Equity (market)	794970			
Debt	398601			
Tobin's Q	1.14			
Adcorp Holdings				
Net Profits	R 122 461	R 160 633	R 223 631	
Equity	R 907 943	R 803 902	R 668 171	
ROE	13%	20%	33%	22%
Total Assets	R 1 671 796	R 1 713 600	R 1 389 934	
ROA	7%	9%	16%	11%
# Shares	58731			
Share Price	R 27.35			
Equity (market)	R 1 606 293			
Debt	R 763 853			
Tobin's Q	1.42			
Workforce Holdings				
Net Profits	R 15 115	R 11 421	R 12 528	
Equity	R 173 804	R 159 216	R 148 459	
ROE	9%	7%	8%	8%
Total Assets	R 393 246	R 381 305	R 377 098	
ROA	4%	3%	3%	3%
# Shares	225630			
Share Price	R 0.35			



Equity (market)	R 78 971			
Debt	R 219 442			
Tobin's Q	0.76			
Rare Holdings				
Net Profits	-R 58 071	R 26 708	R 24 544	
Equity	R 116 580	R 176 150	R 141 479	
ROE	-50%	15%	17%	-6%
Total Assets	R 495 364	R 581 437	R 386 562	
ROA	-12%	5%	6%	0%
# Shares	88750			
Share Price	R 0.61			
Equity (market)	R 54 138			
Debt	R 378 784			
Tobin's Q	0.87			
Primeserv Group				
Net Profits	R 7 222	R 11 451	R 17 507	
Equity	R 76 329	R 74 722	R 68 093	
ROE	9%	15%	26%	17%
Total Assets	R 135 424	R 135 037	R 138 398	
ROA	5%	8%	13%	9%
# Shares	99395			
Share Price	0.37			
Equity (market)	R 36 776			
Debt	59095			
Tobin's Q	0.71			
Metrofile Holdings				
Net Profits	R 52 945	R 42 128	R 59 313	
Equity	R 242 259	R 171 771	R 129 396	
ROE	22%	25%	46%	31%
Total Assets	R 546 467	R 501 133	R 470 325	
ROA	10%	8%	13%	10%
# Shares	408085			
Share Price	R 1.53			
Equity (market)	R 624 370			
Debt	R 304 208			
Tobin's Q	1.70			

Mining (Companies with less than 25% board women)

	2010	2009	2008	Average
--	------	------	------	---------



Micromega				
Net Profits	6044	16362	60241	
Equity	R 299 676	R 280 050	R 260 248	
ROE	2%	6%	23%	10%
Total Assets	504864	420786	440001	
ROA	1%	4%	14%	6%
# Shares	100803			
Share Price	R 1.26			
Equity (market)	R 127 012			
Debt	R 205 188			
Tobin's Q	0.66			
Morvest				
Net Profits	-R 242 914	R 47 482	R 42 797	
Equity	R 225 685	R 482 216	R 343 655	
ROE	-108%	10%	12%	-28%
Total Assets	R 474 288	R 777 504	R 610 761	
ROA	-51%	6%	7%	-13%
# Shares	528864			
Share Price	R 0.16			
Equity (market)	R 84 618			
Debt	R 248 603			
Tobin's Q	0.70			
Dialogue				
Net Profits	R 49 103	-R 96 498	-R 58 352	
Equity	R 110 728	R 64 729	R 158 678	
ROE	44%	-149%	-37%	-52%
Total Assets	R 184 685	R 237 103	R 261 236	
ROA	27%	-41%	-22%	-7%
# Shares	299075			
Share Price	R 0.12			
Equity (market)	R 35 889			
Debt	R 73 957			
Tobin's Q	0.59			
Lonrho				
Net Profits	R 300	-R 6 200	-R 34 100	
Equity	R 127 700	R 81 100	R 69 700	
ROE	0.23%	-8%	-49%	-19%
Total Assets	R 196 400	R 139 900	R 98 800	
ROA	0%	-4%	-35%	-13%



# Shares	1171800			
Share Price	R 1.58			
Equity (market)	R 1 851 444			
Debt	R 68 700			
Tobin's Q	9.78			
Kelly				
Net Profits	R 26 078	R 56 257	R 95 525	
Equity	R 238 946	R 235 346	R 201 661	
ROE	11%	24%	47%	27%
Total Assets	R 625 199	R 614 184	R 577 231	
ROA	4%	9%	17%	10%
# Shares	91924			
Share Price	R 4.85			
Equity (market)	R 445 831			
Debt	R 386 253			
Tobin's Q	1.33			
Excellerate				
Net Profits	R 22 136	R 28 607	R 28 925	
Equity	R 219 350	R 203 507	R 182 903	
ROE	10%	14%	16%	13%
Total Assets	R 475 528	R 467 766	R 407 742	
ROA	5%	6%	7%	6%
# Shares	217865			
Share Price	R 0.72			
Equity (market)	R 156 863			
Debt	R 256 178			
Tobin's Q	0.87			

Construction and Materials (Companies with a minimum 25% board women)

	2010	2009	2008	Average
Group Five				
Net Profits	R 267 377	R 514 733	R 418 507	
Equity	R 2 561 412	R 2 407 843	R 2 023 181	
ROE	10%	21%	21%	18%
Total Assets	R 9 950 394	R 10 372 870	R 9 249 746	
ROA	3%	5%	5%	4%
# Shares	95335			



Share Price	R 35.59			
Equity (market)	R 3 392 973			
Debt	R 7 388 982			
Tobin's Q	1.08			
Brikor				
Net Profits	-R 124 377	-R 28 300	R 73 042	
Equity	R 251 502	R 375 579	R 412 035	
ROE	-49%	-8%	18%	-13%
Total Assets	R 545 676	R 687 338	R 525 967	
ROA	-23%	-4%	14%	-4%
# Shares	625240			
Share Price	R 0.16			
Equity (market)	R 100 038			
Debt	R 294 174			
Tobin's Q	0.72			
Sea Kay Holdings				
Net Profits	-R 255 628	R 25 183	R 85 789	
Equity	R 107 845	R 326 499	R 275 629	
ROE	-237%	8%	31%	-66%
Total Assets	R 594 217	R 939 049	R 882 789	
ROA	-43%	3%	10%	-10%
# Shares	488864			
Share Price	R 0.16			
Equity (market)	R 78 218			
Debt	R 486 372			
Tobin's Q	0.95			
Mazor Group				
Net Profits	R 45 318	R 63 604	R 43 852	
Equity	R 234 287	R 193 702	R 146 160	
ROE	19%	33%	30%	27%
Total Assets	R 269 184	R 251 147	R 171 633	
ROA	17%	25%	26%	23%
# Shares	121014			
Share Price	R 2.09			
Equity (market)	R 252 919			
Debt	R 34 897			
Tobin's Q	1.07			
Wilson Bayly Holmes				
Net Profits	R 961 485	R 869 622	R 716 169	



Equity	R 3 228 245	R 2 579 993	R 1 815 333	
ROE	30%	34%	39%	34%
Total Assets	R 9 358 093	R 9 607 828	R 7 895 982	
ROA	10%	9%	9%	9%
# Shares	54499			
Share Price	R 116.71			
Equity (market)	R 6 360 578			
Debt	R 6 129 848			
Tobin's Q	1.33			

Construction and Materials (Companies with less than 25% board women)

	2010	2009	2008	Average
Aveng				
Net Profits	R 1 872 900	R 1 676 600	-R 1 306 600	
Equity	R 12 219 800	R 10 886 100	R 10 529 100	
ROE	15%	15%	-12%	6%
Total Assets	R 24 142 200	R 22 715 200	R 22 008 200	
ROA	8%	7%	-6%	3%
# Shares	389988			
Share Price	R 38.51			
Equity (market)	R 15 018 438			
Debt	R 11 922 400			
Tobin's Q	1.12			
African Brick				
Net Profits	-R 15 360	-R 84 396	R 21 131	
Equity	R 50 240	R 60 380	R 145 593	
ROE	-31%	-140%	15%	-52%
Total Assets	R 96 648	R 112 904	R 186 016	
ROA	-16%	-75%	11%	-26%
# Shares	312238			
Share Price	R 0.08			
Equity (market)	R 24 979			
Debt	R 46 408			
Tobin's Q	0.74			
Protech				
Net Profits	R 75 586	R 92 911	R 62 110	
Equity	R 310 255	R 234 614	R 141 703	
ROE	24%	40%	44%	36%



Total Assets	R 727 317	R 691 982	R 492 752	
ROA	10%	13%	13%	12%
# Shares	362500			
Share Price	R 0.75			
Equity (market)	R 271 875			
Debt	R 417 062			
Tobin's Q	0.95			
Afrimat				
Net Profits	R 72 925	R 57 705	R 94 985	
Equity	R 564 498	R 599 557	R 570 690	
ROE	13%	10%	17%	13%
Total Assets	R 843 286	R 860 369	R 766 202	
ROA	9%	7%	12%	9%
# Shares	139864			
Share Price	R 3.25			
Equity (market)	R 454 558			
Debt	R 278 788			
Tobin's Q	0.87			
Basilread				
Net Profits	R 260 753	R 274 270	R 204 516	
Equity	R 1 715 289	R 1 500 916	R 792 073	
ROE	15%	18%	26%	20%
Total Assets	R 4 377 471	R 4 190 576	R 2 476 719	
ROA	6%	7%	8%	7%
# Shares	123798			
Share Price	R 12.60			
Equity (market)	R 1 559 855			
Debt	R 2 662 182			
Tobin's Q	0.96			

General Retailers (Companies with a minimum 25% board women)

	2010	2009	2008	Average
Woolworths Holdings				
Net Profits	R 1 257 000	R 1 242 700	R 740 100	
Equity	R 3 453 000	R 3 071 900	R 3 582 800	
ROE	36%	40%	21%	33%
Total Assets	R 9 010	R 8 305	R 11 261	



	000	100	800	
ROA	14%	15%	7%	12%
# Shares	759464			
Share Price	R 23.90			
Equity (market)	R 18 151 190			
Debt	R 5 557 000			
Tobin's Q	2.63			
African & Overseas Enterprises				
Net Profits	R 15 613	R 12 936	R 21 102	
Equity	R 234 874	R 211 777	R 193 422	
ROE	7%	6%	11%	8%
Total Assets	R 290 294	R 262 446	R 241 813	
ROA	5%	5%	9%	6%
# Shares	1250			
Share Price	R 9.14			
Equity (market)	R 11 425			
Debt	R 55 420			
Tobin's Q	0.23			
Hardware Warehouse				
Net Profits	-R 8 732	R 8 324	R 10 460	
Equity	R 27 177	R 35 736	R 28 927	
ROE	-32%	23%	36%	9%
Total Assets	R 126 641	R 131 747	R 83 073	
ROA	-7%	6%	13%	4%
# Shares	71400			
Share Price	R 0.47			
Equity (market)	R 33 558			
Debt	R 99 464			
Tobin's Q	1.05			
Rex Trueform clothing company				
Net Profits	R 30 529	R 25 594	R 38 759	
Equity	R 235 866	R 212 514	R 193 972	
ROE	13%	12%	20%	15%
Total Assets	R 290 334	R 262 208	R 241 296	
ROA	11%	10%	16%	12%
# Shares	2906			
Share Price	R 9.94			
Equity (market)	R 28 886			



Debt	R 54 468			
Tobin's Q	0.29			

General Retailers (Companies with less than 25% board women)

	2010	2009	2008	Average
Mr Price				
Net Profits	R 673 568	R 615 723	R 550 943	
Equity	R 2 070 823	R 1 764 187	R 1 479 331	
ROE	33%	35%	37%	35%
Total Assets	R 3 610 244	R 3 270 870	R 2 791 516	
ROA	19%	19%	20%	19%
# Shares	247156			
Share Price	R 48.40			
Equity (market)	R 11 962 350			
Debt	R 1 539 421			
Tobin's Q	3.74			
TFG				
Net Profits	R 1 046 400	R 1 234 100	R 1 330 000	
Equity	R 5 485 300	R 4 855 500	R 4 136 100	
ROE	19%	25%	32%	26%
Total Assets	9236900	8664000	7074400	
ROA	11%	14%	19%	15%
# Shares	208993			
Share Price	R 71.13			
Equity (market)	R 14 865 672			
Debt	R 3 751 600			
Tobin's Q	2.02			
Alert steel				
Net Profits	-R 98 974	R 4 377	R 51 435	
Equity	R 92 076	R 191 050	R 194 302	
ROE	-107%	2%	26%	-26%
Total Assets	R 561 044	R 520 257	R 444 000	
ROA	-18%	1%	12%	-2%
# Shares	248429			
Share Price	R 0.32			
Equity (market)	R 79 497			
Debt	R 468 968			



Tobin's Q	0.98			
Truworths				
Net Profits	R 1 604 000	R 1 434 000	R 1 277 000	
Equity	R 4 371 000	R 3 551 000	R 2 920 000	
ROE	37%	40%	44%	40%
Total Assets	R 5 409 000	R 4 506 000	R 3 903 000	
ROA	30%	32%	33%	31%
# Shares	425258			
Share Price	R 57.92			
Equity (market)	R 24 630 943			
Debt	R 1 038 000			
Tobin's Q	4.75			

Travel and Leisure (Companies with a minimum 25% board women)

	2010	2009	2008	Average
Spur Corporation				
Net Profits	R 39 050	R 63 264	R 59 266	
Equity	R 403 295	R 434 320	R 437 102	
ROE	10%	15%	14%	13%
Total Assets	R 530 725	R 546 239	R 557 134	
ROA	7%	12%	11%	10%
# Shares	87866			
Share Price	R 12.56			
Equity (market)	R 1 103 597			
Debt	R 127 430			
Tobin's Q	2.32			
Gooderson Leisure Corporation				
Net Profits	R 7 946	R 15 991	R 15 979	
Equity	R 137 655	R 134 494	R 101 812	
ROE	6%	12%	16%	11%
Total Assets	R 198 825	R 179 302	R 140 624	
ROA	4%	9%	11%	8%
# Shares	120990			
Share Price	R 0.60			
Equity (market)	R 72 594			
Debt	R 61 170			
Tobin's Q	0.67			



Cullinan Holdings				
Net Profits	R 27 794	R 17 951	R 16 614	
Equity	R 139 751	R 112 571	R 93 906	
ROE	20%	16%	18%	18%
Total Assets	R 389 961	R 368 589	R 409 915	
ROA	7%	5%	4%	5%
# Shares	718355			
Share Price	R 0.66			
Equity (market)	R 474 114			
Debt	R 250 210			
Tobin's Q	1.86			

Travel and Leisure (Companies with less than 25% board women)

	2010	2009	2008	Average
Famous brands				
Net Profits	R 230 260	R 191 367	R 150 330	
Equity	R 708 594	R 583 926	R 492 291	
ROE	32%	33%	31%	32%
Total Assets	R 1 139 312	R 1 070 829	R 1 052 208	
ROA	20%	18%	14%	17%
# Shares	95818			
Share Price	R 32.72			
Equity (market)	R 3 135 165			
Debt	R 430 718			
Tobin's Q	3.13			
Queensgate				
Net Profits	-R 3 243	-R 4 523	R 1 485	
Equity	R 306 526	R 15 223	R 19 746	
ROE	-1%	-30%	8%	-8%
Total Assets	R 457 959	R 16 469	R 19 948	
ROA	-1%	-27%	7%	-7%
# Shares	1606820			
Share Price	R 0.02			
Equity (market)	R 32 136			
Debt	R 151 433			
Tobin's Q	0.40			
The Don				



Net Profits	-R 9 201	-R 8 947	R 6 972	
Equity	R 195 263	R 197 732	R 156 482	
ROE	-5%	-5%	4%	-2%
Total Assets	R 391 068	R 363 965	R 255 967	
ROA	-2%	-2%	3%	-1%
# Shares	294485			
Share Price	R 0.24			
Equity (market)	R 70 676			
Debt	R 195 805			
Tobin's Q	0.68			