A Study of Corporate Social Responsibility and Working Capital: Evidence from the United Kingdom

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Abstract: Literature on corporate social responsibility (CSR) tends to focus attention on the relationship between CSR and profitability to the neglect of working capital even though working capital management affects profitability and firm value. This study therefore shifts attention to the examination of the relationship between CSR and working capital using companies listed on the main London Stock Exchange from 2005 to 2012 using panel data design and regression analysis. The results showed that there is a non-significant positive association between CSR and working capital. Varied findings were, however, obtained for Asset to Equity, Size and Growth. The paper therefore recommended proper policy formulation and implementation of CSR practices as investment opportunities since the practice has the potential to enhance short term liquidity positions of the listed companies.

Keywords: Stewardship Theory, Working Capital, Corporate Social Responsibility, Shareholder Value and Stakeholder Theory.

I. Introduction

For several decades, literature has acknowledged social responsibilities as an important corporate duty that should be undertaken in the interest of defined stakeholders (Quinn, Mintzberg and James, 1987). In order to protect the interest of key stakeholders, earlier researchers tend to focus their research interest more on the causal relationship between corporate social responsibility (CSR) and financial performance. The results of these studies do not discourage CSR activities by firms, though there exist a portfolio of mixed findings. As a result, scholars and academicians continue to emphasize the involvement of businesses in social decision making processes through such activities as CSR. The reality, however, is that literature seems to be populated with studies on CSR and financial performance with very little work on the relationship between CSR and working capital of firms though working capital has influence on firm financial performance and shareholder value creation. The strength and image of corporations have become a dominant issue such that engagement in the conduct of corporate social responsibility generates visibility and influence (Abdullah and Valentine, 2009). According to Bernstein (2000), CSR as a concept, is important because of the widespread recognition that businesses have moral dimension and therefore have to contribute to the welfare of society in the same manner that governments, charities and individuals are expected. CSR demands are considered legitimate as is silently embedded in social contracts with the host communities. Furthermore, it is argued that companies represent essentially an important sector not merely because of their size and wealth but also because they possess a great deal of resources or expertise with the capability and experience to tackle important social issues (Davis, 1973). According to Lev, Petrovits and Radhakrishnan (2010) charitable contributions appear most effective in enhancing revenues particularly in the consumer sectors, such as retailers and financial services; and limiting increases in government regulation in some instances(Godfrey, 2009). Thus in some cases government institutions and legislators are the ones that apply and demand social responsibility contributions from firms on behalf of the communities. The evidence of improving image or reputation, brand name, customer loyalty and laying firm foundation for the process of legitimacy are very common since the inception of CSR literature.

Often, research on the topic has always emphasized how CSR is linked to business profitability rather than on the liquidity of corporations. Indeed, this is quite understandable since in every business venture, the most important financial objective is to earn profit. However, the nature and strength of liquidity is very crucial in determining profitability and empirical consideration in CSR research is most important. That is, the ability of a company to honor its short term financial obligations when they fall due. Thus increasing CSR at the expense of liquidity can result in dire consequences for the firm. Such a firm may just be inching towards insolvency or bankruptcy. For these obvious reasons, working capital issues which concern short-term assets and liabilities need to be given proper consideration because they relate to both liquidity and profitability of a company. The
main focus of this paper is therefore to examine the relationship between CSR and Working Capital through the lens of stewardship theory using evidence from UK companies listed on the main London Stock Exchange.

II. Related Literature

Despite the rich literature on CSR, it is impossible to put forth a straight definition. This is because CSR is synonymous with other concepts (Matten and Crane, 2005), one of which is that CSR is an obligation to constituent groups in society other than stockholders and beyond that prescribed by law and union contract, and this is because it distinguishes two broad critical dimensions- the legal responsibility provided by law and the social responsibility as commitment outside the law.

Theoretically, CSR issues have also transcended its narrow conceptualization many years ago. Today, theories that provide the baseline for consideration spanned finance, management, marketing, psychology among others. Nonetheless, for the purposes of this paper, the stewardship theory has become the fulcrum CSR discourse. According to Donaldson & Davis (1991), stewardship theory emphasizes not on an individual self-interest but rather on the role of executive management and how they are perceived as stewards who integrate their goals to benefit the organization and the owners and limiting any self interest and opportunistic motive. The essential goal is to do a good job, to be a good steward of the corporate assets (Donaldson & Davis, 1991). The theory emphasizes mutuality managerial and firm goal that places the stewards’ satisfaction and motivation as a function of organizational success.

From the position of Davis, Schoorman & Donaldson (1997), a steward protects and maximizes shareholders’ wealth through firm performance, because by so doing, the steward’s utility functions are maximized. These authors see the steward as corporate executives or managers who work to protect and maximize value for shareholders. Here, the manager can achieve corporate goal of wealth maximization for shareholders by serving multiple interests which invariably means indulging in CSR using corporate resources but in the interest of the manager and shareholders. According to Vaisanen (2006), a steward who successfully improves the performance of the organization generally satisfies most groups (stakeholders) and establishes last legitimacy for the firm but such image and legitimacy become meaningful when the firm remains on the path of liquidity which is key in working capital management.

The main striking distinction between the stewardship and agency theories is the fact that in the agency theory, ownership of the modern corporation is separated from its control so that the agent who is engaged by the owner/principal to administer the corporation does not always maximize shareholder value, and returns may fall below what they would have been if the owner/principal were to exercise direct control. The point of departure of this theory is that the interest of the manager and the owner are at variance (Berle and Means 1932; Jensen and Meckling 1976) and a typical example is where the manager satisfies multiple stakeholders through such activities as CSR to further the manager’s cause and reduce returns attributable to owners (Friedman, 1970).

Empirical evidence on the subject, as already explained, centres mainly on investigating the linkage between CSR and firm profitability rather than CSR and working capital. This paper takes a look at some of these past studies. The current paper uses a greatly improved source of data on CSR) and as indicated by the results of Waddock and Graves (1997) there exists clear empirical linkage between financial and social performance in which they found corporate social performance to be positively associated with prior financial performance, supporting the theory that slack resource availability and corporate social performance are positively related. Their results also support the theory that good management and corporate social performance are positively related.

Orlitzky, Schmidt, Rynes (2003), conducted an integrative, quantitative study into the relationship between CSR and financial performance using meta-analysis of 52 studies and a total sample size of 33878 observations. The meta-analytic findings suggest that corporate virtue in the form of social responsibility and, to a lesser extent, environmental responsibility is likely to pay off, although the operationalizations of CSR and corporate financial performance (CFP) also moderate the positive association. This meta-analytic finding established a greater degree of certainty with respect to the CSR–CFP relationship.

Lee and Park (2010) further analyzed the issue among airline companies. The study primarily focused on the impact of CSR in three different forms, that is, linear, quadratic and cubic on the financial performance of the airline companies using two measurements: value and accounting performance. Data were obtained from secondary sources of the selected companies. The results of the regression analysis showed that CSR has a significant positive relationship with firm value performance but has no impact on accounting performance among the selected companies.

More so, a recent study by Ikharehon (2014) on the impact of corporate social responsibility (CSR) on firms’ profitability among selected quoted Nigerian firms between 2003 and 2012 revealed that a significant and negative relationship exists between CSR and profitability of the selected quoted firms during the period under
review. The author thus recommended, among other things, a wide range of multi-tiered awareness campaign among various stakeholders on CSR advantages.

Clearly, corporate managers regard CSR initiatives as catalyst to achieving their ends, however, even more important is working capital management which greatly influences profitability. If for several decades scholarship works should be devoted to determining the sign, impact and causality of CSR and profitability relationship, then it is also prudent to investigate the CSR practices on working capital as well because of the broader effects of working capital on profitability.

### III. Methodology and Hypothesis

To help examine the relationship between CSR and working capital comprehensively, the study adopts quantitative study with emphasis on panel design. This paper focuses on 43 UK companies listed on the main London Stock Exchange after successfully passing the following criteria: 1) have a complete data on their CSR expenditures 2) have their current assets divulged from their current liabilities. The study period was chosen primarily to include most of the companies and covered 2005 to 2012 with 344 observations. The secondary data were collected from the audited annual reports of the listed companies and the relevant information on the variables extracted. The data were also screened using panel unit root, correlation, collinearity and heteroskedasticity consistent covariance test (white).

Panel unit root test is used because according to Levin, Lin and Chu (2002), traditional time series unit root tests are known to have limited power against alternative hypotheses with highly persistent deviations from equilibrium and so the pooling approach yields higher test power than performing a separate unit root test for each individual. Similarly, Breitung and Pesaran (2005) argued that the application of unit root and co-integration tests to a panel of cross sectional units was to gain statistical power and to improve on the poor power of their univariate counterparts. The correlation matrix is also important because of the need to ensure that there is an established relationship between the dependent and the independent variables, and between the independent variables. Goodwin and Leech (2006) explained that for measurement aimed at obtaining validity and reliability, and that many multivariate statistical procedures build on, or are extension of simple correlation. The study also performed collinearity diagnostic on the variables in order to ward against multicollinearity and as part of multiple regression procedures. Last but not the least, the results of the Fixed Effect Model is to be interpreted based on the heteroskedasticity consistent covariance test (white) so as to validate the error terms. The estimation tools used in this study are Eviews 7 and SPSS (16.0) and all results are interpreted on an alpha level of 5%.

### Variable Description and Hypotheses Development

In discussing working Capital, Nazir and Afza (2009) indicated that short term assets and liabilities’ management are very important for firm’s liquidity and profitability, while Padachi (2006), noted that efficient working capital management is a fundamental corporate strategy. The researchers are also of the opinion that working capital represents the cash available for day-to-day administration of the companies and very crucial for their existence. To this end, this study measures working capital by the ratio of current assets to current liabilities since, in general terms; it determines the ability of the business to meet its short term liabilities as traditionally and widely used in the working capital literature (Mohamad and Saad, 2010).

CSR: Qualitative measures of CSR performance such as corporate social responsibility disclosure (CSRD) indices have often been criticized to be bias and unreliable. For instance, Wood and Jones (1995) argued that Moskowitz ratings merely represent one person’s judgment of how well a company is or is not meeting its social responsibilities; and that using fortune ratings as an indicator of social performance could be seen as similar to asking the foxes how well they keep guard over the henhouses and using KLD data represent a numerically crude scale and an attempt to quantify the nearly unquantifiable. To avoid these confusions, the CSR used in this study is the various expenditures incurred by the selected companies on fulfilling their social obligations since it shows consistent application of the same criteria; independent of the researcher, use of both internal and external sources of information that add reliability and objectivity to the assessment process. According to Carroll and Shabana (2010), the gesture is not a new phenomenon. It has also being found useful by previous researchers such as Ikharehon (2014).

Firm Risk: Caballero, Teruel and Solano (2009) posited that higher leveraged firms have to maintain lower level of working capital in order not to increase the costs of investment, affirming Jensen & Meckling’s (1976) argument that when a firm’s debt increases, it increases the information asymmetry between creditors and shareholders. An empirical study by Chiu, Cheng and Wu (2006) to test this assumption demonstrates a reduction in the measures of working capital management when firms increase their leverage. Based on these arguments, it is anticipated that the relationship between the two constructs will be negative. In this regard, debt is explored further in this study by using equity multiplier (i.e., asset to equity).
Firm Size: Firm size is used in this study because it has a major influence on working capital requirement decisions. For instance, the study of Gill (2011) on 166 Canadian firms listed on the Toronto Stock Exchange for a period of 3 years from 2008-2010 indicated a negative relationship between firm size and working capital requirements and explained that larger firms have lower working capital requirements than smaller firms. Similar results and suggestion was made by Abbadi and Abbadi (2013) that larger firms require lower investment in working capital which may be due to their power over suppliers and thus can have longer period for their payables. This paper tests this assumption by using natural log of total assets.

Firm Growth: The effect of growth opportunities on firm’s working capital cannot be overemphasized. A company anticipating increases in growth is likely to increase its investment in working capital. This is so because according to Scherr and Hulburt (2001), when firms are well grown they are better prepared to continue this growth into the future. However, Cunat (2007) argued that firms with high growth rates tend to rely more on trade credit as a source of financing their growth, since they might have more difficulty in accessing other forms of finance. Again, Emery (1987) opined that companies could give more credit to their customers in order to increase their sales in periods when they have low demand. In view of these contrasting arguments and following the work of Gill (2011), the current study measured firm growth as the ratio of current sales minus past sales all on past sales.

Hypotheses Development

In view of the arguments put forth concerning the variables included in this study, these hypotheses are tested.

H0: there is no significant relationship between CSR expenditures disclosed and working capital.
H1: there is a significant relationship between CSR expenditures disclosed and working capital.
H0: there is no significant relationship between firm risk and working capital.
H1: there is a significant relationship between firm risk and working capital.
H0: there is no significant relationship between firm growth and working capital.
H1: there is a significant relationship between firm growth and working capital.
H0: there is no significant relationship between firm size and working capital.
H1: there is a significant relationship between firm size and working capital.

Model Specification and Estimation

Based on the main objective and the hypotheses of this study, the estimated econometric model is established below:

\[ WC_i = f(CSRED_i, AE_i, SIZE_i, G_i) \]  \hspace{1cm} (1)

In explicit terms, model 1 becomes:

\[ LWC_i = \alpha_0 + \alpha_1 LCSRED_i + \alpha_2 LAE_i + \alpha_3 LSIZE_i + \alpha_4 LG_i + \epsilon_i \]  \hspace{1cm} (2)

Where:

- WC = Working capital or liquidity (cash) and defined as current assets on current liabilities
- CSRED = Corporate social responsibility expenditures disclosed and defined as the absolute corporate social responsibility expenditures disclosed
- AE = Firm Risk or equity multiplier and defined as total asset on total equity
- SIZE = Firm size and defined as total asset
- G = Firm Growth and defined as current sale minus previous sale all on previous sale
- L = Natural log
- \( \epsilon \) = Error term
- \( \alpha_0 \) = Constant term
- \( \alpha_1 - 4 \) = Coefficients to be estimated
- it = Cross-sectional time series dimensions of the variables

IV. Empirical Results And Discussions

Descriptive Statistic

Table 1 shows the descriptive statistics of the variables used in the study. As can be observed from Table 1, the median working capital of the listed companies for the study duration is 1.306907 and dispersed by 0.506921. This indicates that averagely, the listed companies have a liquidity level of about 130.6907% for honouring their current obligations. More so, Table 1 reveals a median value of 62371.50 social expenditures incurred by these listed firms out of their total corporate income. This is deviated by about 117188. For debt (AE), a median of about 2.350884 is reported with a quartile deviation of about 1.074742. The implication is that about 235.0884% of these companies assets are held by creditors. Similarly, SIZE shows a median of

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9.62E+08 (Quart. Deviation = 1462339875). In real term, this averaged a total asset of 92600000000. The growth rate of the companies is about 0.044023 and deviated quarterly by about 0.074197. In terms of percentages, this growth averaged 4.4023%. In cases where the listed companies pursue aggressive growth agenda, liquidity problems could be an issue because much resource will have to be spent in this regard.

Table 1: Descriptive Statistics

<table>
<thead>
<tr>
<th>WC</th>
<th>CSRED</th>
<th>AE</th>
<th>SIZE</th>
<th>G</th>
</tr>
</thead>
<tbody>
<tr>
<td>Median</td>
<td>1.306907</td>
<td>62371.50</td>
<td>2.350884</td>
<td>9.62E+08</td>
</tr>
<tr>
<td>Maximum</td>
<td>33.10386</td>
<td>16000000</td>
<td>38.61219</td>
<td>4.73E+10</td>
</tr>
<tr>
<td>Minimum</td>
<td>0.193446</td>
<td>250.0000</td>
<td>1.139036</td>
<td>10634000</td>
</tr>
<tr>
<td>Skewness</td>
<td>5.705005</td>
<td>4.237709</td>
<td>5.264230</td>
<td>3.629072</td>
</tr>
<tr>
<td>Quart. Dev.</td>
<td>0.506921</td>
<td>117188</td>
<td>1.074742</td>
<td>1462339875</td>
</tr>
</tbody>
</table>

Panel Unit Root Test Results

A summary of the panel unit root tests are presented in Table 2. The results indicate that at 5% alpha level, all the variables are co-integrated or stationary at level. This show of stationarity is an indication that estimating equation 2 would not produce spurious regression.

Table 2: Panel Unit Root Results

<table>
<thead>
<tr>
<th>Variable</th>
<th>LLC</th>
<th>IPS</th>
<th>ADF-Fisher</th>
<th>PP-Chi-sq</th>
</tr>
</thead>
<tbody>
<tr>
<td>LWC_t</td>
<td>0.0000</td>
<td>0.0131</td>
<td>0.0008</td>
<td>0.0026</td>
</tr>
<tr>
<td>LCSRED_t</td>
<td>0.0000</td>
<td>0.0001</td>
<td>0.0000</td>
<td>0.0000</td>
</tr>
<tr>
<td>AE_t</td>
<td>0.0000</td>
<td>0.0011</td>
<td>0.0002</td>
<td>0.0001</td>
</tr>
<tr>
<td>SIZE_t</td>
<td>0.0000</td>
<td>0.1227</td>
<td>0.0106</td>
<td>0.0067</td>
</tr>
<tr>
<td>G_t</td>
<td>0.0000</td>
<td>0.0005</td>
<td>0.0001</td>
<td>0.0000</td>
</tr>
</tbody>
</table>

Correlation Matrix

Table 3 shows the correlation matrix results for the five variables. It also displays their significant values. Every variable is obviously correlated perfectly with itself (i.e, r = 1). Natural log of CSRED_t is negatively related to natural log of cash or liquidity (WC_t) with a correlation coefficient of -0.224369 which is significant at p-value of 0.0000. This indicates that as the amount of CSR expenditures increase by 100%, liquidity decreases by about 22.4369%. The output also shows the natural log of risk (AE_t) is negatively related to LWC_t with a coefficient of -0.038087 but which is non-significant (p-value = 0.4814). There is also a negative correlation between LSIZE_t and LWC_t, with a coefficient of -0.252432 and a significant p-value of 0.000, while LG_t is positively related to LWC_t but again with insignificant p-value of 0.5250. The correlation between firm size and liquidity means that an increase of about 100% in size will lead to about 25.2432% decrease in liquidity. Further details about the correlation results can be obtained in Table 3.

Table 3: Correlation Matrix Results

<table>
<thead>
<tr>
<th>Correlation Probability</th>
<th>LWC_t</th>
<th>LCSRED_t</th>
<th>AE_t</th>
<th>LSIZE_t</th>
<th>LG_t</th>
</tr>
</thead>
<tbody>
<tr>
<td>LWC_t</td>
<td>1.000000</td>
<td>----</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>LCSRED_t</td>
<td>-0.224369</td>
<td>1.000000</td>
<td>0.0000</td>
<td>----</td>
<td></td>
</tr>
<tr>
<td>AE_t</td>
<td>-0.038087</td>
<td>0.410459</td>
<td>1.000000</td>
<td>----</td>
<td></td>
</tr>
<tr>
<td>LSIZE_t</td>
<td>-0.252432</td>
<td>0.746232</td>
<td>0.615824</td>
<td>1.000000</td>
<td>----</td>
</tr>
<tr>
<td>LG_t</td>
<td>0.034390</td>
<td>0.049839</td>
<td>0.089184</td>
<td>-0.021490</td>
<td>1.000000</td>
</tr>
<tr>
<td></td>
<td>0.5250</td>
<td>0.3567</td>
<td>0.0987</td>
<td>0.6912</td>
<td>----</td>
</tr>
</tbody>
</table>
Collinearity Results
The estimated collinearity results are presented in Table 4. As can be seen, the results do not indicate the presence of multicollinearity. The Tolerance and the Variance Inflation Factor (VIF) are above 0.1 and below 10 respectively.

Table 4: Collinearity Statistics

<table>
<thead>
<tr>
<th>Independent Variables</th>
<th>Tolerance</th>
<th>VIF</th>
</tr>
</thead>
<tbody>
<tr>
<td>LCSR$_{it}$</td>
<td>0.434</td>
<td>2.306</td>
</tr>
<tr>
<td>LAE$_{it}$</td>
<td>0.603</td>
<td>1.658</td>
</tr>
<tr>
<td>LSIZE$_{it}$</td>
<td>0.321</td>
<td>3.118</td>
</tr>
<tr>
<td>LG$_{it}$</td>
<td>0.970</td>
<td>1.031</td>
</tr>
</tbody>
</table>

Hausman Test
The Hausman test used to determine between the fixed effect and the Random effect models is shown in Table 5. The p-value indicates the rejection of the null hypothesis (i.e., Random effect model is appropriate) in favour of the alternative (i.e., the Fixed effect model is appropriate).

Table 5: Hausman Test

<table>
<thead>
<tr>
<th>Test Summary</th>
<th>Chi-Sq. Statistic</th>
<th>Chi-Sq. d.f.</th>
<th>Prob.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cross-section random</td>
<td>9.810449</td>
<td>4</td>
<td>0.0437</td>
</tr>
</tbody>
</table>

Empirical Results
Based on the statistics in Table 6, an R-Squared of 0.806636 means that, on the whole, the independent variables explained about 80.6636% variations in the dependent variable. A look at the prob( F-statistic) of 0.000000 also indicates fitness of the model. Empirically, the results also reveal that there is a positive but insignificant relationship between working capital and CSR at 5% alpha level. Though the result shows that an increase in CSR by 100% will lead to about 0.0950% increase in working capital, this result is not statistically different from zero. In view of this, the study failed to reject the null hypothesis. Theoretically, the study confirmed the Stewardship Theory because there is an indication of a positive association which means that a manager’s decision to engage in social activities could be worthwhile for shareholders by improving corporate liquidity and profitability.

On the contrary, risk is negative and significantly related to working capital at 5% alpha level. A 100% increase in risk will cause working capital to decrease by about 29.6387%. This suggests that an increase in the debt portfolio of the listed companies impact negatively on these companies’ liquidity by limiting or reducing their current assets. The study therefore rejects the null hypothesis in favour of the alternative. Size also shows a positive but insignificant relationship with working capital. With this outcome, the study failed to reject the null hypothesis. Size might impact favorably on working capital but the evidence is not overwhelming to reject the null hypothesis and so disconfirming the evidence of Abbadi and Abbadi (2013). Additionally, Growth shows a negative but insignificant relationship with working capital at 5% significant level. Consequently, this study failed to reject the null hypothesis. The study also agrees with the past findings of Gill (2011).

Table 6: The Fixed Effect Model Results

<table>
<thead>
<tr>
<th>Dependent Variable: LWC$_{it}$</th>
<th>Variable</th>
<th>Coefficient</th>
<th>Std Error</th>
<th>t-Statistic</th>
<th>P-Value</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>LCSR$_{it}$</td>
<td>0.000950</td>
<td>0.029749</td>
<td>0.031949</td>
<td>0.9745</td>
</tr>
<tr>
<td></td>
<td>LAE$_{it}$</td>
<td>-0.296387</td>
<td>0.087054</td>
<td>-3.404623</td>
<td>0.0008</td>
</tr>
<tr>
<td></td>
<td>LSIZE$_{it}$</td>
<td>0.003810</td>
<td>0.080599</td>
<td>0.047273</td>
<td>0.9623</td>
</tr>
<tr>
<td></td>
<td>LG$_{it}$</td>
<td>-0.006172</td>
<td>0.007673</td>
<td>-0.804378</td>
<td>0.4218</td>
</tr>
<tr>
<td></td>
<td>C</td>
<td>0.499108</td>
<td>1.596961</td>
<td>0.312536</td>
<td>0.7549</td>
</tr>
</tbody>
</table>

R-Squared = 0.806636  
Adjusted R-Squared = 0.776687  
F-statistic = 26.93400  
Prob(F-statistic) = 0.000000  

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V. Conclusion

Literature has primarily focused attention on the relationship between CSR and profitability to the neglect of working capital even though working capital management affects both profitability and firm value. This study thus focused on how CSR affects working capital because higher returns to shareholders very much depend on efficient management. The estimated outcomes suggested that there is a non-significant positive association between CSR and working capital. On the basis of the outcomes, it is recommended that there is need to ensure proper policy formulation and implementation on CSR practices as investment opportunities since the practice has the potential to enhance short term liquidity positions of the listed companies.

References


