Financial markets value reputation for Corporate Social Responsibility – A study of the South African mining sector

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Declaration

I, Bongani Munkuli, declare that this thesis is my own, original work and that all the sources that I have used have been indicated and acknowledged by means of complete references. This thesis has not previously been submitted for any degree or examination at this or any other university.

Acknowledgments

I want to thank God for giving me the strength to keep going, especially during such tempting times.

I would like to thank my supervisor Dr Horne for her valuable advice and guidance.

ABSTRACT

Corporate social responsibility (CSR) is the obligation of business to participate in sustainable socio-economic development. However, there are uncertainties as to whether active participation in CSR practices lead to increased market valuation for South African mining firms. The purpose of the study is to evaluate the effect of corporate social responsibility practices on the market valuation of mining companies in South Africa. The study has five sub questions focussing on the variances in market valuation measures between mining corporations listed on the Johannesburg Securities Exchange's Socially Responsible Investment Index (JSE SRI) and those that are not on the index over a period 2005-2015. A quantitative methodology was employed, utilising stata software to navigate through panel data that comprises observations on cross-section and time series. Both static and dynamic types of panel data approaches were employed as; ordinary least squares, fixed, and random effects models. The Arellano-Bond procedure were also used as a dynamic function to determine the long-run relationship between CSR and market value of a company. The sample include thirty eight corporations engaged in mining excluding those in exploration-only activities. Secondary data on market valuation measures was gathered from the Bureau of Financial Analysis database.

As compared to the dominant qualitative research on CSR which shows a correlation between CSR and market valuation, the findings of this study which employed a quantitative approach indicate no significant relationship between CSR and market valuation in the mining sector, nor significant variances in market valuations between mining firms on the JSE SRI and those not on the index. Active participation in CSR activities does not lead to increased market valuation. The study has made the following contributions. It has provided an empirically based mining sector specific study on the effect of corporate social responsibility practices on the market valuation in South Africa; an area presently under-researched. Few studies have undertaken a quantitative approach which attempts to find a correlation between CSR and market valuation in the South African mining sector. The study has also provided an understanding that maximising shareholder wealth is still an important business goal despite the need to fulfil social demands. The study has further contributed to the literature by proposing an integrated framework for conceptualising CSR practices by mining firms in a developing economy.

Key words: corporate social responsibility, market evaluation, stakeholder, shareholder.

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LIST OF ACRONYMS AND INITIALS

Aids	Acquired Immune Deficiency Syndrome
BEE -	black economic empowerment
BFAINet -	Bureau of Financial Analysis
CIS -	collective investment scheme
CPI -	consumer price index
CRA -	Community Reinvestment Act
CSP -	corporate social performance
CSR -	corporate social responsibility
DFID	Department for International Development.
DMR -	Department of Mineral Resources
DPS	Dividends per share
DSI -	Domini 400 Social Index
DTI -	Department of Trade and Industry
ECM -	error components model
Eiris -	Ethical Investment Research Service
e/s	earnings per share
ESG -	environmental, social and governance
FTSE -	Financial Times and the London Stock Exchange
GDP -	gross domestic product
GRI -	Global Reporting Initiative
HIV -	human immunodeficiency virus
HPR -	holding period return
HPY -	holding period yield
ICB -	industrial classification benchmark
ISO	International organization for standardization
IRR -	Institute of Race Relations
JPoI -	Johannesburg Plan of Implementation
JSE -	Johannesburg Securities Exchange
JSEMB	JSE main board
KLD -	Kinder, Lydenberg, Domini & Co
MNC	multinational corporations
MV -	market value
NAV -	net asset value
NGO -	Non-Governmental Organisation
p/b -	Price/book ratio
p/cf -	price/cash flow
p/e -	price/earnings ratio
PDSAs -	previously disadvantaged South Africans
PwC	PricewaterhouseCoopers
R&D -	research and development
RDP -	Reconstruction and Development Plan
REM -	Random Effects Model
RoA -	return on assets

RoE -	return on equity
RoI -	return on investment
SIF -	Social Investment Forum
SMME -	small, medium and micro-enterprises
SPV -	special purpose vehicle
SRI -	socially responsible investing
TA -	total assets
TNCs -	transnational corporations
UN -	United Nations
UNCTAD -	United Nations Conference on Trade and Development
WBCSD	World Business Council for Sustainable Development

CHAPTER 1

ORIENTATION AND PROBLEM STATEMENT

1.0 Introduction

The concept of Corporate Social Responsibility (CSR) has carried different meanings for different people at different times, with new terminologies that can effortlessly be incorporated into existing definitions (Pedersen, 2006; Jamali & Mirshak, 2007; Carroll, 1999; Yakovleva, 2007; Ndhlovu, 2011). Both academic and industry-based views of corporate social responsibility appear to have blossomed simultaneously with other concepts, like stakeholder participation and corporate social performance, which are used interchangeably in other fields depending on the age, writer liking or situation. CSR has been given varied names by different companies: corporate social investment, corporate social performance, sustainability programmes, creating shared value and also the company in the community.

Corporate social responsibility (CSR) can be defined as "the commitment of business to contribute to sustainable economic development, working with employees, their families, the local community and society at large to improve their quality of life" (World Business Council for Sustainable Development, 2004: p10). As such, driving social change is no longer the responsibility of the Government only, but has also been cascaded to companies who must now balance the pursuit of profit with corporate social responsibility. This requires companies to commit to contribute to sustainable economic development and society at large to improve the quality of life (Jones et al., (2002); Marchant, 2003). Key to the pursuit of profit by companies is increasing their market value, and as such any investment made or cost incurred is expected to be positively correlated to improving its market value. Dusuki and Dar (2005) point out that there are uncertainties as to whether active participation in CSR practices lead to increased market value. However, these debates have given birth to adjustments and increased commitment concerning the relationships between companies' influence and decisions, government, and society (Edenkamp, 2002).

Corporation managers and shareholders have been criticised for neglecting the effect of their business strategies on various stakeholders, like suppliers, government, banks, environment, customers and employees (Mohr & Webb, 2005), so as to fulfil their corporations' desires of maximising profit. Such managers and shareholders consider CSR practices an inconsistent effort which can affect a company's shareholder wealth maximisation (Friedman, 1970; Gallagher, 2005; Moon, 2008). However, Simionescu and Gherghina, (2014: p281) reasoned, based on Jenkins (2005; p525) that: "The only focus for companies should no longer be maximising profits and increasing market share, but to be conscious and to make a prime objective in allocating the company's resources efficiently in such a way that the company value is maximised through brand value, image value, market value" – which is essentially a strategy on corporate social responsibility.

McWilliams and Siegel (2000) argue that social responsibility is no longer an important option for business. In their definition of corporate social responsibility, they point out that it entails activities that advance some social causes beyond a firm's interest and the regulatory requirements. As a result, the theme has gained importance not only in the business agenda of the most important corporations but it has become an attractive phenomenon to be studied academically as well. Corporations which embrace the importance of CSR, and how their businesses affect society with regard to long-term benefits, have voluntarily incorporated CSR practices into their main business strategies. Simionescu and Gherghina (2014) agree that based on the arguments of Porter and Kramer (2006), Maignan and Ferrell, (2001) and; Drumwright (1994), integrating CSR into a business strategy may yield benefits including: "a source of leverage for the company, a dynamic and important resource for competitive advantage" (Porter & Kramer, 2006: p32), "a proactive strategy for business, and an important financial and effective marketing instrument to generate and maintain a competitive advantage" (Maignan & Ferrell, 2001; Drumwright, 1994: p26).

Researchers have attempted to understand corporate social responsibility (CSR) in different cultural backgrounds, in developed regions like Western Europe and North America. However debates on the legality of CSR, its benefits and the link to market valuation of corporations still continue. In Africa in general and in South Africa in particular, the effect of corporate social responsibility on the market performance of corporations has received considerable attention among researchers, academics and practitioners, but so little has been done about it. Methods and frameworks have been developed and debated in developed nations, with limited focus on developing nations or sector-specific studies. This reveals significant limitations in the existing literature concerning theoretical and empirical studies on the effect of CSR on market valuation in developing countries and in specific sectors.

A plethora of models have been used by market analysts to evaluate financial data in determining value. So investors like to believe that they make comprehensive and objective investment decisions based on rigorous equity analysis. However Cole (2012) argues that while equity analysts may appear to take a very rational approach towards calculating investment potential, their work is often undermined by a failure to take proper account of the effect of intangible assets like patents, customer lists, copyrights, know-how, collaborative activities and brands. One of the most familiar, but least understood, intangible assets is a firm's reputation. These arguments accentuate the importance of reputation, which would enhance the market value of South African mining corporations. Thus, it is also argued that CSR creates non-financial-data-based reputational value for these organisations.

Corporate reputation as a concept has however posed an evaluation and measurement challenge to many investors. So value-based assessments of corporate reputation have not received much consideration, on the ground that if you cannot measure it you cannot account for it (Cole, 2012). Nonetheless, Black and Carnes (2000) uphold their argument that corporate reputation offers value to the stockholder, which leads to financial benefits. Black & Carnes illustrated the contributions of corporate reputation to an organisation's value but fell short of finding a methodology for evaluating and measuring, a separable company's reputation in monetary terms. The forecasts of earnings growth and dividends pay-out ratios form a basis for earnings expectations which accounts for a considerable part of the company's value; however the remaining balance might be derived from intangibles, both identifiable and unidentifiable. Resolving the challenges of the unknown relationship between CSR and firm value requires investors to analyse non-financial data differently in a manner that enables them to evaluate and eventually determine the value of a firm they wish to invest in.

Understanding the association between company market value, return potential, and risks in pursuing long-term financial goals is critical in the planning for an investment strategy. Bhatt and Sumangala (2012) pointed out that equity valuation is a central question which academicians, researchers and practitioners in the field of stock trading and capital markets are trying to address. This study is premised on empirically analysing the relationship between corporate social responsibility (CSR) and market valuation of mining companies listed on JSE so as to understand the influence of the views of the shareholder and stakeholder theories within the context of a developing economy. So there is a need for an up-to-date theoretical framework that will assist an empirical study evaluating the critical connection between CSR practices of mining companies in South Africa and their corporate viability. So the study will evaluate the effect of corporate social responsibility on a selected number of market valuation indicators (share price returns, price-to-book values, price-to-cash flow, price-to-earnings ratios and Tobin's q), for mining companies listed on the Johannesburg Securities Exchange (JSE).

1.1 Background

In their study Steiner and Steiner (2006) trace the foundations of CSR back to the era of John D Rockefeller and Carnegie Andrew, who were engaged in charitable work and donated huge amounts of money into community projects. Yet Blowfield and Frynas, (2005) discussed the roots of CSR and stated that it goes back to the 19th-century when slave labour was used to produce foodstuffs which was boycotted by consumers.

Croft (2003) highlighted the major topics that may be addressed by CSR policies as pollution and environmental issues; supply-chain management; human rights; ethical investment; good governance; political and social issues; general business ethics; employee rights; training, development and education; stakeholder engagement and dialogue; clean technology and the overall reputation of the corporation. Other scholars, like Andriof and McIntosh (2001), presented a more concise idea of the areas where CSR can be used. According to them, a CSR policy is expected to cover four areas: environment, workplace, community and marketplace. Other researchers, like Sen and Bhattacharya (2001) understand CSR as a complex concept with six aspects: environment, employee support, community support, product, diversity and non-domestic operations. The World Business Council for Sustainable Development (2004) and Rajput, Batra and Pathak (2012) define CSR as the commitment of business to contribute to sustainable economic development, working with employees, their families, the local community and society at large to improve their quality of life.

However, reconciling the firm´s economic orientation with its social orientation has been a question in the CSR debate (Carroll, 1991). This debate is premised on the different views among stakeholders, for instance between shareholder primacy and social welfare theorists. The shareholder theory known as the traditional view suggests that firms are in existence for just one reason: to maximise profits for shareholders. According to Berle (1931), the traditional shareholder theory has primary responsibility of maximising the wealth of shareholders, so social issues must not interfere with business operations. Friedman (1970) stated that corporations have neither the authority nor the moral right to sacrifice shareholders' funds for the welfare of society. Managers are shareholders' agents, so they have no right to engage in practices that reduce profits, unless it will increase shareholder wealth. CSR is deemed to be illegal by traditional theorists since it increases agency costs. Friedman (1970) argues that any shareholder is free to use his/her dividend to support social issues of any worthy cause he may choose; however a company manager should not make the choice for him. Salazar et al., (2008) also argue that it is impossible to take all stakeholders' interests into business decisions because no other stakeholders pay for their stake in the company, but shareholders do. Dunne (2009) summarised the shareholder theory by indicated that a manager of a corporation cannot simultaneously be a philanthropist, an eco-warrior, a human rights activist, a civil servant or a social worker.

The stakeholder theory of organisations opposes the traditional views under which firms disregard the effect of their decisions on society. Managers and shareholders have been criticised for their determination to maximise profits irrespective of the company strategy's effect on various stakeholders like banks, suppliers, customers, employees and investors. However, managers are realising that to achieve company objectives, CSR is an indispensable investment which addresses the objective of achieving company goals while adding value to society, though some managers still view CSR as an inconsistent effort which affects business owners' wealth (Friedman, 1970). On the other hand Jenkins (2005) contended that businesses must not focus on maximum profits and growing their market share only, but should also be attentive and efficiently allocate company resources in a manner that will maximise value – brand value, image value and market value. According to Gill (2009), companies have to engage in CSR activities so that society and the environment can also benefit from the company's profits.

Another perspective put forward is that as an economic entity, companies were created to provide goods and services, so their capacity to generate profits was established as the primary reason of being. However, society has not only legitimised a firm as a profit-orientated organisation but also a business is expected to comply with the laws established by governments and with social contracts. Carroll (1991: p39) states "Firms are expected to pursue their economic missions within the framework of the law" as partial fulfilment of the social contract between business and society. More than being economically and legally responsible, society also expects business to be ethical by performing in a manner consistent with expectations of societal mores and ethical norms. Gill (2009) is in support of the market-friendly approach of doing business, meaning that the socially engaged organisation should strive to make a profit, obey the law, be ethical and be a good corporate citizen.

Advocating for CSR, Hamann and Kapelus (2004) argued that today, the practice of aligning corporate policies and practices to sustainable development projects enhances a company's reputation and access to key resources (capital, land and markets). Benefits accrue to companies that incorporate CSR into their company strategies. It is a basis for influence for a business and a key resource for competitive advantage (Simionescu & Gherghina, 2014; Porter & Kramer, 2006), a practical strategy for doing business, and an effective financial and marketing tool to generate and maintain a sustainable business advantage (Drumwright, 1994; Simionescu & Gherghina, 2014; Maignan & Ferrell, 2001). Epstein (1996a) also in support of the contemporary views on CSR, argued that organisations that do not embrace these issues will miss out on the potential competitive advantage resulting from cost reductions, as well as boosting revenue growth. A growing business case for corporate social responsibility is that it is an essential tool for doing business that may lead to financial rewards for socially responsible firms (KPMG, 2013; Van den Ende, 2004). However, the effects of CSR on firm valuation still need to be investigated because even if CSR can lead firms to access key resources; they will not be free.

Idowu and Filho (2009) state that corporate social responsibility has gained huge popularity worldwide and firms have responded by accepting the practice, even if at different levels. There are often varied and powerful company stakeholders who, despite the worldwide popularity of corporate social responsibility, still pose challenges to its implementation. Firstly, corporate strategic decisions are always made with reference to potential and reasonable expectations of financial gains. Managers in charge of corporate social responsibility (CSR) programmes are under intense pressure to quantify clearly in financial terms the effects of these investments on bottom-line items, like revenues and returns (Peloza, 2009; Mcleod, 2011). So communicating the relationship between CSR and market valuation and its significance becomes a challenge, given that research into this domain has issued limited guidance to company executives on how they should quantify the financial results of their CSR policies. In most instances, an attempt is made to relate the effect of CSR activities to market indicators, like market price, or accounting indicators like return on equity, return on assets and return on sales. Nevertheless, these metrics are still criticised for not providing managers with guidance on how to create the best level of CSR investments for their companies, with many other variables affecting such metrics (Peloza, 2009). As a result, there is limited support in the form of funding for corporate social responsibility activities. Secondly, financial controllers in charge of allocating budgets often oppose CSR investments. The argument is that CSR investments result in immediate cash outflows without immediate clearly quantifiable financial outcomes or cash inflows. So these programmes are subject to public opinion, changes in leadership, and are dependent on financial cycles (Epstein & Roy, 2001; Steger, 2006).

There is a strong belief that CSR is positively related to market valuation. Klassen and Mc-Laughlin (1995), Shane and Spicer (1983), Spicer (1978b) and Stevens (1984) found a positive correlation to support this belief. The challenge facing managers who want their social re-sponsibility initiatives to be accepted into conventional budgeting is to quantify the financial returns from these investments (Peloza, 2009). Despite the reluctance of management to invest in CSR with the perception that it will create needless corporate social harm, may lead to overinvesting in CSR in an effort to take advantage of dominant sentiment, or find that they have in fact destroyed shareholder value, both institutional and individual investors are increa-singly making their investment decisions based on the company's potential valuation on the social responsibility investment index. This is mostly a popular practice in developed markets, with indications that it is gaining momentum in developing economies too. For example, in May 2004 the Johannesburg Securities Exchange introduced an investment index called the Socially Responsible Investment Index (JSE SRI Index) as a way of addressing the shifting demands of investors. Sun, Nagata and Onoda (2011) see this index as a yardstick for social responsibility practice on the South African stock market. So firms that prove to be top players in CSR matters are included in the index each year when it is revised. It is, however, not confirmed whether mining companies listed on the JSE SRI Index perform differently from non-SRI-listed companies, so the significance of the relationship between CSR and market valuation in the mining sector remains inconclusive among the few existing studies. The situation is not helped by the limited studies focusing mainly on economies in their entirety without segmenting them into the various sectors of a given economy. This study is motivated by such lack of a sector- or industry-specific empirical analysis concerning the relationship between CSR and market valuation. The need for a sector specific study is supported by the institutional theory advanced by number of authors (Kassinis & Vafeas, 2006; Bansal, 2005; Bansal & Roth, 2000; Campbell, 2007; Delmas & Toffel, 2004; Freeman, 1984; Hoffman, 1999 & 2001; Sharma & Henrique, 2005; and Jennings & Zanbergen, 1995) who propose that, when implementing CSR activities, institutional pressures across industries will tend to influence the direction of the effect of CSR on market valuation. As explained in Flammer, (2013), the institutional theories argue that stakeholders in different industries respond differently to CSR efforts. This study therefore ascribes to the institutional theory. If an industry has high norms with regard to CSR activities, and stakeholders are more sensitive, higher CSR efforts may, in turn, translate into stronger market valuation. Conversely, one can expect a negative relationship between CSR and market valuation in a "dirty" industry with lower institutional norms for CSR, and where stakeholders are likely less sensitive to companies' engagement with CSR. Clearly, the distinct message that institutional theories convey in contrast with other theories is the emphasis they put on industry characteristics. The theory accentuates that the relationship between corporate social responsibility and market valuation should be investigated empirically and compared between or among firms within the same industry. This is to ensure that the results are not affected by different stakeholders' sensitivity towards CSR efforts across industries. Jamali and Mirshak (2006: p36) found that "CSR is still a fairly new concept in Africa and is viewed most commonly in the context of philanthropy, rather than good business practice that supports the bottom line". Although all firms that were surveyed complied with the discretionary conception of CSR, a logical, dedicated and institutionalised methodology to establishing and implementing corporate social responsibility programmes is still missing in developing nations. Thus uncovering such a relationship in the developing South African economy within the mining sector may reveal creditable indications to potential investors who are under pressure to take into consideration the benefits of sustainability when evaluating possible investment assets in the mining sector.

1.1.1 South Africa mining industry

Mining firms are of paramount importance to South Africa's socio-economic development since their operations contribute to economic activity, job creation and foreign exchange earnings. SouthAfrica.info (2012) noted that South Africa is well known for having plenty of mineral resources which contribute a significant percentage of the world production and reserves, and that the mining companies are key players in the global industry with an estimated worth of R20.3 trillion ($2.5 trillion). According to the Chamber of Mines (2012) South Africa's mining industry is the fifth-largest in the world. Projects IQ (2011) pointed out that South Africa's mines were a major contributor to the establishment of the Johannesburg Stock Exchange (JSE).

Siyobi (2015) notes that prior to 1994, mining in South Africa embodied some of the most socially destructive practices of that era. However in the post-1994 democratic dispensation, CSR has been treated as a vehicle for restorative justice and redressing the legacy of apartheid. The mining industry has become a leader in implementing CSR initiatives. However, not all businesses have entirely accepted incorporating social responsibility aspects into their everyday business in South Africa (De Villiers & Vorster, 1997). The Department of Mineral Resources (2010) also expressed concern over the poor performance of mining firms in South Africa which were showing commitment towards social investment. According to the MPRDA (2002), South African mining firms should take part in societal transformation to assist previously disadvantaged South Africans (PDSAs). However, the sector has not yet fully embraced the spirit of the charter towards its social responsibility (DMR, 2010). A number of shortcomings were identified in the manner in which the mining industry was expected to implement the various elements of the charter, including ownership, procurement, employment equity, beneficiation, human resource development, mine community development, housing and living conditions (DMR, 2010). This highlights the fact that not all stakeholders regard corporate social responsibility as an equally important aspect of their business practice.

The transition to democracy was associated with political, institutional and social changes in turn; these affected the concept and role of corporate social responsibility. Siyobi (2015) postulates that capital markets of South Africa are now closely related to international markets, predominantly through the listing of mining companies on international stock exchanges, particularly on the London Stock Exchange. These mining firms ended up being pressured to meet international CSR expectations, which were in line with corporate governance guidelines. Siyobi (2015) further noted that mining firms were incentivised to intensify their CSR commitments in a bid to attract investors; however with these rising international expectations, policies at a domestic level also changed. These led to lack of co-ordination and co-operation between mining companies and other relevant stakeholders at the domestic level.

Antin (2013) noted that South African mining industry had undergone major turmoil since the beginning of the 2008 global financial crisis, including the 2012 shooting of some 34 mineworkers by police in the Marikana area and increasingly vocal calls for the nationalisation of mines as a cure for the nation’s hardships of poverty, inequality and unemployment. According to CNN (2012), after negotiations over a substantial wage increase between striking mineworkers and multi-national platinum producer Lonmin collapsed, violence erupted and 34 mineworkers were killed at the producer's Marikana mine in North-West Province. This added to the 10 people already killed during the preceding week, a tragedy that global media called one of the bloodiest incidents since apartheid ended in 1994. News of the violence, already extensively covered by Alexander (2013), spread rapidly around the world. Immediately after the events, the rand depreciated against the US dollar with a greater margin and the market capitalisation of the top 39 mining companies (companies with a primary listing at the JSE or a secondary listing with main operations in Africa) shaded 5% between June and September 2012 (PricewaterhouseCoopers, 2012). The Chamber of Mines (CM) estimated that losses of R15 billion were realised from both sales and production as a result of strikes (Baxter, 2013). These have shown the importance of the mining sector in South Africa's economy.

The varying definitions of CSR have elicited suggestions that the concept varies from country to country. Turker (2009: 412) suggested that various aspects including "cultural differences, religions, demographics, income levels, education levels and geographic locations of a country or region" influence the views towards the concept of CSR. So it is critical for researchers in each country to assess the concept based on the specific needs of that country so as to develop a true representational definition or understanding of CSR, Nkomani (2013: p2). If each country specific factors are not considered, they suggest inconsistency in conceptualising CSR practice. For example, US attained its independence in 1776; whereas South Africa became properly democratic only in 1994, so factors influencing CSR will be different.

"The context of CSR from a South African point of view has often been centred on black economic empowerment (BEE)" (Nkomani, 2013: p2). On the other hand, Sartorius & Botha, (2008); Nkomani, (2013) further explain that the concept of BEE is not exclusively South African, but a borrowed concept from comparable programmes in other nations. The Johannesburg Stock Exchange (JSE) took an initiative in May 2004 to provide an inclusive assessment of CSR in South Africa by establishing the socially responsible investment index (SRII). The index integrates the BEE and best corporate social responsibility practices to establish a triple bottom line. Painter and Morland (2006: p355) admitted that the incredible role of the King reports on corporate governance immensely influenced the creation of the socially responsible investment index in South Africa. However, time has seen the King reports having progressed and improved since the inception of the framework and now put more weight on sustainability issues than before. It is required of all mining corporations to satisfy the King reports' criteria to be able to apply for a listing on the JSE, so effectively fulfilling the requirements of the SRI index.

However, Sonnenberg and Hamann (2006: p316) argued for the superiority of the SRI requirements over the King Commission report in its effort to define a CSR culture for South African firms. Since the SRI Index was established on the basis of the philosophies of the triple bottom line as defined by Hammond's environmental, social, and governance and related sustainability concerns (JSE SRI, 2011: p4), the bourse then authorised an independent research to assess whether companies listed complied sufficiently with the Index listing requirements

1.2 Problem statement

Corporate social responsibility practices have previously been regarded as purely philanthropic (Mabuza et al., 2010). However, the spread and popularity of CSR is now viewed as a new way for firms to curb the negative perceptions of their activities. A need for established social responsibilities and ethical frameworks in business has become a key priority in contemporary society. This approach is reinforced by the fact that the number of renowned global corporations incorporating CSR programmes into their business operations has never been greater. The prominence of CSR initiatives today suggest that management's opinions with regard to such policies have shifted from an unnecessary addition to an essential business function.

However the Institute for Race Relations (2014) believes that in South Africa, mining firms are responding with CSR activities only to amend their tarnished images. Subsequent to the Marikana incident in which a total of 34 miners lost their lives in 2012 (Institute of Race Relations, 2014), South African mining firms have been forced to respond decisively to social and corporate issues. The Institute of Race Relations (IRR, 2014) regards the South African mining sector as being subject to political and civil hostility, far more than any other sector. These arguments suggest a potentially unclear motive behind CSR in the South African mining context.

The Department of Mineral Resources (MDR, 2010) reported that between 1997 and 2010, the South African mining sector spent R340 billion in socio-economic and BEE-related transactions. Individual mining companies are working with various stakeholders towards helping society. For instance, Anglo American has been providing free anti-retroviral treatment to its employees since 2002; others, like BHP Billiton, De Beers, Kumba and Anglo American, have also been offering financial assistance, supporting health and welfare, education, skills development, sports, crime prevention and many more social support activities to a number of poor communities (Mabuza et al., 2010).

Hamann (2004) believes that mining companies often use CSR to gain publicity and boost market valuations through improved reputations. If this claim is true, one would expect a positive relationship between CSR and the market valuation of those mining firms responding to the plight of communities in South Africa. Zahoor (2004) highlighted that the debate around the relationship between CSR and the bottom-line results of an enterprise is now perennial. On the other hand, Pava and Krausz (1996) have punted the idea that the financial implications of using socially responsible investment criteria are not yet clear, casting yet more doubt on views of a firm's purpose.

Although the link between CSR and corporate market valuation is continuously evolving, it has less empirically tested in a single sector within a developing economy. There are limited studies that have attempted to empirically test the effect of CSR practices on market valuation in the context of a single sector (mining) in a developing economy. Therefore, there still exist an unanswered question which is: what is the current nature of the relationship between CSR and market valuation in the mining sector. Hence the need for an empirical evaluation of the link between CSR practices and the market valuation of mining companies in South Africa.

The need for a sector specific study is supported by the institutional theory advanced by a number of authors (Kassinis & Vafeas, 2006; Bansal, 2005; Bansal & Roth, 2000; Campbell, 2007; Delmas & Toffel, 2004; Freeman, 1984; Hoffman, 1999 & 2001; Sharma & Henrique, 2005; and Jennings & Zanbergen, 1995) who propose that, when implementing CSR activities, institutional pressures across industries will tend to influence the direction of the effect of CSR on market valuation. As explained in Flammer, (2013), the institutional theories argue that stakeholders in different industries respond differently to CSR efforts. This study therefore ascribes to the institutional theory. The distinct message that institutional theories convey in contrast with other theories is the emphasis they put on industry characteristics. The theory accentuates that the relationship between corporate social responsibility and market valuation should be investigated empirically and compared between or among firms within the same industry. This is to ensure that the results are not affected by different stakeholders' sensitivity towards CSR efforts across industries. Jamali and Mirshak (2006: p36) found that "CSR is still a fairly new concept in Africa and is viewed most commonly in the context of philanthropy, rather than good business practice that supports the bottom line". Although all firms that were surveyed complied with the discretionary conception of CSR, a logical, dedicated and institutionalised methodology to establishing and implementing corporate social responsibility programmes is still missing in developing nations.

1.3 Research objectives

The broader objective of this study is to empirically evaluate the link between CSR practices and the corporate market valuation in the context of a single (mining) sector in a developing economy. The objective will be achieved by employing market-based measures to empirically establish whether market valuation is better for mining firms listed on the JSE SRI, relative to non-CSR mining firms listed on the JSE main board in terms of average market returns, price-to-book values, price-to-cash flow ratios, and price-to-earnings ratios.

The research objectives of the study are split into primary and secondary objectives:

Primary objective:

The primary objective is to evaluate the effect of CSR practices on market valuation in the South African mining sector and propose a framework for conceptualising corporate social responsibility.

Secondary objectives:

To achieve the primary objective, the secondary objectives to be realised are:

- To investigate whether there are significant variances in stock returns between JSE SRI-listed and non-SRI-listed mining firms.
- To investigate whether there are significant variances in price-to-book ratios between JSE SRI- and non-SRI-listed mining firms.
- To investigate whether there are significant variances in price-to-cash flow ratios between JSE SRI- and non-SRI-listed mining firms.
- To investigate whether there are significant variances in price-to-earnings ratios between JSE SRI- and non-SRI-listed mining firms.
- To investigate whether there are significant variances in the Tobin's q ratios between JSE SRI- and non-SRI-listed mining firms.
- To propose a framework for conceptualising corporate social responsibility.

1.4 Research questions

Following the rise of CSR around the world, questions are often asked as to whether CSR practices lead to wealth creation for all stakeholders, or for shareholders only.

What effect does CSR have on market valuation ratios? Are mining firms listed on the SRI Index enjoying benefits that non-SRI Index are not enjoying?

Are the theoretical perspectives of CSR independently have the power to explain what drives corporate social responsibility practices?

If social responsibility is a good practice, do financial markets value mining firms listed on the JSE SRI differently from non-SRI mining firms through better share prices and returns?

If not, why would firms then continuously invest beyond the requirement of regulations into social enhancement programmes?

Primary question

What effect does CSR have on market valuation of South African mining firms?

Secondary questions

- Are there statistically significant variances in stock returns between JSE SRI- and non-SRI-listed mining firms?
- Are there statistically significant variances in price-to-book ratios between JSE SRI- and non-SRI-listed mining firms?
- Are there statistically significant variances in price to cash flow ratios between JSE SRI- and non-SRI-listed mining firms?
- Are there statistically significant variances in price-to-earnings ratios between JSE SRI- and non-SRI-listed mining firms?
- Are there statistically significant variances in the Tobin's q ratios between JSE SRI- and non-SRI-listed mining firms?

1.5 Research hypotheses

Hypothesis 1

The objective is to establish whether there are statistically significant differences in stock returns between JSE SRI- and non-SRI-listed mining firms.

H_0: There are no significant variances in stock returns between JSE SRI and non-SRI-listed mining firms.

H_1: There are significant variances in stock returns between JSE SRI- and non-SRI-listed mining firms.

Hypothesis 2

The objective is to establish whether there are statistically significant differences in price-to-book ratios between JSE SRI and non-SRI-listed mining firms?

H_0: There are no significant variances in price-to-book ratios between JSE SRI and non-SRI-listed mining firms.

H_1: There are significant variances in price-to-book ratios between JSE SRI and non-SRI-listed mining firms.

Hypothesis 3

The objective is to establish whether there are statistically significant differences in price-to-cash flow ratios between JSE SRI and non-SRI mining firms?

H_0: There are no significant variances in price-to-cash flow ratios between JSE SRI and non-SRI-listed mining firms.

H_1: There are significant variances in price-to-cash flow ratios between JSE SRI and non-SRI-listed mining.

Hypothesis 4

The objective is to establish whether there are statistically significant differences in price-to-earnings ratios between JSE SRI and non-SRI-listed mining firms?

H_0: There are no significant variances in price-to-earnings ratios between JSE SRI and non-SRI-listed mining firms.

H_1: There are a significant variances in price-to-earnings ratios between JSE SRI and non-SRI-listed mining firms.

Hypothesis 5

The objective is to establish whether there are statistically significant differences in Tobin's q ratios between JSE SRI and non-SRI-listed mining firms?

H_0: There are no significant variances in Tobin's q ratios between JSE SRI and non-SRI-listed mining firms.

H_1: There are a significant variances in Tobin's q ratios between JSE SRI and non-SRI-listed mining firms.

1.6 Significance of the study

The literature revealed that corporate social responsibility is a concept that combines various theoretical perspectives that have similarities and overlaps. However, these theoretical perspectives have been discussed individually as if mutually exclusive although they have many conceptual similarities. Scholars; Gray et al., (1990), Cormier et al., (2005), Islam and Deegan (2008) and Martin and Hadley (2008) have lobbied for a theoretical framework that incorporates various viewpoints. Corporate social responsibility practices, as discussed in the study by Nkomani (2013, p24), "are measured against the criteria across the triple bottom line of environment, society and economy in addition to governance", and hence so integrated that no one perspective can independently and entirely untangle it. The promoters of CSR such as Kurtz and Boone (2005) emphasise that responsibility is more than realising profits from different businesses, and CSR goes further than benevolent gestures; it involves social investment for mutual gains of both the beneficiary and the giver. So CSR has many forms, including legal, social reaction, public anticipation, ethical responsibility, healthier environment, competitive advantage and the dissuasion of more government regulation. Vasconcelos (2011) states that an organisation need to adopt various characteristics: the requirements and demands of humanity through continuing CSR practices ought to be satisfied, its personnel must be appreciated and respected through an unwavering in-house marketing policy, and must reveal efforts towards accomplishing appropriate results in its business processes and be revered.

Carroll (1991: p46) also differentiates the kinds of organisational responsibilities and names them the firm's "pyramid of CSR". However Ramdhony and Omran (2015) argue that the hierarchy suggests that the responsibilities of companies move from economic and legal through to ethical and philanthropic responsibilities which are seen to be more socially favourable. Arguing for these responsibilities, Carroll says that every firm in society is an economic unit with some form of economic responsibility. Society then expects firms to make available goods and services demanded and, in return, profit from selling the products within the confines of the law as set out by the legal system. However there are limitations noted in the pyramid. Schwartz and Carroll (2003) noted that there could be wrong conclusions made that higher responsibilities in the hierarchy are more important than those at the bottom. The other limitation, noted by Ramdhony and Omran, (2015: p41), was the inability of the pyramid to capture any overlaps in the domains. The theories used in the CSR literature, have some overlaps and integrations that consider theoretical extrapolative motivations of CSR practices. The stakeholder and shareholder theories are unified by other views of a firm attempting to achieve improved market valuation. Their similarities are interrelated and they are not competing or mutually exclusive, but complementary. These theories have intersections that can be linked to CSR practices in an attempt to explain the motives of such practices in an integrated theoretical framework.

As compared to the dominant qualitative research on CSR which shows a correlation between CSR and market valuation, the findings of this study which employed a quantitative approach indicate no significant relationship between CSR and market valuation in the mining sector, nor significant variances in market valuations between mining firms on the JSE SRI and those not on the index. Active participation in CSR activities does not lead to increased market valuation. The study has made the following contributions. It has provided an empirically based mining sector specific study on the effect of corporate social responsibility practices on the market valuation in South Africa; an area presently under-researched. Few studies have undertaken a quantitative approach which attempts to find a correlation between CSR and market valuation in the South African mining sector. The study has also provided an understanding that maximising shareholder wealth is still an important business goal despite the need to fulfil social demands. The study has further contributed to the literature by proposing an integrated framework for conceptualising CSR practices by mining firms in a developing economy.

1.7 Assumptions

The study makes an assumption that mining firms included in the JSE SRI belong to the views of the stakeholder theory, while firms that are not listed on the SRI Index follow the views of the shareholder theory.

1.8 Structure of the study

Chapter 1 outlines the introduction, some brief background to the mining industry and the significance of the study. It also formalises the study questions and hypotheses that the study will test and lays out the structure of the research.

Chapter 2 examines the foundations and definitions, taking into account previous researchers' definitions of corporate social responsibility. The chapter will provide a conceptual framework exploring the construct of corporate social responsibility (CSR) from the various perspectives of both traditional and contemporary writers.This investigation will be based on the major theoretical views on corporate social responsibility and the new integrated theory. The study will trace the evolution of views around CSR and whether it serves the shareholder or broader stakeholders, so this will outline a theoretical base on which the relationship between CSR and market valuation is located. The components of corporate social responsibility will be discussed. The chapter reviews previous studies on the CSR - market valuation link.

Chapter 3 is devoted to describing the source and nature of the data, specifying the models, and elaborating on the estimation methodology used in this study, outlining the data collection tools and techniques, elaborating on the designs of the study in a manner that explains and defends the scientific nature of the study. The chapter will state the period to be investigated, as well as the criteria for the selection of companies.

Chapter 4 focuses on the descriptive statistics. The exploratory data analysis is conducted in this section so as to understand the characteristics of the data.

Chapter 5 focuses on the presentation of the empirical results. The results of the study are tabulated and analysed in this section. The section will further discuss the results of the study and the issue of the relationship as detected from the regression.

Chapter 6 focusses on the relevant inferences from the results, relative to other previous studies.

Chapter 7 provides summation of the study, propositions and recommendations for future possible studies on the corporate social responsibility -market valuation link. The conclusion of the study, together with possible suggestions, will be presented in the chapter.

CHAPTER 2:

LITERATURE RIVIEW

2.0 Introduction

Corporate social responsibility (CSR) has gained some significance as a discourse and business practice in this globalised economy. Hooge (2010) illustrates that the concept of CSR in mining has garnered significant attention in the last decade especially in Africa. However, Pedersen (2006) and Jamali and Mirshak (2007) argue that, in spite of its contemporary popularity, CSR remains an ambiguous and much debated construct. As such CSR means different things to different people at different times, and new issues can easily be included in existing definitions (Carroll, 1999; Yakovleva, 2007; Ndhlovu, 2011). Organisations and people perceive CSR to be a very contextual concept in terms of the corporate and national environment (Broomhill, 2007). Scholars who hold this perception consider that the core reason why companies exist is profit-making (Friedman, 1978) and to satisfy the interests of shareholders. They believe that CSR distracts companies from achieving their principal aim of business. However studies testing the relationship between corporate social responsibilities and corporate market valuation have not reached a general consensus on these findings. Findings have emerged reflecting either a positive or a negative relationship. This lack of consensus has been criticised as being largely of no empirical use, particularly to managers responsible for CSR activities. It is argued that the potential sources of this indifference stem from the methodologies, as well as the metrics, used in measuring market valuation (Pelozza, 2009). This chapter presents a review of some of these studies and their findings. The review combines theoretical and empirical aspects and the conceptual framework with those of a conventional literature review.

This chapter explores the theoretical perspectives discussed individually as if mutually exclusive. However, the various features of the theories have several similarities that have enticed the study to construct an integrated perspective that will facilitate the evaluation of the effect of CSR on the market valuation of firms and the influence of the arguments of each perspective. The chapter also outlines the definitions and the implications of corporate social responsibility (CSR), from the perspective of the mining sector. A review of prior studies on the relationship between CSR and market valuation of companies is also presented.

2.1 Definition of CSR

The section delineates the definitions and the evolution of views around CSR, based on whether it serves the interests of shareholders (shareholder theory) or the interests of stakeholders (stakeholder theory).

The theory of finance says the only overlying objective of a firm is to maximise shareholders' wealth. This objective is consistent with the views of Friedman and complements the financial interest of shareholders. However, firms are affected by decisions or actions of stakeholders beyond shareholders, constituents who are often driven by non-monetary motives like the effects of a firm's decisions on the community and the environment. This reveals the many contradicting interests of stakeholders, so the definition of CSR is not always clear. Waddock (2004: p5), states: "The array of terminology that has been used over the years in the development of what is now broadly called corporate citizenship or corporate responsibility highlights some of the confusion that exists in determining the progress of corporate responsibility." However it also demonstrates the progression that is of interest in exploring both the practical and the theoretical development of corporate citizenship. Sometimes there are even comparable and mystifying universes inside the scholarly sphere, not to mention between scholarship and the world of practitioners.

The absence of a consensus from various authors defining and describing corporate social responsibility has produced various definitions, (McWilliams, Siegel, & Wright, 2006; Rodríguez, Siegel, Hillman & Eden, 2006). This concept has different meanings to different people at different times, with new terminologies that can effortlessly be incorporated into existing definitions (Carroll, 1999; Jamali & Mirshak, 2007; Ndhlovu, 2011; Pedersen, 2006; Yakovleva, 2007). Both academic and industry-based views of corporate social responsibility appear to have blossomed simultaneously with other concepts like stakeholder participation and corporate social performance, which are used interchangeably in other fields depending on the phase, inclination of the writer or situation. The term corporate responsibility is also comparable in usage with the term corporate citizenship (Marsden & Andriof, 1998; Marsden, 2000; McIntosh, Leipziger, Jones & Coleman, 1998). Notwithstanding its rising profile, corporate social responsibility (CSR) remains an unclear and much contested concept.

A number of substitutable terminologies point to the confusion that occurs in the expansion of the concept of corporate social responsibility. Many authors have tried to provide full definitions of CSR, but an exact definition is unclear and yet to be formulated (Dahlsrud, 2008). So the area of CSR research generally has been hindered by an absence of a consistent definition (McWilliams et al, 2006; Rodríguez et al, 2006). The next paragraph outlines some interesting definitions and similarities regarding CSR and its related terminologies, used interchangeably as described by various prominent authors.

Waddock (2004: p42) defines corporate social responsibility as "the degree of responsibility manifested in a company's strategies and operating practices as they impact on stakeholders and the natural environment day-to-day". The concept of CSR is the subset of company responsibilities that deal with nurturing voluntary relationships with its social and community stakeholders.

Corporate citizenship is comparable with CSR in usage which manifest in the strategies and operating practices a company develops in operationalising its relationships with and affects stakeholders and the natural environment (Waddock, 2002). Also, business citizenship is similar to corporate citizenship, involving a "broader perspective on business rights and duties, stakeholder relationships, opportunities, and challenges that accompany the. . . global economy" (Wood & Logsdon, 2001; Logsdon & Wood, 2002).

CSR is a concept that compels corporate bodies to look beyond profits and economic valuation and report on their social responsibility activities (Pearce & Robinson, 2004). The definition used in Van den Ende (2004) describes CSR as encompassing an organisation's impact on society and the corresponding need to deal responsibly with influences on each group of stakeholders. Carroll (1979) stated that social responsibility of firms incorporates the economic, legal and voluntary expectations that people have on an organisation.

When describing the concept of CSR, McWilliams and Siegel (2001: p117), said it entails "actions that appear to further some social good beyond the interest of the firm and that which is required by law". Fontaine (2013) states that corporate social responsibility is a concept of a corporate's accountability of how it manages the effects of its business practices on stakeholders and take accountability for creating positive impact on society. Hill (2006: p5) defined CSR as "a set of practices that outline good management or business practices, transparency and company's disclosure".

Bowen (1953) defined social responsibility as the obligation of managers to pursue policies, to make decisions or to take actions which are desirable in terms of the objectives and the values of our society.

Cells & Walton (1961) write that when people discuss CSR, they are thinking in terms of the problems that arise when a business casts its shadow on the social scene and of the ethical principles that ought to govern the relationships between firms and society.

One thing is observed to be common among most definitions of CSR: the continuing commitment by corporates to conduct themselves appropriately, impartially while contributing to economic development and bettering the lives of the employees and their families as well as the communities they exist and operate in. Fontaine (2013) adds that there is consensus on the general definition of CSR and most companies are now endeavouring to participate in CSR activities. In support of these initiatives, the communities and state organisations are also increasingly putting their focus on CSR (Konrad et al., 2006).

The concept of corporate social performance has further been used interchangeably with CSR as Van Beurden and Gossling, (2008) defined it as the implementation of CSR, which is operable and quantifiable whereas CSR is not measurable. Corporate social responsibility is used in the study as a categorical variable. In this research, CSR is treated and measured as a categorical variable represented by dummy variables, in which a value of 1 is assigned to a mining firm included in the JSE SRI and a value of 0 when they are not (Crisóstomo et al, 2011; McWilliams & Siegel, 2000; Tsoutsoura, 2004).

2.2 Conceptual framework of corporate social responsibility

The section provides a brief history and a conceptual framework exploring the construct of corporate social responsibility (CSR) from the various perspectives of both the shareholder (traditional) and stakeholder (contemporary) interests.

2.2.1 History of corporate social responsibility

Kakabadse et al., (2005) and Quazi and O'Brien (2000) index the evolution of different corporate social responsibility concepts to eras, highlighting that a particular view on CSR is related largely to the prevailing economic paradigm during a specific historical period.

In their study Blowfield and Frynas, (2005) discussed the roots of CSR and stated that it goes back to the 19th-century when slave labour was used to produce foodstuffs which was boycotted by consumers. On the other hand Steiner and Steiner (2006) trace the foundations of CSR back to the era of John D Rockefeller and Carnegie Andrew, who were engaged in charitable work and donated huge amounts of money into community projects.

The shareholder view dates back to the period starting before the 1950s and going into the ’60s when corporate social responsibility was based on “rights”, (Logan, 1997; Warhurst, 1997). The view takes a strong argument against corporate social responsibility, branding it as not falling within the mandate of business organisations. The period 1960-’70 saw a change in the way CSR was viewed, with philanthropy becoming a more common approach. This involved altruistic donations of cash and aid given to domestic organisations and to impoverished societies in undeveloped nations. The economic responsibility of business, in the view of those who valorise economics, is “to produce goods and services that society desires and to sell them at a profit” (Carroll, 1979: p500). This view expanded into the socio-economic view of the 1980s and ’90s.

Since 2000 a further change in views of CSR has been seen. The stakeholder theory, stands as the main opposition to the traditional view on corporate social responsibility (Bowie, 2012). This is a contemporary approach by which corporations have a prior obligation to all stakeholders affected by or affecting their activities, rather than simply to owners.

In the modern age, corporate social responsibility (CSR) has developed from a constricted and often marginalised idea to a complicated and multidimensional theory, increasingly becoming a focal point of today’s management process. Even though the concept of corporate social responsibility has been debated on from many years ago, such debates were normally limited to a few people in the academic environment. Professors E Merrick Dodd of Harvard and Adolf A Berle of Columbia are acclaimed as among the few academics who pioneered the debate on corporate social responsibility through a number articles published in the Harvard Law Review. The two prominent professors had varied views on the concept with Dodd (1932) arguing that business managers have multiple responsibilities. On the other hand, Berle (1954) opposed that view stating that corporates managers’ responsibility is only to a company’s stockholders. Then Dodd (1932: p1 145) posed a question: “For whom are corporate managers trustees?” In the discussion, Dodd responded to own question, and claimed that business managers were accountable to all stakeholders who affect and are affected by the organisation, not just to owners. The bottom line of Dodd’s claim was that, over and above the objective of profit maximisation they owe to company owners, corporate managers are accountable to the society in which corporations do business and thus owe that social responsibility to all stakeholders since contemporary firms are “permitted and encouraged by the law to service the community rather than acting in the best interest of shareholders which is profit maximisation” (Dodd, 1932: p1 149). Dodd’s reasoning became the intellectual basis for the assertion that firms have a corporate social responsibility. Although many other proponents of “shareholder primacy” still disagree, Berle (1954: p169) famously declared that “the argument has been settled (at least for the time being) squarely in favor of Professor Dodd’s contention”.

The United States witnessed the birth of activist movements during the 1950s and ’60s. They campaigned to change the business environment in America and the rest of the world by ushering in an era of activist groups and NGOs concerned about businesses and business practices, and which presently is trying to shift media attention on business practices they consider to be unethical or irresponsible. Undesirable attention from the media may severely taint corporate reputation which may lead to decreasing sales and dissatisfied staff. Inappropriate response to the media attention could further lead to unwanted sanctions from the authorities and regulators. In a turbulent business environment, business leaders cannot afford to ignore social responsibility otherwise they risk grave repercussions. Therefore, the focus of the debate shifted in the 1970s from corporate social responsibility to corporate social responsiveness. Frederick, (1978) further observed that businesses are no longer only part of the academic discussion about the morals of different degrees of social responsibility. Instead, they were responding precisely to different social pressures. So as various activists groups started applying pressure to firms, those firms reacted by changing products and policies. Sethi, (1975) first coined the term corporate social performance; expanded by Carroll, (1979) and then refined by Wartick and Cochran, (1985). Generally the idea. According to Sethi, (1975: 68) the “idea behind corporate social performance is the recognition that firms do have ethical obligations and that they must also respond pragmatically to social pressures”. However, there has been increase in the number of suitable responses.

One of the early components of corporate social responsibility is corporate philanthropy. Historically, altruistic activities were done by individuals in their own capacity not on behalf of companies. Nonetheless, organisations started giving for other purposes not directly related to immediate corporate benefit**.** According to Burlingame, (2004: p104), the “New Jersey Supreme Court cleared the way for A P Smith Manufacturing Company to donate $1 500 to Princeton University without violating shareholder interest”, which opened the floodgates of corporate philanthropy.

Porter and Kramer, (2002: p5) then developed a powerful argument in support of a new type of corporate philanthropy. The authors observed that “in the long run . . . social and economic goals are not inherently conflicting but integrally connected”. They further emphasised that many economic investments have social returns, and many social investments have economic returns. Businesses should not endeavour to keep the two types of returns completely separate but should emphasise projects that have both significant financial and social returns. Although Porter and Kramer used these principles to philanthropy, it could easily be extended to virtually any form of CSR. In their argument, they discouraged businesses from throwing money for any good cause. When a company invest in an area where it does not have competitive advantage, the investment will likely have no sustainable effect. This concept is similar to the business strategy of "sticking to your knitting", which Peters and Waterman, (1982: p56) described when they said firms should focus on their core competencies without being distracted by any interesting opportunity where the firm has no expertise in it.

Porter and Kramer further advised that businesses should use fundamentals of corporate strategy to discover philanthropic areas that are mutually beneficial for both parties. This perspective implies that organisations should find social needs that align with their specific expertise. According to Porter and Kramer, (2002: p5), "companies that focus on causes in their area of expertise will almost certainly be more efficient at addressing social needs and these firms should exploit this synergy between the social and the economic, rather than try to minimise it".

Another shift in the evolution of corporate social responsibility has been the move from merely investing to socially responsible investing. The contemporary history of socially responsible investing (SRI) can be traced back to the activist movements of the 1960s and '70s. The real boost to social investing occurred in the 1960s, with the growing number of boycotts of firms that were doing business in South Africa. The idea behind social investing is giving groups and individuals influence over the practices and policies of firms through market mechanisms. If organisations purchase or sell stocks of certain firms involved in practices the stockholder finds objectionable, makes little difference, but many stockholders acting in unison might make a huge difference. The final strategy of SRI is community investment where funds are invested in areas like non-profit activities, cooperatives, small businesses, community facilities and affordable housing. The principle behind community investment is to make investments that will strengthen local communities. Social entrepreneurship is the process of applying the principles of business and entrepreneurship to social problems. Social enterprises are enterprises devoted to solving social problems. The reason for their existence is not to maximise return to shareholders, but to have a positive social effect.

2.2.2 Theoretical perspectives of CSR and business

There are four theoretical perspectives that have been discussed individually as if mutually exclusive, although they have many conceptual similarities. The various features of the theories make it essential to discuss each of them independently when evaluating corporate social responsibility practices. However their similarities entice a researcher to deliberate on them jointly. The sections that follow discuss the individual theoretical perspectives in detail.

2.2.2.1 Shareholder Theory

The shareholder theory of corporate social responsibility is based on “rights” (Logan, 1997; Warhurst, 1997). In the traditional view, supporters perceive the concept of CSR as giving money away which they consider to be a self-imposed tax. They massively oppose any idea for expenses other than costs linked to the purpose of running the business and its growth. Advocates of the traditional view argue that officials in charge of running a company have no right to give away money belonging to the shareholders or owners of companies. The sole responsibility of a manager is to make money for the owners of businesses, not give it away simply for charitable purposes. Friedman (1970) believed that the CSR of any business is to increase profits. It suggests that if the firm manages its economic activities well and makes efficient use of its resources, good behaviour will then follow. Such sceptics criticise the concept of CSR. Their belief is based on the concept of free society where, they say, the only responsibility of the managers of corporations is to maximise profits for the shareholders. They argue that corporations are under no obligation or have no other responsibilities besides maximising income for their shareholders. The idea of CSR is contrary to the basic purpose of business, which is to create wealth (Rajput, Batra, & Pathak, 2012).

The pioneer of the traditional economic theory, Friedman (1962) compellingly argued against the concept of CSR. In his argument Friedman claimed that the only responsibility of business managers is to maximise profits for owners of a company. He further stated that businessmen should not be concerned about social matters which are a responsibility of the state. Friedman believes that the market forces of demand and supply in a free market system should resolve social issues within the ambits of government and the law. Davis, (1973) further argues that corporations do not have the capacity and capabilities to deal with social activities because business managers are experts in business operations and finance but do not have the social skills to handle and resolve social matters. Thirdly, CSR attenuates the principal goal of business, so that adopting CSR would put a business into field of endeavours that are unrelated to their “proper aim” (Hayek, 1969). Davis (1973) imposed a fourth argument against CSR in the form of a question, asking why would a company seek for more potential social power when it already has sufficient authority in its hands . Last is the argument that if a company is involved in CSR activities, it risks losing its international competitiveness. However, it is important to remember that these arguments against CSR could be outdated since they were introduced ages ago, even though some maybe still contemporary.

2.2.2.2 Philanthropy Theory

The period 1960-’70 saw a change in the way CSR was viewed, with philanthropy becoming a more common approach. This involved altruistic donations of cash and aid given to domestic organisations and to impoverished societies in undeveloped nations. Corporate philanthropy is a phenomenon which associates the business sector with the social sector. To social historians and researchers alike as a subset of a larger corporate social responsibility (CSR) subject, philanthropy provides an opportunity for corporations to establish an ethical and moral mantra within the organisation (Gan, 2006; Madrigal & Boush, 2008). Such an organisation comprises of individuals who take responsibility for nurturing and conserving a culture that supports the goals of philanthropy.

Corporate philanthropy has fast turned to be a practicable strategy that is crucial for developing marketing plans. If companies want to improve customer perception, acquire recognition in the market and develop their brand, they can look to incorporating charitable initiatives in their business development processes. Incorporating such initiatives in the planning process has a potential of generating a distinguished competitive advantage for companies that decide to do so. Such a marketing process offers a strong social and economic approach to advancing the many business agendas that are crucial to have a sustainable market.

Bruch and Walter, (2005) stated that achieving the goals of philanthropy is as crucial as the main business. To give assurance of the viability of philanthropy as a strategic tool, the initiatives need to be developed, communicated, implemented, monitored, and sustained. The prospective influence of philanthropy should be understood in all forms to enable a company to adjust its value proposition and consequently model the style in which it uses the concept in business strategy. The concept of strategic marketing means different things to different people with different applications across various industries. There are benefits that can flow as a result of the charitable initiatives such as capitalistic support to an organisation. So many conclusions can be drawn on the intrinsic value of using philanthropy for strategic marketing purposes over and above the feel-good and towards a business growth driver. There has been more focus on corporate social responsibility and its interchangeable concepts of corporate financial performance, corporate reputation and the link to ethics and consumer perceptions. However, there are still gaps and theories are not yet developed on how companies can use philanthropic initiatives to endorse, distinguish, and make a unique strategic marketing process. As this study has noted, a business that strikes a balance between an ethical and an economic business construct, can achieve meaningful value using corporate philanthropy in the nous of a raison d'être.

The philanthropic view of CSR is a view that represents elements of both the traditional and contemporary views (Quazi & O'Brien, 2000; Jamali & Sidani, 2008). Whereas the traditional view embodies a narrow conception of CSR, the philanthropic view advocates for a wider corporate social responsibility. The philanthropic view captures a perspective in which a business sees added value in serving a wider array of societal needs and expectations, even though CSR may generally be a net cost (Jamali & Sidani, 2008).

The definition of corporate social responsibility as identified by Carroll (1979, 1991) has four classifications of responsibilities: economic, legal, ethical and discretionary/philanthropic. These "responsibilities" are the stakeholders and communities' hopes they place upon a business. McGuire (1963: p144) contended: "The idea of social responsibilities supposes that the corporation has not only economic and legal obligations, but also certain responsibilities to society which extend beyond these obligations." Carroll clearly spelt out what McGuire meant by responsibilities that are more than the economic and legal responsibilities. To do this, Carroll recognized and differentiated the ethical and discretionary responsibilities. He further clarified the concept of CSR, by affirming the following regarding the responsibilities; economic and legal responsibilities are "obligatory", ethical responsibilities are "expected", and the discretionary responsibilities are "wished". This way he distinguished the traditional from the new responsibilities of a company.

The traditional duties of a company that are inherently part of the economic and legal responsibilities reveal the ancient social contract with society. Alternatively, the modern duties of a company that are part of the ethical and discretionary responsibilities reveal a modern, wider social contract with society. Therefore CSR is the type and scope of duties that cover more than just economic and legal responsibilities of a business. This reveals that the core of corporate social responsibility and its real meaning are the ethical and discretionary duties of a company to the society. In their definition of CSR Kotler and Lee (2005: p26) said it is "a commitment to improve community well-being through discretionary business practices and contributions of corporate resources", so these authors essentially perceive CSR in the same way.

Kakabadse et al., (2005) define corporate philanthropy as referring to the idea of firm's giving back (financially) to society some of the wealth it has created, as thanks for society's inputs. Porter and Kramer (2002) explain that corporate philanthropy is discretional, motivated by a company's desire to be a good citizen. This opinion stands up against the neo-classical assertions that businesses should only use resources by engaging in activities designed to increase their profits (Friedman, 1970). Consequently, a traditional economic man is entirely self-centred, seeking to maximise self-interest with regard to other individuals or members of society. The assumption of a selfish economic man as imagined by traditionalists has been rejected under the philanthropic view that it does not represent socio-economic reality (Bowen, 1953; Takala, 1999). According to Takala (1999) and Kakabadse et al., (2005), doubt arose among scholars due to growing discrepancies between liberal assumptions and socio-economic reality, as well as from the evidence of the inconsistency of the "economic man" model, seeking to pursue his own benefit only.

A philanthropic view is favoured to the extent to which it vouches for a business which sees added value in serving a wider array of societal needs and expectations while disputing the perception of CSR as a net cost in the long-term survival of an organisation. Mining firms in industrialised countries provide evidence in favour of the broader view of philanthropy by forming charitable foundations and trusts, mostly supported by public policy incentives (Cannon, 1994). Initially, "charitable giving" was commonly alienated from primary business activities. However in some cases they have been condemned for being exploitative (Logan, 1997)

2.2.2.3 Socio-Economic Theory

The economic responsibility of business is "to produce goods and services desired by the society to sell them at a profit" (Carroll, 1979: p498). Companies as economic units, will accomplish such responsibility once they provide the products to the market. The socio-economic view adopts a narrow responsibility with the acceptance of benefits associated with CSR. A socio-economic view accepts that businesses still pursue profit maximisation as the primary objective, while trying to meet social demands as well as deriving some benefits in the process (Kakabadse et al., 2005). Traditional models argue that the social responsibility of business is to increase its profits with good social behaviour following the practices of good administration of economic activities and efficient use of resources (Friedman, 1970). Such an approach, however, snubs the varying conflicts of interest among stakeholders regarding the constituents of efficient use of resources.

Socio-economic views are largely founded on the neo-classical argument that firms should be allowed to pursue profit maximisation and efficiency freely, so maximising the common good of society. The traditional school of economic thought believed that people always seek to maximise their self-interests. As economic agents, firms should always prioritise the interests of their principals, which entail seeking profit maximisation towards an ultimate goal of maximising shareholder wealth. Otherwise, asking companies to engage in social responsibilities (which in the traditional view should be left to the state) is considered to be against the founding principles of a free society with a private property ownership system (Branco & Rodrigues, 2007). From a classical point of view, social problems can never be attributed as the responsibility of firms but to the state (Henderson, 2005). Smith (1976) argued that allowing firms to pursue profits and efficiency would best serve the interest of its owners and those of society. Friedman (1970) stood by the neo-classical stance and argued that since profitability is the ultimate responsibility of business firms in society, they act inappropriately by pursuing other actions that do not contribute towards profit maximisation. Jensen (2002: p236) states that "200 years' worth of work in economics and finance indicate that social welfare is maximised when all companies in an economy maximise total company value". In other words, firms that look beyond profit maximisation and incorporate corporate social responsibility will not only destroy shareholder value, but will also do a disservice to society. Opposing CSR initiatives in the sense that they impair firm valuation (Henderson, 2005), the traditional paradigm implies a negative relationship between corporate social responsibility and market valuation.

The traditional theories envisage a clear-cut negative relationship between corporate social responsibility and market valuation. The theory argues that heavy spending on CSR represents an expense which would lead to a reduction in the firm's future profitability (Friedman, 1962). Lower future profitability may translate to a zero dividend pay-out rate, or shareholders should expect lower dividends in future. The consequence may depress the price of the firm on stock markets. So a more proactive and forward-looking view with a long-term approach to incorporate CSR initiatives is required.

A question has been asked as to what constitute profits and how much profit is a company allowed to make? In his observation, Carroll (1991: p41) realised that profit was initially set as "acceptable profits"; but, later changed to "profit maximisation". The concept of maximising profit is endorsed by traditional economic views of Friedman (1962) who maintained that "there is one and only one social responsibility of business – to use its resources and engage in activities designed to increase its profits so long as it stays within the rules of the game, which is to say, engages in open and free competition without deception or fraud". Drucker (2006) suggested that there is an alternative viewpoint to the traditional economic perspective. In his argument Drucker identifies and state that there are three key roles profit performs. "First, it measures the effectiveness of business activities; second, it provides a risk premium necessary for the corporation to stay in business; and third, it insures the future supply of capital, (Drucker, 2006: p76). He goes on to say that "profitability objective therefore measures not the maximum profits, but the minimum it must produce" (Drucker, 2006: p77). However, it is also important to note another view brought by Barnett (2007) which seem to suggest that maximising owners' profits, in itself, is not in the interest of business owners.

In his argument Barnett (2007) claims that too much or extreme profitability might diminish an organisation's capacity to influence its stakeholders. In the same study, Barnett (2007: p808) goes on to elucidate that: "Doing too well can lead stakeholders to perceive that a firm is not doing enough good. Excessive corporate financial performance indicates that a firm is extracting more from society than it is returning and can suggest that profits have risen because the firm has exploited some of its stakeholders in order to favour shareholders and upper management" (Barnett, 2007: p808). Such a trend may suggest disloyalty on the part of the firm to other groups of stakeholders who are trying to develop or preserve good relations with the firm. While tension remains between these two views of profit, the notion of an economic responsibility in terms of financial profit to stockholders is accepted and required by both views. One may even argue that maximising shareholder wealth in the long run is an underlying principle of both views. The real difference may be that the socio-economic view fails to appreciate the long-term negative effects of the application of the maximisation principle in the short term. By contrast, the opposite view applies to the maximisation principle for long-term benefits, which entails that such a principle may be suppressed in certain short-term considerations.

2.2.2.4 Stakeholder theory

The stakeholder theory stands as the main opposite to the traditional view on corporate social responsibility (Bowie, 2012). This group views CSR as an idea in terms of which corporations have a prior obligation to all stakeholders affected by or affecting their activities, rather than simply to owners. Companies exploit society through their business activities and so are accountable to these lives. Rajput et al., (2012: p84) states: "Companies should not be silent witnesses to illegal and immoral activities in the society. Business does not have an unquestioned right to operate in society." Business has legal responsibilities to society. The legal responsibilities are the duties imposed by the laws and regulations of the communities upon a company. The different perspectives on CSR usually contradict on the make up of legal responsibilities of a company. Nonetheless, the different perspectives still accept the need to comply with the laws and regulations of the community.

However, the type and extent of an obligation makes the distinction. In describing the type of legal duties, some perspectives argue that the legal responsibilities make up the entire responsibilities of companies to the society while others contend that laws and regulations are only a part of the responsibility of a company to society. On one hand Carroll (1991) believes that laws and regulations are the "codified ethics" of a community. He further said that they symbolise "partial fulfilment of the social contract between business and society". Yet others believe that legal responsibilities cover a wider spectrum of issues including additional regulation. Also arguing that regulation is essential for the fulfilment of corporate social responsibility requirements. In support of the case for corporate social responsibility, De Schutter (2008: p203) says CSR "rests on certain presuppositions about markets and the business environment, which cannot be simply assumed, but should be affirmatively created by a regulatory framework for CSR". Though there are others who still emphasize that participating in CSR initiatives and managing the relations with stakeholders must remain voluntary. Phillips et al., (2003) disagree with such claims and argue that company performance cannot be influenced by how a company manages its relations with stakeholders nor does it promote expanding or changing of laws and regulation. Their argument is that the stakeholder theory "does not require a change in the law to remain viable" (Phillips et al., 2003: p491). These arguments have continued with each group justifying their call for extending or narrowing the legal requirements placed on companies. The supporters of regulation still query the role of the free market mechanism in facilitating CSR initiatives (Valor, 2008; Williamson et al., 2006). Their belief is that market failures and the business environment do not offer compensation for participating in CSR initiatives. On the other hand, those not in favour of regulation believe that the free market systems advance the needs of individuals, and the society at large, by recompensing those involved in CSR initiatives. However, markets do not compensate companies for corporate social responsibility initiatives that individuals are not keen to offer their backing. Therefore the free market systems should determine the value of CSR initiatives.

However, corporates depend on society and on socially formed organisations for inputs. This dependence creates a social contract between business and society involving shared rights (benefits) and obligations. So it is important that both society and business accept a need to satisfy these shared obligations for each other's existence and success.

Contemporary views state that managers and firms have obligations to stakeholders which include, but are not limited to, shareholders (Jones et al., 2002; Freeman, 1984, 1988 & 2003; Marchant, 2003; Carroll, 1979, 1998; Mohr & Webb, 2005). Both the traditional and contemporary paradigms recognise profitability as a purpose of business. The contemporary paradigm challenges the idea that entitles shareholders as the only claimants or the ones most privileged over the interests of other legitimate claimants (Hummels, 1998; Emiliani, 2001). Contemporary views also reject the role of managers as agents who should maximise profits for shareholders. Rather, managers have a fiduciary duty to balance the competing claims of various stakeholders (Bowie, 2012). Stakeholders determine the future direction of the firm in which they have an interest and have a right not to be treated merely as a means to a firm's objectives (Evan & Freeman, 1988).

Clarkson (1995) asserts that firms that fail to include the concerns of all stakeholders in their strategies challenge the long-term foundation for their own survival. Organisations must operate on a "balanced scorecard" in achieving their objectives, and at the same time ensuring a fair satisfaction of the claims of legitimate stakeholders. Jones and Wicks (1999), support the stakeholder approach by stressing that the interests of various stakeholders – that is, shareholders and other stakeholders – are related and mutually reinforcing. The stakeholder approach captures a perspective of added value in serving a wider group of societal needs and expectations with a perception that net benefits flow from socially responsible actions (Jamali & Sidani, 2008).

Stakeholder theories point out that corporate activities affect and are affected by the actions of internal and external constituencies (stakeholders) (Freeman, 1984). The long-term efficacy of a company is directly related to the interactions a company nurtures with its stakeholders (Waddock, 2004). The general idea put across by Freeman (1984) was that managing stakeholder relationships is indispensable to running an organisation, and essential for strategic management purposes. Preston and Post (1975) and Clarkson (1995) argue that the influence of a company on the stakeholder or vice versa determines whether a stakeholder is a primary or secondary. Increasingly some academics are recommending that the stakeholder theory be regarded as fundamental to the theory of the firm (Brenner & Cochran, 1991; Hill & Jones, 1992; Donaldson & Preston, 1995; Jones, 1995; Jones & Wicks, 1999). However, these recommendations have not yet been put into practice. The central view is that firms cannot exist devoid of relationships with stakeholders that carry unobservable but implicit effects.

Responsibility is integral to any corporate relationship or practice at some level (from very poor to excellent), but cannot because of its integral nature be avoided (Waddock, 2004).This argument clearly implies that stakeholder relationships have indispensable effects that need to be managed as much as internal processes and employees.The indispensable nature of the contemporary groups of stakeholders is observed through the amount of pressure they exert on corporate organisations to look further than just profits. They are persuading firms to adopt reporting standards that apply an integrative approach that would cover environments, social and market valuation.

2.3 Implications of corporate social responsibility

There is a way in which corporate social responsibility is taken on as an obligation by businesses. Businesses that are participating in corporate social responsibility activities and making profits within the boundaries of the law, are seen to be meeting their social duties towards society, Ivancevich et al., (1997). The society that has legitimised business and accepted it to exist expect repayment from business through provision of products and ultimately making profits. So a legally behaving company pursuing profits is accepted as a socially responsible business. Such a view is related to the business philosophy of Friedman (1970) and those who hold that the society establish companies to fulfill two principal purposes: providing goods and services efficiently and generating maximum profits.

There is another way in which corporate social responsibility is seen as social responsiveness. Socially responsible behaviour is proactive and deterrent, rather than responsive and restorative. In recent years, "social responsiveness" has however been used broadly to mean actions that go beyond social duties and social reaction. Therefore companies that are socially responsive are those that are aggressively searching for solutions to social issues. According to Ivancevich, Lorenzi, Skinner and Crosby, (1997: p20), "progressive managers apply corporate skills and resources to every problem – from run-down housing to youth employment, and from community schools to small-business job creation". In addition, corporate social responsibility activities have also been applied as risk management mechanisms and managing risk is a huge portion of most organisations' strategy. This is so because events such as environmental accidents, corruption and scandals can instantly wipe out reputations built over many decades. Such events may also attract undesirable attention from institutions such as regulators, courts, governments and the media. Hence, Fall, (2011) claims that businesses that curve a genuine culture of "doing the right thing" for themselves may offset risks from such undesirable events. Also, Freeman (1984), concedes that the prominence of corporate social responsibility has been evident since 1984, when several transnational organisations were created. This is when the concept of stakeholders was coined to mean persons and entities that were affected by an organisation's activities.

Based on the arguments of Danko et al., (2008); and Porter and Kramer, (2006), corporate social responsibility incorporates four basic components: "ethical obligations", that is the "duty of a company to behave in a responsible manner or acting as a good corporate citizen"; "sustainability", which is "satisfying the current needs without compromising the ability of future generations to meet their own needs"; the company's need for a licence to "operate as implicit or explicit approval from the host government, communities and stakeholders; and reputation". In this case, the businesses' intention for engaging in CSR activities is to enhance their images, fortify their brands and develop their market values. The public supported this view and had a re-think about the priorities of companies and their financial performance. On the other hand businesses give more "emphasis on sustainability" because CSR is a risk management instrument to manage all types of risks such as; financial, reputational, supply chain and environmental risks. Thus a strong belief for a positive link between CSR and financial performance. Luo and Bhattacharya, (2006) supported this belief by outlining the fundamental assumption that a "firm which is socially responsible is able to present a positive image to customers, and better customer satisfaction produces more financial benefits". Yet there is an argument against such opinion, which questions whether organisations really get value for their money when they make such significant investments in an effort to be socially responsible. It is generally accepted that businesses are required to be responsible towards all stakeholders, but how far is this from the "bottom line to shareholders", or one of the major stakeholders? These are questions that are still receiving much debate even to date. However there are past studies which found that CSR is negatively related to both systematic and non-systematic business risk. Kim, (2010), conceded that, if such a relationship is negative, then CSR could be very important in decreasing risks.

Waddock (2004: p40) writes: "Corporate responsibility is the degree of responsibility manifested in a company's strategies and operating practices as they impact stakeholders and the natural environment day-to-day." Some level of responsibility is central to any corporate action or decision that affects others and the effect cannot be escaped because it is central to action and so forms the root or foundation of corporate citizenship.

Waddock continues with the discussion of corporate social responsibility, naming it CSR or CSR1, and describes it as a subset of corporate responsibilities that deals with a company's voluntary or discretionary relationships with its societal and community stakeholders. The similarities given in the various definitions of CSR and other terminologies that can effortlessly be incorporated in existing definitions or used interchangeably with CSR show that despite the varied views, CSR naturally began with common initiatives usually put into practice by organisations with the objective of developing an essential facet of society, or interactions with the public or non-governmental organisations (non-profit organisations). It is an idea which is often put into practice as community relations, charitable, multi-sector partnership, or volunteer activities (Walling, 2004). Carroll (1998) called it the discretionary and ethical responsibilities of business. It goes without disproof that some form of responsibility is key to any business activity or operational decisions. Organisations cannot evade corporate responsibility because it is fundamental to any business activity, forming the source of corporate citizenship (Wartick, 2002).

Notwithstanding the numerous interchangeable terminologies, corporate social responsibility has been trapped both in the academic environment and in corporate practice. Organisations as juristic persons within societies demand rights which come with a number of responsibilities and hence the duty to act responsibly. The duty to act responsibly obliges organisations to fulfil their duties voluntarily so as to avoid problems arising as a consequence of their irresponsibility. Fredrick (1987) and Waddell (2002: p57) suggest that fulfilling these duties would involve companies engaging in ". . . multi-sector collaboration and partnerships aimed at bettering society in some way, community relations activities, philanthropic programmes and strategies, and volunteer activities". The emergence of duties means that organisations remain accountable for their actions and decisions affecting societies and so should live and act responsibly to expected standards.

The stakeholder theory postulates that the key to the sustainable relationship between an organisation, its stakeholders and the natural environment is appreciating how the company operates and adds value to society (Waddock, 2004; Freeman, 1984). The groundwork for the company's value addition to society lies in the stakeholder relationships and strategic initiative (Freeman, 2003). Industries and the corporate environment have embraced the stakeholder language and put it into practice. Scholars have also integrated the concept into corporate social responsibility and acknowledge that a company's corporate responsibility can only be demonstrated through its decisions, operations, actions, and effect on stakeholders and the natural environment.

Stakeholders are exerting pressure on organisations to look further than just profits. They are encouraging companies to adopt reporting standards that apply an integrative approach that would cover environment, social and market valuation. Warhurst and Lunt (1997) noted that a growing "voice of society" is demanding that mining companies be pro-active. It is implied that where regulation is inadequately developed, firms should create their own social responsibility models that enable them to operate smoothly within the economy. It is however, still widely appreciated that mining firms specifically have of late contributed to: better social development in job creation, state revenues through taxes, establishing an industrial base and improving efficiency. However the same firms are also widely blamed for interfering with state affairs, expanding inequalities in wealth, exploiting workers and failing to provide better living and working conditions, pollution, and not respecting the rights of human beings.

Friedman (1962) popularised the shareholder theory, arguing that a firm is a profit-seeking venture and its responsibility is to its shareholders. The shareholder theory argues that a business' social responsibility is to create maximum profits (Friedman, 1970). Good social behaviour follows the practices of good administration of economic activities and efficient use of resources. This approach overlooked the varying and conflicting powers among stakeholders regarding the constituents of efficient use of resources.

Friedman (1970) and Jensen (2002) argue that spending on social responsibility reduces a company's profitability, while Cochran and Wood (1984) and; Waddock and Graves (1994) are of the opinion that socially responsible firms entice resources. In the contemporary market environment, a firm cannot simply be an economic agent ignoring survival conditions, so there is a view that the shareholder theory is outdated in such a market where the survival needs of firms are important. Despite the views of Friedman (1962, 1970) that a firm is a profit-seeking venture and its responsibility is to its shareholders, there is a need for an organisation to survive in the market for it to create wealth continuously for its shareholders.

Porter (1991) and; Porter and Kramer (2006) argue in support of the broader picture of social responsibility, that it is a foundation for competitive advantage because firms are afterwards seen as being accountable and transparent in their operations. These assertions mean that if company profitability comes at the expense of its survival, accomplishing success will just be an imagination. Friedman (1962, 1970) and Friedmanites like Jensen (2002) argue that a firm's CSR is generating wealth for shareholders. Their argument is that managers can donate to charity in their own capacity, but firms donate to the public through the creation of various jobs and the manufacturing of goods and services for the market. It is important, though, to note that the Friedmanites did not suggest that businesses should be capitalist in an unethical manner, or through fraud, but be within the bounds of the law. However the Friedmanites' arguments tend to ignore issues of employee wellbeing, staff turnover, staff morale and increased productivity, which are direct fruits of CSR. It is believed that firms that put emphasis on CSR have a higher propensity to attract and to keep employees, so reducing staff turnover and the costs of recruitment, training and development. What is more, firms that provide better employee working conditions and high levels of morale are likely to achieve improved productivity and generally declining rates of errors.

Empirical studies have uncovered a relationship between corporate social responsibility and market valuation. It is theoretically and logically inconceivable to think of CSR activities as having no effect on the market valuation of the firm. This is particularly so if one considers that CSR involves an outlay of resources whose expected return can be either positive or negative. So it is of paramount importance to revisit a number of theories (among which are the shareholder theory: Friedman (1962, 1970), and Freeman's (1984) stakeholder theory, and the resource-based view of the firm) which lay the theoretical debate for the relationship between market valuation and CSR.

A number of authors (Kassinis & Vafeas, 2006; Bansal, 2005; Bansal & Roth, 2000; Campbell, 2007; Delmas & Toffel, 2004; Freeman, 1984; Hoffman, 1999 & 2001; Sharma & Henrique, 2005; and Jennings & Zanbergen, 1995) propose that, when implementing CSR activities, institutional pressures across industries will tend to influence the direction of the effect of CSR on market valuation. Their views and those of others not referenced above belong to what is known as the institutional theory (Flammer, 2013). The institutional theories argue that stakeholders in different industries respond differently to CSR efforts. This study ascribes to the institutional theory inasmuch as it is in support of the broader stakeholder theory. If an industry has high norms with regard to CSR activities, and stakeholders are more sensitive, higher CSR efforts may, in turn, translate into stronger market valuation. Conversely, one can expect a negative relationship between CSR and market valuation in a "dirty" industry with lower institutional norms for CSR, and where stakeholders are likely less sensitive to companies' engagement with CSR. Clearly, the distinct message that institutional theories convey in contrast with other theories (the stakeholder and shareholder theories) is the emphasis they put on industry characteristics. The theory accentuates that the relationship between corporate social responsibility and market valuation should be investigated empirically and compared between or among firms within the same industry. This is to ensure that the results are not affected by different stakeholders' sensitivity towards CSR efforts across industries.

Companies that are socially responsible must be managed according to the stakeholder theory (Mohr & Webb, 2005). However, attempting to please the varying expectations of numerous stakeholders may lead to the unproductive use of resources and a subsequent worsening of market valuation. So spending on socially responsible activities may put such organisations at an economic detriment (Aupperle, Carroll & Hatfield, 1985; Ullman, 1985). It is, however, evident that research on the topic has concentrated on the developed markets, while a minimal number of studies have looked at the developing markets.

Flammer (2012: p41) argues in favour of the stakeholder theory that in the early stages of designing CSR policies, firms may find it fairly easy and inexpensive to implement social programmes that yield substantial monetary benefits. However it becomes increasingly difficult to adopt and benefit financially from corporate social responsibility policies "once the lowhanging fruits of CSR have been harvested". This theoretical view suggests that firms within the same industry that have little invested in CSR activities will enjoy stronger market valuation than those with high CSR activities or investment. The observation concurs with the formulations of the shareholder (expense) theory, except that within the spirit of the neo-traditional theory, the relationship between CSR and market valuation is conditional on the current or existing level of expenditure in CSR activities. The shareholder theory predicts a negative correlation between CSR and profitability, as well as other market valuation measures that are positively related to profits, like stock prices, earnings per share and dividends per share. The stakeholder theory predicts a negative relationship between CSR and market valuation in the short run. However, there is likelihood that the perception is not valid in the long run. The shareholder theory anticipates a negative relationship while the stakeholder theory expects a positive link between CSR and the value of mining firms.

2.3.1 Corporate Social Responsibility and Development

It is without doubt that most multinational companies have noticed that public expectations on their role in society has grown. These corporations have therefore started responding by developing and implementing strategies that incorporate CSR practices for the mutual benefit of both the company and the public. Even though arguments against social responsibility have been made that it does not in all cases contribute to the company's bottom line, some companies are engaged in business practices in a socially and environmentally responsible manner yet continue to generate profits. Based on this rationale, supporters of CSR initiatives have argued that where there is no regulation enforcing development, CSR can be an effective tool for companies to give back to communities through sustainable development. As supported by Frynas, (2005), development agencies such as the World Bank, and the United Nations view CSR as a prospective instrument for crafting development. This view substantiates the assumption that corporate social responsibility's impact on development is not baseless. Examples in practice are foundations and charitable organisations established by some big companies in South Africa to support social projects while some have invested in HIV/Aids prevention programmes as a support to local people. Despite such developmental projects, CSR initiatives are still being questioned as to whether they can improve development without the intervention from regulations. These questions emanate from the limited focus of most CSR programmes, specifically the failure to address operational factors that contribute to unending underdevelopment, lack of transformation and social inequities in post-apartheid South Africa.

There are members of society and international development organisations that have shown support for CSR initiatives such as the UN, DFID and the World Bank, nongovernmental organisations such as the World Business Council for Sustainable Development and political parties such as the Freedom Fighters in South Africa. There are also those opposed to the concept of CSR, generally categorised into two sections based on the nature of their objection. One section belongs to "CSR is bad capitalism" and the other section to "weak CSR is bad development", (Blowfield & Frynas, 2005: p505). The group in favour of CSR accept that the concept is key for development in emerging economies and businesses. Although the principal goal of CSR is presumably to support local communities, enthusiasts have made a "business case" for CSR to convince businesses to be involved in socially responsible operations by arguing that it can generate benefits for both beneficiary communities and the benefactor businesses.

The enthusiasts have indicated that business can reap four benefits from CSR activities. As Hopkins, (2004); and Sayer, (2005) outlined that CSR may assist businesses in mitigating risk and growing their status and public image in the communities they belong to by forging good relations. Goddard (2005: p435), also alluded that "Corporate activity that benefits the community can increase levels of social participation and generate positive attitudes towards the public and private sectors. The social cohesion is a key enabling condition for stable politics and profitable business." Businesses may be involved in CSR activities as a way to acquire public backing. Such community support is key despite the legal rights that an entity may have to do business. The support that businesses get from the communities help mitigate risks related to protests and negative publicity. Therefore, organisations invest in social projects to obtain or sustain a "social licence to operate". Non-governmental and not for profit organisations would usually refer to such a "social licence" when making a case for more corporate social responsibility on the part of business entities. A case in point is Amnesty International (1998: p5) which regards human rights protection highly as a key "condition for the corporate licence to operate" claims that a corporation will rely hugely on its acceptance by a vigilant international community for its "continued operating, provision of goods and services, and to create financial wealth".

Another argument for CSR was made by authors Zadek, (2001a & 2001b); Steiner and Steiner, (2006) who claimed that improved public conscious in social investment decisions will improve financial bottom line of a company. This is in line with the trend that has shown growing popularity of ethical investments. When arguing for CSR Frynas (2005) and Vogel (2005) claimed that it offers organisations a competitive advantage, specifically during competitions for business contracts. For instance, Frynas (2005: p12) concluded that "in a number of oil-producing countries, socially responsible oil companies have been favored by governments when awarding oil and gas concessions". It has further been observed that international buyers in a supply chain largely prefer businesses, (both small and medium sized) that show commitment to social responsibility. Willard, (2002); Frynas, (2005); and Hopkins, (2004), all supported the observation by explaining that CSR can assist companies in getting and keeping top talented personnel. The results from the "Millennium Poll on Corporate Social Responsibility" revealed that about 20% to 39% of respondents said they would compensate/punish their organisations for the level of involvement in social responsibility causes. Willard (2002) on the other hand suggested that among the many ways of compensating or punishing their own company a skilled person can either show loyalty through long term service or leave the job. As argued by Willard, low employee turnover could be one way a socially responsible company can save on high recruitment costs. More personnel would feel positive about their employer, as Frynas (2005), agrees that "particularly expatriates working for oil companies in developing countries who witness widespread poverty despite the presence of large wealth-generating oil and gas operations" would feel good about the company they work for.

Those who promote CSR still accept that if businesses could perform above the requirements of local laws when implementing CSR, real benefits would accrue to local communities in which they exist. Others claim that when there is weak regulation, "CSR can be a useful step on the way to better national legislation in countries that have failed to enforce their laws" (Blowfield & Frynas, 2005). It is also argued that social values and public expectations generally lead the legal system hence voluntary programmes such as CSR are needed to provide provisional solutions. The positive news is that "CSR programmes are moving away from strictly philanthropic initiatives (like building a plaza or donating medical equipment to a local hospital) towards investments in projects focused on long-term sustainability" (Frynas, 2005; p33). Hence, most organisations work in collaboration with local governments and non-governmental organisations in developing social projects that sustainably serve the interests of local people. However, these arguments do not mean that all types of philanthropy should be abandoned. There are still situations where philanthropy can be the best mechanism for ploughing back to local communities through donations to social projects. Such donations given directly to the local people are now regarded as ineffective approaches of contributing to sustainability as the gains are usually short lived. In some instances where nations have weaker governments, organisations can have more ability to develop local communities than the government. (Kuper, 2004) argues that empirically evaluating the capabilities, opportunities and motivations of various and powerful players has become an indispensable need in an effort to attribute global political responsibilities. "Unless corporate managers are morally motivated better than the rulers of developed as well as developing nations, we cannot decide by fiat that countries are the principal agents of development"(Kuper, 2004: p15).

As outlined earlier on, those opposed to the concept of CSR are generally categorised into two sections based on the nature of their objection. One section belongs to "CSR is bad capitalism" and the other section to "weak CSR is bad development", (Blowfield & Frynas, 2005: p505). As stated earlier, CSR is criticised by two groups of people, those who believe it is bad capitalism and those who see it as bad development. Friedman was the most famous author to first reject the concept of corporate social responsibility. In his article "The Social Responsibility of Business is to Increase its Profits," Friedman (1970: p126) criticises the suggestion that organisations should have a "social conscience". He maintains that: "[T]here is one and only one social responsibility of business – to use its resources and engage in activities designed to increase its profits so long as it stays within the rules of the game, through engaging in open and free competition without deception or fraud" (Friedman, 1970: p91). In his argument, Friedman, (1979: p 623) state that owners of companies to not expect the leaders of businesses to be involved in social responsibility programmes since " doing so would require that they compromise shareholder earnings, make decisions that they are not qualified to make, interfere with government responsibilities, and impose costs on their stockholders, customers and employees". However most businessmen and researchers argue that Friedman's theory is nonoperational whilst a few people who claim that "CSR will decrease welfare, undermine the market economy, reduce economic freedom, and deflect business from its primary role of wealth creation" (Henderson, 2001 & 2005; Kerr, 2004; Crook, 2005; Norberg, 2003: 40).

Henderson (2005: p32) explains that economic development comes from novel activities that are conducted with a goal of making profit within a "framework of a competitive market economy", so it cannot be dependent on business commitment, or emanating from good intentions or genuine aspirations on the part of businesses to create value for the local communities. Another argument comes from Norberg, (2003) who believes that when business concentrate of CSR instead of improving their efficiency, it will result in less productivity, declining economic growth and thus less supply of essential goods and services to meet the needs of people. This argument suggests that businesses that are complying with CSR principles actually need to be irresponsible to successfully implement these principles. Hence Crook, (2005); Friedman, (1970); Heath and Norman, (2004) argue that CSR is a phenomenon that compromises managers' fiduciary duty to the owners of businesses by requesting management to use owners' money for the benefit of other stakeholders or altruistic reasons instead of investing it to grow profits. Heath and Norman, (2004) further argue that managers risk losing their jobs when they commit to CSR programmes rather than investing in opportunities that maximise profits for shareholders. It is also argued that social responsibility is a duty of governments which means once businesses become socially responsible, it discourages governments' drive to fulfill their obligations to the populace of the country causing them to depend on the organisation. However, some criticise this "dependency as a cause for concern for two reasons: corporations lack the democratic credentials to serve the public good" (Friedman, 1970; Crook, 2005: p14); and "market forces, like competition, limit a corporate executive's ability to manage a corporation in the public interest" (Korten, 1996: p34; Doane, 2005).

There are also scholars and practitioners who criticise managers as unqualified to make community and environmental decisions hence such decisions should be left in the hands of qualified persons such as government personnel, (Friedman, 1970; Buchholz & Rosenthal, 2004). This is the reason why governments are established; to serve the interests of their citizens hence they are the only institutions qualified to be involved in CSR for the benefit of the public, addressing the needs of social justice and supplying public goods and services. Arguing this way, Korten, (1996) relied on the concept of accountability as political office bearers should account to the public which voted them into office, otherwise they risk losing their parliamentary seats in the next election. Given that CSR programmes are implemented on a voluntary basis, firms cannot be held accountable for not providing goods and services outside the scope of their business operations. Doane (2005: p9) also argued that corporate "investments in things like the environment or social causes become a luxury and are often placed on the sacrificial chopping block when the going gets rough".

The promoters of CSR programmes have counter argued the criticisms labelled against them. They maintain that "acts of corporate social responsibility can, in some cases, increase rather than decrease a corporation's profits" (Vogel, 2005: p 17; Hamann & Kapelus, 2001). On the other hand Hamann, (2003) argued that organisations that have poor relations with their communities are likely to incur high costs of delayed business operations. Likewise, Phillips (2002) contends that "companies cannot afford to be socially irresponsible as high-profile cases of environmental and social devastation, such as the case of environmental contamination caused by BHP's Ok Tedi mine in Papua New Guinea, can severely tarnish a company's reputation and make it difficult for companies to attract business partners and customers". Even though it might be true that CSR may be a cost to workers, clients and shareholders but "justified" business expenses such as executive remunerations, corporate governance, human resource management and marketing are also a cost to business (Moon, 2005). It is common knowledge that consumers generally bear the costs of advertising, and owners usually sacrifice part of profits in paying executive bonuses. In their argument, advocates contend that CSR programmes are only supplement to the regulations designed by the governments rather than to substitute governments in doing their duty of fulfilling the needs of the local people.

Blowfield, (2004: p499) posit that "for government and private development agencies faced with stagnant or declining funds, business offers a way of increasing resources and revenues, and CSR is one route to working with companies." While Kuper, (2004: p12) contends that even if CSR programmes are voluntarily undertaken, "participation in voluntary initiatives will offer learning opportunities about compliance, the result being that corporations will have less reason to fear and resist the introduction of compulsory codes". Social values are known of leading regulation, but as soon as regulation catches up with these values, organisations that proactively invested in increasing their social and environmental performance are likely to have little additional costs of compliance with regulation. Socially responsible organisations are basically acting in response to market demand as the public demands these organisations to be socially and environmental responsible. However, Hamann and Kapelus, (2001) believe that big organisations have rejected Friedman's view that "business of business is just business". These scholars have further given evidence of support for CSR by outlining the manner in which sixteen of the world's biggest mining organisations have collaborated to launch an "International Council on Mining and Metals", dedicated to sustainable development (Hamann & Kapelus, 2004), and how the more than 1 400 mining organisations have signed the UN Global Compact. Those in support of CSR programmes further claim that criticisms in the "CSR is bad capitalism" faction erroneously disconnect business from local communities, (Hamann & Kapelus, 2001: Goodpaster & Mathews, 2003). In their argument, Goodpaster and

Matthews maintain that there is independence between the demands of political legitimacy and the demands of moral responsibility, so private individuals or corporations that "guide their conduct by ethical or social values beyond the demands of law should not be constrained merely because they are not elected to do so", (Goodpaster & Matthews, 2003: p48). Moir, (2001) and Amba-Rao, (1990) acknowledge that Goodpaster and Matthews' reasoning is based on the theory of social contract which argues for an inherent contract between organisations and the local communities.

2.3.2 Corporate social responsibility and the emerging markets

The history of emerging markets shows that most of these countries are being governed by post war governments with various challenges including huge budget deficits, huge burdens of diseases and a substantial skills shortage. So many progressive effects of social responsibility have been noted on corporate financial performance in the developed countries yet little has been written about its application and effects in the developing countries. Wilson (2007: p7) argued that "developing countries are not ready for the high standards of CSR used in developed countries". In his research, Wilson suggested that development economics revealed that developing nations cannot afford the high levels of standards applied in rich nations and these standards cannot be replicated in developing nations due to the high costs involved. On the other hand Jamali and Mirshak (2006: p36) found that "CSR is still a fairly new concept in Africa and is viewed most commonly in the context of philanthropy, rather than good business practice that supports the bottom line". Although all firms that were surveyed complied with the discretionary conception of CSR, a logical, dedicated and institutionalised methodology to establishing and implementing corporate social responsibility programmes is still missing in developing nations.

Africa is still experiencing huge inequalities between the rich and poor, lack of infrastructure in most rural areas and a host of other problems that are hampering development and implementing sustainability programmes. It is Jamali and Mirshak who pointed out when they argued that it is this precise setting that is conducive for implementing corporate social responsibility by saying that "the improvement of living conditions is unlikely to materialise in the absence of active private sector participation" (Jamali & Mirshak, 2006: p260). The huge news however is that evidence is showing that organisations in developing nations are accepting and have begun implementing CSR programmes. Another study (Baskin, 2006: p15) analysed organisations throughout the developing markets in the world, and concluded that “sustainability reporting in these markets may well exceed current perceptions, and sometimes surpass that of high-income OECD countries”. Baskin used the Dow Jones Sustainability Index, the Global Reporting Index (GRI) and the ISO 14001, and concluded that developing economies are not only accepting social responsibility, but are actually leading in some industries. Such improvements in activities within developing economies are significant despite the argument that results could have been manipulated by inflating percentage changes. During the analysis of the level of GRI compliance, Baskin pointed out that “many of these companies are subsidiaries of major international corporations, which themselves are under pressure from their home governments to comply”, (Baskin, 2006: p15).

Dawkins and Ngujiri, (2008) conducted a study of ninety one largest organisations on the JSE All Share Index and ninety from the Fortune Global 100. The comparative study analysed the degree of CSR reporting for South African corporations to establish whether these firms are comparable to leading international organisations. This study established that based on the five themes of “environment, community, diversity, employee relations and human rights”, South African organisations performed better than some large transnational corporations in United States, Germany and Japan, (Dawkins & Ngujiri, 2008). These findings were attributed to the strong legal and regulatory system in South Africa that ensures good business practices. However they cautioned that further scrutiny should be done on the level of CSR reporting in South Africa so that some of the components can be adopted and replicated in further studies.

The mining industry in South Africa is one of the largest sector that has a significant contribution to the national economic development. The industry has a huge influence in society and the natural environment hence the importance that mining organisations include CSR principles into their business activities. In support of this view, Mngxitama and Radebe (2010: p992) placed “the onus on South African finance institutions to consider the social and environmental effect of their investments in mining activities across Southern Africa, given their strong influence on the mining companies’ behaviour”. In their arguments, they stated that given the influence of financial institutions on the organisations they fund, they should insist on these organisations’ compliance with global standards on labour, safety and healthy, preservation of the environment, safeguarding of human rights, combating corruption and transparency in business operations. Though they warned that “the South African government should create a framework for the way South African companies behave beyond its borders, in terms of the United Nations Environmental Programme (UNEP) objectives”, (Mngxitama &

Radebe, 2010: p291). Therefore the South African financial institutions have a huge task in ensuring that the local business society accept and effectively implement CSR principles.

The Ethical Investment Research Service (EIRIS) was mandated with the responsibility of conducting an analysis of the state of CSR in developing economies. The EIRIS surveyed forty leading organisations in ten emerging economies evaluating them against environmental, social and governance criteria including board practice, human rights, and biodiversity (Eiris, 2009). This study found that disclosure of key governance practices is very high, and organisations in high impact industries performed very well on environmental and health and safety matters.

Unsurprisingly these findings concur with the findings of Baskin which surveyed a select of global organisations and found that South African and Brazilian organisations stood out of the rest. Such results are attributed to the commitment to CSR shown by these emerging economies as they are beginning to develop their socially responsible indexes, as well as acknowledging the importance of socially responsible investing, (Eiris, 2009).

2.3.3 Corporate social responsibility, profitability and employees

According to Wu, (2006: p168), "the cost of having a high level of corporate social responsibility is minimal and that firms may actually benefit from socially responsible actions". Unsurprisingly, such finding concurs with the study of Abbott and Monsen, (1979) who made similar conclusions. Even though the high levels of marketing and research and development costs are correlated with high profitability, such a link may be hard to empirically analyse. These costs are actually a result of the particular industry and environmental circumstances a business is exposed to at any given point in time. However, it is probable that methods are available that can be applied to ensure that CSR improves performance of a company by evaluating the correlation between social responsibility and different stakeholders. A point worth noting is that it does not imply that organisations involved in social responsibility programmes automatically become or will always be successful. It is unusual for one factor to explain why any particular organisation is successful or not successful. Actually, the general success of a company is a product of the complete set of management practices and policies, coupled with industry and economic conditions and some level of luck. An important development on the current conception of CSR is that social activities can, and should be applied to improve the profitability of a business. Consequentially, most if not all economic decisions should be vetted for their social effects, thus economic and social returns should not be separately located in detached units. Those companies that follow successful strategies of pursuing profitability as well as satisfying social needs may also create good relations with their workers, clients, government and the media. This can, in turn, lead to higher profits for the firms' shareholders.

Creating good relations with the employees leads to low turnover rates, low recruitment costs and significantly enthusiastic employees. Internationally, it is the reason that in 2007, Google was named by Fortune magazine as the best company to work for. In addition, many would claim that the firm is one of the most "fun" for employees: it offers free meals, a spa and free medical care on site (Fortune, 2007). Furthermore, Google allows its engineers to spend 20% of their time working on projects of their own liking. These perks ensures that Google select among the best during recruitment; the organisation of 6 000 employees receives more than 1 300 résumés daily. Google has a low turnover rate, and high staff morale which are factors likely to improve the company's profitability in the long run. Turban and Greening, (1997: p658) showed that "a firm's CSP may provide a competitive advantage in attracting applicants". Companies regarded as great places to work for usually build competitive advantages. Undoubtedly, Google is one of such organisation. In addition to responsibility to employees, corporate responsibility extends to customer care and welfare; happy customers are considered to be loyal customers who sustain the business.

2.3.4 Indicators of corporate social responsibility

Van Beurden and Gossling, (2008: p411) measure an organisation's performance on CSR using the following categories"

CSR1: "The dimension that looks at the extent of companies' social disclosure about matters of social concern, where measurement comprises content analysis of corporate disclosures to the public".

CSR2: "The dimension that looks at the corporate action relating to concrete, observable CSR processes and actions, like philanthropy, social programmes and pollution control. The dimension is measured by the company's expenditure on such initiatives as a percentage of company turnover".

CSR3: "The dimension that looks at the corporate reputation ratings like KLD, Fortune, Markowitz and Business Ethics. Here it is assumed that the CSR reputations are indicative of the company's underlying CSR orientation and behaviour".

In the South African context, the black economic empowerment (BEE) legislation and various scorecards are applied to measure how an organisation complies with CSR, financial reporting and listing requirements. In 2004, the JSE developed the SRI Index, in collaboration with the UK's FTSE (jointly owned by the Financial Times and the London Stock Exchange), which lists only companies that are compliant and meet stringent CSR criteria. One of the criteria for inclusion in the index is compliance with BEE principles. To be rated as having good CSR practices, a mining corporation should be included in the index. An organisation is rated against the triple bottom line of environment, society and economy. Furthermore an organisation may be rated in other voluntary standards such as the Turnbull and the King codes that are added to these standards. Van Beurden and Gossling, (2008) further adds other international standards to the list which are the United Nations Global Compact, the World Business Council for Sustainable Development and the Principles for Global reporting Investment (PRI). Those firms doing business in the foreign markets are encouraged to comply with the Global Reporting Initiative, the carbon Disclosure Project and the ISO 14001, and could list on the Dow Jones Suitability Index.

2.3.5 Corporate social responsibility in the mining industry

In the past, mining involved exploitation of a county until its natural resources were depleted and then moving on to exploit another region (Vintróa, Fortunya, Sanmiquelb, Freijoc & Edob, 2012). Locally based societies perceived mining undertakings as economic engines but also as a danger to the natural environment within an area, with hazardous effects to the air, water and soil. However, several sustainable development awareness campaigns are being staged with commitment to the environment developing into commitment to the community where each company carries out its operations.

Many debates centred on sustainable development have been engaged in within the mining activities on sustainability at the global and national scales (Hilson & Murck, 2000). There are scholars who show the positive effects that mining activities can have (Mikesell, 1994; Walker & Howard, 2002; Wheeler et al, 2002), but there is still some kind of confusion regarding the relationship between sustainable development and mining. There is strong argument against the idea that mining can make a positive contribution to sustainable development because of the confused relationship between sustainable development and mining, (Cowell et al., 2009).

Although several initiatives are being undertaken at both national and international levels to attend to the environmental hazards, and the efforts made by some companies, a negative societal perception towards issues of noise, dust, and surface and groundwater pollution as the main environmental hazards produced by mining operations still exist in the exploited areas (Evangelinos & Oku, 2006). There are several examples of positive contributions by mining undertakings to sustainable development, including caring for the country, people and culture (Howitt, 2001). The study by Vintróa et al., (2012) states that such examples would include providing employment to residents of neighbouring communities (Dorian & Humphreys, 1994), job retraining services (Hilson & Murck, 2000), using local suppliers (Esteves, 2008), re-investing in downstream businesses (Pegg, 2006), and contributing funds to regional developmental projects and key socioeconomic infrastructure like roads, hospitals, schools and housing (Hilson, 2002). Hilson and Murck state that effectively managing CSR initiatives can achieve the mining industry goal of contributing positively to sustainable development through minimising the environmental and social effects.

Guidance to improve sustainability in mining activities has been given by these authors. Adopting CSR practices would change the negative perceptions and make mining operations be viewed as socially and environmentally responsible. As supported in the studies by Vintróa et al., (2012), and Mikesell (1994), the practice of re-investing the prosperity produced from construction of critical infrastructure for local communities could contribute to sustainability in the mining sector. Another proposition by Gibson (2000) is that to improve the status of mining, there is a need for immediate remedial actions for any negative effects caused by the sector. There is another argument from Newbold, (2003), who suggests that mining industries should participate actively in voluntary programmes that are intended to increase development in the regions where they operate. Walker and Howard (2002) say that various challenges can be addressed by embracing a helpful conceptual framework like CSR. Challenges such as concerns over environmental and social valuation rather than product, quality and safety give a negative public opinion, the existence of pressure groups that target the mining sector negatively, maintaining a social licence to operate, and screening of socially responsible investing funds, could be faced off by CSR initiatives (Jenkins & Yakovleva, 2006).

So the stakeholder theory indicates that it is the responsibility of the companies to respond to the concerns of the societies in which they do business, concentrating not only on the interests of their shareholders and the law (Utting, 2005). This study anticipates that mining organisations will be socially responsible during the process of generating profits for the sake of all stakeholders concerned.

2.3.6 Corporate social responsibility in the South African mining sector

Notably, Jenkins and Yakovleva (2006) contend that CSR has never been more important in the mining sector due to poor public opinion of the sector as a whole (that is, there is more concern with environmental and social performance than in areas such as product pricing and safety), domestic and international pressure groups challenging its legitimacy, the financial sector being more concerned about risk management and social responsibility – other than socially responsible investing (SRI) and a challenge to the notion of "a licence to operate". However, there is a consensus on "what" CSR has to achieve, let alone the "how" part of it. In this instance, CSR is a helpful conceptual framework for exploring the corporate attitude of companies towards stakeholders and society at large (Mabuza et al., 2010; Hooge, 2010; Hamann, 2004). This is further articulated by Kapelus, (2002) when he indicates that enlightened companies/corporations have long been aware that it may be in their interests to address issues of concern to the local communities in which they operate. While corporations have always been involved with CSR programmes to some degree in one form or another, recent decades have seen an explosion in terms of the efforts and resources that corporations have been expending on CSR. CSR appeals to mining companies to respond to the concerns of its stakeholders, including shareholders, employees, customers, local communities and the general public (Yakovleva, 2007). This view resonates with that of Visser, (2006) that there is a general agreement that the private sector remains one of the best-placed institutions to make a significant positive contribution towards improving social, economic and environmental conditions, particularly in Africa.

Studies were conducted on firms in developed markets, giving an impression that the empirical work on the topic was invented there. It also suggests that the huge volume of these studies focuses on the outcomes of social responsibility on the market valuation of organisations, without any of them looking specifically at the JSE's SRI Index. As in many other countries, studies that examine the subject of corporate social responsibility in South Africa also do so from a variety of angles. However, even those that relate it to market valuation do so without relating it to specific economic sectors. As noted above, one suggestion from more contemporary theoretical arguments indicates that the relationship between corporate social responsibility and market valuation should be examined with reference to specific sectors, as different stakeholders in different sectors will respond differently to CSR efforts (Flammer, 2013; Agle et al., 2008; Bansal, 2005; Bansal & Roth, 2000; Delmas & Toffel, 2004; Kassinis & Vafeas, 2006). The section below revisits empirical studies examining corporate social responsibility in South Africa's mining sector.

Highlighting trends in the South African mining industry, PwC, (2013) warned that mining companies should rethink risk and the risk landscape in which they operate. In other words, mining should also consider risk from all stakeholders, considering not only health and safety. This illustrates the importance for mining companies of moving even more towards social responsibility to ensure long-term sustainability of the industry by engaging all stakeholders.

The South African mining sector is confronted with overwhelming challenges, including but not limited to falling and unstable mining product prices, an unstable political environment, the obligation to provide return on investments for shareholders and high labour unrest emanating from wage demands, leading to lack of productivity and loss of revenue for the mining corporations and employees alike. The Institute of Race Relations, (2014) points out that South Africa's mining industry is now under acute stress. On one side, mining companies are frustrated with the state of infrastructure (like electricity) that falls under the responsibility of the government. This reduces profitability in the industry due to rising operating costs. On the other hand, mining companies are required, like any other firm in South Africa, to comply with BEE obligations and contribute to society. Due to political sensitivities surrounding the mining sector in South Africa, an unnamed leading investment analyst interviewed by the Institute of Race Relations is said to have commented: ". . . it appears that the pendulum has swung too far and that shareholders are now right at the back of the queue". This highlights how demanding corporate social responsibility has become, particularly in South Africa's mining sector. The statement also indicates that corporate social responsibility can affect market valuation and shareholder wealth negatively.

Adding to these, regulatory requirements need to be fulfilled by the same mining corporations to keep their operating licence while serving their social responsibility obligations to the societies in which their operations are established. It has turned out to be obvious recently, for example, under the Johannesburg Plan of Implementation (JPOI); mining companies espoused themselves to strengthen partnerships and to contribute first and foremost to the improvement of the quality of lives of host communities. The South African mining sector has over the years contributed substantially to society. About R1.3 billion was contributed towards community development, with an additional R800 million spent on corporate social investment programmes in 2011; a total of 10 224 students were awarded bursaries in 2010 and it is reported that companies are making significant progress in phasing out single-sex hostel accommodation as well as working with local municipalities, providing housing and community services (Facts About SA Mining, 2012).

To meet the socio-economic development goals of the economy optimally, it is crucial that the private sector form partnerships with all involved stakeholders such as the non-governmental organisations, the public sector and the civil society. The Johannesburg Plan of Implementation inspires voluntary initiatives from organisations aimed at improving social valuations by recommending public private partnerships (Mabuza, Msezane, & M Kwata, 2010; Madeleine, 2013). The JPoI, in paragraph 44, recognises these positive contributions that can accrue from mining in favour of sustainable development:

> *44. "Mining, minerals and metals are important to the economic and social development of many countries. Minerals are essential for Contemporary living. Enhancing the contribution of mining, minerals and metals to sustainable development includes actions at all levels to":*
>
> *(a) "Support efforts to address the environmental, economic, health and social impacts and benefits of mining, minerals and metals throughout their life cycle, including workers' health and safety, and use a range of partnerships, furthering existing activities at the national and international levels, among interested Governments, intergovernmental organizations, mining companies and workers, and other stakeholders, to promote transparency and accountability for sustainable mining and minerals development";*
>
> *(b) "Enhance the participation of stakeholders, including local and indigenous communities and women, to play an active role in minerals, metals and mining development throughout the life cycles of mining operations, including after closure for rehabilitation purposes, in accordance with national regulations and taking into account significant transboundary impacts";*

(c) "Foster sustainable mining practices through the provision of financial, technical and capacity-building support to developing countries and countries with economies in transition for the mining and processing of minerals, including small-scale mining, and, where possible and appropriate, improve value-added processing, upgrade scientific and technological information, and reclaim and rehabilitate degraded sites".[1]

For economic, social and historical reasons, the mining sector is of paramount importance to the South African economy (Madeleine, 2013). South Africa is leading on the world exports charts with "minerals such as gold, platinum, manganese and chromium from the mining sector that contributes more than 50% of its exported goods".[2] The mining industry accounts for 18.7% of the South African GDP, creating 13.5 million jobs[3]. The mining sector is one of the largest in the world's economies and intricate due to the fact that "the current sustainability practices cannot be separated from the political history of the sector and the socio-economic conditions of the mining populations" (Mariri & Chipunza, 2011: p96).

Most communities in South Africa see much of the activity of the mining sector in a destructive sense, highlighting its hefty negative effects on society and the risks allied to it (Saksenberg, 2013). However, Saksenberg argues further that despite all these negative perceptions from the communities, "South African mining companies have routinely asked themselves how they can mitigate their negative effects on people and communities while continuing to be profitable corporations in an increasingly competitive and costly industry. CSR has been viewed by the mining majors in South Africa as the best method to counteract the negative views and to put forward a responsible and wholesome image."

The sources reviewed indicate that mining companies are contributing significantly to society. However, this study found very limited studies that have attempted to empirically test the effect of CSR practices on market valuation in the context of a single sector (mining) in a developing economy, and whether relevant stakeholders see further than mining organisations' behaviour

[1] "Johannesburg Plan of Implementation, *World Summit on Sustainable Development*, 2002", "**http://www.johannesburgsummit.org/html/documents/summit_docs/2309_planfinal.htm"**

[2] "Christian Ardelean, Staffan Lindstrom, Sara Mikkila, Christian Pitulia, Anders Tenfalt, and Sara Thunstrom, *A Relative Study Regarding Corporate Social Responsibility in Swedish and in South African Companies*, (Bachelor Thesis: Chalmers University of Technology, 2001), 4".

[3] "Carroll: Mine Violence Caused by Legacy of Apartheid, *Mail & Guardian*, 5 December 2012", "**http://mg.co.za/article/2012-12-05-carroll-mine-violence-caused-by-legacy-of-apartheid"**

from a business perspective when choosing the mining firms to include in their investment portfolio.

2.3.6.1 JSE Socially Responsibility Index (JSE SRI)

The Social Responsibility Index (SRI) is an investment plan that attempts to balance financial returns with being a good corporate citizen in society. The ideologies underlying SRI have since been adopted by many countries into their mainstream risk management practices and used as a tool for guarding shareholder value (Heese, 2005; Ntoi, 2010). The index is a bench-mark for companies' corporate governance. Introduced in May 2004, the JSE SRI has since been used as a yardstick to assess compliance, active development and implementation of mainstream business strategies in preventing negative social and environmental impacts (Mutezo, 2012)**.** The index includes stocks of businesses that incorporate ideologies of CSR in their main operations (Heese, 2005; Ntoi, 2010). According to Ntoi (2010), the JSE SRI was established on the basis of the principles of Hammond's "triple bottom line of environmental, social and economic sustainability". Its objectives as laid down by the JSE (Ntoi 2010; JSE 2009) are:

- *"Identify those companies listed on the JSE that integrate the principles of the triple bottom line and good governance into their business activities";*
- *"Provide a tool for a broad holistic assessment of company policies and practices against globally aligned and locally relevant corporate responsibility standards";*
- *"Serve as a facilitation vehicle for responsible investment for investors looking for non-financial risk variables to include in investment decisions, as such risks do carry the potential to have significant financial impacts";*
- *"Contribute to the development of responsible business practice in South Africa and beyond".*

The FTSE calculates and publishes the index daily by close of business. A company has to meet certain criteria to be included in the index, as required by the JSE. Every November, the JSE conducts policies appraisals of listed companies to ensure that they continue to comply with international standards and matters specific to the needs of the South African economy. The JSE SRI gives the corporate social responsibility valuation of only those firms listed on the index. Therefore, considering that other indicators of CSR will complement as well as supplement the JSE SRI index in measuring the CSR of specific firms, even those which are not listed on the index can be measured.

2.4 Firm value

Firm value/capitalisation is the product of the price of a stock and total number of outstanding shares measuring the total value of a company's shares. Firm value/capitalisation is such a significant concept because it permits providers of finance to understand the comparative size of companies. It represents a company's worth on the open market and how the market perceives the future prospects, also revealing how much finance potential investors are willing to provide in exchange for its stock.

An investor wanting to plan an investment strategy would consider understanding the association between company sizes (market value), return potential, and risk as key when pursuing long-term financial goals. Such knowledge would facilitate the construction of a balanced portfolio. Bhatt and Sumangala (2012) mention that "equity valuation is a central question which the academicians and researchers in the field of capital markets are trying to address through different angles while practitioners in the field of stock trading have been working through different clues". According to their argument, Bhatt and Sumangala believe that the market value of an equity share, as per the fundamental analysis, broadly depends on three factors as follows: economy factors, industry factors and company factors. The authors further say that economy factors include factors like GDP growth, favourable government policy, favourable agricultural production (if applicable), favourable industrial production and many more such factors". Corporate social responsibility initiatives would certainly fit in as one of the elements of the "favourable government policy" that would lead to an improved stock valuation. These arguments maybe suggesting that the different angles include corporations embracing the importance of CSR, and how their business affect society relative to the long-term benefits as one of the means to improve market value of a company's stock.

However there are various theoretical models that are used in equity valuations which produce values equal or not equal to the market price conditional on future prospects of earnings and risk relative to market expectations. These models are generally categorised into relative and absolute valuation models. Relative valuation models base their logic on the arbitrage theory of comparable assets trade at comparable price and so identify prices of companies with similar characteristics and value a company at the same price. Absolute valuation models on the other hand identify company specific characteristics (fundamentals) and use them in valuing a company, mainly using the discounted cash flows approach. Another simple form of valuing a company is net asset valuation, which uses the balance sheet figures by calculating the difference between assets and liabilities. However the balance sheet excludes many value-creating items from its face (line items) like investments in education of employees, marketing and so on, so net asset values generally tend to be lower than market values.

A number of previous research studies provide different measures of market valuation together with additional control variables used in the evaluation of the correlation between market valuation and corporate social responsibility. Peloza, (2009) warns of the significant implications and consequences of each choice of market valuation measure selected or used in empirical tests. Market valuation measures can be more or less sensitive to corporate social responsibility activities. Measuring market value may be considered easy but it has its difficulties due to a lack of agreement among researchers as to which measures to use. Researchers who use market measures include Alexander and Buchholz, (1978) and Vance, (1975), while Waddock and Graves, (1997); Cochran and Wood, (1984) apply accounting measures. McGuire et al., (1988) applied a both accounting and market indicators. Inappropriately selected market valuation metrics within empirical studies may have these detrimental consequences:

1) It can create unnecessary social and environmental harm if managers hold back from investing in CSR out of fear that it may undermine market valuation.
2) or, shareholder value will be destroyed when managers overinvest in CSR activities. When this is the case, it will be difficult to interpret and compare the results from empirical studies, particularly whether managers should engage in CSR.

A consideration will be made for the inclusion, as much as possible, of different market valuation metrics, so that the different measures are able to validate one another. However Brooks, (2008) explains that a parsimonious model with fewer variables is favourable if it can explain all the results of a larger model with more variables. So it is the objective of this study to include only a few parameters in an attempt to achieve a parsimonious model with, nonetheless, the ability to describe all the features of variables of interest. As an example, the following table summarises the findings on the reported relationship between corporate social responsibility and market valuation from different empirical studies using different market valuation metrics.

Table 1: Financial measures used in previous studies and the nature of results

Study	accounting	market	accounting & market	result
Bragdon & Marlin (1972)	X			positive
Bowman & Haire (1972)	X			neither
McGuire *et al* (1988)			X	negative
Chen & Metcalf (1980)	X			negative
Klassen & McLaughlin (1995)		X		positive
Wilkinson (1989)			X	neither
Cochran & Wood (1984)	X			negative
IRRC (1995)		X		positive
Allen (1994)	X			positive
Alexander & Buchholz (1978)		X		negative
Shane & Spicer (1983)		X		positive
Spicer (1978a)	X			positive
Aupperle *et al* (1985)	X			negative
Spicer (1978b)		X		positive
Stevens (1984)		X		positive
Mahapatra (1984)		X		negative
Hart & Ahuja (1994)				positive
Huckle (1995)	X			negative

Adapted from Wingard (2001)

The above Table 1 illustrates a common phenomenon in empirical studies: the findings on the relationship between corporate social responsibility and market valuation vary widely (positive, negative or neither). Chang and Majumbar, (1993) suggest that discovering appropriate components of *m* valuation measures is a pertinent area for research. Researchers choose market valuation measures based on various criteria, since different sets of indicators need different measurement strategies, which lead to different effect sizes (Orlitzky, Schmidt & Rynes, 2003; Fu, Wang & Jia, 2012). Two categories of valuation indicators widely used by researchers to test the relationship between CSR and market valuation are market (investor returns) and accounting (accounting returns) measures. Market measures reflect the view that the shareholder is a chief stakeholder group whose satisfaction defines the company's future (Cochran & Wood, 1984; Fu, Wang & Jia, 2012). The accounting measures indicate a firm's internal efficiency in some way (Cochran & Wood, 1984; Fu, Wang & Jia, 2012). Observing the table above, market measures and accounting measures were used often by researchers (Senbet, 1981; Cochran & Wood, 1984; Yang & Yun, 2009; Peters & Mullen, 2009). Among scholars who applied market measures of market valuation, Klassen and McLaughlin, (1995), Shane and Spicer, (1983), Spicer, (1978b) and Stevens, (1984) found a positive relationship, whereas Alexander and Buchholz, (1978), and Mahapatra, (1984) found a negative relationship between market measures of market valuation and CSR.

Those who applied accounting measures of market valuation also found varied results. Bragdon and Marlin, (1972), Allen, (1994) and Spicer, (1978a) found a negative relationship while Chen and Metcalf, (1980), Cochran and Wood, (1984), Aupperle et al., (1985), and Huckle, (1995), all used the accounting measures and found a negative relationship.

Market measures of valuation have been used justifiably for one of the following reasons, among others:

- market measures are influenced by investor sentiments and are forward-looking, taking into consideration the expected future outlook of the business, as opposed to accounting measures which do not take into account the expected future valuation of a business but are historical in nature.
- The social and environmental risk exposure of a firm is likely to be detected and mitigated since market measures most probably will reveal these through CSR policies and programmes, so making it attractive to invest in sustainable firms.
- market measures will reflect other aspects of a firm allied to CSR, like reputation, brand, goodwill, corporate governance and sustainability above the firm's profitability

2.5 Empirical studies of the relationship between CSR and firm value

Vintilă et al., (2015) examined the relationship between corporate social responsibility (CSR) ratings and firm value, by using a sample of US companies listed on the New York Stock Exchange and the NASDAQ stock market, for the years 2008 to 2011. The Corporate Social Responsibility Index (CSRI) developed by the Boston College Centre for Corporate Citizenship and Reputation Institute was used as a proxy for corporate social responsibility. Companies were perceived in three dimensions: citizenship (the community and the environment), governance (ethics and transparency), and workplace practices, that were quantified through numerical variables reflected into the CSRI ranking score. Tobin's *Q* ratio adjusted according to activity sector was employed to quantify firm value. After the estimation of panel data regression models, unbalanced, both without cross-sectional effects and with fixed effects, results showed that corporate social responsibility influences firm value positively. The empirical evidence shows consistency with the instrumental stakeholder theory view, since the companies involved in corporate social responsibility undertakings use their resources in a more effective way so as to better satisfy stakeholders' needs. CSR activities can add value to the firm if they are wisely managed and implemented, and sufficiently disclosed and reported.

Saleh et al., (2009) evaluated the relationship between CSR and financial performance of Malaysian organisations applying longitudinal data analysis. The sample comprised of 200 largest firms in terms of market capitalisations listed on the Malaysian stock Exchange (Bursa) during 2000 - 2005. Using ROA and Tobin' Q as the regressed, they estimated the fixed effects model. Their conclusion was that CSR has an instant impact on financial performance even though Malaysia is still in its infancy with regards to CSR disclosure. It has been shown that there is a significant link between financial performance and CSR for these companies and financial performance react when CSR increase or decrease. However the study did not find a significant long term relationship between CSR and financial performance. Such results are generally supported by studies in some of the developed markets. According to Amran and Devi, (2007: p 63), "CSR, as the decoupling strategy for Malaysian companies, makes them follow business associates from overseas who are already applying CSR reporting and are also trying to be good corporate citizens, for the purpose of obtaining government contracts". This phenomenon has encouraged most Malaysian corporations to behave socially responsible in their business operations. There is therefore evidence in world case studies, and the results of some studies that CSR makes not only ethical but also business sense in big and small corporates.

Wolfe and Aidar Sauaia (2003) used a modified version of the Tobin q by Chung & Pruitt (1994) in their study arguing for consistency between the games because of firms' simplified balance sheets. Basing on the original study by Lindenberg & Ross (1981), Wolfe and Aidar Sauaia argue that "…this modified version closely approximates Tobin's original statistic and produces a 96.6% approximation of the original formulation" (p.158). Their results indicate the Tobin q's performance varies quite widely across the four simulations that generate performance scores. The q is strongly related to the performance scores generated by The Business Policy Game and The Business Strategy Game. They further found that the q ratio is moderately related to the Performance Index found in The Global Business Game. Almost the same amount of variation in the performance score generated by The Multinational Management Game is explained by the Tobin q but in the opposite direction. Their conclusion was that as a diagnostic tool, firms with low qs might be considered candidates for instructor led coaching or counselling. In practice, the q is sensitive to the swing effects of its equation's denominator, i.e. the firm's total assets of cash, receivables, inventory and plant book value.

Seo, Kim, & Park, (2015) analysed whether there is a systematic relation between CSR performance and corporate profitability-and-corporate value within Korean companies. They utilised the 943 KEJI indexes that were calculated from 2012 to 2014 as surrogate variables of CSR, and ROA and Tobin’s q were used as surrogate variables of corporate profitability-and-corporate value before a correlation analysis and a regression analysis were carried out. They found a significant positive relationship between CSR performance measured by KEJI index and corporate profitability (ROA) and corporate value (Tobin’s q). In their conclusion they presented a possibility of CSR as a key management strategy of a company.

In a study conducted by McWilliams, and Siegel, (2000), the researchers reported a positive, negative, and neutral impact of corporate social responsibility (CSR) on financial performance. In their argument, they pointed out that this inconsistency may be due to flawed empirical analysis. They demonstrated what they called “a particular flaw in existing econometric studies of the relationship between social and financial performance” (p. 608). They further argued that most studies estimate the effect of CSR by regressing firm performance on corporate social performance, and several control variables. McWilliams, and Siegel pointed out that most of these studies use misspecified models because they do not control for investment in R&D, which has been shown to be an important determinant of firm performance. They formulated a model in the form of $perf_i = f(csp_i, size_i, risk_i, ind_i)$ where they argue that long-run economic or financial performance of firm i proxied by measures of accounting profits is a function of corporate social responsibility of firm i (based on an index of social performance), size of firm i, risk of firm i, and industry of firm i. However they hypothesised that such a model is misspecified as it does not control for investment in R&D and the advertising intensity of its industry. In their discussion they argued that this misspecification results in upwardly biased estimates of the financial impact of CSR.

The researchers then formulated what they called a more appropriately specified model as:
$perf_i = f(csp_i, size_i, risk_i, ind_i, rdint_i, indadint_i)$ arguing that long-run economic or financial performance of firm i proxied by measures of accounting profits is a function of corporate social responsibility of firm i (based on an index of social performance), size of firm i, risk of firm i, industry of firm i, R&D intensity of firm i proxied by R&D expenditures/sales and advertising intensity industry of firm i. Their results confirmed that corporate social

performance (CSP) and R&D are highly correlated, and that, when R&D intensity is included in the equation, CSP is shown to have a neutral effect on profitability. They argued that many firms that actively engage in CSR are also pursuing a differentiation strategy, involving complementary strategic investments in R&D thus making it difficult to isolate the impact of CSR on performance without simultaneously controlling for R&D. However they concluded by cautioning “readers to be wary of models that claim to "explain" firm performance, but do not include important strategic variables, such as R&D intensity” (McWilliams & Siegel, 2000, pp. 603-609). A point of interest is that despite controlling for R&D and advertising intensity, they still admitted that when the model is properly specified, no conclusive relationship between CSR and financial performance. Their results found that CSR has a neutral impact on financial performance.

In their study, Lin, Chang, & Dang, (2015) investigated the relationship between CSR and firm financial performance, and proposed an integrated model that integrates intellectual capital as a mediator and industry type as a moderator into such a relationship. In designing their model, Lin, et al hypothesised that (1) there is a significant association between CSR and firm financial performance, (2) CSR enriches the intellectual capital of a firm leading to higher financial performance. Effectively their hypotheses mean that intellectual capacity is a mediator between CSR and financial performance while industry type moderates the relationship. They tested the relationship between CSR and ROA as follows ROA= f(firm size, capital intensity, R& D intensity, CSR) and found that CSR has a direct effect on firm performance. However such a relationship without accounting for mediating factors will not provide a rich understanding of the nature of the relationship. The mediation process was then tested based on the hypothesis that intellectual capital has an effect on the relationship between CSR and financial performance as; IC = f(firm size, capital intensity, R& D intensity, CSR) and finally tested the relationship between CSR and ROA with intellectual capital as a moderating factor as ROA= f(firm size, capital intensity, R& D intensity, IC, CSR). However they had to assume a certain set of conditions should be met and expressed them as: (1) “CSR must affect financial performance (ROA) in the first model; (2) CSR must affect intellectual capital (IC) in the second model; and (3) when ROA is regressed on both CSR and IC in the third model, IC must affect financial performance. If the effect of CSR on financial performance is less in the third model than in the first model, then partial mediation holds. Perfect mediation holds if CSR has no effect on financial performance in the third model”. They studied 500 largest firms in the American stock market (S & P 500). Their model used variables including CSR, intellectual capital, financial performance, and control for firm size, capital intensity and research and development intensity. They argued for their approach as they believed that intellectual capital is the principal source of value creation for any firm therefore meditates the relationship between CSR and financial performance. Their findings show that CSR influences financial performance differently from industry to industry. They found a positive relation between CSR and intellectual capital confirming the mediating effect it has on the CSR –financial performance relationship. This study is commended for its effort to consider the mediating factors.

As argued "for the business to be sustainable in the long term, its activities are needed to meet stakeholder demands, respect ethical principles and give an appropriate answer to organizational stakeholders", (Hategan, Sirghi, Pitorac & Hategan, 2018), Hategan, Sirghi, Pitorac & Hategan, also investigated the relationship between Corporate Social Responsibility and Profit in Romanian Companies expressing: CSR = f(Profit, Impairment, Assets, Liabilities, Market Capitalization, Dividends, Size, Ownership). To test the relationship between CSR and profit, with the dependant variable profit, as a dummy variable, they used a logistic regression, testing the function: Profit =f(CSR, Turnover, Impairment, Assets, Liabilities, Market Capitalization, Dividends, Size, Ownership). Their study aimed at identifying how strong the correlation between CSR and profit is, and how companies behave in the periods they have losses, whether they continue to do CSR activities, they reduce the activities, or they give them up. These authors used indicators that express firm value based on both accounting data and information provided by the financial market. Some of the information were found in the reports of listed companies although the reports did not disclose the amounts spent on these activities.

The variables, CSR, profit and dividend were used as dummy variables. If the company had disclosed at least one of the CSR indicators it took the value 1, if not, 0. A dummy variable was used for profit as they could not calculate the profitability indicator ratios because some companies registered losses in other years. Dividends were also presented as a dummy variable taking the value 1 if the companies distributed the dividends and 0 if not. They considered Dividends a market indicator because it is a form of communication with the shareholders of the well-being of the companies. The researchers used profit as a control variable as they argued that "when analysing the accounting policies of the companies, this indicator is one of the hardest to manipulate by a company's management, which means that there is a high degree of certainty for the value of this indicator", (Hategan, et. al, 2018. p 10). Another indicator that

influences the value of companies is assets impairment which negatively influences the stock price, as this affects the future financial performance. In the study by Hategan, et. al, (2018. P 10), the model also included a dummy variable, ownership that takes value 1 if the company has a majority private shareholder and 0 if the majority of shareholders are state-owned.
The main findings of this study emphasise that firms which implement CSR activities are more profitable in economic terms hence a positive relationship between CSR and Profit.

Cornett et al., (2014) analysed corporate social responsibility (CSR) for banks and its effect on bank financial performance in the context of the recent financial crisis. The findings were that the largest banks consistently have higher CSR strengths and concerns during the sample period. However, it was observed that there was a steep increase in CSR strengths and a steep drop in CSR concerns after 2009. The study also noted that profitable banks have higher capital ratios, charge lower fees for deposits, more female and minority directors, and a significantly higher score for CSR strengths. Banks with low engagement with low-income earners are the smallest banks that show many significant relations between corporate social responsibility and bank characteristics. Yet the largest banks have high involvement in low-income communities and are rewarded for their social responsibility, as both size-adjusted RoA and RoE are positively and significantly related to CSR scores.

Hirigoyen and Rehm (2015) investigated the causal relationship between the various dimensions of corporate social responsibility (human resources, human rights in the workplace, societal commitment, and respect for the environment, market behaviour and governance) and financial performance (return on equity, return on assets, market-to-book ratio). The sample comprised 329 listed companies in three geographical areas (the United States, Europe and the Asia-Pacific region) for the years 2009 and 2010. The study used linear regression analysis and Granger causality to examine the causal relationship between social responsibility and financial performance. The findings concluded that greater social responsibility not only results in better financial performance, but also that financial performance has a negative effect on corporate social responsibility.

Servaes and Tamayo, (2013) carried out research on the relationship between corporate social responsibility and firm value. They conclude that corporate social responsibility (CSR) and firm value are positively related for firms with high customer awareness, as proxied by advertising expenditures. For firms with low customer awareness, the relationship is either negative or insignificant. Prior to that there had been findings indicating that the effect of awareness of the CSR value relationship is reversed for firms with a poor prior reputation as corporate citizens. This evidence was consistent with the view that CSR activities can add value to the firm, but only in certain conditions. The researcher pointed out that firstly, CSR activities can enhance firm value for firms with high public awareness, as proxied by advertising intensity. However firms with high public awareness are also penalised more when there are CSR concerns. Second, for firms with low public awareness, the effect of CSR activities on firm value is either insignificant or negative. Thirdly, advertising has a negative effect on the CSR value relationship if there is an inconsistency between the firm's CSR efforts and the company's overall reputation. Lastly, after including firm fixed effects, it was found that there is no direct relationship between CSR and firm value. These results were consistent with those of Sen and Bhattacharya, (2001) and McWilliams and Siegel, (2001), which suggested that without awareness, customers are unable to reward CSR involvement, so CSR efforts have to be aligned with the firm's prior reputation to create value, as articulated by Schuler and Cording, (2006). The research suggested that the link between CSR activities and performance through the customer channel is only one way in which CSR may affect firm value, so the authors believe that focusing on other channels would be a fruitful area for future theoretical and empirical research. The employee channel, in particular, seems to deserve further exploration, for instance, to what extent can CSR activities enhance employee productivity and reduce absenteeism, so enhancing firm value? In which types of organisation is this particularly relevant? Is there a link between the customer and the employee channel?

Rajput et al., (2012) examined the relationship between corporate social responsibility (CSR) and the financial performance of Indian organisations. The researcher used the organisation's CSR rating as an indicator of CSR, and profits and sales as indicators of financial performance. The motive for the study was to better understand the relationship between CSR and financial performance in the Indian context, since the authors suggested that previous research on the relationship between corporate social responsibility and financial performance had largely been based on international data. CSR indexes and financial performance (annual reports) measures were taken to allow the estimation of regression analysis conducted to examine the relationship between CSR and financial performance. Preliminary results revealed a statistically significant relationship between corporate social responsibility and financial performance as measured by the sales revenue and profits of 500 Indian companies, meaning that there is a financial benefit for companies that are innovative enough to invest in CSR. Escalating demands from stakeholders' interests in social performance have put pressure on corporations to enter into social responsibility reporting and practices so as to gratify these demands and to gain public support. Some organisations have already responded well to this perspective, either by publishing a separate report regarding their social activities, or by providing such information in their annual report or on their website.

Simionescu and Gherghina (2014) applied both accounting (RoA, RoE, and RoS) and market measures (p/e, e/s, and p/b), in their study of the relationship between CSR and corporate performance of firms on the Romania's Bucharest Stock Exchange (BSE) during the period 2008-2011. Several control variables covering firms' characteristics, including size, indebtedness and companies' tenure were considered. Estimating the panel data regression models without cross-section effects, the study produced a negative correlation between CSR and RoS, and a positive correlation between CSR and e/s. The study also estimated the fixed effects panel data regression models and found that a positive relationship between CSR and e/s was reinforced.

Pan et al., (2014) studied the relationship between corporate social responsibility and financial performance for the Chinese mineral industry. They used panel data of 228 mineral companies to evaluate the relationship between corporate social responsibility and corporate financial performance in China. The used the pooled least squares regression approach for companies listed between 2010 and 2013. The divided the firms into five sub categories based on the Industry Classification Benchmark (ICB) criteria: the extractive industry, the metal fabrication industry, the oil and gas industry, the gas and water-related industry, and the oil-producing equipment industry. It also considered five different sub-level CSR issues – shareholder responsibility, employee responsibility, environmental responsibility, and public responsibility, and supplier, customer and consumer responsibility – in capturing the impact of CSR components on corporate financial performance. Their conclusions were that CSR has significant impact on RoA, RoE, and e/s, which indicates that CSR programmes may assist an organisation to minimise costs. This would increase profits thus shareholder responsibility is positively related to an organisation's profits. There is a negative relationship between profits and environmental responsibility in a high pollution industry. This is as a result of high expenditure requirements to combat the effects of the environmental damage and to minimise pressure from public attention. The relationship is positive between employee responsibility and profitability in the metal fabrication; and oil and gas industries while there is short-run negative impact on the profitability in the water and gas-related industry. There is a positive link between public responsibility and e/s in the oil and gas industry, generally as result of increased corporation of the local people during exploitation process. The sub groups of CSR that show significant impact on the organisation's financial performance are stakeholders who are very close to the activities. There is no significant relationship between public responsibility and financial performance (with the exception of the oil and gas sector), hence the reason why most mineral organisations pay no attention to the interest of the local people, causing severe clashes; and lastly, varying results of the relationship between CSR and financial performance are caused by industry specific characteristics.

Cochran and Wood, (1984) controlled for average age of company assets and discovered a positive relationship between CSR and market share valuation. On the other hand Waddock and Graves, (1997) applied current CSR valuation and market valuation found that a relationship exists between the two variables. Studies by both Cochran and Wood, (1984) and Waddock and Graves, (1997), concluded that companies which apply socially responsible measures in the short term will earn benefits in the form of improved market share valuation in the future (Gladysek & Chipeta, 2012).

Kempf and Osthoff, (2007) constructed a portfolio and tested the influence of SRI firms on market portfolio valuation and revealed that there are huge returns when a trader goes long on shares with a high SRI valuation and short on shares with lower ratings. The study concluded that SRI companies outperform non-SRI companies even when transaction costs are taken into account.

However, Seifert, Morris and Bartkus, (2003) found a negative relationship between CSR and market valuation when they examined corporate philanthropy (corporate giving). Gladysek and Chipeta, (2012) also noted that in some instances, companies that behave in a socially responsible manner may be penalised. The apartheid era in South Africa steered several corporations to disinvest from the country as a form of CSR (Lansing & Kuruvilla, 1988). In their study, Wright and Ferris, (1997) analysed the announcement of listed companies withdrawing their investments from South Africa with a consequence of significant negative excess returns. Viviers, Bosch, Smit and Buijs, (2009) tested the valuation of SRI funds in comparison with non-SRI funds and found that JSE SRI funds did not consistently achieve high-risk adjusted returns related to non-SRI funds.

From these empirical studies it can be concluded that much of the research was carried out in developed nations and it is notable that very few indeed have focused on Africa. The concept has also gained popularity in recent years, as noted by the short time horizon for the samples under review. This notion was supported by Pan et al., (2014) that CSR is a relatively new concept for Chinese firms; so data related to CSR is extremely limited. However there is need to consider an extension in the number of periods, making it a longitudinal study. Overall, the relationship between corporate social responsibility and financial performance has undergone extensive empirical examination in many developed countries. However theoretical debates and discussions concerning the relationship are inconclusive, since there is no consensus among scholars, so a gap in the research has to be filled.

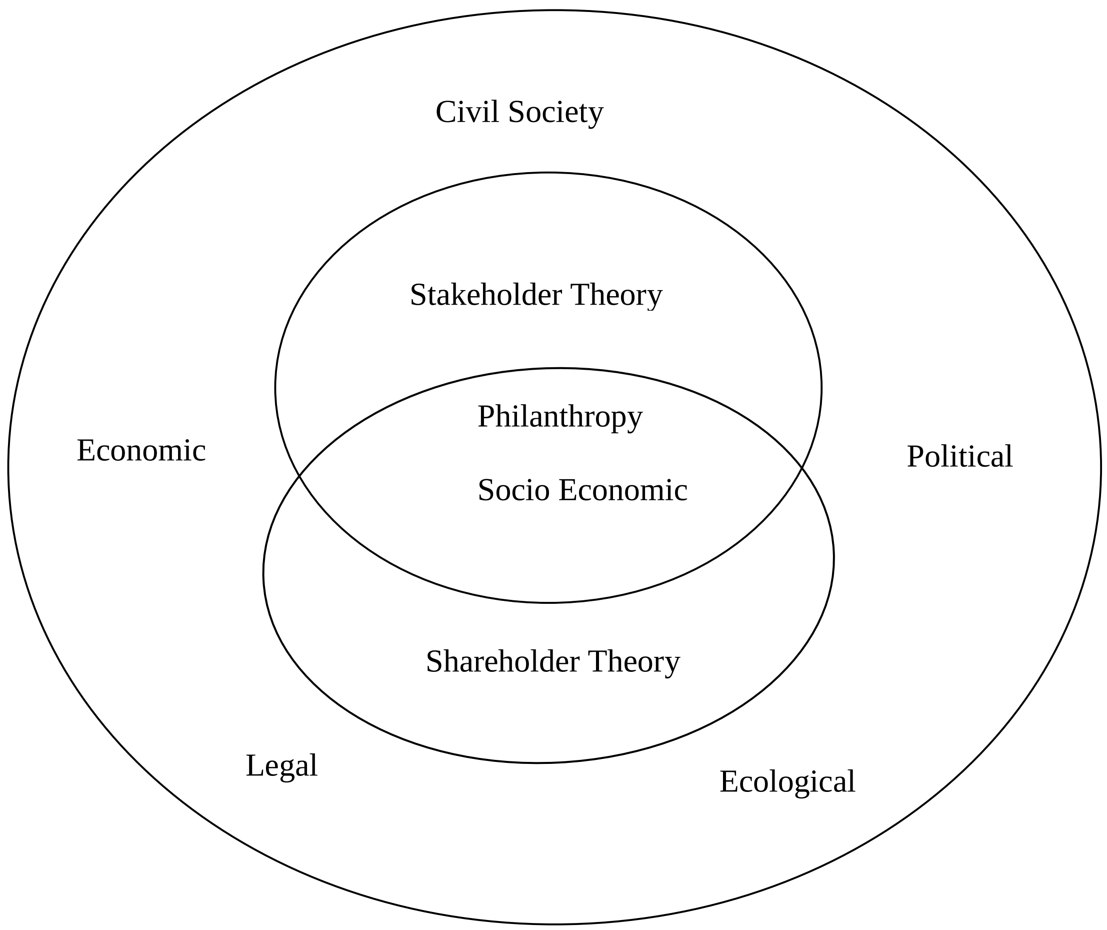
Despite its extensive and continuously evolving coverage, the relationship between CSR and corporate market valuation has been less empirically tested and measured in a single economic sector. This study did not find any empirical research that tested the influence of the two opposing theories (shareholder and stakeholder) within the context of the South African mining sector. Most relevant studies specific to the South African set-up have concentrated on the parametric and descriptive methods of finding the "value-enhancing (or value-destructive) effects that superior (or inferior)" (Oikonomou, 2011: p52) corporate social responsibility is claimed to have. So there is a need for an up-to-date empirical study that evaluates the effect of CSR practices on market valuation in the context of a single sector (mining) in a developing economy, and whether relevant stakeholders see further than mining organisations' behaviour from a business perspective when choosing the mining firms to include in their investment portfolio.

2.6 Proposed Integrated Framework for Conceptualising CSR

On the other hand Islam and Deegan (2008: p356) argue that integrating theories "offers a richer basis for understanding" and conceptualising CSR practices than analysing them individually, because none of the theoretical perspectives is independently able to explain the drivers of corporate social responsibility (Gray et al., 1995). Scholars like Gray et al., (1990), Cormier et al., (2005), Islam and Deegan (2008) and Martin and Hadley (2008) have advocated for a framework that incorporates various viewpoints. Corporate social responsibility practices, as discussed in the study by Nkomani (2013: p24) "are measured against the criteria across the triple bottom line of environment, society and economy, in addition to governance" and hence is so multi-faceted that no one perspective can independently and entirely untangle it. The supporters of CSR practices, Kurtz and Boone (2005) contend that responsibility is much more than making profit from different business activities. In their argument, they add that CSR as a concept goes further than simple philanthropic gestures aimed at shaping the image of a company, but should include social investment that will assist both parties; the beneficiary and the benefactor. Therefore there are multiple forms to CSR containing; legal, social, public expectation, ethical obligation, healthier environment, human wellbeing, competitive advantage, and avoidance of more government regulation. Adding support to the wider role of CSR, Vasconcelos (2011) argued that a company should adopt different characteristics such as: satisfying the different social needs of communities, applying an unwavering internal marketing policy and treating all workers with respect and fairness, and showing the willingness to achieve appropriate results in all business dealings and be esteemed.

The shareholder theory is a leading economic theory in use by business; however, maximising shareholder profits as the purpose of the firm should be accomplished within laws, economic and financial theory, management practices, and language. Carroll (1979, 1999) diverged from Friedman (1970) and established a framework for legitimising ethical and philanthropic considerations in management action. Yet both Friedman and Carroll's views consider the economic aspect of business as its primary benefit for society.

Carroll (1991) differentiated between the kinds of organisational responsibilities and named them the firm's "pyramid of CSR". However Ramdhony and Omran, (2015) argued that the hierarchy suggests that the responsibilities of companies move from economic and legal through to ethical and philanthropic responsibilities which are seen as more socially favourable. Arguing for these responsibilities, Carroll says that every firm in society is an economic unit with some form of economic responsibility. So society expects firms to make goods and services demanded available; in return, to make profit from selling the products within the confines of the law as set out by the legal system. There are, however, limitations noted in the pyramid. Schwartz and Carroll (2003) noted that wrong conclusions could be drawn that higher responsibilities in the hierarchy are more important than those at the bottom. The other limitation as noted by Ramdhony and Omran (2015: p41), was the inability of the pyramid to capture any overlaps in the domains. This study proposes an alternative framework to conceptualise views on CSR. Figure 1 below presents a proposed integrated conceptual framework for corporate social responsibility.



Source: Author's work

Figure 1: Integrated Conceptual framework

This study has provided as one of the contributions to the literature by developing and proposing an integrated framework for conceptualising CSR practices by mining firms in a developing economy. Four theories, namely stakeholder, shareholder, philanthropic and socio-economic theories have been used in the CSR literature, with some overlaps and integrations that consider theoretical extrapolative motivations of CSR practices. The stakeholder and shareholder theories are the main opposing theories, unified by the intermediate philanthropic and socio-economic views of a firm attempting to achieve improved market valuation. Their similarities are interrelated and they are not competing or mutually exclusive, but complementary. These theories have intersections that can be linked to CSR practices in an attempt to explain the predictive motives of such practices in an integrated theoretical framework. This theoretical framework can be used in future empirical studies as a theoretical basis for CSR practices in different contexts. The integrated perspective of the proposed theoretical framework will assist firms in taking their CSR practices from being a mere publicity stunt to the top of the agenda for their management to incorporate into their corporate cultures and business models.

The shareholder theory recognises shareholders as the principal stakeholders of an organisation who seek to satisfy their interests through wealth maximisation (Friedman, 1970; Jensen, 2001). In their studies; Carroll (1979) and Smith (2003) argue that the shareholder theory also acknowledges the relevance of other stakeholders of a firm. The stakeholder theory, on the other hand, recognises the role of external parties that have power, legitimacy, urgency and salience (Mitchell et al., 1997), and can influence or be influenced by the decisions of a company (Freeman, 1984). So these arguments bring the shareholder and stakeholder theories closer, creating an overlap. The difference is that the shareholder theory perceives external stakeholders as a means to an end, while the stakeholder theory sees external stakeholders as an end. The other basic argument and perception differentiating the shareholder theory from the stakeholder theory is where the stakeholder theory contends that businesses need to embrace a wider responsibility towards society so as to survive in the contemporary socio-economic environment.

The stakeholder theory indicates that the purpose of a firm is to generate collective value for all stakeholders by maximising the firm's value. This goal can be accomplished via CSR practices and sustainability by satisfying the interests of all relevant stakeholders, including but not limited to the government and its agencies, investors, creditors, suppliers, customers, employees, the environment, and society as a whole. The purpose of any business is to increase profits, so if the firm manages its economic activities well and makes efficient use of its resources, good behaviour will then follow. The shareholder theory (Friedman, 1970; Smith, 2003) argues that firms seek to generate socially acceptable wealth maximisation. Such firms would have to balance the interests of the various stakeholders under stakeholder theory (Freeman, 1984; Frooman, 1999; Phillips, 2003), so the management teams of firms that seek to maximise the firm's value cannot disregard the influence of external stakeholders.

The principle of profit maximisation is endorsed by the shareholder theory, led by Milton Friedman, who argues that "there is only one social responsibility of business: to use its resources in activities designed to increase its profits so long as it stays within the rules of the games, which is to say, engages in open and free competition without deception or fraud" (Friedman, 1970: p88). The call by Friedman that the sole responsibility of a company should be making profits has been a much debated claim in present-day business. However, an ethical perspective to the concept of maximum profit was made through Friedman, who put more emphasis on all companies' activities to always focus on growing owners' wealth. This perspective received support from Gallagher (2005) and Moon (2008), and they uphold Friedman's viewpoint arguing that it is a closely related to the business' broader goal of "maximising of shareholder profits". Even so, business ethics impose auxiliary responsibilities on companies to extend a social hand to communities they operate in. This argument is reinforced by the fact that some studies have pointed to the evidence of such supplementary responsibilities enriching businesses' status in the communities.

It is not incorrect to argue that businesses should make profit maximisation their principal goal, given that when a firm's profits grow, this ultimately translates to a growing economy which benefits its people. Furthermore, non-profitable businesses will eventually close down. As recommended by Friedman, it makes sense for business to focus on maximum profit considering how they develop and operationalise strategies. Companies will strategically position themselves to minimise production costs and maximise profits from comparative advantages of lower product costs. Factors to be considered in the theory are the "location, land price, labour cost, transport cost and access, environmental restrictions, workers' unions, population and other incidental costs". Following that logic, companies are not required to act socially responsible since by strategically positioning their factories and other business operations, their goal is to generate maximum profit. However, the theory does not care about the social issues such as "destroying the land, paying unfair wages, or exploiting a country"; as long as the profit objective is achieved. Weight is given solely to the economic gains that arise out of business dealings between companies and society; that is only initiatives that are consistent with generating wealth for owners are acceptable. Therefore this implies that CSR is simply an instrument for generating and accomplishing economic goals and eventually creating wealth for owners.

Theories postulate that when businesses invest in the communities they belong to, they are growing the shareholder value but "acting without deception and fraud". However, assumptions would be rejected where the cost of meeting such social needs exceed the gains to companies or significantly increase costs of doing business. In support of these views Friedman (1970: p97) described a model investment scenario in a particular society: "It will be in the long-run interest of a corporation that is a major employer in a small community to devote resources to providing amenities to that community or to improving its government. That makes it easier to attract desirable employees; it may reduce the wage bill or lessen losses from pilferage and sabotage, or have other worthwhile effects. In this instance the social responsibility of the business is to increase and maximise profits although it will also benefit the community in a way." However, many debates have been conducted and conclusions arrived at in favour of a positive CSR policy that does not destroy profits. In support of positive CSR, Walling (2007: p56) described an incident that involved a footwear giant "Nike" that: "Footwear mogul Nike is still dealing with the backlash of a UK-instigated campaign that accused it of employing child labour in developing countries." An agent who landed Nike into this situation probably believed in and was in support of Friedman's business philosophy. In pursuit of higher profits, the agent decided to minimise costs by selecting to do business in markets and countries where low cost child labour is possible. However, such business model was widely criticised with consequences that led to an international rejection of all Nike products as the entire company was considered negligent. As Cassel, (2001) likened this business model to Friedman's philosophy, he claimed that the whole approach backfired on Nike and the agent who implemented it. It was seen by human activists as in contravention of human rights. Human activists and promoters of social responsibility maintained that business should be done not only to grow profits but be done in the spirit of CSR because communities support it.

In present times, communities expect companies to go beyond profit making and be responsible to their staff members, communities and all interested parties even if improving their conditions mean sacrificing profits (Bernstein 2000). Davis (1960) further analysed the amount of influence that companies wield in society and the social impact of such influence. The analysis concluded that companies are social institutions and should use their authority responsibly. Such a conclusion indicates that by default, companies accept social obligations and related rights to partake in a certain level of cooperation. However, Friedman disagreed with such analysis citing that corporations should not be concerned about social issues as they can be solved by the "unfettered workings of the free market system".

According to Carroll, (1979: p499), a company's "economic responsibility" is "to produce goods and services desired by the society to sell them at a profit". This way a company fulfils the primary obligation as an economic unit in society. A socio-economic view adopts a narrow responsibility with the acceptance of benefits associated with CSR. A socio-economic view accepts that businesses still pursue profit maximisation as the primary objective, while attempting to meet social demands as well as deriving some benefits in the process (Kakabadse et al., 2005). The shareholder theory argues that the social responsibility of business is to increase its profits with good social behaviour, following the practices of good administration of economic activities and efficient use of resources (Friedman, 1970). Such an approach, however, snubs the varying conflicts of interest among stakeholders regarding the constituents of efficient use of resources. So these socio-economic views are largely founded on the neo-classical argument that firms should be allowed to pursue profit maximisation and efficiency freely, so maximising the common good of society.

However, Davis argued against the supposition of perfect competition in the socio economic theory citing that a company partaking in social activities in society affects the market price equilibrium hence the price will not be at “Pareto optimum” that represent an arm’s length price of the free market system. According to the view expressed by Davis, (1960), thus when a company doesn’t use its social authority, it is bound to lose its influence in society, particularly if society wants social responsibility from local companies. Also, business depends on society for its existence, continuity and growth. Social demands are considered to be the way in which society interacts with business and gives it a certain legitimacy and prestige. As a consequence, corporate management should take into account social demands, and integrate them in such a way that the business operates in accordance with social values.

The views of the philanthropic and socio-economic theories are located in the intersection area and accept that business should still pursue profit maximisation as the primary objective, while at the same time trying to meet social demands as well as derive some benefits in the process (Kakabadse et al., 2005). The philanthropic view submits that businesses undertake corporate social responsibility activities for altruistic and ethical reasons, so as to help other less fortunate members of society, while the socio-economic view adopts a narrow responsibility with the acceptance of benefits associated with CSR. The perceived consequences with regard to costs and benefits from corporate social responsibility depict arguments considering whether a firm should adopt a narrow or a wider corporate social responsibility.

As Carroll and Shabana, (2010), put it, the basis for business responsibility can be restricted to each circumstance and era depending on the mores of society at each time, but emanates through a firm’s operational roles. On the other hand Zadek (2000) noted that businesses follow CSR approaches that will enhance their “reputation (pain alleviation), justify benefits over costs (the traditional business case), integrate with their broader strategies (the strategic business case), and learn, innovate and manage risk (new economy case)". Furthermore, a company that builds positive relationships in the community will benefit from tax advantages and reduced regulation because it is seen as a responsible corporate citizen and good member of society. In their argument, Carroll and Buchholtz, (2009) claim that this is synonymous with being preemptive though anticipation, planning and taking initiative which is more preventative that reactive. Such proactive behaviour in handling social issues as they arise cost less than reacting to arising problems. In contrast to the concept of maximum profits as pronounced by Friedman, the link between business and society is rooted in ethical values. Therefore, this indicates that corporate social responsibility ought to be looked at from an ethical viewpoint; consequently companies should accept social responsibilities as ethical duties beyond other considerations. Based on the stakeholder theory, companies that are socially responsible should strive to balance and meet the demands of multiple stakeholders, not only the needs of the shareholders as pronounced by Friedman.

In the present era, sustainable development has become key to business putting CSR practices under the public eye. Even though this concept of sustainability was developed at macro level, it requires appropriate involvement of corporates. Yet sustainable development as a concept has grown and extended to include social aspects as not detachable from development. As detailed by the World Business Council for Sustainable Development (2000), that sustainable development involves incorporating social, environmental and economic aspects to balance the judgments for the long run. So companies that are socially responsible should endeavour to conserve the environment. Frederick, (1987) viewed CSR as a requirement for business to oversee the operation of an economic system that fulfils the expectations of the public. The means of production of firms should be employed in such a way that production and distribution would enhance the total socioeconomic welfare. However, other scholars defined CSR as a more integral concept. Carroll, (1991) described corporate social performance as the three-dimensional integration of CSR, corporate social responsiveness, and social issues. The author suggested that CSR should address the entire range of obligations of business to society and must encompass the economic, legal, ethical, and discretionary categories of business performance.

2.7 Conclusion

This chapter explored the history and conceptual framework of corporate social responsibility as well as relevant literature on the different schools of thought concerning CSR. The implications of CSR for business and issues of profitability to stakeholders have been examined. The idea of corporate social responsibility in relation to the South African mining industry and sector has also been dealt with.

Another section of this chapter outlined the market valuation measurements used by several researchers in evaluating the relationship between CSR and company market valuation. The chapter further discussed the empirical findings of previous studies, so identifying the research gap for which the study endeavors to provide some answers.

CHAPTER 3

RESEARCH METHODOLOGY

3.0 Introduction

This chapter outlines the methodological approach the study will employ in its engagement with the subject area. The study elects a quantitative method in a manner that expands and enriches the abilities of the study to gather, process and analyse data. The chapter also describes the data collection tools and techniques, and elaborates on the designs of the study in a manner that explains, defends and so reinforces its reliability and dependability as an academic study.

3.1 Research design

As illustrated in the literature, studies have employed various methods to verify theories in this field of study. However, it is crucial to begin by establishing what constitutes good CSR principles. The literature revealed that inclusion on a social responsibility index is regarded as an indication of good CSR practice. Chiu and Sharfman (2011: p1 569) noted that the KLD database is often used internationally as a proxy for social responsibility valuation. In the South African context, the JSE introduced its JSE SRI index in 2004 to perform a comparable function. Thus this study considers any mining firm that is a constituent of the JSE SRI index as having good CSR practices. Firms that fulfil the qualifying criteria have to apply for inclusion in the index. The JSE, working in consultation with the advisory committee, was responsible for developing the qualifying criterion. Members of the advisory committee include independent experts from the industry (JSE SRI Index, 2012). Nkomani (2013: p24) stated: "companies are then measured against the criteria across the triple bottom line, namely environment, society and economy (ESG) in addition to governance". However, companies are only accepted on the index once minimum key measures are met as stipulated in the criteria (see Appendix 3). Each company would have to put in place core indicators as a bare minimum before inclusion can be considered. Nkomani (2013: p24) further explains that "the desirable indicators are meant to ensure that firms consider all relevant issues that could affect their CSR practices".

The lack of an existing numerical index in South Africa means that CSR is measured as a categorical variable represented by dummy variables in terms of regression analysis, in which a value of 1 is used when mining firms are included in the JSE SRI and a value of 0 when they are not (Crisóstomo et al., 2011; McWilliams & Siegel, 2000; Tsoutsoura, 2004).

It is also a key decision to consider how to measure market valuation when determining a suitable research method. The literature reveals that either accounting- or market-based measures (Van Beurden & Gossling, 2008: p412) are commonly used. Different measures of market valuation are frequently used together with additional control variables in analysing the link between market valuation and corporate social responsibility. The valuation measures are selected based on various criteria, since different sets of indicators need different measurement strategies, which lead to different magnitudes of effects (Orlitzky, Schmidt & Rynes, 2003; Fu, Wang & Jia, 2012). Peloza (2009) also warns of the significant implications and consequences of each choice of market valuation measure selected or used in empirical tests, while Chang & Majumbar (1993) admitted that discovering appropriate components of market valuation measures is a pertinent area for research. Market valuation indicators can be more or less sensitive to corporate social responsibility activities. This study has selected the market measures of market valuation aspect of each mining firm, as they reflect the view that the shareholders are a chief stakeholder group whose satisfaction defines a firm's future performance (Cochran & Wood, 1984; Fu, Wang & Jia, 2012) as opposed to past performance; so they are less vulnerable to manipulation by management (Aras et al., 2009). The literature also revealed researchers who used similar market valuation indicators, including Vance (1975), Alexander and Buchholz (1978), Spicer (1978b), Shane and Spicer (1983), Stevens, (1984), Mahapatra (1984) and; Klassen and McLaughlin, (1995).

The first type of function for this study follows the approach used by McWilliams, and Siegel, (2000) who formulated a model in the form of $perf_i = f(csp_i, size_i, risk_i, ind_i)$ where they argue that long-run economic or financial performance of firm i proxied by measures of accounting profits is a function of corporate social responsibility of firm i (based on an index of social performance), size of firm i, risk of firm i, and industry intensity of firm i. However they later hypothesised that such a model is misspecified as it does not control for investment in R&D and the advertising intensity of its industry. In their discussion they argued that this misspecification results in upwardly biased estimates of the financial impact of CSR. The researchers then formulated what they called a more appropriately specified model as: $perf_i = f(csp_i, size_i, risk_i, ind_i, rdint_i, indadint_i)$ arguing that long-run economic or financial performance of firm i proxied by measures of accounting profits is a function of corporate social responsibility of firm i (based on an index of social performance), size of firm i, risk of firm i, industry of firm i, R&D intensity of firm i proxied by R&D expenditures/sales and advertising intensity industry of firm i.

The first function (0a) to assess the CSR- market valuation relationship is in the form expressed as:

$FV_i = f(CSR_i, SIZE_i, RISK_i)$……………………………………………………………...(0a)

Where FVi = value of firm i (market measures). This study employees the following ratios as indicators of firm valuation.

Returns = (price in year *i* ÷ price in year *i*-1) - 1

Price/earnings ratio (p/e) = price per share ÷ earnings/share (e/s)

Price/cash flow (p/cf) = price/share ÷ cash flow/share

Price to book ratio (p/b) = price/share ÷ balance sheet price/share

CSRi = a proxy for corporate social responsibility of firm i (based on the listing on the social responsibility investment index) is a dummy variable.

All firm value indicators are numerical variables. It was assumed that these measures will reveal if financiers are prepared to pay a higher price for mining companies or will be discouraged from putting their money in such investments.

The study considers a period from 2005-2015. The Johannesburg Stock Exchange (JSE) took an initiative in May 2004 to provide an inclusive assessment of CSR in South Africa by establishing the socially responsible investment index (SRII). Therefore the choice of the lower bound of the period (2005) is based on an attempt to capture a complete year of performance thus the study opted to allow for a full first year of CSR performance before measuring its impact on market value. The upper bound of the period (2015) is based on the year when this research began and the latest date of data availability on the index.

Another crucial decision revealed in the literature and theoretical models is that a firm's market valuation can be a function of both CSR and other variables which can have an effect on market valuation. According to Fu, Wang and Jia (2012), the selection of appropriate control variables to be included in empirical models is critical to obtaining reliable results. Control variables are used because of the possibility that factors other than the independent variable of interest exist which affect the dependent variables. In addition, in light of other control variables, the relationship between the explanatory and explained variable may change. So the inclusion of control variables enhances the robustness of the model, which may improve the reliability of the results. The control variables included are those that affect or are believed to affect the dependent variable. The variables are also included to mitigate the likelihood of utilising spurious models; the relic of an omitted variable bias and an attempt to eliminate non-CSR influence and, thus, focus on the influence of CSR on market valuation (Oikonomou, 2011), so size and risk will be used as control variables.

$SIZE_i$: *Log* (market capitalisation). A proxy for the size of firm i. The size is represented by the natural log of market cap of the company. It is thought that large firms are inherently more competent than small firms and are likely to adopt CSR principles more frequently, so size is considered an important control variable. Beaver et al., (1970: p662) argued further that “firm size is comparably related negatively to asset return variance and that reputational effects are higher for larger firms, which makes banks view them as less risky, and reduce the yields they charge them”.

$RISK_i$: A proxy for the risk of firm i. Proxied by debt/asset ratio. As firms grow big, more stakeholders pay attention to their operations (Burke et al., 1986). Growth is likely to attract lenders willing to lend their money to the firms, so the level of debt held by the firm is adopted as an important control variable.

Such a function when used to evaluate the effect of CSR practices on market valuation in the South African mining sector could be suffering from effects of omitted variables. The suspicion then encouraged the study to use a second more robust form of model to perform the analysis with a different set of variables and compare the results. This in a way enhances the reliability and robustness of the results. The second function (b) is in the form of:

$q_i = f(CSR_i, SIZE_i, RISK_i, SALES_i, ATR_i, R\&D_i, ADVERT_i)$……………………………(0b)

This form of model would provide an improved control of the effects of the firm-specific variables. The dependant variable q_i (value of firm i) is proxied by the Tobin’s q ratio. The Tobin’s q ratio has been the commonly used measure of firm value, defined by Hirsch and Seaks, (1993) as the market value of the firm divided by the replacement costs of assets. However for practicality purposes, a modified version of the Tobin’s q as designed by Chung & Pruitt (1994) was used for consistency because of simplified balance sheets. Chung & Pruitt (1994) found that this modified version closely approximates Tobin's original statistic and produces a 96.6% approximation of the original formulation used by Lindenberg & Ross (1981).

q = (MVS + D)/TA

Where:

MVS = Market value of all outstanding shares, i.e. the firm's Stock Price * Outstanding Shares

TA = Firm's assets, i.e. cash, receivables, inventory and plant book value

D = Debt defined as:

D = (AVCL – AVCA) + AVLTD

Where,

AVCL = Accounting value of the firm's Current Liabilities = Short Term Debt + Taxes Payable

AVLTD = Accounting value of the firm's Long Term debt = Long Term Debt

AVCA = Accounting value of the firm's Current Assets = Cash + Inventories + Receivables

Moreso, Tobin’s q ratio is key to testing the robustness of reported results to the use of other measure (Welch, 2003). Tobin’s q primarily represents the community of investors constrained by their insight, brightness, or doubt (Demsetz and Villalonga, 2001).

Elsayed and Paton (2004) applied Tobin’s q when assessing the effect of CSR practices on market valuation. However, according to Lindenberg and Ross, (1981) Tobin’s q ratio has its own limitations and it is a noisy metric, significantly affected by industrial organization. Although there are still arguments about these measures, this section of the study uses the market-based measure; the Tobin’s q ratio as a dependent variable. The model assumes q of firm i is a function of corporate social responsibility (CSR), financial leverage, firm’s size, firm’s sales, asset turn over, advertising intensity and research and development investments.

A set of firm-level control variables which could influence companies’ value are included. Thus, for evaluating companies’ size, (as explained in the paragraph above), the size influences the capacity to initiate social responsibility actions, because smaller firms have a reduced potential to sustain these activities in contrast to larger companies which have a solid infrastructure and high levels of cash flows. As the company develops, it becomes more visible and responsible regarding stakeholders’ requests. According to Roberts (1992), stakeholders’ wealth is influenced by the existence of financial difficulties. The gearing and debt level will be measured as the ratio between total debt and total assets, a company with a solid orientation towards stakeholder interests being considered well managed and less risky. Growth opportunities in terms of sales, could suggest the improvement of employees and customer satisfaction through rising the turnover.

Research & Development (R &D) is the R&D intensity of firm I (R&D expenditures/sales) to control for a mining firm's rate of investment in R&D. A long standing theoretical literature links investment in R&D to improvements in long-run economic performance (Griliches, 1979). The R&D is considered to be a form of investment in "technical capital. Investment in technical capital results in knowledge enhancement which leads to product and process innovation. This innovative activity enables firms to enhance their productivity.

ADVERT is advertising intensity industry of firm i. It is designed to serve as a proxy for the extent of product differentiation at the industry level and entry barriers that might serve to enhance firm profitability. Entry barriers are a shared asset across firms in an industry, because entry barriers are an industry level construct (McWilliams and Smart, 1993).

The study further adopted and modified the

3.2 Sampling

An entire set of mining firms listed on the JSE is the population of the study. A population is the whole group with at least one common characteristic (Zikmund, 2003). These firms are in South Africa and engaged in mining activities (excluding companies involved in exploration only), classified in terms of Standard Industrial Classification (SIC) of all Economic Activities.[4] The complete list is presented in Appendix 2.

The sample size for the study is 38 mining companies engaged in mining activities, excluding exploration-only companies. The size of the sample was derived after taking into account the availability of data and the necessity of having a suitable overall sample size within the mining sector.

The literature revealed that a number of authors (Agle et al., 2008; Bansal, 2005; Bansal & Roth, 2000; Campbell, 2007; Delmas & Toffel, 2004; Freeman, 1984; Hoffman, 1999, 2001; Jennings & Zanbergen, 1995; Kassinis, & Vafeas, 2006; and Sharma & Henrique, 2005) argue that CSR activities are affected by institutional pressures across industries which subsequently

[4] The Standard Industrial Classification (SIC) of all Economic Activities is prescribed by the Department of International Economic and Social Affairs of the United Nations to classify all economic activities acceptable internationally and is one adopted by the South African Reserve Bank (SARB) as well as by Statistics South Africa (Stats SA).

influence whether CSR will have a positive or negative effect on market valuation, hence the rationale to narrow the study to the mining sector only.

For the purpose of this study:

- Firms are grouped into two categories: SRI-listed and non-SRI listed mining companies, due to the fact that data on market valuation is easily obtainable from their published annual financial statements.
- Firms included in the JSE SRI are put into the CSR band and those not included in the JSE SRI are put into the non-CSR band.
- Firms are only disqualified if no sufficient financial data was available from the Bureau of Financial Analysis (BFAINet).

3.3 Data collection

The data for this study was gathered from the Bureau of Financial Analysis (BFAINet), formerly the McGregor BFA database (McGregor BFA, 2012). This is a subscription database service that supplies real time data and contains information on both the financial statements and all the financial ratios of mining companies used in the study. In a case where there is partial data for a particular mining firm over the 11 years (2005-'15), a background check on the specific firm was performed. Some companies had gaps in their data due to being deregistered, name changed or newly listed during the period. In cases where gaps in the data were due to changing of company name, information in financial statements was used to calculate ratios based on the description given on the Bureau of Financial Analysis (BFAINet).

3.4 Econometric approaches and model specification

The objective of the study is to evaluate whether CSR has any effect on corporate market valuation of South African mining companies listed on the JSE, using an econometric methodology. In this light, the study makes use of panel data regression equations. These models will increase data points and degrees of freedom, reduce collinearity of the explanatory variables, and improve efficiency of estimates (Hsiao, 2003). In addition, panel data models are employed in this study to analyse dynamic changes, and helping detect and measure effects that simply could not be observed in pure time series or cross-sectional data (Gujarati & Porter, 2009).

3.4.1 Approaches to panel data analysis

In this study, the panel data analysis is conducted using three popular approaches: pooled panel data, fixed effects and random effects panel data analysis (Woodridge, 2013; Gujarati & Porter, 2009). The three approaches are explained below, including their related pros and cons in relation to the study.

3.4.1.1 Pooled panel data analysis

Often called the pooled OLS model, the approach pools all observations (in this case all 38 mining companies) and estimate a "grand" regression, neglecting the cross-section and time series nature of the data (Gujarati & Porter, 2009). The reason for using independently pooled cross-sections in the study is to increase the sample size. By pooling random samples drawn from the same population of mining firms, but at different points in time, the study can find more precise estimators and test statistics with more power. Pooling is helpful in this regard only insofar as the relationship between the dependent variable and at least some of the independent variables remain constant over time (Woodridge, 2013). However the challenge associated with pooling cross-sections together is that of camouflaging the heterogeneity (individuality or uniqueness of the mining firms) that may exist among the cross-sectional units. Such heterogeneity or unobservable effects are called nuisance parameters (Gujarati & Porter, 2009). The objective of the study is to explore the effect of CSR on market valuation, so the econometric equation for the pooled OLS regression model is used to explain the relationship between CSR and market valuation as presented in equation 1:

$$Y_{it} = \beta_0 + \sum_{n=1}^{n} \beta_n \; X_{it} \; + \; \varepsilon_{it} \dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots 1$$

where y is the dependent variable (market valuation measures); x represents the independent variables; β is the coefficient of the explanatory variables; ε is the error term; i indicates a firm number; and t represents time.

This study addresses the shortcomings of the pooled OLS model by applying the fixed and random effects models.

3.4.1.2 Fixed effects model

The fixed effects model allows the intercept to differ among cross-section units in recognition of the fact that each individual mining firm or cross-section unit may have some special characteristics of its own (Greene, 2008; Wagner, 2006). The two variations to the fixed effects model as outlined by Gujarati and Porter (2009) are:

1. The fixed effects least squares dummy variable (LSDV) model. This pools all observations, but allow each cross-section unit (in this study, mining company) to have its own (intercept) dummy variable; this is represented in an equation as:

$$Y_{it} = \beta_{0i} + \sum_{n=1}^{n} \beta_n \; X_{it} \; + \; \varepsilon_{it} \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots.\ldots 2a$$

   where *y* is the dependent variable; *x* represents the independent variables; *β* is the coefficient of the independent variables; *ε* represents the error term; *i* indicates a firm number; and *t* represents time; and

2. The fixed effects within-group model. This pools all observations, but for each cross-section unit (mining company), each variable is expressed as a deviation from its mean value and then an OLS regression is estimated on such mean-corrected or "de-meaned" values. This is presented in an equation as:

$$\ddot{Y}_{it} = \sum_{n=1}^{n} \beta_n \; \ddot{X}_{it} \; + \; \varepsilon_{it} \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots.\ldots 2b$$

3.4.1.3 Random effects model

This is often called the random effects model (REM) or error components model (ECM), (Gujarati & Porter, 2009). Unlike the LSDV model, in which each cross-section unit is allowed to have its own (fixed) intercept value, in this model it is assumed that the intercept values are a random drawing from a much bigger population of mining companies (Greene, 2008; Gujarati & Porter, 2009; Woodridge, 2013). The equation for the random effects model investigating the relationship between CSR and market valuation is presented as:

$$Y_{it} = \beta_{0i} + \sum_{n=1}^{n} \beta_n \; X_{it} \; + \; \varepsilon_{it} \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots 3a$$

where *y* is the dependent variable; *x* represents the independent variables; *β* is the coefficient of the independent variables; *ε* represents the error term; *i* indicates a firm number; and *t* represents time.

In this model, as opposed to the fixed effects model, the intercept coefficient is assumed to be a random variable with a mean value of β_0 (no subscript i here). Consequently, the intercept value for an individual mining company is expressed as:

$$\beta_{0i} = \beta_0 + \mu i, \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots 3b$$

where μ_i is a random error term with a mean value of zero and a variance of σ^2

What this implies is that the cross-sectional units have a common mean value for the intercept $(= \beta_1)$. The individual differences in the intercept values of each cross-section unit are reflected in the error term ε_i.

Substituting equation 3b into equation 3a results in equation 3c:

$$Y_{it} = \beta_0 + \sum_{n=1}^{n} \beta_n X_{it} + V_{it} \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots 3c$$

where $V_{it} = \varepsilon_{it} + \mu_{it}$

where y is the dependent variable; x represents the independent variables; β is the coefficient of the independent variables; ε represents the error term; v is the unobserved firm effect; i indicates a firm number; and t represents time.

3.4.1.4 Fixed or random effects model

The Hausman test was used to choose the most precise between the two models (fixed or random effects) to investigate the relationship between CSR and market valuation. A test of random effects against the fixed effects model was performed with the null and alternative hypotheses stated as follows;

H_0: the random effects model is appropriate.

H_1: the fixed effects model is appropriate.

In all cases the Prob>chi^2 was greater than 0.05 (see appendix A6 for results), meaning we fail to reject the null hypothesis that the random effect model is appropriate, so the random effects model is to be conducted as the main model for the study. The Breusch-Pagan test was also used as an alternative to see whether the error components model (ECM) is appropriate in this scenario.

The error term (μ_{it}) for the random effects model in equation (3c) is defined as:

$$\mu_{it} = \varepsilon_i + \mathrm{V}_{it} \dots \dots 4$$

In (4), ε_i is the cross-section error component and v_{it}, combines the cross-section and time series error component.

3.4.2 Model specifications (1)

Following the works of Waddock and Graves (1997), McWilliams and Siegel (2000), Callan and Thomas (2009) and; Andersen and Dejoy (2011) and further customising equations 1, 2 (a & b), 3 (a, b & c) and 4 in the preceding section, equations for this study for the first form of the model (a) are then presented as follows:

3.4.2.1 Pooled OLS model

$$Y_{jit} = \beta_0 + \beta_1 CSR_{it} + \beta_2 Size_{it} + \beta_3 Risk_{it} + \varepsilon_{it} \dots \dots 5$$

3.4.2.2 Fixed effects model

$$\ddot{Y}_{jit} = \beta_1 C\ddot{S}R_{it} + \beta_2 Si\ddot{z}e_{it} + \beta_3 Ri\ddot{s}k_{it} + \varepsilon_{it} \dots \dots 6$$

3.4.2.3 Random effects model

$$Y_{jit} = \beta_0 + \beta_1 CSR_{it} + \beta_2 Size_{it} + \beta_3 Risk_{it} + \mathrm{V}_{it} \dots \dots 7$$

where

$$\mathrm{V}_{it} = \varepsilon_{it} + \mu_{it} \dots \dots 8$$

where *y*, the dependent variable in all instances (that is, equations 5-7 in this study) refers to market valuation measures, (market return, p/e ratio, p/cf ratio and p/b ratio). CSR is measured as a categorical variable represented by dummy variables, in which a value of 1 is used when mining firms are included in the JSE SRI and a value of 0 when they are not (Crisóstomo et al., 2011; McWilliams & Siegel, 2000; Tsoutsoura, 2004); β is the coefficient of the independent variables; ε represents the error term; v is the unobserved firm effect; j = 1 to 4, which indicates market valuation measures; i = 1 to 38, which indicates a firm number; and t represents time (under normal circumstances t = 2005-'15).

In this study, the above static equations measure the instantaneous effect of CSR on market valuations. It is however possible that CSR could have a delayed effect on market valuation, which requires the use of dynamic equations (Woodridge, 2013).

3.4.2.4 Dynamic model- Arellano and Bond Procedure

Using the generalized method of moments (GMM) of Arellano and Bond procedure (1991*)*, *t*he dynamic panel data equations is estimated in this section and presented as follows:

$$Y_{jit} = \beta_{0i} + \beta_{1i} Y_{it-1} + \sum_{n=2}^{n} \beta_n \ X_{it-1} + \ \varepsilon_{it} \dots \dots \dots \dots \dots \dots \dots \dots \dots \dots \dots \dots \dots \dots \dots \dots \dots \dots \dots ..9$$

where *y* represents a set of alternative dependent variables (in this study it refers to market valuation measures, namely market return, p/e ratio, p/cf ratio and p/b ratio) and X_{it} represents a set of independent variables where in this study it refers to CSR, company size and risk. β is the coefficient of the independent variables; ε represents the error term; *v* is the unobserved firm effect; *j* = 1 to 4 which indicates market valuation measures; *i* = 1 to 38 which indicates a firm number; and *t* represents time (under normal circumstances *t* = 2005-'15).

Inclusion of lagged dependent variables as regressors in dynamic panel models often causes the estimators from the fixed and random effects models to be biased and inconsistent, except in the case of "long panels" (Munoz, 2005; Woodridge, 2013). The study addresses this challenge by using lagged dependent variables as instruments for independent variables by estimating the Arellano-Bond dynamic panel models.

3.4.3 Model specifications (11).

Given that the preliminary analysis show that there is no clear linear relationship between the dependent and independent variables, indicating that linear regression methods like OLS would not be most appropriate. The Generalized Least Squares (GLS) is a more appropriate method than the Ordinary Least Squares (OLS) for panel data analysis. Therefore, this section of the study, considers only the random, fixed effects and dynamic models. For this type of function (b), models are expressed as follows

3.4.3.1 Fixed effects model

$$\ddot{Y}_{jit} = \beta_1 \ddot{CSR}_{it} + \ \beta_2 \ddot{Size}_{it} + \beta_3 \ddot{Risk}_{it} + \beta_4 \ddot{Sales}_{it} + \beta_5 \ddot{ATR}_{it} + \beta_6 \ddot{R\&D}_{it} + \beta_7 \ddot{Advert}_{it} + \varepsilon_{it} \dots \dots 10$$

3.4.3.2 Random effects model

$$Y_{jit} = \beta_0 + \beta_1 CSR_{it} + \ \beta_2 Size_{it} + \beta_3 Risk_{it} + \beta_4 Sales_{it} + \beta_5 ATR_{it} + \beta_6 R\&D_{it} + \beta_7 Advert_{it} + V_{it} \dots ..11$$

where

$$V_{it} = \ \varepsilon_{it} + \ \mu_{it} \dots \dots \dots \dots \dots \dots \dots \dots \dots \dots \dots \dots \dots \dots \dots \dots \dots \dots \dots \dots \dots \dots \dots ..12$$

3.4.3.3 Dynamic model- Arellano and Bond Procedure

Using the generalized method of moments (GMM) of Arellano and Bond procedure (1991*)*, *t*he dynamic panel data equations is estimated in this section and presented as follows:

$$Y_{jit} = \beta_{0i} + \beta_{1i}Y_{it-1} + \sum_{n=2}^{n} \beta_n \ X_{it-1} \ + \ \varepsilon_{it} \dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots..13$$

where *y* represents the Tobin's q ratio and X_{it} represents a set of independent variables where in this study it refers to CSR, financial leverage, firm's log Size, firm's Log Sales, asset turn over, Advertising intensity and Research & Development.

3.5 Conclusion

The methodology chapter described the broader research design, followed by an outline of the data collection process. Attention was given to the methodology used to ensure that the empirical results are robust. The study used the control variables that have been revealed to have an effect on market valuation in asset pricing, and corporate social responsibility market valuation literature. The variables are included to mitigate the likelihood of utilising spurious models; the relic of an omitted variable bias and an attempt to eliminate non-CSR influence and, thus, focus on the influence of CSR on market valuation (Oikonomou, 2011). Extensive efforts were made to utilise appropriate panel regressions. The lagged dependent variables were used as instruments for independent variables by estimating the Arellano-Bond dynamic panel models to avoid estimators from the fixed and random effects models to be biased and inconsistent (Munoz, 2005; Woodridge, 2013).

The literature shows that minimal prior work has been done on the detection of outliers in a panel data model, so this thesis uses graphical methods to check and treat the effects of these outliers to avoid their influence on the results. The analysis was conducted in two parts; firstly by including the outliers in the data analysis and later by excluding these outliers from the analysis. These tests did not yield any differences between the results, so negating the influential effects of such outliers.

CHAPTER 4:

DATA ANALYSIS

4.0 Introduction

Prior to running the regressions models, exploratory data analysis was carried out on variables both individually and as a group. The explorations carried out are the descriptive statistics and box and whisker plot to check for unusual data points, scatter plots and correlation statistics to check for linear relationships as well as linear graphing to check for trends. The analysis is discussed in detail in the following sections.

4.1 Descriptive statistics

Table 2 presents descriptive statistics of each variable used in this research. The data employed in this study comprise of 371 observations from a panel of mining companies listed on the JSE for the period 2005-15.

The large J-B values for all the variables under study indicate that they do not follow a normal distribution. P-values for Jarque-Bera further indicate that the data are not normally distributed. All variables are positively skewed and have substantive kurtosis values except for CSR and company size. Statistically, values for kurtosis are high (close to or above three), hence, the distributions are peaked relative to normal distribution. Kurtosis is a measure of whether the data is peaked or flat relative to a normal distribution (Ngailo, 2011) – that is, data sets with high kurtosis tend to have a distinct peak near the mean, decline rather rapidly, and have heavy tails, whereas data sets with low kurtosis tend to have a flat top near the mean rather than a sharp peak.

Table 2: Descriptive statistics

	Mean	Median	Maximum	Minimum	Std dev.	Skewness	Kurtosis	Jarque-Bera	Probability	Sum	Sum sq. ev.	Observations
R&D	2.48491	7.42	12.58	8.18	1.841845	0.303787	3.401141	16.22196	0	3353.87	520.2195	371
ADVERT	1.94591	0.28	4.19	-6.68	0.757062	1.710579	8.626903	638.3043	0	35.44	121.3476	371
ATR	0.37779	7.25	260.44	-1310.43	153.7481	8.393605	136.9915	335909.1	0	4797.14	6782534	371
SALES	2.84301	4.33	497.55	-113.60	58.72681	3.685682	36.75738	16886.20	0	2112.57	887849.7	371
SIZE	9.517197	9.41	11.85	7.18	1.184581	0.03787	2.011411	15.19622	0.000501	3530.88	519.1955	371
RETURN	0.098167	0.08	3.91	-1.68	0.570624	1.107959	9.269037	683.4301	0	36.42	120.4764	371
P/E	13.41008	8.26	2060.45	-1103.43	135.7814	7.936053	153.4915	353990.1	0	4975.14	6821543	371
P/CF	5.964286	5.32	497.55	-213.06	48.72681	2.568281	37.57387	18886.02	0	2212.75	878491.7	371
P/B	4.556846	1.32	515.45	-62.84	29.69796	14.5207	241.3548	891272.2	0	1690.59	326328.4	371
DA_RISK	0.761267	0.36	36.26	-19.07	3.447263	4.074605	51.35482	37171.07	0	282.43	4396.94	371
CSR	0.369272	0	1	0	0.483259	0.541756	1.293499	63.16494	0	137	86.4097	371

The dispersion of CSR, returns, risk and size are relatively lower with standard deviation of 0.483, 0.038, 3.45 and 1.185 signifying less variability between the minimum and maximum values. However, some conclusion can be drawn that the mean values are significantly lower than the maximum values of CSR, returns and risk, except for size as shown in Table 2 above.

On average, all mining companies are big except for a few, as shown by the mean value of 9.52 that is close to a maximum value of 11.85. Comparing companies' size relative to stock returns, conclusions can be drawn from Table 2 that most of the companies are big for the sample under study, but only a minority of these firms have returns above the mean, so it is in line with the concept of size effect, that small firms tend to post higher returns relative to big ones. These conclusions can be supported by Reingnanum (1982), who illustrated that small firms earn significantly higher returns than larger firms and Loeb (1991) supported the fact that small-size stocks yield higher returns than large-size stocks.

The mean value of leverage (risk) reveals that the total debt-to-equity ratio is reasonably lower, an indication that most mining firms in South Africa are not highly leveraged. The low gearing ratios may be due to high interest rates, or bureaucracy which slows the process of unlocking funds when needed.

The dispersion of p/b, p/cf, sales, p/e, and atr measured by the standard deviation is very high at 29.70, 48.73, 58.726, 135.78 and 153.748 respectively. As noted in Table 2, on average, the price to earnings ratios of mining companies are significantly lower relative to the maximum value.

4.2 Visual inspection

Although there is minimal literature on the detection of outliers in panel data models, the box-and-whisker plots were used to check for unusual data points that could be outliers with potential to influence the results. Figures 2 to 5 present the box-and-whisker plots for data in level and first difference on individual and group variables.

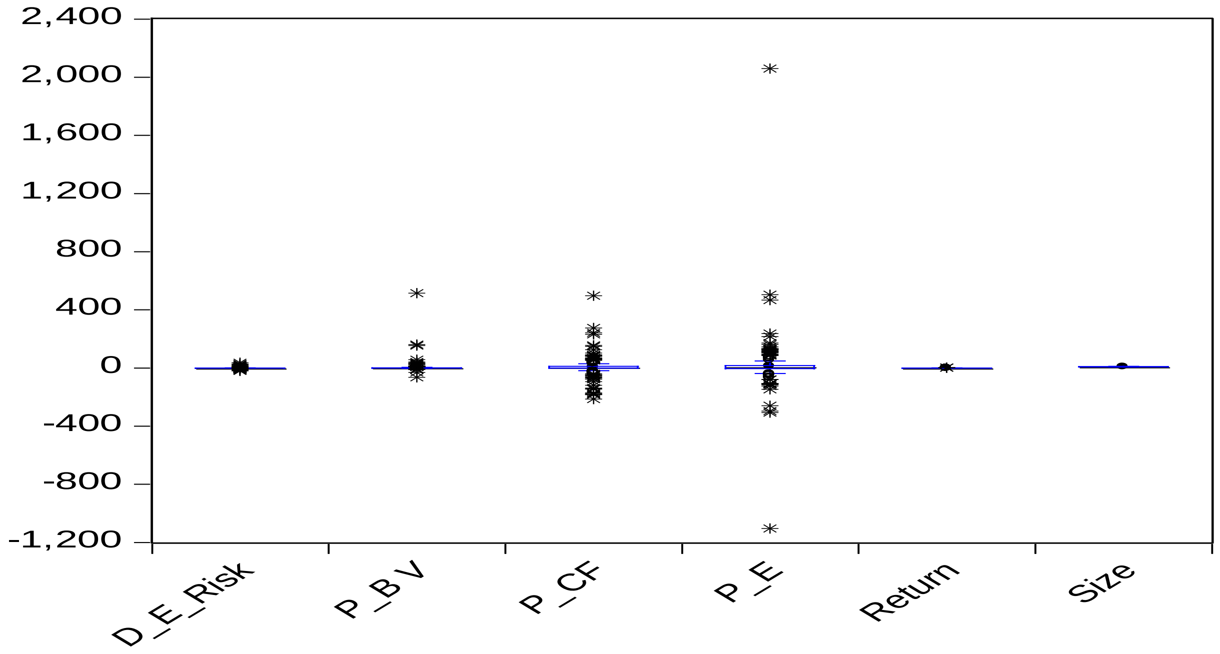


Figure 2: Box-and-whisker plot for data in level: group variables

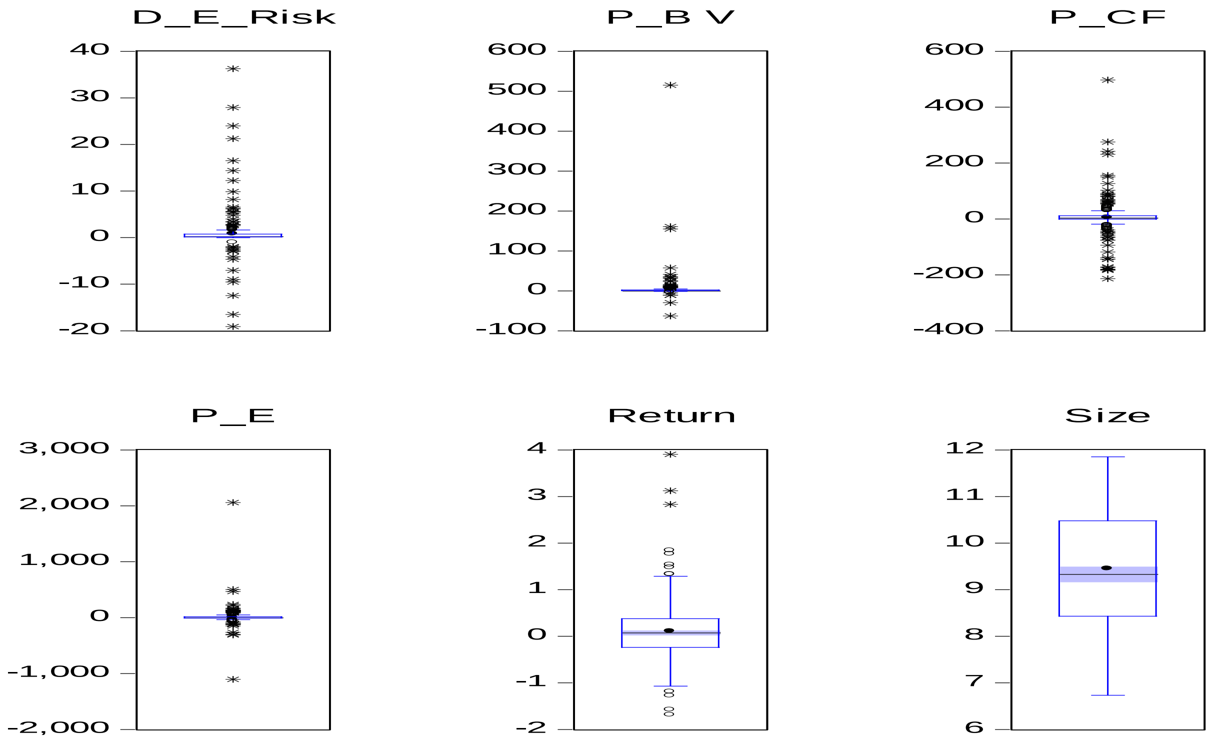


Figure 3: Box-and-whisker plot for data in level: individual variables

Price-to-earnings and price-to-book values were the variables with outstandingly extreme data points, which could be outliers with a potential to influence the results.

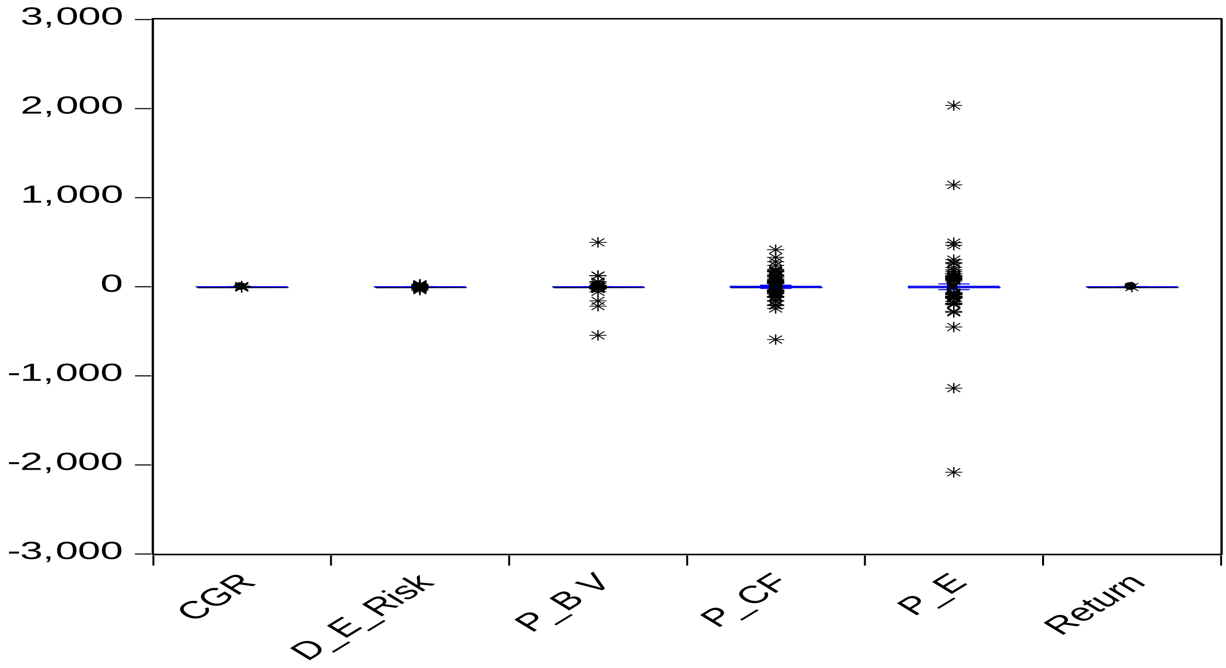


Figure 4: Box-and-whisker plots for data in first difference: group variables

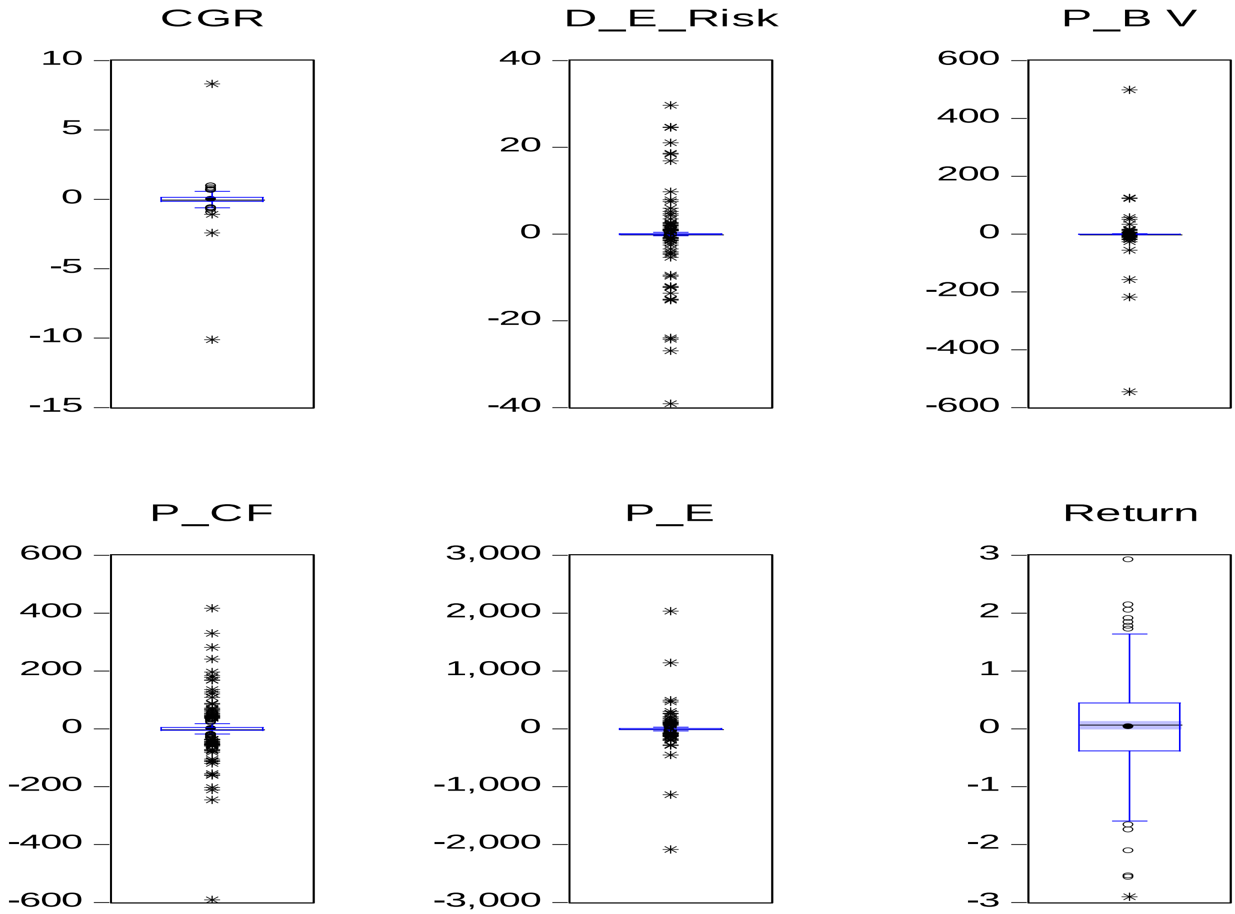


Figure 5: Box-and-whisker plot for data in first difference: individual variables

During the analysis of data in first difference, company size (CGR), price-to-earnings and price-to-book were found to be variables with outstandingly extreme data points, which are outliers and are likely to influence the results otherwise, hence there was a need to account for these points during model estimation. To prevent outliers biasing the regression slopes, robust panel models were applied to down-weight them using the M-estimators in the model (Greene, 2002; Wooldridge, 2002). The influential effect of these data points was further checked and the analysis was conducted in two stages, firstly by including the outliers and secondly by excluding outliers (see Appendix 3). No differences were observed in the statistical significance of the results that could affect their interpretation then a decision was made to include these data points to avoid tampering with the data integrity and reliability of conclusions.

Scatter plots with a regression line were used to check for the linear relationship between variables. Figures 6 and 7 present the relationship between paired variables.

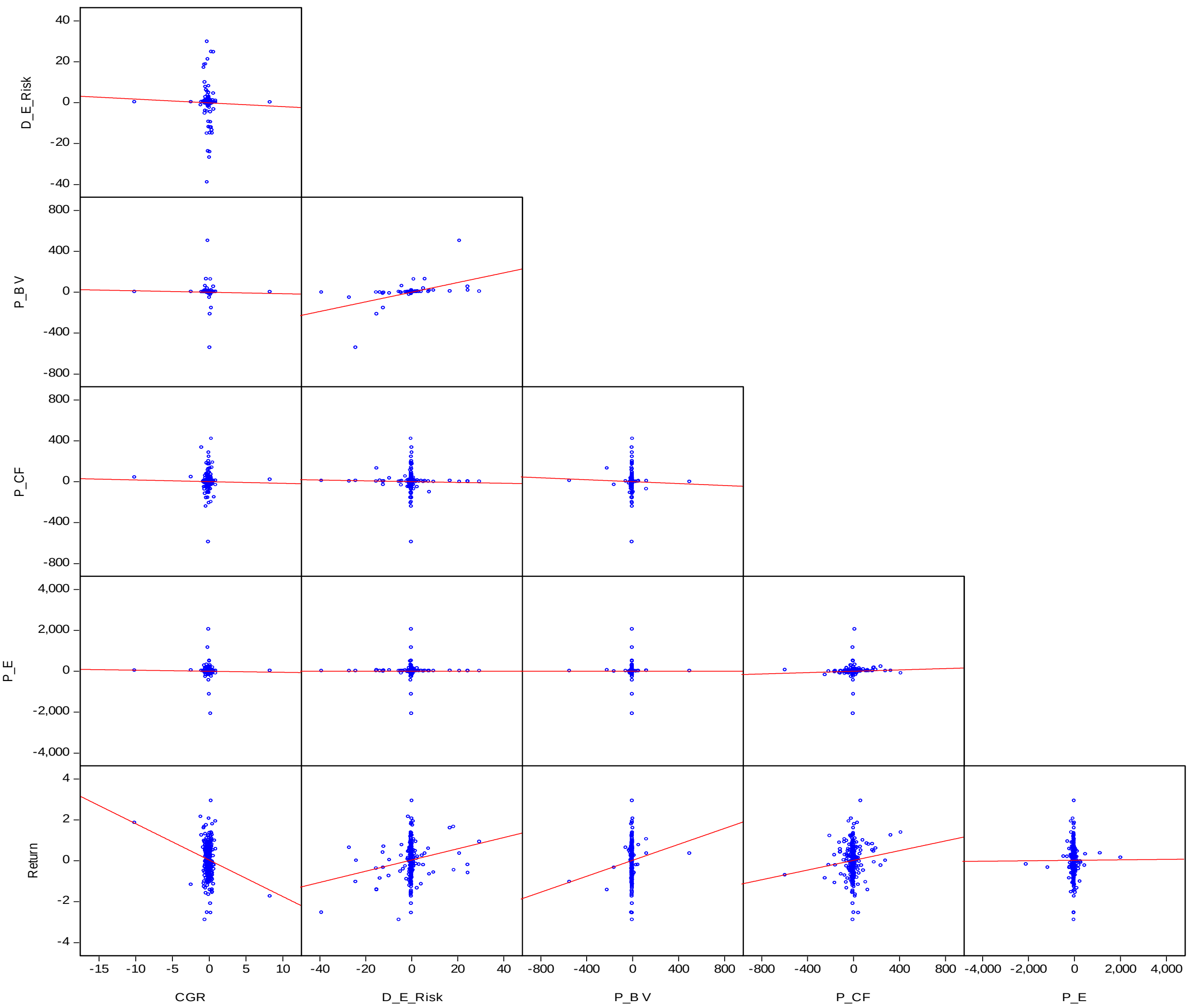


Figure 6: Scatter plots for data in levels.

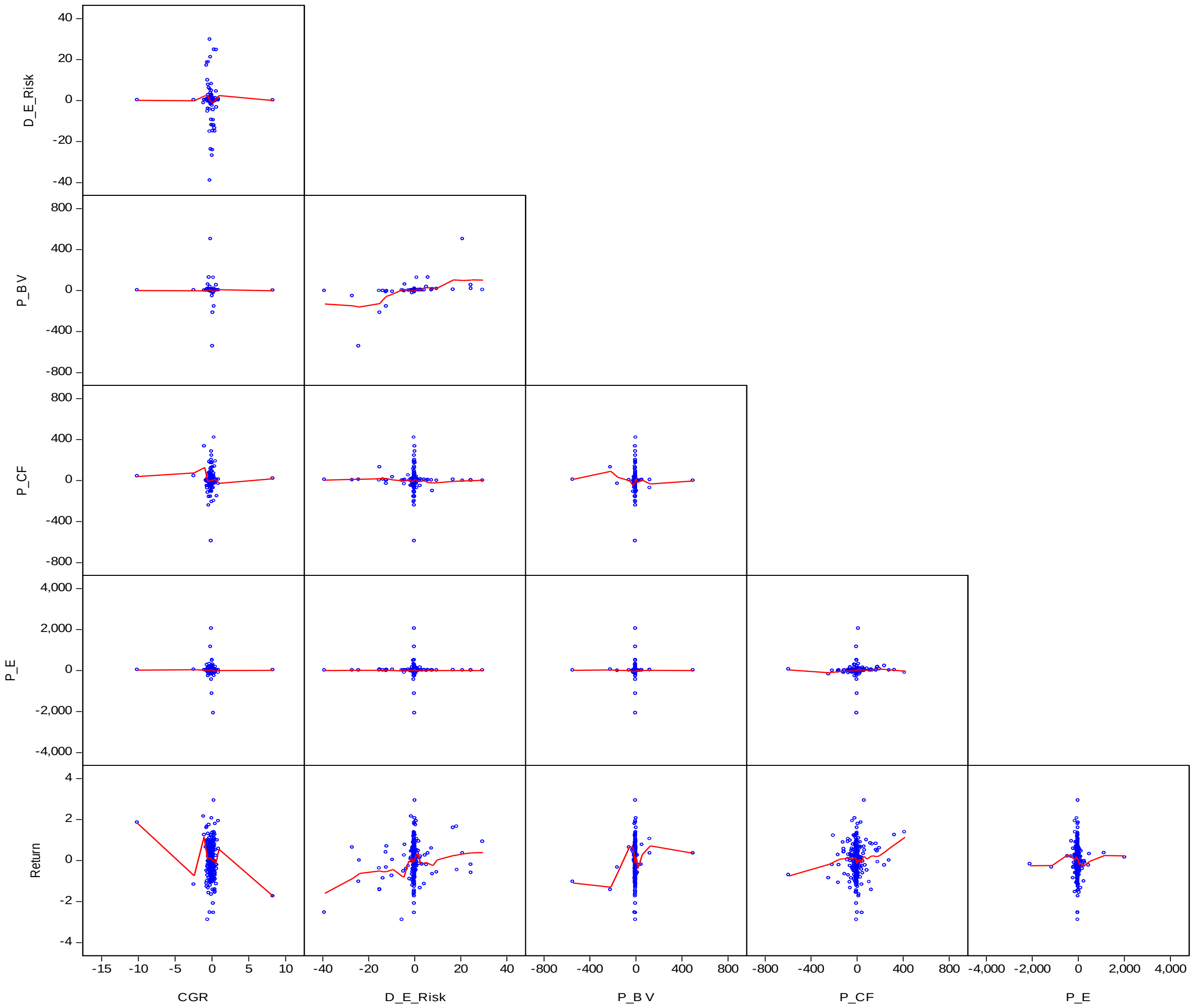


Figure 7: Scatter plots for data in first difference.

The scatter plots for both data in levels and in first difference show that there is no clear linear relationship between the dependent and independent variables, indicating that linear regression methods like OLS would not be most appropriate.

In addition to these predominantly visual inspections of the data, panel unit root test using the Levin, Lin & Chu *t**, augmented Dickey-Fuller, *Im*, Pesaran & Shin *W*-stat, ADF-Fisher chi-square and PP-Fisher chi-square were carried out on individual variables (see appendices 4a-4c and 5a-5f for tables of results). The variables were all determined to be stationary, which is there is enough evidence to reject the null hypothesis of existence of common unit roots among the variables across the different mining companies.

4.3 Correlation between variables.

The correlation matrix shows the relationship among the variables. The correlation matrix in Table 3 shows that there was no evidence of multicollinearity since all variables were within the acceptable parameter of -0.8 to 0.8. The variables exhibited both weak positive and negative correlation, except for size and CSR, which exhibit a strong positive correlation of 0.684

Table 3: Correlation between variables

CORRELATION BETWEEN THE VARIABLES										
	p/bv	p/cf	p/e	return	size	da_risk	sales	atr	advert	r &d
p/bv	1									
p/cf	-0.0435	1								
p/e	-0.0079	0.1023	1							
return	0.0932	-0.0034	-0.0322	1						
size	-0.0694	0.1036	0.0617	-0.1304	1					
da_risk	0.4387	-0.0167	-0.0076	0.1124	-0.091	1				
sales	-0.0618	0.0552	0.0835	-0.0647	0.684	-0.0452	1			
atr	-0.0161	0.0256	0.0582	-0.0464	0.6454	-0.02455		1		
advert	0.4787	-0.0176	-0.0057	0.1241	-0.0191	0.4783	-0.0416	-0.0087	1	
r &d	0.4438	0.0716	0.0067	0.1412	0.0291	0.4838	0.0571	0.0066	0.0453	1

Table 3 presents the correlations between the variables. There are weak positive correlations between sales and price-to-cash flow and price-to-earnings values while weak negative correlations are observed between sales and price-to-book and share price returns. Correlations between company size and price-to-cash flows and price-to-earnings values show a weak positive relationship, while the correlation between company size and price-to-book value and share price returns is weak and negative. There are also positive correlations between the risk and price-to-book values and share price returns, with negative correlations observed between risk and price-to-cash flow and price-to-earnings ratios. The positive results must not be mistaken for causal effects but imply that an increase in one variable results in an increase in the other variable or *vice versa*. On the other hand, a negative result means an inverse relationship between variables; that is, an increase in one variable will lead to a decrease in the other variable.

From Table 3 a strong correlation exist between size and sales with a value of 0.684. It is not an unexpected relationship, as it is commonly viewed that sales may increase with increasing company size. The results fall within the acceptable range of -0.8 and 0.8. Even if the researcher noticed some high pairwise correlations, Blanchard (2005) noted that "do nothing" multicollinearity is God's will, not a problem with ordinary least squares or statistical techniques in general. According to Blanchard (2005) sometimes we have no choice over the data available for empirical analysis. Multicollinearity results in a very high *R*-squared but with few significant coefficients, confidence intervals tend to be much wider; *t*-ratios tend to be statistically insignificant. If multicollinearity is perfect, the regression coefficients are indeterminate and their standard errors are infinite. If multicollinearity is less than perfect, the regression coefficients, although determinate, possess large standard errors (in relation to the coefficients themselves), which means the coefficients cannot be estimated with great precision or accuracy.

4.4 Conclusion

The exploratory data analysis was carried out on variables individually and as a group to check for unusual data points and for linear relationships or trends and to show the true characteristics of the raw sample data. The analysis indicates that these variables do not follow a normal distribution. The shortcomings of the raw sample data were addressed in the panel data methodology used in the study.

The analysis rejected the null hypothesis of existence of common unit roots among the variables across the different mining companies. The conclusion drawn from this analysis is that there was no clear linear relationship between the dependent and independent variables, implying that linear regression methods such as an OLS/pooled would not be most appropriate. Also some unusual data points were detected which had the potential of affecting the results; however corrective measures such as logging the data where necessary were undertaken.

The unbalanced panels were accommodated in the study by using the Greene (2003) formula for testing for group, time, and interaction effects embedded in the panel data models.

CHAPTER 5

PRESENTATION OF RESULTS

5.0 Introduction

This chapter presents the results of the study and appraises whether the research hypothesis outlined in Chapter 1 is backed or disproved by the data. Results are organised following the order of the hypotheses and evaluate the outcomes of the analysis. The section concludes with a decision statement, stating whether the null hypothesis can be rejected. This study is presented at a time when activists of social justice, labour movements, scholars in community development in South Africa, Africa at large and worldwide have increased calls for extractive industries to honour their obligations to the environment and social responsibility to governments and communities.

Capel (2009: p5) stressed that corporate social responsibility should not be reduced to public relations and window-dressing where companies perform acts and dramatise CSR for the media and the management of public opinion. In other words, Capel and other scholars demand that CSR not only be done but be seen to be done in actuality and not in pretence. As stated earlier, the aim of the study is to establish the connection between CSR activities of mining companies in South Africa and their profitability and corporate viability. The broader objective of the study is to econometrically test the effects of CSR practices and the link between these CSR practices and market valuation of mining companies within the context of a single sector (mining) in a developing economy. To achieve the objective, an evaluation was conducted to establish whether mining firms on the JSE SRI have superior market valuation relative to non-SRI mining firms.

Centred on the results of the study, the design of this research further aimed at proving answers on whether the outcomes of the study present robust and statistically significant findings on the corporate social responsibility -market valuation link in the South African mining sector. For that reason, the discussion of the results that appears below will investigate the theoretical perspectives discussed in the study within the context of the mining sector.

The study used three financial ratios and computed market share returns to analyse the market valuation of mining companies in relation to their social responsibility practices. The main purpose of the regressions is to test whether CSR practices have a significant influence on the corporate market valuation of South African mining companies listed on the JSE, using an econometric methodology. The study made use of panel data regression models that comprise observations on cross-sectional and time series. The methodology was selected and used to: address the shortcomings observed in the distribution of the raw data sample. According to Hsiao, (2003), these models will increase data points and degrees of freedom, reduce collinearity of the explanatory variables, and improve efficiency of estimates. In addition, panel data models are employed in this study to analyse dynamic changes, and helping detect and measure effects that simply could not be observed in pure time series or cross-sectional data (Gujarati & Porter, 2009), or measure differences in business practices across companies (Baltagi, 1995), thus accounting for individual heterogeneity.

Three panel data models – pooled OLS, fixed effects and random effects panel data models – with six equations (on data in levels and first difference) were employed to perform an analysis on selected market valuation variables (returns, p/e ratio, p/cf ratio, p/b ratio).

However, the preliminary data analysis showed that there is no clear linear relationship between the dependent and independent variables, implying that linear regression methods, like a pooled/OLS model, would not be most appropriate. In the data analysis, the pooled/OLS model was nonetheless employed following the Gujarati and Porter (2009) methodology where all observations were pooled together (all 38 mining companies) and estimated a "grand" regression, neglecting the cross-section and time series nature of the data for comparative purposes only. Pooling increases the sample size and provides more precise estimators and test statistics with more power. This is helpful only when the relationship between the dependent variable and at least some of the independent variables remains constant over time (Woodridge, 2013). However, this conceals the heterogeneity (individuality or uniqueness) that may exist among the cross-section units. The shortfall of the pooled OLS model was addressed in the fixed and random effects models which were conducted.

The next model employed to perform data analysis was the fixed effects, using the fixed effects within-group model, which according to Greene, (2008); and Wagner, (2006), allows the intercept to differ among cross-section units in respect of the fact that each cross-section unit may have its own unique features. The fixed effects within-group model as outlined by Gujarati and Porter (2009) was applied to pool all observations, but for each cross-section unit (mining company), each variable is expressed as a deviation from its mean value, and then an OLS regression is estimated on such mean-corrected or "de-meaned" values.

An analysis was further performed using the random effects model (REM) or error components model (ECM) (Gujarati & Porter, 2009). Unlike the fixed effects, the random effects model assumes that the intercept values are a random drawing from a much bigger population of mining companies (Greene, 2008; Gujarati & Porter, 2009; Woodridge, 2013). This implies that the cross-sectional units have a common mean value for the intercept (= β_1). The individual differences in the intercept values of each cross-section unit are reflected in the error term ε_i.

The Hausman test was conducted to choose the most precise model between the two (fixed or random effects). A test of random effects against the fixed effects model was performed with the null and alternative hypotheses stated as follows:

H_0: the random effects model is appropriate.

H_1: the fixed effect model is appropriate.

In all cases the Prob>chi^2 was greater than 0.05 (refer to Appendix 6 for results), meaning we fail to reject the null hypothesis that the random effect model is appropriate, so the random effect model was conducted as the main model in this study. The Breusch–Pagan test was used as an alternative to see whether the error components model (ECM) is appropriate in this scenario.

In this study, these static models measured whether CSR has any instantaneous effect on market values. It is however, possible that CSR could have a delayed effect on market valuations, which would require the use of dynamic panel models (Woodridge, 2013). Two forms of dynamic panel data models were applied to analyse such delayed effects of CSR and also attempt to explore any portrayed effects. The models were estimated using the same equations as in the static panel data models, where market valuation variables are dependent variables. The dynamic panel model approaches applied are: pooled, fixed effects and random effects dynamic panel data analysis that include lagged dependent variables as regressors. However, including lagged dependent variables as regressors in dynamic models frequently causes the estimators from both the fixed and random effects models to be biased and inconsistent, except in the case of "long panels" (Munoz, 2005; Woodridge, 2013). The challenge was addressed in the study by use of the Arellano-Bond or Blundell-Bond dynamic panel models (which automatically choose lagged dependent variables as instruments for independent variables) with and without a constant. The models were run on data in levels only.

If the finding is a significant positive relationship between CSR and market valuation, it could suggest that mining firms should increase their CSR activities to create superior implications for company market valuation, so the stakeholder theory would be applicable as opposed to the other theoretical views. Freeman (1984), Waddock and Graves (1997), Orlitzky et al., (2003) and Chetty, Naidoo and Seetharam (2015) argued that companies in the forefront in relation to CSR activities and deriving benefits (like improved relationships with stakeholders, effective management of brand and reputation, attraction and retention of high-calibre employees, and company recognition for high ethical standards) from it, would be evidence for associating these CSR activities with better market valuation. On the other hand, a negative relationship may be linked to the costs of engaging in CSR initiatives that do not improve market value, implying the applicability of the shareholder theory.

5.1 Results

5.1.1 Hypothesis 1

The null hypothesis related to the objective stated that there are no significant variances in stock returns between JSE SRI and non-SRI-listed mining firms. The alternative hypothesis related to the objective stated that there are significant variances in stock returns between JSE SRI and non-SRI-listed mining firms.

The annual closing share prices of mining companies listed on the SRI index and non-SRI index were obtained, from which the returns were calculated by dividing the opening share price in year 1 by the opening share price in year *i*-1.

As part of the regression analysis, the static panel models were used for data in both levels and changes (referred to as first difference) over time to assess whether there were significant variances in stock returns between JSE SRI and non-SRI-listed mining firms. The results are presented in Table 4.

Table 4: Static panel model results: data in levels and first difference

Independent variables	***Data in levels***			***Data in first difference***		
	pooled OLS model	*fixed effects model*	*random effects model*	*pooled OLS model*	*fixed effects model*	*random effects model*
	Returns			Returns		
CSR	0.07	0.403	0.072	-0.011	0.221	-0.011
	(0.67)	(2.11) *	(0.67)	(0.20)	(0.62)	(0.20)
size	-0.09	0.007	-0.091	-0.173	-0.169	-0.173
	(2.28) *	(0.05)	(2.28) *	(4.16) **	(4.00) **	(4.16) **
D_A risk	0.016	0.020	0.016	0.027	0.026	0.027
	(2.52) *	(2.65) *	(2.52) *	(2.45) *	(2.41) *	(2.45) *
constant	0.93	-0.115	0.934	0.040	-0.044	0.040
	(2.59) *	(0.09)	(2.59) **	(1.84)	(0.34)	(1.84)
observations	387	387	387	351	351	351
number of CID	38	38	38	38	38	38
robust t statistics in parentheses						
* statistically significant at 5%; ** statistically significant at 1%						

The results presented in Table 4 show that the pooled OLS model yields a positive and statistically significant relationship (at 5% level) between return and risk, which concurs with the literature that the higher the risk, the higher the return. Data in the first difference also shows that the relationship between return and risk remains positive and statistically significant at the same level of significance. On the other hand, the results show a negative but statistically significant relationship (at 5% level) between returns and company size. This suggests that as the mining company grows, returns tend to decrease. When data is in the first difference, results show that the relationship between returns and company size still remains negative but now statistically significant at 1% level. The results further show that there is a positive but statistically insignificant relationship between CSR and returns for data in level. Differencing the data in the first order changes the relationship between returns and CSR to negative yet still statistically insignificant.

The fixed effects model further shows that there is a positive and statistically significant relationship (at 5% level) between returns and risk in both level and first order difference, again concurring with the literature. The relationship between returns and company size has changed to positive, but statistically insignificant for data in level. When differencing the data in the first order, the relationship is negative but statistically significant at 1% level of significance, suggesting that the larger the mining company, the lower the returns it achieves.

The equation of the fixed effects model yielded a statistically significant positive relationship at 5% level of significance between returns and CSR, resulting in two equations as follows:

Equation when CSR dummy = 1

Return= (-0.115+0.403(1)) + 0.007log (size) + 0.02 Risk + ε_{it}

Return = 0.288 + 0.007log (size) + 0.02 Risk +ε_{it}

Equation when CSR dummy = 0

Return = -0.115 + 0.007 log (size) + 0.02 Risk +ε_{it}

The constant is the parameter of interest in the two equations, herein interpreted as the average return for each group of companies. Since the average return for companies in the CSR index is greater than that of companies that are not in the CSR index, that is 0.288 > -0.115, the researcher rejects the null hypothesis H_0: $R_{SRI\ INDEX} - R_{JSEMB} = 0$. The returns of SRI-listed mining firms are significantly different from the returns of non-SRI mining firms listed on the JSE. This implies that companies on the SRI index tend to enjoy, on average, higher returns than non-CSR companies. However, the equation in the fixed effects model (static panel models, data in first difference) yields a statistically insignificant positive relationship between returns and CSR.

The random effects model yields a positive and statistically significant relationship (at 5% level) between returns and risk for both data in levels and first order differencing, so supporting the literature of higher risk, higher return. The relationship between returns and company size is now negative but statistically significant at 5% for data in level. When differencing the data in the first order, the relationship is again negative, but statistically significant at 1% level of significance, suggesting that the larger the mining company, the lower the returns it achieves.

Again, no statistically significant relationship was found between CSR and returns using the random effects models (both data in level and first order differencing) as reported in Table 4. When differencing the data in first order, the relationship becomes negative but statistically insignificant.

From the three static models estimating the relationship between returns and CSR, only the fixed effects model (data in levels), yielded a positive and statistically significant relationship at a 5% level of significance. The main model; the random effects model did not provide evidence that there are significant variances in market valuation between SRI and non-SRI mining firms. The study fails to reject the null hypothesis that says there are no significant variances in stock returns between JSE SRI and non-SRI-listed mining firms. The results show that overall, there are no significant variances between the stock returns of the SRI and the non-SRI mining firms. This implies that CSR has no statistically significant effect on mining companies’ market valuation, therefore the data refutes the broader hypothesis that there is a positive relationship between CSR and market value.

As part of the statistical analysis, the dynamic panel data models were also applied on data in levels only, to assess whether there are significant variances in stock returns between JSE SRI and non-SRI-listed mining firms. The results are displayed in Table 5.

Table 5: Dynamic panel model results: data in levels

Independent variables	*pooled dynamic*	*fixed effects dynamic*	*random effects dynamic*		*Arellano-Bond dynamic model without a constant*	*Arellano-Bond dynamic model with a constant*
	Return				return	
L. CSR	-0.001	0.503	-0.001	L.CSR	0.139	0.244
	(0.01)	(1.97)	(0.01)		(0.37)	(0.76)
L. size	-0.053	0.172	-0.053	L. Size	-0.199	-0.212
	(1.64)	(1.33)	(1.64)		(0.92)	(1.04)
L. D_A risk	-0.023	-0.025	-0.023	L.D_A risk	0.024	0.025
	(2.66) *	(2.60) *	(2.66) **		(1.67)	(1.81)
L. return	0.195	0.111	0.195	L. return	0.162	0.160
	(3.08) **	(1.95)	(3.08) **		(2.79) **	(1.89)
constant	0.629	-1.667	0.629	constant		2.007
	(2.23) *	(1.42)	(2.23) *			(1.03)
observations	348	348	348	observations	310	310
number of CID	38	38	38	number of CID	38	38
robust *t* statistics in parentheses				z statistics in parentheses		
* significant at 5%; ** significant at 1%				* significant at 5%; ** significant at 1%		

Table 5 presents results from the dynamic panel models for data in levels. As presented in the left panel of Table 5, the pooled and random effects dynamic models show that CSR in the previous year has a negative but statistically insignificant effect on company returns. A statistically insignificant but positive relationship between one-year lagged CSR and returns is shown by the fixed effects model.

The pooled and random effects models yield a negative and statistically insignificant relationship between returns and one period lag of company size. The fixed effects dynamic model, on the other hand, produces a positive but statistically insignificant relationship between returns and one period lag of company size. This suggests that the size of a mining company has no long term effect on its returns.

The pooled and fixed effects models produced a negative and statistically significant relationship (at 5% level) between return and one period lag of risk, but the random effects model yielded a negative and statistically significant relationship (at 1% level) between return and one period lag of risk. Risk of a mining company in the previous period has a negative relationship with current returns. A statistically significant and positive relationship (at 5% level) between one-year lagged returns and current returns was obtained from the pooled and random effects dynamic models, yet the fixed effects dynamic model achieved a statistically insignificant relationship between the two variables. To address the bias in the estimators from both the fixed and random effects dynamic models, caused by the inclusion of lagged dependent variables as regressors, the study further ran regressions on data in levels applying the Arellano-Bond or Blundell-Bond dynamic panel models, which use lagged dependent variables as instruments for independent variables (Munoz, 2005; Woodridge, 2013).

The Arellano-Bond dynamic models were applied with and without a constant with stock returns as a dependent variable while incorporating instrument variables, and revealed a positive but statistically insignificant relationship between return and CSR. The results further show that the models produce a negative and statistically insignificant relationship between returns and company size.

When returns are regressed against risk, results show that the relationship between returns and risk is now positive (as opposed to a negative and statistically significant relationship achieved from the pooled, fixed effects and random effects dynamic models) but statistically insignificant.

Applying the Arellano-Bond dynamic model without a constant achieves a positive and statistically significant relationship (at 5% level) between returns and one period lag of returns. When a constant is included, the relationship becomes positive but statistically insignificant.

The results show that we fail to reject the null hypothesis which states that mining firms listed on the JSE SRI do not achieve significantly different returns relative to non-SRI mining firms listed on the JSE. The dynamic panel models estimating the relationship between returns and CSR did not produce a statistically significant difference between the average returns of SRI and non-SRI mining companies. Corporate social responsibility has no significant long term effect on corporate market valuation, thus data also repudiates the broader hypothesis of a positive relationship between CSR and market valuation. The results imply that SRI-listed mining companies do not perform differently from non-SRI listed companies.

5.1.2 Hypothesis 2

The null hypothesis related to the objective stated that there are no significant variances in price-to-book ratios between JSE SRI and non-SRI-listed mining firms. The alternative hypothesis related to the objective stated that there are significant variances in price-to-book ratios between JSE SRI and non-SRI-listed mining firms

The price-to-book ratio measures the market price per share of a mining company relative to the balance sheet price per share. According to Riley and Brown, (2003), a ratio above 1 indicates financiers' willingness to pay more than book value of the stock. It was assumed that these measures will divulge whether financiers will be prepared to invest or not.

Table 6 presents the results from the static panel data models, for data in levels and in first difference.

Table 6: Static panel model results: data in levels and first difference

Independent variables	***data in levels***			***data in first difference***		
	pooled OLS model	*fixed effects model*	*random effects model*	*pooled OLS model*	*fixed effects model*	*random effects model*
	p/b			p/b		
CSR	-1.917	-1.912	-1.917	-0.341	-1.245	-0.341
	(0.87)	(0.40)	(0.87)	(0.76)	(1.23)	(0.76)
Size	-0.21	0.802	-0.210	-1.175	-1.294	-1.175
	(0.14)	(0.44)	(0.14)	(0.95)	(0.95)	(0.95)
D_A risk	3.747	4.123	3.747	4.714	4.743	4.714
	(1.58)	(1.58)	(1.58)	(1.52)	(1.52)	(1.52)
Constant	4.42	-5.464	4.424	-0.025	0.323	-0.025
	(0.33)	(0.33)	(0.33)	(0.06)	(0.58)	(0.06)
Observations	373	373	373	331	331	331
number of CID	38	38	38	38	38	38
robust t statistics in parentheses						
* statistically significant at 5%; ** statistically significant at 1%						

The results in Table 6 show that all models (OLS data, fixed effects panel data, random effects) produced a negative and statistically insignificant relationship between market valuation (p/b) and CSR.

The relationship between p/b and company size from the OLS and random effects models is negative and statistically insignificant when applying static panel models for both data in levels and first difference. The fixed effects model for data in levels produced a positive but statistically insignificant relationship between p/b and company size. However, when differencing the data in the first order, the fixed effects model changed the relationship between p/b and company size to negative and statistically insignificant.

All the static panel models (pooled data, fixed effects panel data, random effects) produced a positive and statistically insignificant relationship between market valuation (p/b) and risk for data both in levels and first difference.

Applying data in levels, the constant is positive and statistically insignificant for the pooled and random effects models. The fixed effects model produces a negative but statistically insignificant constant. However, when data in first order differencing is applied, the constant become negative and statistically insignificant for the pooled and random effects models, whereas the fixed effects model produces a positive but statistically insignificant constant.

The results show that the relationship between p/b values and CSR is statistically insignificant, so there are no significant variances in price-to-book ratios between JSE SRI and non-SRI-listed mining firms. Thus the data refutes the broader hypothesis that there is a positive relationship between CSR and market valuation, so we fail to reject the null hypothesis. Table 7 presents results from the dynamic panel data models for data in levels.

Table 7: Dynamic panel model results: data in levels

Independent variables	*pooled dynamic*	*fixed effects dynamic*	*random effects dynamic*
	P/B		
L. p/bv	-0.039	-0.143	-0.039
	(1.47)	(5.45) **	(1.47)
L. CSR	-0.540	-5.025	-0.540
	(0.21)	(1.80)	(0.21)
L. size	-2.152	3.134	-2.152
	(0.83)	(1.62)	(0.83)
L. D_A risk	0.166	0.088	0.166
	(0.53)	(0.22)	(0.53)
constant	25.364	-22.833	25.364
	(0.99)	(1.25)	(0.99)
observations	329	329	329
number of CID	38	38	38
robust t statistics in parentheses			
* significant at 5%; ** significant at 1%			

	Arellano-Bond dynamic model without a constant	*Arellano-Bond dynamic model with a constant*
	p/b	
L. p/bv	-0.671	-0.671
	(4.58) **	(4.40) **
L. CSR	-8.998	-8.933
	(1.30)	(0.73)
L. Size	-1.074	-1.080
	(0.16)	(0.20)
L. D_A risk	3.604	3.603
	(2.03) *	(2.05) *
constant		19.096
		(0.34)
observations	288	288
number of CID	38	38
z statistics in parentheses		
* significant at 5%; ** significant at 1%		

As presented in the left panel of Table 7, the models (pooled dynamic, fixed effects dynamic and random effects dynamic) yielded a negative relationship between the p/b ratio and the one-period lag of p/b. However, a statistically significant but negative result (at 5% level) is found in the fixed effects model. The results suggest a negative long-term relationship between p/b and its one-period lag.

A statistically insignificant and negative relationship between one-year lagged CSR and p/b is revealed in the pooled dynamic, fixed effects dynamic and random effects dynamic models, suggesting that CSR has a delayed negative effect on market valuation.

The pooled and random effects models yield a negative and statistically insignificant relationship between p/b value and-one period lag of company size. The fixed effects dynamic model, on the other hand, produces a positive but statistically insignificant relationship between p/b value and one period lag of company size. This suggests that the company size of a mining company has no delayed effect on its market value (p/b).

The three models (pooled dynamic, fixed effects dynamic and random effects dynamic) produced a positive and statistically insignificant relationship between p/b and one period lag of risk. Risk of a mining company in the previous period has an insignificant positive relationship with current price-to-book value, and so an insignificant delayed negative effect on market valuation.

A statistically significant and positive relationship (at 5% level) between one-year lagged returns and current returns was obtained from the pooled and random effects dynamic models, yet the fixed effects dynamic model achieved a statistically insignificant relationship between the two variables.

The constant is positive and statistically insignificant for the pooled and random effects models. The fixed effects model produces a negative but statistically insignificant constant.

The study addressed the bias in the estimators from both the fixed and random effects dynamic models which is caused by the inclusion of lagged dependent variables as regressors, by further running regressions on data in levels applying the Arellano-Bond dynamic panel models which use lagged dependent variables as instruments for independent variables (Munoz, 2005; Woodridge, 2013).

The Arellano-Bond dynamic model (with and without a constant) was regressed with p/b as a dependent variable and the results show that the relationship between the lag of p/b and p/b is negative but statistically significant at 5% level. This suggests that a high p/b in the previous period will affect the p/b values negatively.

When the p/b values are regressed against company size, results show a negative and statistically insignificant relationship between the variables.

The Arellano-Bond dynamic model, with and without a constant, yield a strongly positive and statistically significant relationship (at 1% level) between p/b and risk. The dynamic panel data models estimating the relationship between p/b and CSR, did not produce significant variances in price-to-book ratios between JSE SRI and non-SRI-listed mining firms

The data again disproves the broader hypothesis of a positive relationship between CSR and market valuation, so we fail to reject the null hypothesis that there are no significant variances in price-to-book ratios between JSE SRI and non-SRI-listed mining firms. The results suggest that CSR does not have a long term effect on the market valuations of mining companies.

5.1.3 Hypothesis 3

The null hypothesis related to the objective stated that there are no significant variances in price-to-cash flow ratios between JSE SRI and non-SRI-listed mining firms. The alternative hypothesis related to the objective stated that there are significant variances in price-to-cash flow ratios between JSE SRI and non-SRI-listed mining.

Price to cash flow (p/cf) is an investment valuation ratio used by investors to evaluate the attractiveness of investing in a mining company's shares. The ratio considers cash flows only and removes the effect of non-cash items. The ratio in the low single digits may indicate that the stock is undervalued, while a higher ratio may suggest potential overvaluation. So investors prefer smaller price-to-cash flow ratios as they may reveal a firm generating ample cash flows that are not yet properly considered in the current share price. This helps investors in judging the actual condition of a company. Table 8 presents results of the static panel data models, for data both in levels and first difference.

Table 8: Static panel model results: data in levels and first difference

Independent variables	**data in levels**			**data in first difference**		
	pooled OLS model	fixed effects model	random effects model	pooled OLS model	fixed effects model	random effects model
	p/cf			p/cf		
CSR	-5.04	-10.272	-6.190	-2.815	-11.582	-2.815
	(0.66)	(0.48)	(0.69)	(0.77)	(0.89)	(0.77)
Size	6.119	9.127	6.459	-1.677	-1.670	-1.677
	(1.93)	(0.84)	(1.73)	(0.75)	(0.74)	(0.75)
D_A risk	-0.105	-0.130	-0.110	-0.392	-0.411	-0.392
	(0.48)	(0.53)	(0.60)	(1.15)	(1.21)	(1.15)
constant	-49.94	-76.560	-52.527	1.681	5.043	1.681
	(1.79)	(0.74)	(1.61)	(0.50)	(1.01)	(0.50)
observations	372	372	372	331	331	331
number of CID	38	38	38	38	38	38
robust t statistics in parentheses						
* statistically significant at 5%; ** statistically significant at 1%						

All the models for data, in both levels and first difference, produced negative and statistically insignificant results of the relationship between market valuation (p/cf) and CSR.

The results show that a positive but statistically insignificant relationship was achieved by all models on the relationship between p/cf and company size for data in levels. However, for data in the first order difference, the relationship between p/cf and company size changes to negative and statistically insignificant for all models.

The models further produced a negative and statistically insignificant relationship between market valuation (p/cf) and risk.

When data in levels is used, the constant is negative and statistically insignificant for all models. However, when data in first difference is applied, the constant becomes positive but still statistically insignificant for all models.

The study failed to reject the null hypothesis, which stated that mining firms listed on the JSE SRI index do not achieve statistically different p/cf values relative to non-SRI index mining firms listed on the JSE main board. In this instance, data shows that CSR does not have a statistically significant effect on mining companies' market valuation, so contradicting the broader hypothesis that there is a positive relationship between CSR and market valuation.

Table 9 presents results from the dynamic panel data models (pooled, fixed effects and random effects) for data in levels.

Table 9: Dynamic panel model results: data in levels

Independent variables	pooled dynamic	fixed effects dynamic	random effects dynamic
	p/cf		
L. CSR	**-0.994**	**-15.854**	**-0.994**
	(0.18)	**(1.01)**	**(0.18)**
L. size	3.696	4.011	3.696
	(1.35)	(0.57)	(1.35)
L. D_A risk	-0.098	0.024	-0.098
	(0.42)	(0.10)	(0.42)
L. p/cf	0.030	-0.090	0.030
	(0.54)	(1.47)	(0.54)
constant	-28.972	-25.846	-28.972
	(1.15)	(0.39)	(1.15)
observations	329	329	329
number of CID	38	38	38
robust t statistics in parentheses			
* significant at 5%; ** significant at 1%			

Independent variables	Arellano-Bond dynamic model without a constant	Arellano-Bond dynamic model with a constant
	p/cf	
L. CSR	**-15.663**	**-15.075**
	(0.87)	**(1.35)**
L. size	0.491	0.629
	(0.04)	(0.10)
L. D_A risk	-0.494	-0.498
	(1.04)	(1.03)
L. p/cf	0.042	0.042
	(0.88)	(0.46)
constant		6.237
		(0.11)
observations	288	288
number of CID	38	38
z statistics in parentheses		
* significant at 5%; ** significant at 1%		

In the left-hand panel of the table, all models yielded a negative and statistically insignificant relationship between the p/cf ratio and the one-period lag of CSR.

A statistically insignificant but positive relationship between one-year lagged company size and p/cf is again revealed in all models.

The pooled and random effects models yield a negative and statistically insignificant relationship between p/cf value and one period lag of risk. The fixed effects dynamic model, on the other hand, produced a positive but still statistically insignificant relationship.

A statistically insignificant and positive relationship between p/cf and a one-period lag of p/cf was observed from the pooled and random effects models. The fixed effects dynamic model, on the other hand, produced a negative but still statistically insignificant relationship.

The constant is negative and statistically insignificant for all models (pooled dynamic, fixed effects dynamic and random effects dynamic).

Applying the Arellano-Bond dynamic model yields a statistically insignificant and negative relationship between p/cf and CSR, implying that CSR initiatives are a cost to the company.

The results show a positive but statistically insignificant relationship between p/cf values and company size whereas the relationship between p/cf and risk is negative and statistically insignificant.

The main study model (random effect) yielded a statistically insignificant relationship between p/cf and CSR (the independent variable of interest), so the study failed to reject the null hypothesis, which stated that mining firms listed on the JSE SRI do not achieve significantly different p/cf values relative to non-SRI mining firms listed on the JSE main board.

The data does not support the broader hypothesis of a positive relationship between CSR and market valuation since there is no significant difference between the p/cf of the SRI-listed mining companies and the p/cf of the non-SRI mining companies, so SRI-listed mining companies do not perform differently from non-SRI-listed companies.

5.1.4 Hypothesis 4

The null hypothesis related to the objective stated that there are no significant variances in price-to-earnings ratios between JSE SRI and non-SRI-listed mining firms. The alternative hypothesis related to the objective stated that there are a significant variances in price-to-earnings ratios between JSE SRI and non-SRI-listed mining firms.

Price/earnings ratio (p/e ratio) is used to gauge how the stock market is judging a company's earnings performance. The p/e ratio is compared with the "earnings multiple", which gives a relationship between e/s (current or expected) and the current firm's stock price. The earnings multiple enables to judge whether the shares are under- or over-valued relative to fundamentals (Helfert, 1991). A higher ratio may indicate that the company has the ability to generate high earnings relative to its price, so financiers are prepared to pay more for such a company. It is an indication of a company's growth potential and risk perception by the market. A higher p/e value for SRI-listed mining companies would reveal that investors anticipate higher growth for the companies than non-SRI companies. As indicated by Kriek and Beekman, (2002), firms with potentially high-risk tend to have low p/e values. So investors perceive high p/e-value SRI mining companies as safe investments.

Table 10 presents results of the static panel data models for data in levels and first difference.

Table 10: Static panel model results: data in levels and first difference

Independent variables	***data in levels***			***data in first difference***		
	pooled OLS model	*fixed effects model*	*random effects model*	*pooled OLS model*	*fixed effects model*	*random effects model*
	P/E			P/E		
CSR	21.95	1.487	21.946	-4.270	12.375	-4.270
	(0.96)	(0.05)	(0.96)	(1.20)	(0.89)	(1.20)
size	0.97	-1.801	0.973	-5.151	-4.939	-5.151
	(0.20)	(0.16)	(0.20)	(0.95)	(0.92)	(0.95)
D_A risk	-0.11	-0.370	-0.107	-0.078	-0.151	-0.078
	(0.27)	(1.26)	(0.27)	(0.60)	(1.18)	(0.60)
constant	-3.79	30.250	-3.789	1.254	-5.196	1.254
	(0.08)	(0.28)	(0.08)	(0.46)	(0.97)	(0.46)
observations	371	371	371	328	328	328
number of CID	38	38	38	38	38	38
robust t statistics in parentheses						
* statistically significant at 5%; ** statistically significant at 1%						

Applying data in levels produced statistically insignificant but positive results of the relationship between p/e and CSR. Differencing the data achieves a negative relationship between p/e and CSR from the OLS and random effect models, and a positive relationship from the fixed effects model. The results are, however, statistically insignificant in all cases.

Positive but statistically insignificant results were achieved from the OLS and random effects models on the relationship between p/e ratio and company size for data in levels. The fixed effects model yielded a negative but statistically insignificant relationship between p/e ratio and company size. However, when differencing the data, all models changed the relationship between p/e and company size to negative and statistically insignificant. The relationship between p/e and risk is negative and statistically insignificant from all models, whether the data is in first level or first difference.

Using data in levels, the constant is negative and statistically insignificant from the OLS and random effects models. The fixed effects produced a positive and statistically insignificant constant. For data in first difference, the constant becomes positive and statistically insignificant for OLS and random effects models. The fixed effects model yields a negative and statistically insignificant constant.

The study fails to reject the null hypothesis that there are no significant variances in price-to-earnings ratios between JSE SRI and non-SRI-listed mining firms

The random effect model yielded a statistically insignificant relationship between p/e and CSR, and it is concluded that data does not support the theory of SRI-listed mining companies performing any differently from non-SRI-listed companies. CSR has no statistically significant effect on company valuation, and the broader hypothesis that there is a positive relationship between CSR and market valuation is rebutted by the data. Table 11 presents results from the dynamic panel data models for data in levels.

Table 11: Dynamic panel model results: data in levels

Independent variables	*pooled dynamic*	*fixed effects dynamic*	*random effects dynamic*
	p/e		
L. CSR	**30.683**	**14.618**	**30.683**
	(1.20)	**(0.46)**	**(1.20)**
L. size	-4.684	-18.401	-4.684
	(0.85)	(1.17)	(0.85)
L. D_A risk	-0.243	0.059	-0.243
	(0.66)	(0.31)	(0.66)
L. p/e	0.015	-0.087	0.015
	(0.44)	(3.82)**	(0.44)
constant	45.875	184.087	45.875
	(0.93)	(1.19)	(0.93)
observations	326	326	326
number of CID	38	38	38
robust t statistics in parentheses			
* significant at 5%; ** significant at 1%			

	Arellano-Bond dynamic model without a constant	*Arellano-Bond dynamic model with a constant*
	p/e	
L. CSR	**-52.771**	**-51.067**
	(1.32)	**(1.87)**
L. size	-37.915	-37.707
	(1.39)	(1.24)
L. D_A risk	-0.981	-1.044
	(0.97)	(0.84)
L. p/e	-0.089	-0.089
	(1.21)	(0.85)
constant		391.159
		(1.33)
observations	284	284
number of CID	38	38
z statistics in parentheses		
* significant at 5%; ** significant at 1%		

The left-hand panel of the table presents the results from the pooled dynamic, fixed effects dynamic and random effects dynamic models. These models produced a positive but statistically insignificant relationship between p/e and CSR.

A statistically insignificant and negative relationship between one-year lagged company size and p/e is revealed in pooled dynamic, fixed effects dynamic and random effects dynamic models.

The pooled and random effects models yield a negative and statistically insignificant relationship between p/e value and one period lag of risk. The fixed effects dynamic model, on the other hand, produced a positive but still statistically insignificant relationship.

A statistically insignificant and positive relationship between p/e and a one-period lag of p/e was observed from the pooled and random effects models. The fixed effects dynamic model, on the other hand, produced a strongly negative but statistically significant relationship (at 1% level).

The constant is positive and statistically insignificant for the pooled dynamic, fixed effects dynamic and random effects dynamic models.

The right-hand side panel presents the results from the Arellano-Bond dynamic model. The relationship between p/e and CSR is negative and statistically insignificant for both models, with and without constant.

The Arellano-Bond dynamic models with and without constant produced a negative but statistically insignificant relationship between the p/e and company size. The results also show a negative and statistically insignificant relationship between p/e and risk.

The dynamic panel data models did not produce significant variances in price-to-earnings ratios between JSE SRI and non-SRI-listed mining firms. The random effect model yielded a statistically insignificant relationship between p/e and CSR (the independent variable of interest).

The data disproves the broader hypothesis that there is a positive relationship between CSR and market valuation, so we fail to reject the null hypothesis stating that mining firms listed on the JSE SRI do not achieve significantly different p/cf values relative to non-SRI mining firms listed on the JSE main board. Corporate social responsibility does not have a significant effect on company valuation, SRI-listed mining companies do not perform any differently from non-SRI-listed companies.

The study refuted both the shareholder and stakeholder theories, perhaps due to the moderate views that have emerged in an attempt to unify both theories. The ideologies of both the philanthropic and socio-economic theories embrace the idea that businesses still pursue profit maximisation as their primary objective, while at the same time, trying to meet social demands as well as derive some benefits in the process (Kakabadse *et al*, 2005).

5.1.5 Hypothesis 5

As stated in the research design section, the study utilised a second function which the study makes an assumption that it is an improved version. This is a more robust form of model to perform the analysis with a different set of variables to offer comparative results. The results from the improved function are presented in table 12 and table 13 bellow.

Table 12: Static panel model results: data in levels and first difference

Independent variables	***data in levels***		***data in first difference***	
	fixed effects model	*random effects model*	*fixed effects model*	*random effects model*
	Tobin's q			
CSR	0.025	0.021	0.220	0.360
	(0.138)	(0.959)	(0.591)	(0.880)
SIZE	2.720	1.487	21.946	21.95
	(0.070)	(0.050)	(0.962)	(0.96)
RISK	-0.508	-1.172	-1.917	-4.684
	(1.195)	(0.163)	(0.014)	(0.85)
SALES	0.172	2.152	3.696	6.771
	(0.968)	(0.056)	(0.953)	(0.968)
ATR	2.054	3.696	7.950	0.053
	(0.830)	(1.350)	(0.192)	(1.64)
R &D	0.360	0.220	3.790	30.250
	(0.804)	(0.591)	(0.081)	(0.28)
ADVERT	0.0020	0.005	0.018	0.004
	(1.070)	(1.160)	(1.080)	(0.114)
Constant	0.970	1.801	0.973	5.151
	(0.200)	(0.160)	(0.200)	(0.950)
observations	371	371	371	371
number of CID	38	38	38	38
robust t statistics in parentheses				
* statistically significant at 5%; ** statistically significant at 1%				

The results in table 12 show that the relationship between all independent variables and market value measured by the Tobin's q ratio are not statistically validated in all models.

The data in levels produced statistically insignificant but positive results of the relationship between Tobin's q and CSR. Differencing the data still achieves a positive relationship between Tobin's q and CSR from all models. However, the relationship between CSR and market value was not statistically validated in all models.

We observe positive but still statistically not significant results from all models on the relationship between Tobin's q and company size, asset turnover ratio, advertising intensity of a firm and research and development investment for both data in levels and in first difference. The constant is also positive and statistically not significant from all models. On the contrary the relationship between Tobin's q and leverage is negative and statistically not significant from all models, whether the data is in first level or first difference. The improved function does not provide a different conclusion. The data did not validate the relationship between CSR and market value measured by the Tobin's q ratio and thus a conclusion that CSR has no statistically significant effect on company valuation.

Further, a dynamic function which uses the generalized method of moments (GMM) of Arellano and Bond procedure (1991*)* was applied to determine the long-run relationship between CSR and market value of a company and the results are presented in table 13 below.

Table 13: Dynamic panel model results: data in levels

Independent variables	*Arellano-Bond dynamic model without a constant*	*Arellano-Bond dynamic model with a constant*
	Tobin's q	
L. CSR	22.671	11.067
	(1.021)	(1.817)
L. SIZE	17.815	26.307
	(1.239)	(1.124)
L. RISK	-0.498	-1.022
	(0.297)	(0.774)
L. SALES	0.049	0.019
	(1.121)	(0.785)
L. ATR	-11.064	60.083
	(1.387)	(1.320)
L. R &D	42.570	5.084
	(1.332)	(0.685)
L. ADVERT	1.304	0.343
	(0.864)	(0.696)
L. Tobin's q	0.033	0.0153
	(0.285)	(3.433)**
constant		33.109
		(1.002)
observations	371	371
number of CID	38	38
z statistics in parentheses		
* significant at 5%; ** significant at 1%		

The results in table 13 further confirm that the relationship between lagged independent variables and market value measured by the Tobin's q ratio are not statistically validated in both models. However, when the lagged dependent variable is used as instrument for independent variables, a positive and significant relationship is obtained. All data used in table 13 are in level form. The relationship between Tobin's q and leverage is negative and statistically not significant from both models.

Applying the generalized method of moments of Arellano and Bond procedure with an improved function does not provide a different conclusion. The data still does not validate the long term relationship between CSR and market value measured by the Tobin's q ratio.

5.2 Discussion of results

Interestingly, there are positive and negative yet weak correlations between CSR and market valuation measures, which reinforces the view that there is lack of an unequivocal relationship between CSR and market valuation. The smallness of the margins and insignificance of the indications is also a factor to be reckoned with: it means that whatever the indications, they do not have overwhelming authority and may not be definitive in their meaning.

The outcome of this study does not fit the claims about the relationships between CSR and market valuation relatively well, possibly because the theories on conceptualising CSR are evaluated in isolation as if in competition rather than jointly, thereby diminishing their effect on market valuation. This study also reports on the results of dynamic models of the relationship between CSR and market valuation, with findings failing to confirm a long term CSR -market valuation relationship. The theoretical perspectives on CSR may not be applicable if individually interpreted and have no effect on the market valuation of mining companies in a developing economy. As rightly put by Islam and Deegan (2008: p356), discussing the theories jointly “offers a richer basis for understanding” and conceptualising CSR practices than analysing them individually, because none of the theoretical perspectives is independently able to explain the drivers of corporate social responsibility (Gray et al., 1995). The criteria for a listing on the JSE SRI further require that “companies are measured against the criteria across the triple bottom line, of environment, society and economy in addition to governance”. Nkomani (2013: p24) indicated how multi-faceted CSR practices are such that no one perspective can independently and entirely unpack CSR. The findings from the analysis yield the following discussion.

Hypothesis 1

The findings of hypothesis 1 show that there were no significant variances in stock returns between JSE SRI and non-SRI-listed mining firms. The study failed to reject the null hypothesis.

In this instance, CSR has no significant effect on corporate market valuation, and the data refuted the broader hypothesis of a positive relationship between CSR and market valuation. Mining firms on the SRI do not necessarily perform better than the non-SRI companies. However, the moral and ethical standing of CSR practices of complying companies may remain a plus on their part and their national and public appreciation.

Studies that also found an inconclusive relationship between CSR and market valuation are those of Bowman and Haire (1972), Aupperle et al., (1985), Wilkinson (1989), Roman et al., (1999), McWilliams and Siegel (2000), Bauer et al., (2002) and Van de Velde et al., (2005).

Aupperle et al., (1985) applied a Carhart multi-factor model but adjusted for sector and style biases. This study tested the relationship based on a company's risk-adjusted returns on assets and social valuation, but found no statistically significant relationship. Bauer et al., (2002) used risk-adjusted returns and tested for the differences between ethical and conventional funds for a period between 1990 and 2001 but found no significant differences.

These results are further supported by another single-industry study by Moore and Robson (2002) that investigated the relationship between social and financial performance. The study used a small sample of eight supermarkets for which they created a 16-measure social performance index and a 4-measure financial performance index, the analysis yielded only one statistically significant result, concurring with the results of this study.

On the other hand McWilliams and Siegel, (2001) tested the corporate social responsibility-financial performance link by using dummy variables for firms that are in the Domini 400 Social Index to represent involvement in corporate social responsibility activities. They used financial performance indicators as dependant variables while the explanatory variables were dummy variables for CSR, expenditures on advertising as proxy for industry and expenditure on R&D. The study attributed misspecifications in the preceding studies as the source of the discrepancy in findings of the relationship between CSR practices and market valuation. They also identified industry-level factors as possible sources of variations in company performances across industries, yet preceding studies had failed to control for these factors. The study established that a company's expenditures; on research and development and advertising could be variables for consideration in investigating the relationship between CSR practices and market valuation. After correcting for these industry specific factors, the study could not find a conclusive link and therefore their conclusion was that a properly specified regression model may not yield a relationship between corporate social responsibility and financial performance.

Van de Velde et al., (2005) adjusted for style and found that high sustainability-rated portfolios outperformed low-rated portfolios. However, they agreed that comparison of row performances of sustainability-screened portfolios against traditional portfolios was not enough, since a wide range of company-level factors beyond sustainability could be responsible for these differences. To correct for this, Van de Velde et al., applied the Fama and French model to rate companies' CSR performance in five dimensions, which differentiates between varying levels of corporate sustainability.

Griffin and Mahon (1997), on the other hand, established that the relationship between CSR practice and financial performance is positive, but discrepancies in methodologies may have led to the incongruities in the results of the previous empirical studies.

Roman et al., (1999) disagreed with Griffin and Mahon, arguing that the results of the relationship could be grouped into three classes; positive, negative and neutral, between CSR and company performance, with a conclusion that the results are inconclusive. In their response to the arguments of Roman et al, Mahon and Griffin later accepted that the relationship merited their exploration, but contended that the interpretation biases might have influenced the findings of Roman et al., (1999).

Hypothesis 2

The study found no significant variances in price-to-book ratios between JSE SRI and non-SRI-listed mining firms, thus failing to reject the null hypothesis. The price-to-book ratios of SRI-listed mining companies is not significantly different from those of non-SRI-listed companies on the JSE. Accordingly, it was concluded that the data does not support the broader hypothesis that there is a positive relationship between CSR and market valuation.

These findings validate those of Neiling and Webb (2009), Shen and Chang, (2008) and; Renneboog, Horst and Zhang (2008), who did not find a positive and statistically significant relationship. However these findings contradict the findings of Berns et al., (2009) who concluded that corporate social responsibility may generate good publicity and image. On the other hand, Van de Velde et al., (2005) argued that providers of finance are usually prepared to pay more for businesses that have good relation with the public. The argument of Van de Velde et al is that goodwill and the brand name of a firm is the source of the difference between the market price per share of a company and its balance sheet price per share.

The ratio can divulge that: “either investors are willing to pay a premium for the stock over the company’s book value, or the company has been earning a very poor return on its assets” (Ntoi, 2010: p7). Inferring from Riley and Brown (2003), who stated that a p/b value ratio greater than 1 indicates that financiers are prepared to invest more than the book value for the shares in a firm, it can then be concluded from the findings of this study that investors would not invest more than the book value for the share of a mining company listed on the SRI ahead of one not listed on the SRI.

The p/b value ratio befits valuation of mining companies that are capital-intensive businesses whose main assets are physical and shown on the books, but carries less meaning for a service company whose assets are intangible.

Hypothesis 3

Testing hypothesis 3 produced insignificant variances in price-to-cash flow ratios between JSE SRI and non-SRI-listed mining firms. The study failed to reject the null hypothesis. The data does not support the broader hypothesis that there is a positive relationship between CSR and market valuation. SRI-listed mining companies do not perform any differently from the non-SRI-listed companies.

However, the ratio is well suited for the study of a single industry, as it is usually more insightful for companies within the same industry, because capital intensity (and thus depreciation) can vary widely among industries. A much lower price-to-cash flow ratio difference for a capital-intensive industry like the mining industry is ideal because of the need for reinvestment of much of the money generated from the business into equipment, facilities, materials and fixed assets, or else the firm will be hurt.

Hypothesis 4

Testing hypothesis 4 produced insignificant variances in price-earnings ratios between JSE SRI and non-SRI-listed mining firms. The study failed to reject the null hypothesis. It implies that CSR does not have a significant effect on company market valuation. The data disproves the general claim of a positive relationship between CSR and market valuation.

According to Little and Little (2000) a strong reputation for CSR achieves slightly better p/e ratios. However, Bird et al concluded that it is not only CSR but CSR and other factors contribute to an organisation's brand. Such observations by Bird et al are in line with the conclusions of the current study that found insignificant variances in price-earnings ratios but it could still be argued that other factors in addition to CSR are in play. The downside to the p/e ratio as a measure of a company's market value is that it does not indicate potential future growth of a company.

Nonetheless, the ratio suffices as an indicator of confidence in mining firms involved in CSR activities, so the ratio was reliable for comparing companies in the same industry. Hence the findings are still valid and shows how financial market value SRI mining firms relative to non-SRI mining companies.

These findings show that the indications that CSR has no effect on a mining corporation's market valuation and those that negate it both lack statistical significance, and the margins of indication are minimal. The sum indication is that none of the indications were radically declarative. Factoring in effects on business performance and market evaluation like the global financial crisis that is noted above, the results of this study do not, however, radically dismiss the importance of CSR in the market valuation of a mining corporation in South Africa, but may suggest a need for a shift in the way CSR practices are perceived. Islam and Deegan (2008: p356) argue that discussing the theories together "offers a richer basis for understanding" and conceptualising CSR practices than analysing them individually, because none of the theoretical perspectives is independently able to explain the drivers of corporate social responsibility (Gray et al., 1995).

If the current for CSR practice is defeated in the evaluation of this study, it may not sufficiently convincingly defeated for it to be completely discounted or dismissed. There are other effects, like that of the factor of foreign shareholding that is noted above. There is also the important issue of brand loyalties and the slow GDP growth that has been recorded in South Africa. None of these factors noted can be ignored in the market valuations of corporations, but an integrated CSR approach may be required to encompass these meaningful factors. Given the ethical importance of CSR, its business case that is noted in the literature review of this study, there is lack of a strong case for the meaninglessness of CSR practices in the market and, importantly, ethical, national and other valuations of business. Further, according to Van Wyk, D, Cronjé, and Van Wyk, J, (2009:p35) "there are low levels of accountability, transparency and commitment to all aspects related to sustainable development and corporate social responsibility in the mining arena of the SADC region and for business in general". Therefore transnational corporations should direct their CSR programmes on real sustainable development of the public, instead of their own publicity. This will require such organisations to follow international standards and mechanisms guiding real sustainable development (Van Wyk, et al., 2009). For that reason, this study has had no way of measuring whether those mining corporations that apply CSR apply it well enough to have an indicative effect on their market valuation. There is a possibility that where CSR is applied, it may be simply used as a PR gimmick or simple window-dressing to manage and manipulate public opinion. Another study in CSR and the South African mining industry carried this observation:

In more than 100 years of mining in South Africa, the communities of West Coast – apart from Richtersveld and a small part of Steinkopf, the local people have achieved less infrastructure and community development, or achieved just a little more than the survival level. These communities argued that the mining activities being undertaken in their locality did not benefit the local area, leaving the people there with a feeling of being marginalised and secluded. Capel (2009:p5) believes that the "situation is further exacerbated by what this study calls 'closed communities' – characterised by a strong corporation defining the lives of communities through its labour policies and through its economic control and influence". Capel further indicates that "most of the diamond mining towns on the West Coast suffer high unemployment, substance abuse, mental disorders, suicide and domestic violence". It is surprising, though, that in the midst of lack of such local development, while most diamond mining houses still report on "their environmental management programmes and have adopted international standards and have third party reviews of their environmental management programmes, the area is seriously affected by water contamination – both ground and surface water are under threat". As noted by Capel, "much of the area looks like a waste site that will take hundreds of years to rehabilitate. Corporate social responsibility (CSR) cannot be mere window-dressing or glossy annual sustainability reports, but must address the social, environmental and economic effects in a way that does not externalise costs and that leads to true empowerment and shareholding of communities" (Capel, 2009: p5).

The above observation indicates that CSR itself has probably not been implemented and effected to any meaningful extent in South Africa, and for that reason its outcome in the market valuations of the companies concerned may not be felt or detected by studies without integrating the theoretical perspectives that provide a comprehensive view of the concept. Communities in South Africa, and to an extent the state may not in a meaningful way be experiencing the positive and developmental proceeds and benefits of CSR practices from the corporates that view the concept as defined by individual theoretical perspectives within the mining sector. The abovementioned study notes that apart from Richtersveld and a small part of Steinkopf local people of the West Coast are not deriving any benefits from the CSR programmes of these corporations. The challenge has been in the implementation and monitoring of such policies. This has led to severe environmental and social issues within the region. The likely solution to the long term sustainability of the mining industry in the region would be the buy in of the local people. The industry needs support, involvement and possibly shareholding of the local people. Capel (2009:p5), further claimed that "the alluvial diamond mining industry on the West Coast is by all accounts in steep decline and may even be considered a sunset industry. It may even be possible that the days of large-scale capital-intensive mining in the area are over", and this paints a difficult CSR picture for both the companies and the communities they operate in. For that reason, no positive results in the market valuations of the mining corporations may easily be yielded and indicated in any study, because CSR performance itself appears to be in crisis on the ground. In South Africa, mutually beneficial collaboration among the various stakeholders ("mining companies, civil society, government and communities") is key to the sustainability of the mining industry in the West coast, where business profits are a priority over the rights of the local people; while "CSR often only remains a part of a glossy corporate annual report with little bearing to the reality on the ground", (Capel, 2009; p7).

Van Wyk, et al., (2009) expressed that organisations both locally and internationally have been pressurised to be more responsible and clear about their business operations in the local communities. This involves organisations concentrating not only on profits and production, but also participating in CSR activities that will create sustainable development in a mutually beneficial manner. However, policy interventions also have their limitations and the fact that most mining corporations continue mistaking CSR programmes to philanthropy and or hand outs to local people has caused various social challenges linked to oversights, purposeful shortcuts and intended and unintended perversions of information. It is becoming clear that this study, in measuring the relationship between CSR and the market valuation of mining corporations, might have been measuring a factor whose effect is a nullity or is in crisis, hence the meaningless margins and insignificant readings that are noted in the results above. In the observation of Van Wyk, et al., (2009: p7), "during the 19th century the Kimberley diamond mines gradually came under the exclusive control of De Beers. The fact that the company belonged to Cecil Rhodes, who was also the Prime Minister of the Cape, allowed the company to use the Cape legislature to pass laws that secured cheap labour, resources and the necessary capital to move from alluvial mining to mining at deeper levels. Such behaviour set a wrong foundation for the mining industry in South Africa's history. Since then, the mining sector has continuously wielded excessive power over government that has "blurred the lines between the mining industry and the state, and the interests of influential mining characters and powerful political personalities". The Marikana massacre and current protests and struggles around the mining sector in South Africa do not indicate that the situation or the view of CSR practices and political influences has changed much.

The empirical analysis of this study did not find any relationship between CSR and market valuation. However there are studies that have proved elsewhere that CSR practices contribute to positive market valuation for businesses, small and large. Fry, Keim and Meiners (1982) reveal that firms spending on CSR do not need to spend as much on advertising. This helps in reducing costs and creating a corporate identity or building the reputation of the firm. Hammond and Slocum (1996) argued that corporate social responsibility can increase the reputation of a company and decrease its financial risk leading to less chances of bankruptcy. Therefore, Klassen and McLaughlin (1996) suggested a theoretical model that ensures strong environmental management that may increase future financial performance of an organisation. In their empirical study, Waddock and Graves (1998) further proved a positive link between corporate social performance and financial performance. On the other hand, Paterson (2000; p 28) argued that "financial incentives are not the key to attracting and retaining quality staff". The study showed that about 82% of UK professionals would decline well-paid job opportunities if the recruiting firm did not respect their values. Daviss (1999) reported that organisations that appreciate their new role as the centre of positive social and environmental change will likely improve their profitability. Lord Clement-Jones also believes that CSR is important for the financial bottom-line of a company and the format of communicating and reporting it is key. These analyses clearly reveal that corporate social responsibility assist companies in developing loyalty with clients, help firms respond appropriately to claims of corporate greed, minimise chances of expensive class action suits, help in reducing staff turnover and improving staff morale which then facilitates recruiting, motivating and retaining a talented pool of employees and reducing an organisation's equity risk premium. Furthermore, Wilks (2000) argued that the measure of business success should go beyond financial returns to include social and environmental issues. Wilks directly linked the idea of social responsibility to the concept of the triple bottom line. Boutin-Dufresne and Savaria (2004) also indicated that organisations that are socially responsible have "less diversifiable risk" in their stock performance than non-socially responsible businesses. Crawford and Scaletta (2005) proposed that utilising a balanced score card would provide an effective reporting of CSR. Falck and Heblich (2007: p56) believe "shareholders react favourably towards the stock prices of companies' strategically practising corporate social responsibility". In addition, Younghwan, Jungwoo and Taeyong constructed a "corporate transparency index" for the transparency of 237 Korean organisations. Their study revealed that "financial, corporate, operational and social transparencies play an important role in a firm's profitability", (p 88). Boorman, (2001) also reported that high staff morale improves the organisation's bottom line.

All this shows that elsewhere under different historical and political settings, CSR leads to positive market valuation for corporates. For that reason, the lack of positive market evaluation for CSR-compliant mining corporates in South Africa may point to other explanations, like considering integrating the theoretical perception, than the failure of CSR practices to produce better market valuations for such corporations.

Hypothesis 5

The formulation of an improved model does not provide a different conclusion despite the inclusion of more variables in an attempt to enhance the reliability and robustness of the results. The improved function still produced a positive yet weak relationship between CSR and the market valuation measure, therefore reinforcing the view that there is lack of an unequivocal relationship between CSR and market valuation.

In the recent history, most managers have responded positively to the calls to engage in corporate social responsibility (CSR). However some have resisted basing their argument on Friedman's (1970) theory that "there is one and only one social responsibility of business – to use its resources and engage in activities designed to increase its profits so long as it stays within the rules of the game, through engaging in open and free competition without deception or fraud" (Friedman, 1970: p91).

The weak positive relationship between company size and market valuation that size positively influence the capacity to initiate social responsibility actions, since smaller firms may have a reduced potential to sustain CSR activities in contrast to larger companies which have a solid infrastructure and high levels of cash flows. It is possible that as a company develops, it becomes more visible and responsible regarding stakeholders' requests. However the data used in this study of the effect of CSR on the on market valuation did not validate

According to Roberts (1992), stakeholders' wealth is influenced by the existence of financial difficulties. A company with a solid orientation towards stakeholder interests is considered to be well managed and less risky hence the negative relationship between firm value and leverage. It is also envisaged that growth opportunities in terms of increased sales, could lead to improvement of employees and customer satisfaction through rising the turnover. A long standing theoretical literature links investment in research and development to improvements in long-run economic performance (Griliches, 1979). Investment in technical capital results in knowledge enhancement which leads to product and process innovation. This innovative activity enables firms to enhance their productivity for the benefit of all stakeholders. On the other hand the advertising intensity explains the extent of product differentiation at the industry level and entry barriers that might serve to enhance firm profitability for the benefit of stakeholders.

Despite all the positive links between the independent variables and the market valuation measure, the results show that the relationship between CSR and market value measured by the Tobin's q ratio are not statistically validated. Applying the generalized method of moments of Arellano and Bond procedure with an improved function does not provide a different conclusion. The data still does not validate the long term relationship between CSR and market value measured by the Tobin's q ratio.

5.3 Conclusion

The findings observed in the study are positive and negative, yet not significant enough to warrant a conclusion that CSR practices have an effect on market valuation. However, the margins of the indications are a factor to be reckoned with, as they do not have overwhelming authority.

The results presented in the chapter show that when static models (OLS, fixed and random effects) are applied the data, it repudiates the claim of an existence of a relationship between CSR and market valuation for data both in levels and first difference. The Hausman test was conducted to ascertain the appropriateness of the models and revealed that the unobserved individual effects were not related to the independent variables. The random model was selected as the appropriate model for the evaluation process, compared with the fixed effects model. However, the random effects model also refuted the claim of a relationship between CSR and market valuation. The equation on the fixed effects model for the data in level produced a statistically significant (at 5% level of significance) and positive relationship between returns and CSR. This finding is reinforced by the study of Andersen and Dejoy (2011), who found CSR to have a positive effect on market valuation when market returns are used as dependent variable, backing the assumption that South African mining companies with more financial resources at their disposal will invest more in sustainability.

The dynamic panel data models also did not produce any relationship between CSR and market valuation. The outcomes yielded an insignificant relationship between CSR and all market valuation measures, so failing to reject the null hypothesis, which stated that there are no significant variances in market valuations between JSE SRI and non-SRI-listed mining firms. This implies that the data does not support the claim of a CSR - market valuation relationship, and so no evidence that SRI listed mining companies perform any differently from the non-SRI-listed mining companies. The findings have provided inconclusive indications that do not fit the theory of the relationships between CSR and market valuation relatively well, possibly because the theoretical perceptions of CSR practices are evaluated in isolation as if they are in competition rather than joint consideration, so diminishing their effect on market valuation. The theoretical perspectives are not sufficiently applicable to have an effect on market valuation, if individually interpreted within the context of the mining sector in a developing economy. Their similarities perhaps require discussing these perspectives jointly. As such, an integrated theoretical framework may be necessary. This conclusion is supported by Islam and Deegan (2008: p356), who indicated that discussing the theories jointly "offers a richer basis for understanding" and conceptualising CSR practices than analysing them individually, because none of the theoretical perspectives is independently able to explain the drivers of corporate social responsibility (Gray et al., 1995). This approach would be consistent with the criteria for listing on the JSE SRI, which requires "companies to be measured against the criteria across the triple bottom line, of environment, society and economy, in addition to governance" (Nkomani, 2013: p24), which in itself indicates an integrated CSR approach.

Despite all the positive links between the independent variables and the market valuation measure, the results show that the relationship between CSR and market value measured by the Tobin's q ratio are not statistically validated. Applying the generalized method of moments of Arellano and Bond procedure with an improved function does not provide a different conclusion. The data still does not validate the long term relationship between CSR and market value measured by the Tobin's q ratio.

As compared to the dominant qualitative research on CSR which shows a correlation between CSR and market valuation, the findings of this study which employed a quantitative approach indicate no significant relationship between CSR and market valuation in the mining sector, nor significant variances in market valuations between mining firms on the JSE SRI and those not on the index. Active participation in CSR activities may not lead to increased market valuation. The conceptual framework point to an understanding that maximising shareholder wealth is still an important business goal if achieved simultaneously with the fulfilment of social demands.

CHAPTER 6

FINDINGS

6.0 Introduction

This chapter focusses on the relevant inferences from the results presented in Chapter 5 in light of the findings of past studies. The design of this research aimed at answering the question as to whether the results present robust and statistically significant and suitable conclusions on the CSR- market valuation relationship for South African mining corporations. As stated in this study, limited studies have attempted to empirically test the effect of the theoretical perspectives of CSR practices on market valuation in the context of a single sector (mining) in a developing economy. So there is a need for an empirical evaluation of the link between CSR practices and the market valuation of mining companies in South Africa.

6.1 Key findings

This study applied both static and dynamic data models with equations for data in levels and in first differencing over the period (2005-’15). The equation on the fixed effects model for the data in level produced a statistically significant (at 5% level of significance) and positive relationship between returns and CSR. This implies that returns of SRI-listed mining firms are significantly different from the returns of non-SRI mining firms listed on the JSE. This implies that companies on the SRI index achieve higher returns than non-SRI companies.

However, the main findings are that CSR has no effect on the market valuation of South African mining companies. These findings point to a lack of both an instantaneous or a delayed effect of CSR on the market valuation of mining companies listed on the JSE, bringing forth a conclusion that financial markets do not value corporate social responsibility, at least within the South African mining context. So the theories do not independently have the ability to fully explain the drivers of CSR within the context of the mining sector, as there is no evidence of a link between the CSR activities of mining companies in South Africa and their corporate viability. It seems that the integrated theoretical approach to conceptualising CSR practices may be necessary if businesses are to fulfil their mandate as economic units while pursuing profit maximisation as the primary objective, but at the same time trying to meet social demands as well as deriving some benefits (Kakabadse et al., 2005) within the confines of the legal system.

The empirical results did not corroborate the theory that social responsible practices in the South African mining sector yield better market valuation than those not taking part in such CSR activities. The data disproved the hypothesis of a positive relationship between CSR and market valuation, so the study failed to reject all its null hypotheses. So it is important for those taking part in the SRI movement to be aware that an integrated theoretical approach to conceptualising CSR may be key to doing business in the South African context, where the economy is reeling under the legacy of the apartheid era, with huge inequalities.

However, it was observed that market valuation measures moved, in a weak or statistically insignificant manner, in response to CSR variations. This is widely supported by existing findings by researchers like Aupperle, Carroll and Hatfield (1985), who tested the relationship based on companies' risk-adjusted returns on assets and social valuation but found no statistically significant relationship. Odemilin et al., (2010) did a test between CSR and market valuation using the e/s of 20 selected United Kingdom companies, and found a weak positive relationship. McWilliams and Siegel (2000) applied the Waddock and Graves model by using advertising and R&D expenditure as proxies for market valuation. They also concluded that there was no relationship between CSR and market valuation.

Recent years have noted new variables of the corporate social responsibility-market valuation link being introduced in the literature with a number of contributions, but much more still needs to be done. So many issues related to the effects of corporate social responsibility on market valuation are yet to be adequately and conclusively resolved. Future research may have to "generate new ideas and robust methodologies, combined with measures based on the constantly improving datasets containing corporate social responsibility information, that can significantly enhance the understanding of how, when and to what extent doing good can also lead to doing well in the business world" (Oikonomou, 2011: p47).

Key observations for the tests' failure to reject the null hypotheses are summarised:

- The theoretical perspectives of CSR practices are interpreted individually as if in competition. However, Islam and Deegan (2008: p356) suggest that discussing the theories together "offers a richer basis for understanding" and conceptualising CSR practices than analysing them individually, because none of the theoretical perspectives is independently able to explain the drivers of corporate social responsibility (Gray et al., 1995). This is consistent with the listing requirements of the JSE SRI which, as discussed in Nkomani, (2013: p24) requires that "companies are measured against the criteria across the triple bottom line, of environment, society and economy in addition to governance", thus a multi-faceted perspective.

- The global financial crisis experienced in 2008 could have had some residual effects in the stock market, and it could be that the mining sector did not recover fully, subsequently distorting the results of the relationship between CSR and market valuation. A study by Ntoi (2010) also showed that following the recession period, the SRI took longer to recover, increasing the gap between the returns of the SRI and non-SRI firms. The SRI was more affected by the recession than the non-SRI group, shown by the higher SRI returns at the peak and lower at the base of the performances of indices.
- The South African mining sector is dominated by large corporations with heavy foreign shareholding. This translates to huge foreign stockholding in the SRI index, as these large corporations dominate the listing. While it is acknowledged that South Africa as a developing economy was not severely affected by the economic downturn relative to the first world countries like the UK and the US, large foreign shareholding in the South African mining sector could have transferred the global effects through to the JSE SRI index. The foreign investors invested heavily in the South African mining companies could have withdrawn their funding from these stocks during the period, so lowering share prices and the index value.

For this study, the theoretical arguments that CSR has been making sense for businesses in their own interests in other parts of the world may indicate the need for a study of the uniqueness of the South African business context, and this credits the views of Kwesi Prah and Immanuel Wallerstein that methods and integrated theories may need to be centred in historical and political contexts for them to be relevant.

The corporate social responsibility-market valuation relationship has received greater attention from various interested stakeholders who see it as a key theme. The leadership in mining organisations would like to develop and implement policies that assure sustainability and successful management of operational and reputational risk exposures of the corporations under their stewardship. Investors and individuals that are actively involved in equity markets would like to understand the specifics of components priced as risk premium in financial assets. "Employees, local communities, environmentalists, consumers, non-governmental organisations and other stakeholders expect firms to benefit society in a series of ways and they would like to support that the type of corporate behaviour they are promoting is aligned with, or at least it is not detrimental to, the objective of increasing firm value, as this would provide a most convincing argument in favour of their purpose" Oikonomou (2011: p36). Those involved in policy-making would like to establish corporate regulatory frameworks that would provide adequate deterrence but also promoting a business world which endeavours to minimise negative externalities to the environment and society, in addition to creating good quality products and services needed by consumers. Oikonomou (2011: p36) stated that "answering whether corporate social responsibility has a detectable financial impact and of what kind is material to all the aforementioned groups".

Corporate managers and shareholders have been criticised for neglecting the effect of their business strategies on various stakeholders, like suppliers, government, banks, environment, customers, and employees, so as to fulfil their corporations' desires of maximising profit. Government and society are putting pressure on corporations to take up social welfare projects and by encouraging firms to play a more explicit role in the welfare and prosperity of society (Balabanis, Phillips & Lyall, 1998; Fiori, Donato, & Izzo, 2007). Organised groups and communities have also focused their attention on business activities (Margolis & Walsh, 2001) and recognised issues like the social responsibility programmes (Carroll, 1979). Groups of stakeholders are further exerting pressure on corporate organisations to look further than just profits. Companies are being encouraged to adopt reporting standards that apply an integrative approach to the environment, social and financial valuation.

Wood (1991) reiterated that social matters have been at the core of discussions for many years, but lately researchers and practitioners have initiated deliberations on these social matters as key facets of business strategies connected to the "responsible management system". Levy (1999) and; Simionescu and Gherghina (2014) further emphasise that charity (philanthropy), social issues and their effects on communities are the core of a company. Such business practices steered societies into taking part in initiatives that would tackle societal challenges posed by these firms, which created administrative concerns for the corporations (Uadiale & Fagbemi, 2012; Busacca, 2013).

Responding to these pressures, many corporations are hard at work trying to incorporate the principles of corporate social responsibility (CSR) into their mainstream business strategies and operations. Corporations are progressively making use of CSR as a marketing tool and to generate a mutual understanding with the public. As such, many organisations pursue corporate social responsibility programmes, despite the Friedmanites' belief that such activities do not generate the revenue required to meet the company's operational costs. Advocates of CSR argue that the industry has an obligation to pursue such policies, to make those decisions, or to follow those lines of actions which are desirable in terms of the objectives and values of society (Bowen, 1953; Lodge, 1977; Frederick et al., 1992; Freeman, 1984; Balabanis et al., 1998). It is further argued that a contractual obligation exists between organisations and society concerning social responsibility; hence it is a result of such an obligation that comes from increasing organisations' social power (Davis, 1975; Donaldson, 1983). Supporters of social responsibility claim that organisations involved in socially responsible initiatives will attain greater market valuation relative to firms not considering the societies in which they operate, so CSR initiatives seem to be a significant factor, among others, that encourages banks and other institutional investors to make investment decisions in those corporations (Spicer, 1978a, 1978b; Rosen et al., 1991; Graves & Waddock, 1994; Pava & Krausz, 1996). So it suggests that a favourable CSR profile has a significant influence on a firm's access to capital markets. Since the second King Report on Corporate Governance was published, South African firms have increasingly focused their efforts on accounting for the effects of their activities on society and the environment (Van den Ende, 2004). Through extending its support towards the community, the mining industry in South Africa has formed important partnerships with the public sector towards promoting socio-economic development. A number of mining companies in South Africa, like Anglo American, Kumba Resources, De Beers and BHP Billiton, have responded with CSR initiatives, forming crucial partnerships with some important stakeholders, like labour unions. It is however still important to appreciate that despite the rise in CSR activities, there are some mining firms that are lagging behind as they are trying to mend their tarnished images, in contrast with the time when such actions were regarded as mere philanthropic acts (Mabuza, Msezane & Kwata, 2010).

Despite the varied arguments from both the shareholder and stakeholder theories, this study did not find evidence of the influence of both theories within the context of the mining sector. So no connection is observed between CSR activities of mining companies and their market valuation.

6.2 Conclusion

The results failed to confirm that engaging in social responsibility activities within the South African mining industry will yield different results from not taking part in such activities. In general, the findings also failed to confirm a significant long term- relationship between CSR and market valuation. The study failed to reject all four hypotheses. Integrated theoretical approaches to CSR practices are crucial when measuring the effect of CSR on market valuation, as recommended by Islam and Deegan (2008: p356), who suggest that discussing the theories jointly “offers a richer basis for understanding” and conceptualising CSR practices than analysing them individually, because none of the theoretical perspectives is independently able to explain the drivers of corporate social responsibility (Gray et al., 1995).

CHAPTER 7

CONCLUSIONS AND RECOMMENDATIONS

7.0 Introduction

This concluding chapter is aimed at providing a summation of the study by highlighting its purpose, design, results and the conclusions derived from them. The chapter also makes and reflects on some critical propositions of the study and possible directions for further research. The study seeks to make is a careful observation of the dialectical relationship between CSR and corporate viability in terms of market valuation and sustainability of the mining businesses that comply with it, compared with those that do not.

7.1 Conclusion

The study noted that CSR has gained importance worldwide, which is reflected in coverage in the global media, the concerns of governments and the interest of labour movements and scholars. In recent decades, CSR on a world scale has become a central legal, ethical and social justice issue that cannot be left to corporations alone. As a result firm managers, owners, clients, environmental activists, workers, individuals, expert investors, policy-makers and non-governmental organisations are becoming more and more conscious of the possible effects that company policies, programmes and activities have on the environment and local communities.

As noted in the literature, the shareholder theory –particularly articulated by Friedman (1970) – claims that organisations have no obligations except complying with existing legislation and maximising shareholder value. Such view remains strong among businesses and some scholars, but has increasingly become eroded by compelling drives for ethical and responsible business in the world. Friedman and other scholars held the view that anything that involves "arbitrary taxation" of the owners by the management of the company is a "misallocation of valuable resources and violates fundamental principles of modern democratic political regimes, and so should not be considered sound corporate policy", (p83). Friedman and his supporting scholars hold the thesis that the business of business is business – a thesis now widely condemned for its otherwise radical capitalist ethic. As noted in the study, scholars who hold this perception consider that the core reason for companies to exist is profit-making and satisfying the interests of shareholders. They believe CSR distracts companies from achieving their principal aim. In this category of views, CSR is considered bad capitalism.

Those who believe that the goal of a business should encompass maximising social good, and benefits to workers, clients, local people and the natural environment, support the stakeholder views. The stakeholder theory stands as the opposite to the traditional views of corporate social responsibility (Bowie, 2012). This group views CSR as an idea in terms of which corporations have a prior obligation to all stakeholders affected by or affecting their activities, rather than simply to owners. So, based on this observation, CSR values should be the norm, regardless of the financial costs they attract and the financial revenues they generate for the company. In support of the stakeholder perspective, established by Freeman (1984: p33) and others, it has been argued, "in many different ways, that superior CSR practice can lead to improved relationships with key firm constituents, thus creating sustainable comparative advantages and contributing materially to the long-term financial wellbeing of the corporation". As noted in this study, several debates are still ongoing among researchers and scholars relating to the legitimacy of CSR, benefits accruing to companies for incorporating CSR into company strategies, and its relationship with market valuation (Simionescu & Gherghina, 2014; Tsoutsoura, 2004; McWilliams & Siegel, 2000).

However, there are those who believe that implementing CSR and strong company financial performance are not exclusive but complementary. Those who hold this view believe that the business of business is not only business but it also requires a critical balance with sound CSR as a central objective and function of the corporation in society. In that regard, good capitalism is that which has a socialist spirit after or alongside its profit motive.

The aim of the study was to establish whether CSR activities lead to improved company market valuation. Moreover, the foregoing debates have mostly been based on developed countries, with minimum research done on developing countries, thus the existing literature has significant limitations. This lack of a sector-specific analysis of in a developing economy setup motivated the study. So one of the key features of the study is the review of the views of CSR practices and the relationship with business in the setting of a developing world, where social welfare and social justice are critically central due to the history of colonialism and apartheid that fostered deep social inequalities. The interest of the research has been to attempt to establish whether the theories independently interpreted have an effect on the motives of CSR practices in the context of the mining sector and what would be the link between CSR activities of mining companies in South Africa and their market valuation.

It is further noted in the literature that various stakeholders in different industries respond differently to CSR efforts. When implementing CSR activities, pressures across industries will influence whether CSR will have a positive or negative effect on market valuation (Flammer, 2013; Kassinis & Vafeas, 2006; Bansal, 2005; Bansal & Roth, 2000; Campbell, 2007; Delmas & Toffel, 2004; Freeman, 1984; Hoffman, 1999, 2001; Sharma & Henrique, 2005; Jennings & Zanbergen, 1995). Thus, if an industry has high norms regarding CSR activities and stakeholders are more sensitive, higher CSR efforts may, in turn, translate into stronger market valuation. Conversely, one can expect a negative relationship between CSR and market valuation in a "dirty" industry with lower institutional norms of CSR and where stakeholders are likely less sensitive to companies' engagement with CSR. A clear message from the literature is its emphasis on industry-specific characteristics. To this study the theory accentuates that the relationship between corporate social responsibility and market valuation should be empirically investigated and compared between or among firms within the same industry. This is to ensure that the results are not affected by the varying stakeholders' sensitivity towards CSR efforts across industries. The problem is particularly relevant to South Africa, noting that existing studies address the subject qualitatively and in general terms. The subject matter is less empirically and econometrically tested in the mining sector specifically, despite the rising popularity of CSR activities in the sector (Mabuza et al., 2010). The mining sector, after the Marikana incident, has been at the centre of attention in many discussions, including those of social welfare and CRS itself.

CSR, as noted in the study, describes a company's commitment to be accountable to its stakeholders, and demands that businesses manage the economic, social and environmental effects of their operations to maximise the benefits and minimise the downsides. Notably, the notion of corporate social responsibility (CSR) has gained some significance as a discourse and business practice in the globalised world economy. As Hooge (2010) illustrates, the concept of CSR in mining has garnered significant attention in the last decade or so, more so in Africa. Its profile has risen considerably during the mid-2000s. But as Pedersen (2006) and Jamali and Mirshak (2007) argue, in spite of its current popularity, CSR remains an ambiguous and much debated construct, meaning different things to different people at different times, and new issues can easily be included in existing definitions (Carroll, 1999; Yakovleva, 2007; Ndhlovu, 2011). Further, the study noted that different people and organisations perceive CSR in different ways and it is seen as a very contextual concept in terms of corporate and national environment (Broomhill, 2007).

More so, studies testing the relationship between corporate social responsibilities and market valuation have not reached a general consensus on their findings. This lack of consensus has been critiqued as being largely of no empirical use, particularly to managers who are responsible for CSR activities. The potential sources for the difference stem from the methodologies, as well as the metrics used in measuring market valuation (Pelozza, 2009). For that reason, this study notes that methods as well as theories may not be allowed the final say on the importance or lack of it in such areas as CSR practices that have to do with corporations in their ethical responsibility to society and to the communities in which they are located. The concept should be conceptualised by a combination of theories analysed jointly, rather than individually as if they are mutually exclusive of each other. Islam and Deegan (2008: p356) argue that discussing the theories jointly "offers a richer basis for understanding" and conceptualising CSR practices than analysing them individually, because none of the theoretical perspectives is independently able to explain the drivers of corporate social responsibility (Gray et al., 1995).

The corporate social responsibility-market valuation relationship has received greater attention from various interested stakeholders who see it as a key theme. The leadership in mining organisations would like to develop and implement policies that assure sustainability and successful management of operational and reputational risk exposures of the corporations under their stewardship. Investors and individuals that are actively involved in equity markets would like to understand the specifics of components priced as risk premium in financial assets. "Employees, local communities, environmentalists, consumers, non-governmental organisations and other stakeholders expect firms to benefit society in a series of ways and they would like to support that the type of corporate behaviour they are promoting is aligned with, or at least it is not detrimental to, the objective of increasing firm value, as this would provide a most convincing argument in favour of their purpose" (Oikonomou, 2011: p38). Those involved in policy-making would like to establish corporate regulatory frameworks that would provide adequate deterrence but also promoting a business world which endeavours to minimise negative externalities to the environment and society, in addition to creating good quality products and services needed by the consumers. Oikonomou (2011: p39) stated that "answering whether corporate social responsibility has a detectable financial impact and of what kind is material to all the aforementioned groups".

The basis of the findings of the study is on the analysis of the results of the market returns, price/earnings ratio (p/e), earnings/share (eps), price/cash flow (p/cf), and the price-to-book ratio (p/b).

The price-to-book value ratio can reveal that: “either investors are willing to pay a premium for the stock over the company’s book value, or the company has been earning a very poor return on its assets” Ntoi (2010: p7). Such ratio befits valuation of mining companies, which are capital-intensive businesses and whose main assets are physical and shown on the books, but carries less meaning for a service company whose assets are intangible. The results did not yield a significant relationship between the price/book ratios and CSR. These findings do not provide significant variances in price-to-book ratios between JSE SRI and non-SRI-listed mining firms. Such findings are validated by Neiling and Webb (2009), Shen and Chang, (2008) and Renneboog, Horst and Zhang (2008), studies which also did not find a statistically significant relationship. However the results contradict the findings of Berns et al., (2009), who concluded that CSR has an effect in creating a solid brand name. Van de Velde et al., (2005), on the other hand, argue that investors are normally prepared to pay more for stocks of organisations that have good relations with their stakeholders. Van de Velde et al.,’s argument is that goodwill and the brand name of a firm is the source of the difference between the market price per share of a company and its balance sheet price per share.

The price-to-cash flow ratio is well suited for the study of a single industry, as it is usually more insightful for companies in the same industry, because capital intensity (and thus depreciation) can vary widely among industries. A capital-intensive industry like the mining industry has a higher need for reinvestment of much of the money generated from the business into equipment, facilities, materials, and fixed assets, and so will command a lower price-to-cash flow ratio. However, the results did not yield a statistically significant relationship between the price-to-cash flow ratios and CSR. Hence the study did not find any statistically significant difference between the price-to-cash flow ratios of SRI mining companies and those of the non-SRI mining companies listed on the JSE.

A price/earnings ratio suffices as a measure of confidence of financial markets in (mining) firms involved in CSR activities, thus the ratio was reliable enough for comparing companies in the same industry. The results did not yield a statistically significant relationship between the price/earnings ratios and CSR. Thus, there are no significant variances in price-to-earnings ratios between JSE SRI and non-SRI-listed mining firms. These findings are showing how financial markets perceive mining corporations' CSR practice relative to those mining companies that are not. However, one study, by Little and Little (2000), contradict these findings and concluded that strong reputation for CSR achieves marginally better price/earnings ratios.

However, there were small differences observed between the market returns of the SRI and non-SRI mining companies, but these were not statistically significant. In this instance, the study could not conclude that CSR has a significant effect on corporate market valuation. There are some studies that also found such an inconclusive relationship between CSR and market valuation, as shown in the literature by the studies of Bowman and Haire (1972), Aupperle et al., (1985), Wilkinson (1989), Roman et al (1999), McWilliams and Siegel (2000), and Bauer et al., (2002). Van de Velde et al., (2005), adjusted for style of how CSR performance is assessed and found that high sustainability-rated portfolios outperformed low-rated portfolios. Nonetheless, they agreed that comparison of row performances of sustainability-screened portfolios against traditional portfolios was not enough, since several company-level features over and above sustainability could be responsible for these differences as the study noted, hence an inconclusive finding.

The results of the dynamic panel models (OLS, fixed effects and random effects that include lagged dependent variables as regressors), and the Arellano-Bond models with and without constant also did not find a significant relationship between CSR and market valuation of mining companies listed on the JSE.

This study tested the effect of CSR on corporate market valuation through an empirical investigation. Statistically insignificant correlations between CSR and market valuation measures were found, reinforcing the view of a lack of an unequivocal relationship between CSR and market valuation. This indicates that the data used to test the theoretical effect of CSR practices of market valuation refuted the claim of such a relationship, suggesting a need for an integrated theoretical perspective of a combination of various views. The findings recognise the possible contributions made by the different theoretical views. Thus the results imply the importance of the complementarity of the individual theories, with the prominence of the moderate views that have emerged in an attempt to unify the shareholder and stakeholder theories. The views of the philanthropic and socio-economic theories concur with the findings of this study and accept that business still pursues profit maximisation as its primary objective, while attempting to meet social demands as well as derive some benefits in the process (Kakabadse et al., 2005). The philanthropic view submits that businesses undertake corporate social responsibility activities for altruistic and ethical reasons so as to help other less fortunate members of society, while the socio-economic view adopts a narrow responsibility with the acceptance of benefits associated with CSR practices.

However, the indications that confirmed that CSR has no effect on a mining corporations' market valuation and those that negated it did not have strong statistical significance, and the margins of indication were minimal. The conclusion is that none of the indications were radically declarative or forcefully meaningful. If the current trend for CSR is defeated in the evaluation of this study, it is not convincingly defeated for it to be discounted. Factoring such effects on business performance and market evaluation as the global financial crisis that is noted above, the results of this study did not radically and unequivocally dismiss the importance of CSR in the market valuation of a mining corporation in South Africa. There are also other factors, like that of foreign shareholding that is noted above, important issue of brand loyalties and the slow GDP growth that has been recorded in South Africa. All these noted are factors that cannot be ignored in the market valuations of corporations. Given the ethical importance of CSR, and its business case noted in the literature review of this study, there may be no strong case for the meaninglessness of CSR in the market, and importantly, ethical, national and other valuations of business.

The importance of mediating variables like brand loyalty and customer satisfaction, and the joint analysis of theoretical perspectives require consideration for future researches. The business case for CSR broadly suggests that accounting for the role of the mediating variables would improve the relationship between CSR and market valuation, while Islam and Deegan (2008: p356) argue that discussing the theories jointly "offers a richer basis for understanding" and conceptualising CSR practices than analysing them individually, because none of the theoretical perspectives is independently able to explain the drivers of corporate social responsibility (Gray et al., 1995).

Pivato et al., (2008) also argued that investigating social performance-specific drivers rather than the indices would be more beneficial. In support of this claim, Pivato et al., examined the influence of social performance on brand loyalty through building trust with customers, and found a positive relationship. In other words, Pivato et al argued that a good business would be one where the profit motive, as important as it is, does not remain the central motive, but is mediated by human and social responsibilities. This argument is consistent with the philanthropic views that argue for businesses to undertake corporate social responsibility activities for altruistic and ethical reasons, so as to help other less fortunate members of society, and the socio-economic views that adopt a narrow responsibility with the acceptance of benefits associated with CSR. The Socio-economic views concur with the findings of this study and accept that businesses still pursue profit maximisation while attempting to meet social demands, as well as deriving some benefits in the process (Kakabadse et al., 2005).

It is perhaps worthwhile to consider the effect of CSR on market value based on other fundamentals. This would investigate the supposed relationship between CSR and market value while accounting for mining firm-specific factors. Overlooking the effect of including or deleting a stock from the SRI index may be another factor responsible for the inconsistency in the results obtained. Institutional investors pay more attention to the SRI index and its constituents, so it is reasonable to believe that including or deleting a stock from the socially responsible investment index is linked to a better or worse market valuation.

The inferences made from these findings have significant effects on the leadership of mining corporations, potential investors, policy-makers, and researchers alike. The statistically insignificant correlations between CSR and market valuation measures strengthens the importance of the philanthropic and socio-economic views that, combined, advocate for businesses to make profit in a responsible and ethical manner within the boundaries of law. These theories encourage businesses to undertake corporate social responsibility activities for altruistic and ethical reasons while attempting to meet social demands, as well as deriving some benefits in the process through pursuing profits for shareholders.

It is also important for those involved in social programmes to take cognisance of these findings – that being an SRI constituent alone may not necessarily lead to a superior market value relative to non-SRI-listed mining companies. Thus businesses should be allowed to pursue profit maximisation while attempting to meet social demands, as well as deriving some benefits in the process (Kakabadse et al., 2005). So other factors may need to be taken into account when selecting investment stocks. However, given the ethical importance of CSR and its business case as noted in the literature, the study may not emphasise a strong case for the meaninglessness of CSR in the market. This study cannot either conclude empirically that profit made by a business that has complied with CSR be considered much more legitimate and ethical than what is achieved without CSR, albeit legitimacy and ethical can be achieved on moral and human grounds and therefore in the interests of society. Oikonomou (2011: p57) pointed out further that “potential implications for corporations, investors, various stakeholders groups and society as a whole are tremendous in a cynical world where a pragmatic incentive for ethical corporate behaviour may be the only way towards a better society”. Yet, CSR may mediate the propensity of a corporation that is driven solely by the ethos of capital in a world where benevolence and responsibility are valued and expected. Further, according to Van Wyk, et al.,(2009: p35) “there are low levels of accountability, transparency and commitment to all aspects related to sustainable development and corporate social responsibility in the mining arena of the SADC region and for business in general”. Therefore transnational corporations should direct their CSR programmes on real sustainable development of the public, instead of their own publicity. This will require such organisations to follow international standards and mechanisms guiding real sustainable development (Van Wyk, et al., 2009). However, this study has had no way of measuring whether those mining corporations that apply CSR apply it well enough to have an indicative effect on their market valuation. There is a possibility that where it is applied, CSR is used as a PR gimmick or simple window-dressing to manage and manipulate public opinion. Another study in CSR and the South African mining industry carried the observation that some corporations in the South African mining sector apply CSR as window-dressing and simplistic public relations strategies (Capel, 2009: p5). The indication from this observation by Capel is that CSR itself has probably not been implemented and effected to any meaningful impact in South Africa and for that reason its effect on the market valuations of the concerned companies may not be felt or detected by studies like this and others.

Communities in South Africa, and to an extent the nation as a whole, may not in a meaningful way be experiencing the positive and developmental proceeds and benefits of CSR from the corporates in the mining sector. The abovementioned study of Capel notes that apart from Richtersveld and a small part of Steinkopf, local people of the West Coast are not deriving any benefits from the CSR programmes of these corporations. The challenge has been in the implementation and monitoring of such policies. This has led to severe environmental and social issues within the region. The likely solution to the long term sustainability of the mining industry in the region would be the buy in of the local people. The industry needs support, involvement and possibly shareholding of the local people. Capel (2009:p5), further claims that “the alluvial diamond mining industry on the West Coast is by all accounts in steep decline and may even be considered a sunset industry. It may even be possible that the days of large-scale capital-intensive mining in the area are over", and this paints a difficult CSR picture for both the companies and the communities they operate in. For that reason, no positive results on the market valuations of the mining corporations may easily be yielded and indicated in any study because CSR performance itself appears to be in crisis on the ground. In South Africa, mutually beneficial collaboration among the various stakeholders ("mining companies, civil society, government and communities") is key to the sustainability of the mining industry in the West coast, where business profits are a priority over the rights of the local people; while "CSR often only remains a part of a glossy corporate annual report with little bearing to the reality on the ground", (Capel, 2009; p7).

Van Wyk, et al., (2009) expressed that organisations both locally and internationally have been pressurised to be more responsible and clear about their business operations in the local communities. This involves organisations concentrating not only on profits and production, but also participating in CSR activities that will create sustainable development in a mutually beneficial manner. Nonetheless, the role of policy in intervening has inherent limits while the mere fact that most mining corporations continue to mistakenly confuse CSR programmes to philanthropy and or hand outs to local people has caused various social challenges linked to oversights, purposeful shortcuts and; intended and unintended perversions of information.

It became clear that this study, in measuring the relationship between CSR and the market valuation of mining corporations, might have been measuring a factor the effect of which is a nullity or is in crisis, hence the meaningless margins and insignificant readings that are noted in the results above. Van Wyk, et al., (2009: p7), further observed that "during the 19th century the Kimberley diamond mines gradually came under the exclusive control of De Beers. The fact that the company belonged to Cecil Rhodes, who was also the Prime Minister of the Cape, allowed the company to use the Cape legislature to pass laws that secured cheap labour, resources and the necessary capital to move from alluvial mining to mining at deeper levels". Such behaviour set a wrong foundation for the mining industry in South Africa's history. Since then, the mining sector has continuously wielded excessive power over government that has "blurred the lines between the mining industry and the state, and the interests of influential mining characters and powerful political personalities" (Van Wyk, et al., 2009: p9). The Marikana massacre and present protests and struggles around the mining sector in South Africa do not indicate that the situation of CSR and political influences has changed much. This study can note that allegations of state capture in South Africa where corporations gain favours corruptly from the state and bend rules, may in a way be the tip of the iceberg, as some corporations may be corruptly ducking their CSR commitments with the complicity of some state players.

However, the literature shows that elsewhere, under different historical and political settings, CSR leads to positive market valuation for corporates. For that reason the lack of positive market evaluation for CSR-compliant corporates in South Africa may be pointing to other explanations than the failure of CSR to produce better market valuations for corporations. The expansive literature explored in this study contradicts the conclusions of this study, suggesting that methods and even theory alone may not accurately measure the potency of CSR in practice. For instance, Fry, Keim and Meiners (1982) reveal that firms spending on CSR are able to spend less on advertising. This helps in reducing costs and creating a corporate identity or building the reputation of the firm. Hammond and Slocum (1996) argued that corporate social responsibility can increase the reputation of a company and decrease its financial risk leading to less chances of bankruptcy. Therefore, Klassen and McLaughlin (1996) suggested a theoretical model that ensures strong environmental management that may increase future financial performance of an organisation. In their empirical study, Waddock and Graves (1998) further proved a positive link between corporate social performance and financial performance. On the other hand, Paterson (2000; p 28) argued that "financial incentives are not the key to attracting and retaining quality staff". The study showed that about 82% of UK professionals would decline well-paid job opportunities if the recruiting firm did not respect their values. Daviss (1999) reported that organisations that appreciate their new role as the centre of positive social and environmental change will likely improve their profitability. Lord Clement-Jones also believes that CSR is important for the financial bottom-line of a company and the format of communicating and reporting it is key. The analysis clearly reveals that corporate social responsibility assist companies in developing loyalty with clients, help firms respond appropriately to claims of corporate greediness, minimise chances of expensive class action suits, help in reducing staff turnover and improving staff morale which then facilitates recruiting, motivating and retaining a talented pool of employees and reducing an organisation's equity risk premium. Furthermore, Wilks (2000) argued that the measure of business success should go beyond financial returns to include social and environmental issues. Wilks directly linked the idea of social responsibility to the concept of the triple bottom line. Boutin-Dufresne and Savaria (2004) also indicated that organisations that are socially responsible have “less diversifiable risk” in their stock performance. Crawford and Scaletta (2005) proposed that utilising a balanced score card would provide an effective reporting of CSR. Falck and Heblich (2007: p56) believe “shareholders react favourably towards the stock prices of companies’ strategically practising corporate social responsibility”. In addition, Younghwan, Jungwoo and Taeyong constructed a “corporate transparency index” for the transparency of 237 Korean organisations. Their study revealed that “financial, corporate, operational and social transparencies play an important role in a firm’s profitability”, (p 88). Boorman, (2001) also reported that high staff morale improves the organisation’s bottom line.

This study noted that, in the important critique of eurocentricism the contradictions in the conclusions of the analysis may suggest that the different historical and political settings of a developed economy, methods and even theory may not be applicable to an emerging economy. That the approach of this study gives an indication that there is no relationship between mining companies’ CSR compliance and their market valuation gives an opportunity for future studies to explore the argumentation as a broader, less positivist and humanist, approach to studies and to social understanding and even social justice. Wallerstein, as cited in this study, noted that social science, especially its quantitative category, has been Eurocentric and biased in its take and projects to European societies and Western countries and peoples at large, its categories and purposes do not relate well or sit well with societies and settings of the global south. Wallerstein (1996: p94) concluded in his study that the quantitative social sciences have “the parochiality of its universalism” and have a negative tendency of “its attempts to impose the theory of progress”. In South Africa, Prah, as cited in this study, stated that the social sciences in Africa impose their Eurocentric and Western understanding of life and the world in ways that do not relate to and are not relevant to the history and the lives of the people of the global south. All good knowledge and knowledge production, Prah stated, should bear relevance to the people and communities where it is being applied, and that methodologies and theories should be alive to historical and geographical context. Given the pronouncements of Wallerstein and Prah on the social sciences and their quantitative analysis, this study notes that statistical analysis and its reasoning may not exactly be relevant to the African setting and its unequal, difficult and historically troubled colonial and apartheid background. That statistics and data prove that CSR does not necessarily reflect on a mining company’s market evaluation may be proof that social science and its positivism is designed for capitalists and the profiteering motive at the expense of human and societal welfare and interest. Social benefit, human welfare and wellness are experiences and social benefits do not necessarily respond to quantification and calculation. In the study, Prah (2015) noted that the social sciences and their reasoning are not alive to the history, poverty, social injustice and inequalities that exist in South Africa's post-apartheid and post-colonial setting, hence the merit of the protests and calls to decolonise knowledge production, theories and methodologies in South African higher education. This study may not question the reliability, dependability and repeatability of the results that are discussed above, but here questions the social and ethical relevance of the results that gesture towards the insignificance of CSR to the market valuation of corporations. The results may be true but not right, correct but not ethical, and therefore not exactly sustainable, if humanity is factored in. So the results may be valid but are partial results in that they are bereft of the humanist interpretative approach. The results that are presented and discussed above may be limited by their social, scientific and quantitative nature, a limitation that disables them from relevance to the ethical requirements that corporations face in a society like South Africa in the socially unjust post-apartheid and post-colonial era. Capel (2009:5), as cited in the study, notes that in South Africa as in other African countries, extractive industries benefit from outflows of resources and profits alongside the impoverishments of populations and communities, poor people, including black mine workers, are isolated, marginalised and their communities polluted and underdeveloped. The analysis presented above may be blind to the truth and correctness of the need for the eradication of poverty, local beneficiation and local development. The approach may remain a valid tool of social science but it may not be the only one, as it suffers some glaring blind spots and ethical limits too important to ignore. A research and analysis tool that has an ethical limit needs to be filled up and complemented, or maybe rejected, as ethics are central in research. Social science, in its quantitative angle and less humanist approach, may be observed to be complicit with the hegemonic interests of capital and the tyrannical economic system of capitalism at large, what in South Africa is called and condemned as white monopoly capital. In their study, Nicoleta and Cristian (2014) proved that there is a connection between good business performance and the practice of good corporate social responsibility. A CSR programme can build reputation for an organisation, therefore strategies and decision making done under the programme's watch becomes very important. Hence, it is of paramount importance for an organisation to adopt various characteristics to be able to respond to the interests of the numerous parties that can influence or can be influenced by the business strategy: Vasconcelos (2011) argued that the requirements and demands of humanity through continuing CSR practices ought to be satisfied, its personnel must be appreciated and respected through an unwavering in-house marketing policy, and must reveal efforts towards accomplishing appropriate results in its business processes and be revered. The size of an organisation does not define respect or organisational power over a market. An organisation shows respect through transparent operations, trust shown by stakeholders in its policies, moral behaviour and the social impact the entity has in the local community. The greatest asset a company can have is reputation. This is as a result of the powerful nature of the stakeholders of an organisation such as the – clients, suppliers, and the public- who have a bearing on its profitability and successes. If, as argued here, contrary to the conclusions of this study, corporate social responsibility adds to a company's reputation and that company becomes more profitable by being reputable, this study may have had a limit where it could not measure how profitability in its connection with market valuation derives from CSR. As noted in the literature review chapter, according to D'Silva (2008), a company's pledge to the well-being of the local communities is an effective tool for building brand loyalty among the currently hard to please customers. An organisation's brand is at risk (for instance, to customer boycott) if the company's actions are negligent. Therefore being involved in CSR programmes minimises the likelihood of customer boycotts. In addition, CSR may lead to "sales growth, customer loyalty, improved company image and positive media coverage, but also lower risks" (Simionescu & Dumitrescu, 2014: p 31) and a "competitive advantage" (Porter & Kramer, 2002: p16). Organisations can also avoid losses and utilise their management's leadership expertise to achieve competitive advantage. So corporate social responsibility is not only a risk management tool but also a window of opportunity for generating value for the organisation. (Bassen et al., 2006). Sun and Cui (2014) agreed that CSR has a huge impact on minimising the risk of defaulting, with organisations in volatile environments the biggest beneficiaries than those in less volatile environments. However, Kim et al., (2014) argued that company management that uses CSR as way of covering up bad conduct of shareholders, poses a risk of a big crash for their organisation. On the other hand, gaining consumer loyalty and attracting customers from rivalry organisations can help increase profits and mutually beneficial relationship with suppliers and potential investors can also be a solid basis for competitive advantage, (Dyer & Singh, 1998). Waldfogel, (2003) further alluded that good relationships with local communities can also be a good mechanism for improving profitability of a company. Yet Kemper et al., (2013: p63) found that "CSR becomes a significant moderator of the link between marketing capabilities and performance only in highly competitive industries". According to Brine et al., (2007) operational efficiency can be improved through minimised costs as a result of being involved in CSR programmes. A case in example is an organisation that actively manages social and environmental issues leading to lesser costs of compliance with regulations (Moon, 2007). A research conducted by KPMG (2005: p11) underlined that “a successfully implemented CSR strategy calls for aligning these initiatives with business objectives and corporate values thereby integrating corporate responsibility across business functions and enhancing business reputation”. Nicoleta and Cristian in their study concluded that evidence points to a relationship between good business performance and CSR (Nicoleta & Cristian, 2014: p249).

In their study of Malaysia’s stock exchange, a study which is invoked in the discussion of results of this study, Saleh, Zulkifli and Muhammad (2009) noted that the situation concerning disclosure of CSR information in financial statements is still at an early stage. Their results suggested that CSR has an instant effect on financial performance of Bursa Malaysia listed corporations. It has been shown that there is a significant link between financial performance and CSR for these companies and financial performance react when CSR increase or decrease. Such results are generally supported by studies in some of the developed markets. According to Amran and Devi, (2007: p 63), “CSR, as the decoupling strategy for Malaysian companies, makes them follow business associates from overseas who are already applying CSR reporting and are also trying to be good corporate citizens, for the purpose of obtaining government contracts”. This phenomenon has encouraged most Malaysian corporations to behave socially responsible in their business operations. There is therefore evidence in world case studies, and the results of some studies that CSR makes not only ethical but also business sense in big and small corporates. This study concludes here that the lack of a relationship between CSR and the market valuation of corporations does not radically dismiss the business importance of CSR. Once again the question arises as to whether CSR as applied in the South African mining sector is applied to the full letter and spirit of the practice.

In the presentation of “the business case for CSR” after their studies, Archie and Kareem (2010) noted that there is an inherent belief that being involved in CSR will improve the social environment and in the long term will benefit organisations. Even though businesses’ negative impact on the social environment became the catalyst of the need for CSR, the will to improve local communities has always been in the thoughts of early researchers and practitioners. As time passed by, resources committed to corporate social responsibility increased then questions on the benefits of participating in social responsibility activities surfaced. Archie and Kareem (2010: p14) further noted that “another incentive for the development of the business case was probably a response to Milton Friedman’s continuing arguments against the concept, claiming that businesses must focus only on long-term profits”.

As noted by in this study, observably from scholars (Van Marrewijk & Verre, 2003: p36) and their studies, “corporations around the world are struggling with a new role, which is to meet the needs of the present generation without compromising the ability of the coming generations to meet their own needs”. Local communities are putting organisations to task by requiring that they be responsible for the effect of their business operations on the natural environment and the public. These organisations are being reminded to use sustainable ways of conducting business activities. “Sustainability here refers to an organisation’s activities, typically considered voluntary, that demonstrate the inclusion of social and environmental concerns in business operations and in interactions with stakeholders” (Van Marrewijk & Verre, 2003: p37). In a strong way, as this study has noted, CSR – even if does not in an obvious way deliver proportional prosperity to businesses and their interests – is part of the responsibility even if it is a risk to modern businesses in both the legal and ethical senses. Another argument condemns firms which derive “economic prosperity’ at the expense of other stakeholders who bear the negative consequences of firms’ corporate behaviour. As Van Marrewijk and Verre (2003) echoes, such behaviour among corporations is not acceptable anymore. This argument suggest that organisations should, in the process of profit maximisation, behave as “good corporate citizens”. Therefore, staying in touch with international trends while continuing with their dedication to fulfilling financial duties of providing both private and public benefits has compelled organisations to redesign their agendas, rules and business models. Most organisations are therefore attempting to remain on top of the swiftly shifting challenges by continuously reviewing their short and long term programmes. It is further argued that if a business makes a profit without complying with CSR demands, that profit can be considered illegitimate, corrupt, greedy, unethical or even proceeds of crime, like dirty money. For that reason, one can argue that CSR delivery on its own is profitable, given that a corporation will be fulfilling a central responsibility, duty and demand without which the corporate would not be a legitimate and ethical citizen of the country where it is located. Hence, social responsibility or sustainability is an important piece of literature on business and society, dealing with concepts of “business ethics, corporate social performance, global corporate citizenship and stakeholder management”. With that reasoning, d’Amato, Henderson and Florence, (2009: p65) highlighted that “management education can be an important source of new ideas about shifting toward an integrated rather than a fractured knowledge economy, but this means also that the role and meaning of socially responsible leadership needs to be updated”. They argued that further research is required to provide clarification on what is needed in leadership and the subject of leadership development. Notably, the importance of accountability in leadership is recognised and identified as a procedure that seeks to guarantee integrity of an organisation.

The study noted that in the literature that responsible leadership concerns itself with efforts to resolve and align the varying, needs, interest and values of different stakeholders including, employees, customers, suppliers, local communities, owners of businesses, non-governmental organisations and the local environments. A company that incorporates suitable measures of CSR in its internal systems and supply chain activities will likely generate for itself an effective course of CSR accounting. The theory also shows an increasing demand for good practice in CSR reporting and more calls on non-governmental organisations to demonstrate that they are indeed principled and accountable to those they affect, (Frame, 2005). Social responsibility within South Africa and everywhere else should be firmly deep-rooted in multiple business operators. The need for “sustainability and the new role of business in society” (Blowfield & Googins, 2006: p33), and “increased expectations and new rules and tactics”(Burke, 2005; 21), means business leadership is certain to interact and sometimes clash with multiple key stakeholders in the area of responsible business, international versus regional and local needs, and various national cultures. For that reason, CSR may lead to the avoidance of the strikes and service delivery protests that have become an economic and political problem in South Africa. The Marikana massacre in which many workers were killed by police is a case in point. As shown above, in countries like South Africa, quantitative analysis, observations and arguments are somehow blind to politics and economic ramifications of failure to comply with CSR in the interests of business and society. For instance, Morsing, Schultz and Nielsen (2008: p23) state that “although companies strive to engage in CSR together with their stakeholders, they are simultaneously struggling to understand the true relationship behind this marriage – and first of all, who their stakeholders are”. The literature shows that the even the owners of companies are now part of the greater pool of stakeholders and competing for power with workers, clients, suppliers, rival firms, labour unions, social environment, and local people. While companies measure their profit in financial gains, most of their important stakeholders measure their benefits in terms like welfare, wellness and the health of the environment. The analysis as shown in this study may be valorising financial profit at the expense of experiential profits, which are important to societies where businesses operate, for instance in South Africa, where social justice is important following apartheid. CSR compliance has become part of serious business leadership in the modern world and should be so in South Africa, or else social science will be seen to be complicit with social injustice. McGaw (2005; p 34) considers the “biggest challenge in the field of CSR implementation to be the development of leaders for a sustainable global society, asking what kind of leader is needed for building a sustainable global society and how we can best develop individuals with these leadership capabilities”. McGaw clearly explains that it will not be easy to create leaders for a sustainable global community by simply imagining a progressive change. Howell and Avolio (1992: p 14), also reiterated that “responsible leadership is the art of building and sustaining relationships with all relevant stakeholders, and it requires socialised, not personalised, leaders”. There is need for leaders who can adapt to varying situations, align diverse values into a shared vision, good listener and a servant of people. Hence collective efforts are required from all members of the global community and a responsible leadership devoted to diversity, ethics and values. CSR compliance may be seen to be a mark of modern business leadership, despite technical and quantitative evidence to the contrary. In a way it is more of a sustainable development deliverable and should in a way be part of the measurement for a feasible business.

As noted in the study, Rousseau (2002) observes that the stakeholder theory is one explanation for companies’ adoption of CSR. The stakeholder theory argues that organisations have an obligation towards all parties that are affected by the business operations and as such the organisation need to satisfy the competing interests of these stakeholders. It is thus expected that all stakeholders work with the company for the common benefit. Such collective efforts between the company and its stakeholders create novel solutions that can solve previously gridlocked challenges. This view is in contrast with the economic entity theory which claims that any efforts to use company resources on causes other than profits goes against the purpose of business and the concept of free society. Yet the stakeholder theory is gaining acceptance as a framework for decision making. It appears that CSR itself is a quality and experience that businesses may give and beneficiaries may receive, and not a quantity that lends itself to easy measurement.

In an extensive study of South African business and politics, another scholar whom this study examined, Busacca (2013), narrated the background that the “end of apartheid meant that a black majority ran the government, but a white minority still ran the economy”. At the dawn of democracy, the ruling part ANC established a “Reconstruction and Development Programme” (RDP) to stamp out the legacy of socio economic inequalities brought about apartheid. The programme was meant to resolve the socioeconomic issues like the housing issues, clean drinking water, energy, land reform, healthcare and public works. The programme also acknowledged poverty alleviation and a viable economy to be connected and commonly supportive objectives. Critiques of the RDP argued that the programme was too generous and suffered a lack of real long term goals. This led to the programme being replaced by the Growth, Employment and Redistribution (GEAR) programme in 1996. The new programme "GEAR" was a conventional economic policy with the main goal to decrease the national budget deficit, reduce public debt and spending and to reconfigure state owned assets and maintain high interest rates. At the time of its expiry in 2000, GEAR had achieved some of the goals: decreased inflation, convinced international investors and job creation of about 400 000 jobs. Yet GEAR also failed to meaningfully resolve socioeconomic inequalities and many other goals. Busacca (2013) noted that "in 2001 the government, under the country's second post-apartheid president Thabo Mbeki, created the concept of Black Economic Empowerment (BEE) as the country's newest growth strategy". The BEE was established based on the historical understanding of the country. The history of the country under apartheid witnessed an ethnically divided system which gave whites more privileges to educational opportunities and higher salaries than blacks. The country had highly disproportionate representation in leadership and ownership of resources. A reading of this political and economic background showed the study that CSR can be considered in South Africa as part of the broader process of getting big business to contribute to economic and social transformation after long years of inequalities and apartheid in the country. Busacca (2013: p30) noted: "CSR may contribute to the general uplifting of those historically disadvantaged people that have been discriminated against for centuries." Organisations created a norm of consulting communities about their operational effects on the local environment; and the interests of society and other stakeholders began to be shown in business strategies. These arguments imply that CSR should be measured and examined in close observance of the historical and political context of the countries and communities where it is being applied. A one-size-fits-all approach may conceal rather than reveal the effect or lack of it if CSR's setting and context are ignored.

7.2 Recommendations of the study

Based on the observations, arguments and conclusions that this study made, this concluding chapter submits some recommendations that also derive from the above noted areas of possible future research. This study has established that the data does not deliver a definitive indication of the link between CSR and the market valuation of corporations as noted in the sample studied. The study concludes that businesses still pursue profit maximisation at the same time attempt to meet social demands, as well as deriving some benefits in the process (Kakabadse et al., 2005). The findings do not support other studies that were examined, opening up room for suggestions for further studies. The study has also made a recommendations in lieu of policy suggestions for where CSR can be stretched beyond being an ethical and legal issue to a political and developmental issue that is part of the feasibility of a business, and democratic ways used to examine and measure transparently how corporations comply. The methods and theories alone may not be important in establishing the importance of CSR, but humanist and political interventions to insert a developmental and democratic approach to CSR may be essential. In a way, this study further recommends a human factor approach and integration of theoretical perspectives to the future studies and policy-making around CSR in South Africa and the general global south. This study, as part of its contribution, has unlocked some views and ideas for further research to investigate the supposed relationship between CSR and market value in the context of the South African mining sector. These recommendations for further studies are made:

- Theoretical perspectives should be used jointly when attempting to understand the drivers of CSR practices. The literature analysed advocates for complementarity rather than competition among theories. As noted in the study by Islam and Deegan (2008: p356), discussing the theories together "offers a richer basis for understanding" and conceptualising CSR practices than analysing them individually, because none of the theoretical perspectives is independently able to explain the drivers of corporate social responsibility (Gray et al., 1995).
- In the application of CSR, global best standards and practices should be considered alongside the local contextual realities, including the expectations and perceptions of all stakeholders, role players and beneficiaries like communities.
- In a setting like South Africa, CSR should be noted at policy level as part of the reparations towards communities and the solutions of historical social inequalities that were occasioned by apartheid. This follows observations of this study and the background where during the South African Truth and Reconciliation Commission process there was a call for businesses to pay reparations to previously disadvantaged peoples.
- Official mechanisms should be set that enable the state and communities to be able to democratically and transparently measure and be satisfied of the compliance of corporations with the important expectations of CSR compliance, so that it is not left to businesses themselves and scholars in their studies.

- Consistent metrics/variables should be developed to measure CSR of mining firms, which differentiate between dimensions/criteria of CSR performance. This will create more accurate regression models that reflect the relationship between CSR and market valuation.
- The political cycle and media trends' effects on financial outcomes of CSR need further research. Supposing that there is a political party or a coalition that approves of CSR activities by incentivising through tax benefits, companies investing in CSR activities could expect to reap financial benefits under the government of that party.
- The effect of including or deleting a stock from the SRI Index. Institutional investors pay more attention to the SRI index and its constituents, so it is reasonable to believe that including (or deleting) a stock in the index is related to better (worse) market valuation.
- Since this study noted that there are other studies in other countries in which the relationship between CSR and market valuation of corporations was noted to be positive, future studies should assume a comparative approach so as to tease out some unique factors in the South African setting of CSR. A study could also be conducted in the mining sector of another emerging market, or a comparative study of two emerging markets, to provide motivation for a conclusion on the uptake for CSR in the mining sector in emerging markets.
- Future studies should focus on finding new theories, methods and tools of qualifying and quantifying the application of CSR in a developing market in settings like South Africa and the global south at large.
- It is crucial for future studies to consider integrating the theoretical perspectives rather than analysing them in competition. Studies should emphasise the complementarity of theories of CSR practices, rather than substitutability.
- Perceptions, contributions and experiences of stakeholders should be factored and considered in a study that seeks to achieve a global understanding of the effects of CSR.

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9.0 Appendices

Appendix 1: Key terminologies/competing ideas used in the evolution of CSR

- Corporate social responsibility
  - Corporate social responsiveness.
  - Carroll's pyramid of corporate responsibilities.
  - Corporate social rectitude/ethics.
  - Corporate social religion.
- Corporate social valuation.
- Alternative CSRs.
  - Corporate social relationships
  - Corporate social reputation
- Corporate responsibility (CR).
- Stakeholder approach/theory.
  - Instrumental, descriptive, normative, narrative.
  - Stakeholder management.
  - Stakeholder relationships.
  - Stakeholder engagement.
- Business ethics and values, including nature-based values
  - Economising
  - Power aggrandising
  - Ecologising
  - Attunement
- Boundary spanning functions including:
  - Issues management
  - Public affairs
  - Employee relations
  - Investor relations
  - Public relations
  - Customer relations
  - Supplier relations
  - Corporate community relations (CCR)
  - Other
- Corporate Community Involvement (CCI).
- Corporate citizenship (CC).
  - Business citizenship.

Source: Waddock (2004)

Appendix 2: List of mining companies listed on the JSE

Code	Short name	Full name
ARI	ARM	African Rainbow Minerals Ltd
AMS	AMPLATS	Anglo American Platinum Ltd
AGL	ANGLO	Anglo American plc
ANG	ANGGOLD	AngloGold Ashanti Ltd
AQP	AQUARIUS	Aquarius Platinum Ltd
ASR	ASSORE	Assore Ltd
ATL	ATLATSA	Atlatsa Resources Corporation
BAU	BAUBA	Bauba Platinum Ltd
BIL	BHPBILL	BHP Billiton plc
BDM	BUILDMX	Buildmax Ltd
CZA	COAL	Coal of Africa Ltd
DRN	DELRAND	Delrand Resources Ltd
DRD	DRDGOLD	DRDGOLD Ltd
EPS	EASTPLATS	Eastern Platinum Ltd
EXX	EXXARO	Exxaro Resources Ltd.
FSE	FIRESTONE	Firestone Energy Ltd (s)
FSEO1	FIRESTONE OPT	Firestone Energy Ltd (s)
GLN	GLENCORE	Glencore plc
GFI	GFIELDS	Gold Fields Ltd
GBG	GB GOLD	Great Basin Gold Ltd (s)
HAR	HARMONY	Harmony Gold Mining Company Ltd
HWA	HWANGE	Hwange Colliery Company Ltd
IMP	IMPLATS	Impala Platinum Holdings Ltd
IMPCB	IMPL CONV	Impala Platinum Holdings Ltd
KEH	KEATON	Keaton Energy Holdings Ltd
LON	LONMIN	Lonmin plc
MRF	MERAFE	Merafe Resources Ltd
MMH	MIRANDA	Miranda Mineral Holdings Ltd (s)
MMH	MIRANDA	Miranda Mineral Holdings Ltd (s)
NHM	NORTHAM	Northam Platinum Ltd
ORL	OAKBAY	Oakbay Resources and Energy Ltd
PZG	PZGOLD	Pamodzi Gold Ltd (s)
PAN	PAN-AF	Pan African Resources plc
PET	PETMIN	Petmin Ltd
PLL	PLATFIELD	Platfields Ltd (s)
RNG	RANGOLD	Randgold & Exploration Co Ltd
RSG	RESGEN	Resource Generation Ltd
RDI	ROCKWELL	Rockwell Diamonds Inc
RBP	RBPLAT	Royal Bafokeng Platinum Ltd
SMM	SABLEMENTL	Sable Metals and Minerals Ltd
SNU	SENTULA	Sentula Mining Ltd
SGL	SIBANYE	Sibanye Gold Ltd
SAH	SACMH	South African Coal Mining Holdings Ltd (s)
S32	SOUTH32	South32 Ltd
TAW	TAWANA	Tawana Resources NL
THA	THARISA	Tharisa plc
TSX	TRNSHEX	Trans Hex Group Ltd
WCC	WATERBERG	The Waterberg Coal Company Ltd (s)
WSL	WESCOAL	Wescoal Holdings Ltd
WEZ	WESIZWE	Wesizwe Platinum Ltd
		Middle East Diamond Resources Ltd
		Palabora
		Kumba Iron Ore

Appendix 3: SRII Areas of Measurement

AREAS OF MEASUREMENT

ENVIRONMENT

- Address all key issues
- Working towards environmental sustainability

SOCIETY

- Training & development
- Employee relations
- Health & safety
- Equal opportunities
- Community relations
- Stakeholder engagement
- Black Economic Empowerment
- HIV & Aids

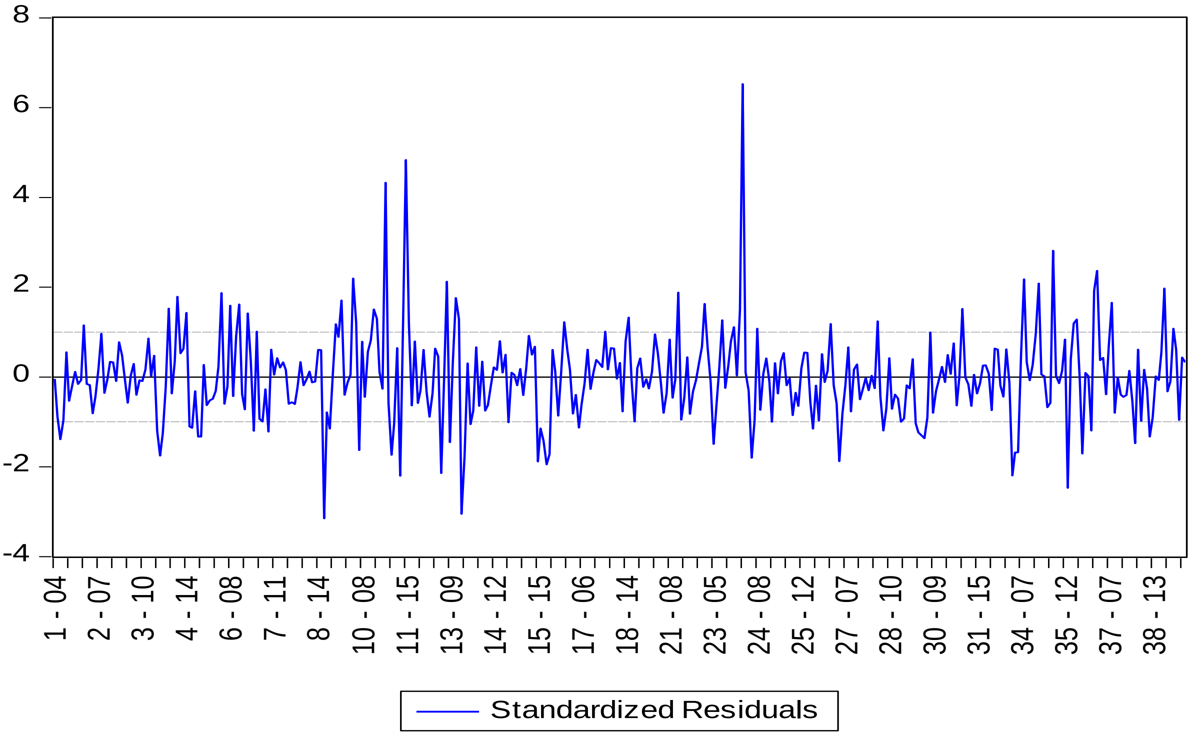
GOVERNANCE AND RELATED SUSTAINABILITY CONCERNS

- Board practice
- Ethics
- Indirect effects
- Business value & risk management
- Broader economic issues

CLIMATE CHANGE

- Managing & reporting on efforts to reduce carbon emissions and deal with the anticipated effects of climate change

Appendix 3: Testing for outliers



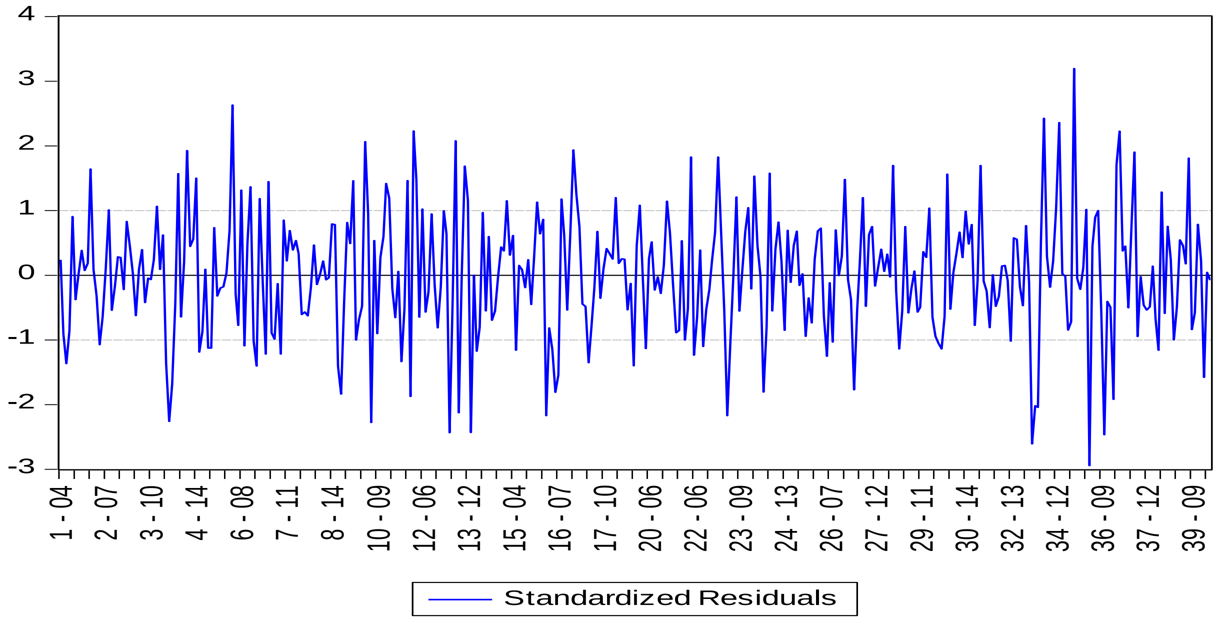
Dependent Variable: RETURN
Method: Panel Least Squares
Date: 04/17/17 Time: 15:44
Sample: 2004 2015
Periods included: 12
Cross-sections included: 38
Total panel (unbalanced) observations: 382
White cross-section standard errors & covariance (d.f. corrected)

Variable	coefficient	std error	t-statistic	prob.
CSR	0.341451	0.150313	2.271604	0.0237
D_E_RISK	0.017557	0.006872	2.554853	0.0111
SIZE	0.036646	0.174453	0.210063	0.8337
C	-0.388270	1.660073	-0.233887	0.8152

Effects specification

Cross-section fixed (dummy variables)

R-squared	0.139371	Mean dependent var	0.093348
Adjusted R-squared	0.038417	SD dependent var	0.508195
SE of regression	0.498338	Akaike info criterion	1.546045
Sum squared residual	84.68414	Schwarz criterion	1.969506
Log likelihood	-254.2945	Hannan-Quinn criterion	1.714042
F-statistic	1.380545	Durbin-Watson stat	1.888953
Prob(F-statistic)	0.069089		



Dependent Variable: RETURN
Method: Panel EGLS (Cross-section random effects)
Date: 04/17/17 Time: 15:47
Sample: 2004 2015
Periods included: 12
Cross-sections included: 38
Total panel (unbalanced) observations: 382
Swamy and Arora estimator of component variances
White cross-section standard errors & covariance (d.f. corrected)

Variable	coefficient	std error	t-statistic	prob.
CSR	0.002378	0.073749	0.032240	0.9743
D_E_RISK	0.015015	0.006367	2.358032	0.0189
SIZE	-0.062644	0.035760	-1.751806	0.0806
C	0.672642	0.300246	2.240305	0.0257

Effects specification

	S.D.	Rho
Cross-section random	0.022840	0.0021
Idiosyncratic random	0.498338	0.9979

Weighted statistics

R-squared	0.035201	Mean dependent var	0.092450
Adjusted R-squared	0.027544	SD dependent var	0.507620
S.E. of regression	0.500558	Sum squared residual	94.71117
F-statistic	4.597138	Durbin-Watson stat	1.683612
Prob(F-statistic)	0.003564		

Unweighted statistics

R-squared	0.035697	Mean dependent var	0.093348
Sum squared resid	94.88546	Durbin-Watson stat	1.680520

Appendix 4: Panel unit root test: data in level

a)

Null Hypothesis: Unit root (individual unit root process)
Series: D_E_RISK, P_B_V, P_CF, P_E, RETURN, SIZE
Date: 11/06/16 Time: 19:09
Sample: 1 391
Exogenous variables: Individual effects
Automatic selection of maximum lags
Automatic lag length selection based on SIC: 0
Total number of observations: 2261
Cross-sections included: 6

Method		Statistic	Prob.**
Im, Pesaran and Shin W-stat		-42.6925	0.0000
Im, Pesaran and Shin t-bar		-16.4744	
T-bar critical values ***:	1% level	-2.33500	
	5% level	-2.10000	
	10% level	-1.97500	

** Probabilities are computed assuming asymptotic normality
*** Critical values from original paper

Intermediate ADF test results

Series	t-stat	prob.	E(t)	E(var)	;ag	max lag	obs
D_E_RISK	-17.381	0.0000	-1.532	0.735	0	16	390
P_B_V	-19.543	0.0000	-1.532	0.735	0	13	366
P_CF	-19.482	0.0000	-1.532	0.735	0	13	365
P_E	-18.701	0.0000	-1.532	0.735	0	13	362
RETURN	-18.377	0.0000	-1.532	0.735	0	16	390
SIZE	-5.3626	0.0000	-1.532	0.735	0	16	388
Average	-16.474		-1.532	0.735			

b)
Null hypothesis: unit root (common unit root process)
Series: D_E_RISK, P_B_V, P_CF, P_E, RETURN, SIZE
Date: 11/06/16 Time: 19:11
Sample: 1 391
Exogenous variables: individual effects
Automatic selection of maximum lags
Automatic lag length selection based on SIC: 0
Newey-West automatic bandwidth selection and Bartlett kernel
Total number of observations: 2261
Cross-sections included: 6

Method	Statistic	Prob.**
Levin, Lin & Chu t*	-36.6390	0.0000

** Probabilities are computed assuming asymptotic normality

Intermediate results on UNTITLED

Series	2nd stage coefficient	variance of reg	HAC of dep.	lag	max lag	band-width	obs
D_E_RISK	-0.87558	13.257	0.2621	0	16	105.0	390
P_B_V	-1.02388	890.80	74.650	0	13	23.0	366
P_CF	-1.00416	2390.3	350.15	0	13	76.0	365
P_E	-0.98660	18826.	117.85	0	13	338.0	362
RETURN	-0.93093	0.3534	0.0178	0	16	41.0	390
SIZE	-0.13882	0.3709	0.1396	0	16	16.0	388

	coefficient	t-stat	SE reg	mu*	sig*	obs
Pooled	-0.59850	-31.140	1.120	-0.501	0.713	2261

c)
Group unit root test: Summary
Series: D_E_RISK, P_B_V, P_CF, P_E, RETURN, SIZE
Date: 11/06/16 Time: 19:12
Sample: 1 391
Exogenous variables: Individual effects
Automatic selection of maximum lags
Automatic lag length selection based on SIC: 0
Newey-West automatic bandwidth selection and Bartlett kernel

Method	statistic	prob.**	cross-sections	obs
Null: Unit root (assumes common unit root process)				
Levin, Lin & Chu t*	-36.6390	0.0000	6	2261
Null: Unit root (assumes individual unit root process)				
Im, Pesaran and Shin W-stat	-42.6925	0.0000	6	2261
ADF - Fisher Chi-square	779.138	0.0000	6	2261
PP - Fisher Chi-square	777.695	0.0000	6	2261

** Probabilities for Fisher tests are computed using an asymptotic chi-square distribution. All other tests assume asymptotic normality.

Appendix 5: Alternative panel unit root testing: data in first difference

a)

Panel unit root test: Summary
Series: D_E risk
Date: 11/06/16   Time: 22:18
Sample: 2004 2015
Exogenous variables: Individual effects
User-specified lags: 1
Newey-West automatic bandwidth selection and Bartlett kernel

Method	Statistic	prob**	cross-sections	obs
Null: Unit root (assumes common unit root process)				
Levin, Lin & Chu t*	-166.609	0.0000	36	307
Im, Pesaran & Shin W-stat	-22.1930	0.0000	36	307
ADF – Fisher chi-square	106.759	0.0049	36	307
PP – Fisher chi-square	142.577	0.0000	36	343

** Probabilities for Fisher tests are computed using an asymptotic chi-square distribution. All other tests assume asymptotic normality.

b)
Panel unit root test: summary
Series: P_B_V
Date: 11/06/16   Time: 22:20
Sample: 2004 2015
Exogenous variables: Individual effects
User-specified lags: 1
Newey-West automatic bandwidth selection and Bartlett kernel

Method	Statistic	prob**	cross-sections	obs
Null: unit root (assumes common unit root process)				
Levin, Lin & Chu *t**	-34.2264	0.0000	32	273
Null: unit root (assumes individual unit root process)				
Im, Pesaran & Shin W-stat	-12.9909	0.0000	32	273
ADF – Fisher chi-square	169.143	0.0000	32	273
PP – Fisher chi-square	197.213	0.0000	32	305

** Probabilities for Fisher tests are computed using an asymptotic chi-square distribution. All other tests assume asymptotic normality.

c)

Panel unit root test: summary
Series: p/cf
Date: 11/06/16 Time: 22:21
Sample: 2004 2015
Exogenous variables: individual effects
User-specified lags: 1
Newey-West automatic bandwidth selection and Bartlett kernel

Method	statistic	prob**	cross-sections	obs
Null: unit root (assumes common unit root process)				
Levin, Lin & Chu *t**	-43.0895	0.0000	32	273
Null: unit root (assumes individual unit root process)				
Im, Pesaran & Shin W-stat	-15.7650	0.0000	32	273
ADF – Fisher chi-square	187.938	0.0000	32	273
PP – Fisher chi-square	279.480	0.0000	32	305

** Probabilities for Fisher tests are computed using an asymptotic chi-square distribution. All other tests assume asymptotic normality.

d)

Panel unit root test: summary
Series: p/e
Date: 11/06/16 Time: 22:22
Sample: 2004 2015
Exogenous variables: individual effects
User-specified lags: 1
Newey-West automatic bandwidth selection and Bartlett kernel

Method	statistic	prob**	cross-sections	obs
Null: unit root (assumes common unit root process)				
Levin, Lin & Chu *t**	-66.1867	0.0000	31	266
Null: unit root (assumes individual unit root process)				
Im, Pesaran & Shin W-stat	-13.1683	0.0000	31	266
ADF – Fisher chi-square	157.164	0.0000	31	266
PP – Fisher chi-square	295.701	0.0000	31	297

** Probabilities for Fisher tests are computed using an asymptotic chi-square distribution. All other tests assume asymptotic normality.

e)

Panel unit root test: summary
Series: RETURN
Date: 11/06/16 Time: 22:22
Sample: 2004 2015
Exogenous variables: individual effects
User-specified lags: 1
Newey-West automatic bandwidth selection and Bartlett kernel

Method	statistic	prob**	cross-sections	obs
Null: unit root (assumes common unit root process)				
Levin, Lin & Chu *t**	-7.14304	0.0000	36	307
Null: unit root (assumes individual unit root process)				
Im, Pesaran & Shin W-stat	-3.08371	0.0010	36	307
ADF – Fisher chi-square	114.881	0.0010	36	307
PP – Fisher chi-square	193.842	0.0000	36	343

** Probabilities for Fisher tests are computed using an asymptotic chi-square distribution. All other tests assume asymptotic normality.

f)

Panel unit root test: summary
Series: SIZE
Date: 11/06/16 Time: 22:23
Sample: 2004 2015
Exogenous variables: individual effects
User-specified lags: 1
Newey-West automatic bandwidth selection and Bartlett kernel

Method	statistic	prob**	cross-sections	obs
Null: unit root (assumes common unit root process)				
Levin, Lin & Chu *t**	-7.21078	0.0000	36	306
Null: unit root (assumes individual unit root process)				
Im, Pesaran & Shin W-stat	-1.67104	0.0474	36	306
ADF – Fisher chi-square	95.0872	0.0356	36	306
PP – Fisher chi-square	120.823	0.0003	36	342

** Probabilities for Fisher tests are computed using an asymptotic chi-
square distribution. All other tests assume asymptotic normality.

Appendix 6: Hausman test

Hausman test for fixed versus random effects model

. hausman fixedpbv randompbv

	---- coefficients ----			
	(b) Fixedpbv	(B) randompbv	(b-B) difference	sqrt (diag (V_b-V_B)) SE
CSR	-1.91176	-1.917234	.0054741	8.054967
Size	.8017596	-.209875	1.011635	3.761095
D_E risk	4.122737	3.747137	.3756	.1733177

b = consistent under Ho and Ha; obtained from xtreg
B = inconsistent under Ha, efficient under Ho; obtained from xtreg
Test: Ho: difference in coefficients not systematic
chi2 (3) = (b-B)'[(V_b-V_B) ^ (-1)] (b-B)
= 5.12
Prob>chi2 = 0.1630

. Hausman fixedpcf randompcf

	---- coefficients ----			
	(b) fixedpcf	(B) randompcf	(b-B) difference	sqrt (diag (V_b-V_B)) SE
CSR	-10.27232	-6.189868	-4.08245	14.42571
Size	9.127371	6.45937	2.668001	6.873328
D_E risk	-.1303076	-.1096202	-.0206875	.298056

b = consistent under Ho and Ha; obtained from xtreg
B = inconsistent under Ha, efficient under Ho; obtained from xtreg
Test: Ho: difference in coefficients not systematic
chi2 (3) = (b-B)'[(V_b-V_B) ^ (-1)] (b-B)
= 0.36
Prob>chi2 = 0.9489

. Hausman fixedpe randompe

	---- coefficients ----			
	(b) fixedpe	(B) randompe	(b-B) difference	sqrt (diag (V_b-V_B)) SE
CSR	1.486574	21.94611	-20.45953	41.22818
Size	-1.800797	.9734112	-2.774208	19.16683
D_E risk	-.3701502	-.1071341	-.2630161	.9075513

b = consistent under Ho and Ha; obtained from xtreg
B = inconsistent under Ha, efficient under Ho; obtained from xtreg
Test: Ho: difference in coefficients not systematic
chi2 (3) = (b-B)'[(V_b-V_B) ^ (-1)] (b-B)
= 0.30
Prob>chi2 = 0.9601

. Hausman fixedr randomr

	---- coefficients ----			
	(b) fixedr	(B) randomr	(b-B) difference	sqrt (diag (V_b-V_B)) SE
CSR	.4031919	.0723701	.3308218	.1769015
Size	.0070483	-.0914722	.0985205	.078893
D_E risk	.0197225	.0161981	.0035243	.00318

b = consistent under Ho and Ha; obtained from xtreg

B = inconsistent under Ha, efficient under Ho; obtained from xtreg

Test: Ho: difference in coefficients not systematic

chi2 (3) = (b-B)'[(V_b-V_B) ^ (-1)] (b-B)

= 5.06

Prob>chi2 = 0.1676