Full Length Research Paper

The impact of corporate social responsibility on the profitability of listed retailers: Indication from the Johannesburg Security Exchange (JSE)

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Compliance to the corporate social responsibility (CSR) by firms has been more of a regulatory requirement rather than a social obligation. While a few firms have entrenched policy structure to actuate meaningful responsiveness to their operating community, compliance by a host of other companies to the statutory provision in this regard has been proven to be difficult. This research examines the extent to which the adoption of CSR affects the profitability of the listed retailing firms on the Johannesburg security exchange (JSE). This research applies regression analysis as well as analysis of variance (ANOVA), using SPSS statistical package, to analyse the relationship between the financial performance of these firms, and their CRS responsiveness. The finding suggests that CRS engenders good perception of organisations by consumers and regulatory bodies in a way that favourably improves the organisation's corporate financial performance (CFP). This paper looks at the profitability of organisations as regards CSR from two perspectives namely, the consumer loyalty and consumer bias that creates favourable corporate goodwill of being socially responsible, and the possible financial savings from spending less on ‘forced’ social responsibility.

Key words: Corporate social responsibility (CRS), retailers, financial performance.

INTRODUCTION

The increasing global economic meltdown has created uncertainty in the labour market as well as the decline in the general public confidence in the real economy; more and more attention is shifted to what organisations can do for the society through corporate social responsibility (Hart and Milstein, 2003). Majority of consumers and shareholders are putting pressure on corporate board members and executives to be more responsive on the operational impacts of companies on the environment and society, and to be socially responsive in their drive to achieving the bottom-line (Barrett and Scott, 2001; Tom, 2006).

Simply giving is no longer enough for social investment. There seem to be inexorable shifts within the broader corporate social responsibility and corporate investment on a global scale; a strategic move to align corporate social responsibility (CSR) with corporate strategy (Hart and Milstein, 2003). This is intended to achieve better efficient use of corporate skills and abilities to maximise community investments. This strategy also poses to bring messages of social responsibility closer to the brand proposition, and to accurately measure impacts of investments both on the economy and society at large (Tom, 2006; Business Report, 2009).

There are also shifts reflected in the power relationship between business and society. Today, shopping is seen...
as politics by society, essentially in the advanced economies where consumers are of the view that they vote every time they patronise a brand (Barrett and Scott, 2001). The overwhelming consumer choice has given customers the power to vote with their wallets for those companies whose actions and products they endorse; in that consumer choices are no longer only about the utility of the product bought, but increasingly about what those products represents and the companies behind those products (The Sustainable Handbook, 2009).

The marketplace is used to represent a facilitative trading space, but now it has become an arena of critical societal reflection; one in which sophisticated consumers and consumer-lobby groups are equally concerned about the merits of companies’ production and trading practices as they are about a particular product or service (Business Report, 2009). Sustainable market practices are not merely about avoiding risk but about creating opportunities for better bottom-line, and this have shown that there are more prospects to companies willing to embrace change (Greening and Turban, 2000).

Conceptual appraisal

This paper views CSR from the perspectives of the supply and demand theory of CSR (Smith, 1994; Anderson and Frankle, 1980; Freedman and Jaggi, 1982; McWilliams and Siegel, 2001). The theory postulates that firms will proactively respond to the demands of their external environment in a strategic way that will ensure profit maximisation. In essence, firms will satisfy the level of environmental and social obligations that is placed on them by their external operating environment as a strategic instrument to maximising profit, by applying ‘sustainability lenses’ that is necessary to strategically segregate stakeholders’ value creation strategies (Hart and Milstein, 2003; Colbert et al., 2008).

It has been argued that CSR spending is determined by the level of a firm’s profitability rather than a proactive instrument to achieve profitability (Atkins, 2006). In this instance, CSR spending is viewed as a reactive measure towards achieving organisational sustainability (Robinson and Coulter, 2006). This school of thought adopts the resource-based view (RBV) approach, and purviews CSR as the internal organisational resources that build competitive advantage by enabling a strategic adaptation to the external environment (Harrison and St John, 1996; Litz, 1996; Hilman and Keim, 2001; Patrick and Quinn, 2001).

This viewpoint is also supported by Hart (1997) and Hart and Milstein (2003). These authors are of the opinion that CSR challenges managers to adapt to global drivers of change, by adopting appropriate global benchmark that allows the firm to segment shareholder value creation strategies. These strategies advocate the stakeholder inclusion in strategy formulation and the focus is on building firm competitive advantage through strategically orientating and directing resources towards perceived demands of stakeholders.

Conversely, Porter and Kramer (2002) are of the view that CSR is a competitive driver to be resourced by firms. These sentiments are echoed by Bruch and Walter (2005) and Smith (1994) that firms elect to engage in philanthropic efforts that are supported by the core competencies of their organisations as well as to adapt to stakeholder expectations in order to generate sustainable performance with regards to stakeholder needs and the firm’s competitive needs. Hart and Milstein (1999) are of the view that corporate giving can increase consumer name recognition, improves customer attitudes towards the company and potentially improves the firm’s sales. This position was also buttressed by other authors such as Cooley (1995) and Tom (2006).

Atkins (2006) describes in a nutshell what CSR really means to investors and consumers: being transparent in your financial reporting; producing quality products and not misrepresenting it; not using predatory practices in offshore manufacturing; letting the public know about the product that endangers the consumers; not polluting your environment or other environment, and being respectful, fair and open in employment practices. Willard (2002) suggests that, large companies of 500 employees or more that strategically employs CSR can increase profits by as much as 38% and small to medium enterprises (SME’s) can increase profits by up to 66%. Willard (2002) further observes that environmental regulations can easily sideswipe companies, so one committed to sustainable development will face lesser risks and probably attract easier financing. Crampton and Patton (2008) further suggest that CSR can help recruit qualified employees, increase retention of good employees and improve employee productivity, which benefits the area of human resources. Another merit of CSR lies in the view that companies that make sustainability an important part of their strategic business approach are better positioned for long-term growth and profitability (Cooley, 1995; Atkins, 2006).

Caribbean Business (2004) reveals that when traditional customer – buying criteria, such as price, quality, and convenience are equal, 81% of consumers would switch brands if a company practiced CSR. This further suggests that if ethics fails to persuade a firm to conform to CSR practice, the bottom line certainly should. In other words, the more a firm applies CSR as a core of its business practices, the more profitable and competitive the company becomes. A survey conducted by the UK Social Market Foundation, showed that 82% of consumers prefers to purchase goods and services from companies that are socially and environmentally responsible, even though their prices might be expensive (The Sustainable Handbook, 2007).

The question that now arises is: how do CSR help organisations to save costs? In the first place, human
resources was mentioned earlier as one area, other areas include: savings through staff retention; ability to generate funds through mutual funds investible only in socially responsible companies; and through sales not only from consumer goodwill inspired by CSR, but also from the sales of non-traditional products launched to take care of pressing social or environmental needs.

It is noteworthy that CSR does not just add new costs or obligation for companies, but can also bring benefits that are crucial in making companies profitable (Smith, 1994; Crampton and Patton, 2008). The Dow Jones sustainable index has increased by 108% since 1993. With this in mind, it is believed that CSR can help companies achieve their objectives in terms of reducing costs, boosting productivity and improving quality and customer service, because the lack of it undermines employee morale and quality (Business Europe, 2001).

Also, the argument advanced in support of consumer-patronage suggests a consideration for increasing CSR participation by firms. For instance, capital market studies have established a good relationship between environmental commitment of firms and their ultimate financial performance (Magnness, 2007). This is further supported by other studies where it was found that companies that proactively manage environmental and other social responsibility issues enjoy higher returns (Petkus and Woodruff, 1992; Wallard, 2002; Crampton and Patton, 2008). More specifically in the pulp and paper industry, it has been established that companies which make forward-looking investments in environmental controls have higher share prices than companies that merely comply with control regulations, and companies with lower effluent emissions have better share returns than competing companies with higher emissions (Petkus and Woodruff, 1992).

CSR is viewed as a company’s commitment to minimising or eliminating any harmful effects and maximising its long-run beneficial impact on society (Douglas et al., 2004). It is also noteworthy that a good number of conscious consumers read organisations’ CSR reports. In one of the surveys conducted by Business Environment (2004), it was found that many respondents from the participating countries concur to the fact that reading or hearing about companies’ CSR reports improved their impression of the company and led them to buy the company’s products and, consumers positively disposed to recommend the company to others.

More and more industries are embracing CSR practices, not only to generate goodwill but because they also hold the potential to increase profitability (Business and Environment, 2007). The sensitivity of consumers to retailers, being the nosepiece between consumers and producers, makes the retailing industry very sensitive (Business Environment, 2004). Poor CSR record may arguably precipitate a firm falling into abeyance for patronage. The allegation of poor customer orientation levied against some of the South African giant retailing outfits in the early 2002, as exasperated by the recent price fixing allegations of 2008/2009/2010, consummates interest in the level of CSR involvement of this sensitive sector.

**Corporate social responsibility (CSR) and retail business in South Africa**

The history of big business in Southern Africa is inevitably and closely tied-in with the discovery of precious metals and diamonds (Thompson, 1995). This led to the limited linkages created by mining industries and, the demand for consumer goods provided stimulus for industrial development. The restructuring of conglomerates, as well as privatisation of the state’s steel and chemicals interests, brought more efficient mineral-related operations and a sharper profit focus but not strong enough local value chains (Smith, 1994; Kroon, 1997; Machaka and Roberts, 2003). This move has been marked by the shift in the JSE listing index, as more and more companies were restructured. The post 1999 era saw a move towards privatisation, which led to a noticeable increase in the number of firms engaged in financial, retail and other services (Chabane and et al., 2006). Some of these organisations include MTN, Netcare; Pick n Pay, and Edcon, and the Shoprite Group.

Another event that totally restructured the business landscape in South Africa was the introduction of the broad based black economic empowerment (BBBEE) Policy, which furthered the restructuring program for parastatals, in terms of promoting the empowerment of historically disadvantaged communities (Maseko, 1999). In the early 1990’s, control of large South African companies was placed entirely in the circuit of big conglomerates such as Anglo American Corporation (AAC). This situation has improved as a noticeable percentage of this control has gradually been transferred to fund management institutions, who are now estimated to be the largest shareholders on the JSE (Financial Mail, 2005).

Since 1994, South Africa has been faced with challenges of re-integration into world markets as a global economy, while at the same time positioning itself to realise the high expectations of its populace regarding a successful transition towards a more democratic order. To achieve the objectives of economic growth through competitiveness on the one hand, and employment generation and income redistribution as a result of this growth on the other, South Africa’s small-, micro- and medium-sized enterprise (SMME) economy has been actively promoted since 1995 (Berry et al., 2002). SMMEs as enterprises have been identified to be economically strategic to the South African economy. This sector is observed to be capable of contributing to a country’s national product by either manufacturing goods of value, or through the provision of services to both
consumers and/or other enterprises (Chabane et al., 2006). This encompasses the provision of products, and to a lesser extent, services to foreign clients, thereby contributing to overall export performance and foreign earnings.

The retail business in South Africa has relatively proven to be impervious to the recent economic meltdown that ravaged the advanced economies between 2008 and 2009, as reflected in their books of record. Earlier in 2007, one of the mining giants in the country, Anglo American observes that sustainable development is central to the way they do business, as they constantly seek ways of improving their practices to ensure that their employees, local communities, government and society realise benefits from their operations, and view them as preferred partner for the future (The Sustainable Handbook, 2007).

The development of sector charters for BBBEE, as well as the development of socially responsible investment index on the JSE, had played an important role as drivers of CSR in South Africa. The University of South Africa Centre for Corporate Citizenship, Institute of Business Science and the Graduate School of Business at the University of Cape Town are among the drivers that have demonstrated an increasing focus on corporate citizenship in South Africa over time (Louw and Venter, 2006).

Although, CSR has continued in recent times to gain momentum, it is not only a new scientific, political, social and legal concept, but an entirely new business philosophy based on a new mythology. It requires that business thinks differently about its role in a society and how it goes about what it does (Sunter and Visser, 2002). This is supported by Tom (2006) as she sees CSR movement as one that is growing to a point where ignoring it could be detrimental to a company’s bottom line. CSR is now regarded as a business commonplace globally, especially in the retail sector of the economy. Whether it is banking services in Soweto, mobile phones in Lagos, or food chains in Mumbai, these marketers are regarded as the fortune at the bottom of the pyramid. Lessons could be learnt from certain retailers, like Nike; as it was hard hit by USA universities and colleges campaigning against the use of sweat shops (Hill, 2011). Shell is no exception as it was accused of destroying ecology in the North Sea when it sank its oil, an action that precipitated petrol bombs being thrown at service stations in Germany (Louw and Venter, 2006). It is well documented that oil workers are kidnapped in the Niger delta over Shell’s poor environmental records in that region (Hill, 2011). While McDonald’s bears American image, it had to change its menu to accommodate the fight against obesity, thereby improving its brand reputation in US and the European Union. According to the Old Mutual’s marketing and corporate director Crispin Sonn, corporate social investment and transformation have become a daily part of business life, and creating a social return is as important as creating financial dividends if one wants to stay in the business (Sunday Times, 2009). He is of the opinion that helping to create wealth and helping to transform the economy at all levels improves their corporate image, which in return bolsters their business performance. It is not surprising to find big corporations such as Woolworths, Pick n Pay, Spar, to mention but a few, with their known product prices, still gaining momentum on the bottom-lines. It has been established that a company’s corporate social responsibility record has an impact on the bottom line through its effect on the company’s reputation. This has persuaded these big corporations to maintain a known record of social and environmental activities (Tom, 2006; Carrillo, 2007). Consumer and customer sensitivity to sustainability issues is posing new challenges to companies concerning how products and services are manufactured, positioned, packaged and distributed. Corporations in this regard could run a risk of decline in sales volume if consumers consider such products to be unacceptable, especially on the CSR performance of the manufacturers. By positioning existing products and services appropriately based on sustainability criteria, companies can enhance their appeal relative to competitors (Willard, 2002; The Sustainable Handbook, 2007).

The CSR prescripts suggest that good citizenship should not only be for the fear of exposure for wrongdoing. It is a business commonplace that good companies, just as good individual citizens, appreciate how important it is to contribute to a more stable and prosperous society. A few good examples such as First National Bank (FNB), the Amalgamated Banks of South Africa (ABSA), NEDBANK as well as Standard Bank are documented on their CSR performance in 2006/2007. One could argue that corporate behaviour that diminishes risk while capitalising on opportunity, is likely to enhance corporate prosperity. On the other hand, ignoring the signals of social and environmental risk will ultimately necessitate disaster recovery or damage control, as unforeseen events impact negatively on operations (The Good Corporate Citizen, 2004).

**EMPIRICAL RESEARCH**

This research adopts a positivist approach. It critically evaluates available literature on the impact of CSR on financial performance of firms. It uses the available data set to test the research hypothesis. A series of tests were conducted to justify the position taken by the authors. The theoretical a priori expectation is that, we expect the distress ratio, return on equity and return on capital employed to be positively related to total capital employed, suggesting that there is relationship between the CSR performance of these listed retailers and their financial performance. The literature survey supports this assumption as it is well documented that high CSR performance of organisations designates a high financial performance. The model specified in this analysis runs thus:

\[
ROE_t = \beta_0 + \beta_1 TCAP_t + \beta_2 ROG_t + \beta_3 DSTRatio_t + \epsilon_t
\]

Where:
Table 1. Model fitting information.

<table>
<thead>
<tr>
<th>Model</th>
<th>-2 Log likelihood</th>
<th>Chi-square</th>
<th>Df</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intercept only</td>
<td>1861.147</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Final</td>
<td>0.000</td>
<td>1861.147</td>
<td>180</td>
<td>.000</td>
</tr>
</tbody>
</table>

Link function: Logit.

Table 2. Goodness-of-fit.

<table>
<thead>
<tr>
<th>Chi-square</th>
<th>Df</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pearson</td>
<td>2083.950</td>
<td>31324</td>
</tr>
<tr>
<td>Deviance</td>
<td>880.771</td>
<td>31324</td>
</tr>
</tbody>
</table>

Link function: Logit.

ROE = Return on Equity in period t  
TCAP = Total capital employed in period t  
DST Ratio = distress ratio as a ratio of TCAP at time t  
TCAP = Total capital employed at time t  
\( \varepsilon_t \) = the white noise error term

**ANALYSIS AND RESULTS**

The data used in this research is generated from the McGregor Bureau for Financial Analysis (BFA) Research Domain. The data is generated for all the listed retailers on the Johannesburg Security Exchange (JSE), except for the newly listed that do not have complete data for the period between 1997 and 2010. For the purpose of this research, three criteria are used to measure a company’s corporate social responsibility performance, namely their size, their importance to investors and consumers (Ofori and Hinson, 2007; Globe and Mail, 2009). The company’s size is measured by their total capital employed, rather than by their market caps as suggested by some authors (Eccles et al., 2009). This assumption is made on the premise that capital employed is a better reflection of a company’s ability to source and employ funds, more effectively than the markets caps, which is a reflection of a firm’s total equity currently available on the stock market.

Although, the market caps have been used widely by authors and organisations as a measure of an organisation’s size, it should be noted that the market caps is not a general indication of a firm’s capital value (Young, 1911; Lang and Lundholm, 2000; Abdolmohammadi, 2005). Firstly, the market caps of a firm fluctuates from time to time, based on the market swings. Secondly, it represents a small portion of the firm’s shares and not the entire corporate shareholding. Thirdly, the fluctuation of the value of market caps of a firm may fluctuate for reason far beyond performance for example: acquisition, divestitures and stock repurchases. The importance of CSR to investors is measured by the firms’ distress ratio, while the importance of CSR to consumers is measured through the firms’ profitability.

Also, return on capital is used instead of net profit, being a true reflection of a firm’s financial performance. Distress ratio and return on equity (ROE) are used to assess the firms’ ranking by investors. While ROE indicates the financial gains of investing, the distress ratio signals to the financial strength of an organisation. In essence, a rising distress ratio generally bespeaks increased urgent need for capital by an organisation. Although, it is potentially a herald to higher defaults provided it is accompanied by a credit crunch (Taub, 2007) as experienced during 2008/2009.

Table 1 contains analysis to test the fitness of the model specified. As a statistical prescript, the model fitting information contains information on the fitness of a model as suggested by the interaction of the intercept and the model estimate. The likelihood ratio chi-square with a p-value of less than 0.0004 tells us that our model as a whole fits significantly better than the model with no predictors (the “intercept only” model). This simply implies that the model specified does not fall in the region of rejection, as its predictive ability is significantly significant.

Table 2 contains a test of goodness of goodness of fit of the model specified. It establishes whether or not the observed frequency distribution of the variables tested in this model differs from a theoretical distribution. More specifically, the degree of freedom between Pearson test and Deviance are equal, indicating that there is good fitness of fit of the model specified; that all the variables considered in this analysis a significant correlation at 1% level. This suggests that return on equity, return on capital employed, total capital employed, and the distress ratio all points to a company’s corporate social responsibility performance, as measured by their size, their importance to investors as well as to consumers.

The problem of positive serial correlation is not strong as indicated by the Durbin-Watson of 1.129. The basic
Table 3. Model summary\textsuperscript{a,c}.

\begin{tabular}{l}
\textbf{Durbin-Watson} \\
1.129* \\
\end{tabular}

\textsuperscript{a}Predictors: DST Ratio, TCAP' 000, ROC' 000; 
\textsuperscript{b}dependent variable: ROE 000; 
\textsuperscript{c}Linear regression through the origin

statistical rule is that the Durbin–Watson statistic should be greater than 1, and if it is less than 1, there is evidence of serial correlation; but if it is less than 2, there is no evidence of serial correlation. The statistical prescript further suggests that there will be problem of autocorrelation if the Durbin-Watson figure is greater than 2. The 1.129 figure recorded in this model suggests that there is no problem of serial or autocorrelation in the model specified.

Table 4 contains the coefficients of the dependent variable and the independent variables. The values contained in Table 4 reflect the change in the predicted value of the dependent variable (ROE) for a one unit increase in the predictor variables (TCAP, ROC, and DST Ratio). Thus, a \( \beta \) coefficient of 1.0 would indicate that for every unit increase in the predictor, the predicted value of the dependent variable also increases by one unit (Norusis, 1990). In this analysis, given that there are three correlated predictors in the model, the B coefficient is known as a partial regression coefficient, and it represents the predicted change in the dependent variable when that predictor is increased by one unit while holding all other predictors constant. Here, the table reflects a strong positive regression between ROE and ROC, as well as ROE and DST Ratio; suggesting that an increase in ROE will trigger a 1.054 increase in ROC and 0.531 in DST Ratio. The influence of any change on TCAP is very weak. This outcome is strengthened by the zero-order correlation of 0.97 and 0.6 respectively for ROC and DST Ratio respectively as opposed to TCAP of 0.4. Without any form of overlap between the dependent variable and the independent variables, ROC (0.96) and TCAP (0.45) appears to have stronger relationship with ROE than DST Ratio (0.15). This result is also strengthened by the part (Semi-Partial) correlation values.

The result of multicollinearity test suggests that there is no problem of co linearity in the model. The statistical standard is that the greater the values of the variables to 1, the better. Co-linearity becomes an issue if the value is less than or equals to 0.01 (Tabachnick and Fidell, 2001). This result is further supported by the VIF figure which is less than 10 for all the variables considered. Table 5 contains the further results of co-linearity test. The most important values here are the condition index contained in the third column of the table. These values are important because they measure the extent to which one dependent variable depends on another. Multicollinearity is present if the condition index is equal to or greater than 30, and at least two variance proportions for a particular independent variable are greater than 50 (Meyers et al., 2006). From Table 5, all the values are in the single digit, confirming that multicollinearity is not a problem in the model. The results contained in Tables 3, 4 and 5 are clear indications that the model specified does not fall in the region of rejection. That is, the financial performance of listed retailers on the JSE is influenced by their CSR performance. In essence, there is positive relationship between the financial performance of these organisations and their CSR performance.

This conclusion is further strengthened by the scatter plot graph (Figure 1). From Figure 1, it is evident that there is good positive relationship between all the predictor variables and the dependent variable in this analysis; given that the residual revolves around the mean (the straight line).

Figure 1 indicates correlation among the variables considered in this research. The scatter plot reflects a normal distribution; in that the residuals in the regression are normally distributed, which is an assumption of regression analysis. This plot is more or less a linear line, indicating positive linear correlation. This interpretation reinforces the hypothesis that the more firms engage in CSR, the better their overall corporate performance. The regression equation for this model reads:

\[
ROE = TCAP \times 0.002 + ROC \times 1.054 + DSTRatio \times 0.531
\]

Conclusion

This research has been able to establish that there is a positive relationship between TCAP, ROC, DST ratio and ROE. This conforms to the research hypothesis that suggests a positive relationship between corporate financial performance and the CSR performance. The JSE’s socially responsible investment (‘SRI’) index was launched in May 2004 in response to the unrelenting debate around corporate social responsibility of firms. This initiative stems out of the global outcry over sustainability issues worldwide, and particularly in the South African context. During that year, only four retailers listed on the JSE formed part of the SRI index constituents. The first SRI ranking in 2006 that featured 57 constituents (of which 9 are from the retail sector), featured the highest ranked retailer in the 12th position. The rest others are ranked 18, 20, 26, 43, 45, 48, 51, and 52.

The 2007 ranking is nothing different except that the rated best retailer in 2006 in the 20th position climbed to 11th position, and previous 45th climbed to 37th position. The previous champion slid from 12th to 13th position. So also is the previous number 18th that slid to 25th position, and the previous number 26th fell to 32nd position. The result is generally the same for all these retailers for the year 2007. The 2008 ranking did not present anything different for none of the retailers fell within the favourable
Table 4. Coefficients.

<table>
<thead>
<tr>
<th>Model</th>
<th>Unstandardized coefficient</th>
<th>Standardized coefficient</th>
<th>t</th>
<th>Sig.</th>
<th>95% confidence interval for B</th>
<th>Correlation</th>
<th>Co-linearity statistics</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>Std. error</td>
<td>Beta</td>
<td></td>
<td></td>
<td>Lower bound</td>
<td>Upper bound</td>
</tr>
<tr>
<td>1</td>
<td>TCAP 000</td>
<td>0.002</td>
<td>0.000</td>
<td>0.124</td>
<td>7.260</td>
<td>0.000</td>
<td>0.001</td>
</tr>
<tr>
<td>ROC 000</td>
<td>1.054</td>
<td>0.023</td>
<td>0.910</td>
<td>44.843</td>
<td>0.000</td>
<td>1.007</td>
<td>1.100</td>
</tr>
<tr>
<td>DST Ratio</td>
<td>0.531</td>
<td>0.268</td>
<td>0.040</td>
<td>1.979</td>
<td>0.049</td>
<td>0.002</td>
<td>1.060</td>
</tr>
</tbody>
</table>

Table 5. Co-linearity diagnostics\(^a,b\)

<table>
<thead>
<tr>
<th>Model</th>
<th>Dimension</th>
<th>Eigen value</th>
<th>Condition Index</th>
<th>Variance proportions</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>TCAP' 000</td>
<td>ROC' 000</td>
<td>DST Ratio</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>1</td>
<td>1.790</td>
<td>1.000</td>
<td>0.10</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>0.800</td>
<td>1.496</td>
<td>0.90</td>
</tr>
<tr>
<td></td>
<td>3</td>
<td>0.410</td>
<td>2.089</td>
<td>0.00</td>
</tr>
</tbody>
</table>

\(^a\)Dependent variable: ROE' 000; \(^b\)linear regression through the origin.

Figure 1. Normal probability plot of regression standardized residual.
ranking brackets of low or medium environmental impact assessment. The situation remains largely the same for the 2009/2010 periods.

It is imperative to note that there is noticeable relationship between the financial performance and poor CSR ratings of these firms. While their SRI ranking dwindles, so also is their financial performance over this period. It is no gainsaying that most of the firms that are low on SRI ranking have been subjected to a series of allegations ranging from price fixing, through to collusion and noncompliance to CSR regulatory provisions. As suggested by their annual books of record, their financial performance have been increasingly affected in a negative way.

REFERENCES


