

CSRs and Their Impacts on Corporate Value

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ABSTRACT

The issue of corporate social responsibility (CSR) has developed rapidly in recent years and has been widely discussed and valued by sectors both at home and abroad. Aside from implementing CSRs, enterprises have also been conducting reports on the subject. Environmental issues have been receiving increasing attention. Since 2002, the relevant authorities in Taiwan, such as the Ministry of Economic Affairs (MOEA), have assisted enterprises in understanding and implementing CSRs. Moreover, MOEA has asked enterprises on specific industries or have substantial scales to prepare CSR reports to provide related information. In this study, we examine whether companies with CSRs have better stock values. We further study the impact of different industries on the implementation of CSRs, such as the financial industry, retail, electronics, manufacturing, and food. Specifically, we examine whether stock value compensation and financial performance will be better than those of competitors and determine if investors give a higher market valuation for companies that implement CSRs—in other words, whether investors will be more inclined to invest in companies with CSRs than in those that do not implement CSRs. This study uses a multi-factor regression model to examine corporate citizenship. The samples are companies listed in Common Wealth Magazine from 2008 to 2017. The selected companies are mostly three-year profit-seeking public companies supervised by the Financial Supervisory Commission. The four criteria of the evaluation criteria are corporate governance, corporate commitment, social participation, and environmental protection. Different scores and average total scores are given, the digitized CSR, information on stock value compensation, financial performance, and company value are adopted. The Taiwan Economic Journal database is used to explore the relevance.

Keywords: Corporate Social Responsibility, Corporate Stock Price, Corporate Value, Corporate Governance, Multi-Factor Regression Model.

INTRODUCTION

In recent years, the issue of corporate social responsibility (CSR) has been widely discussed and valued by sectors both at home and abroad because global environmental issues are having increasing attention. In the past, the general understanding of CSRs was mostly related to the pursuit of the highest profit by shareholders, that is, the theory of enhancing shareholder value (Friedman, 1970). However, with the changes in society, many different issues have been raised, such as corporate ethics, corporate governance, and environmental protection. The CSR cannot

be measured from a single economic level. Therefore, successful enterprises not only need to achieve excellent business performance but also be responsible for all stakeholders, that is, they need to contribute to the overall social environment. The frame of this study is organized as follows: Section 1 introduces the background, motivation and the purposes of this study. Section 2 reviews the correlated literatures. Section 3 develops the research hypotheses and collects data. Section 4 establishes the multi-factor regression model and presents the empirical analyses. The final Section concludes the results of this study.

LITERATURE REVIEW

Although no recognized definition of CSRs exists, CSRs generally refer to the responsibility of business operations to the environment, society, and governance. When companies make profits and are responsible for the interests of shareholders, they are also responsible for their employees, society, and the environment. The standard that indicates that companies must exceed ethical, legal, and public requirements are based on the idea that business operations must be consistent with sustainable development, including adherence to business ethics, production safety, occupational health, protection of the legitimate rights and interests of workers, and resource conservation. Moreover, the impact on all relevant stakeholders must be taken into account when conducting business activities. According to the World Business Council for Sustainable Development, companies must consider not only their own financial and operational conditions but also their impact on society and the natural environment. The World Bank defines the CSR as a collection of business-critical relationships, values, compliance, respect for people, and a collection of policies and practices that are relevant to communities and the environment. Furthermore, it is a commitment to improve the quality of life of stakeholders and contributing to sustainable development.

Caroline Flammer (2013) obtains statistics that show that the proportion of shareholders who pay more attention to environmental CSRs has been increasing in recent years. Shareholders are not only considering companies' profitability but also their contribution to the social environment. In line with this situation, CSRs gradually developed into a mainstream doctrine, which led to the research motivation of this study. Research published by Robert G. Eccles, Ioannis Ioannou, and George Serafeim (2014) of the Harvard Business School and Henry L. Friedman and Mirko S. Heinle (2016) show that the net income, return, and stock value performance of companies that practice CSRs in the long term are significantly better than those of their competitors. Empirical research points out that investors generally give higher ratings to the companies that practice CSRs.

D. Ditlev-Simonsen and Atle Midttun (2011) show that business leaders and NGOs prioritize long-term goals by seeking to create value, with

short-term profits considered CSR incentives. All agree that seeing the benefits from CSR participation immediately is not possible and that they may expect to generate value gains over a longer period of time; thus, this study was conducted over a period of five years. Linda Huguen, Ayalew Lulseged, and David R. Upton (2014) examine the recent CSR reports submitted by the Global Reporting Initiative, whose stakeholders refer to every detail that can affect or individuals and groups that are affected by a company's decisions and actions, including but not limited to employees, customers, suppliers, community groups, parent companies or affiliates, partners, investors, and shareholders. In this case, companies try to integrate social and environmental considerations with the needs of their relevant stakeholders. The number of corporate sustainability reports prepared in response to various company stakeholders has grown significantly. KPMG's 2011 International Corporate Responsibility Report shows that nearly 95% of the world's 250 largest companies practice CSR activities, and nearly half of them claim that their financial value increased after they began to practice CSRs.

Mohammad Jizi, Rabih Nehme, and Aly Salama (2016) believe that a positive correlation exists between stock value and disclosed CSR information. A better and complete CSR report can provide shareholders with additional information to estimate stock value, thereby reducing the problem of information asymmetry. Concetta Carnevale, Maria Mazzuca, and Sergio Venturin (2012) propose another view. Cross-country analysis shows that in some countries, the CSR is related to company value and has a positive impact on stock values. But in other cases, in the publishing industry, for example, the CSR has a negative impact on stock values. Therefore, investors should send their CSR information to their bank's management, requiring investors not only to turn their attention to financial statements, but also to other documents, such as the risk section of the financial statements or the CSR report.

DATA

RESEARCH HYPOTHESES

H1: When a company practices CSRs sometimes, its stock value will be better than that of a company that does not practice CSRs.

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H2: When a company practice CSRs sometimes, its performance and profitability will be better than those that do not practice CSRs.

H3: Investors will give higher market valuations to companies that practice CSRs, thereby increasing their stock values.

DATA COLLECTION

The samples of this study are based on large-scale enterprises (TSEC-listed, OTC-listed, emerging stock company, and public companies) that are included in the Corporate Citizens list of *Common Wealth Magazine*. Enterprises in the same industry that are not listed in the above are included for comparison. The *Taiwan Economic Journal* is used to collect basic financial data and various statistical variables of each enterprise. On the basis of the starting date of the selection of Corporate Citizens by *Common Wealth Magazine*, the period from 2008 to 2017 was used as the sample period.

DEFINITION OF VARIABLES

CSR Variables

All enterprises are acquired from the Corporate Citizens list of *Common Wealth Magazine* from 2008 to 2017. The number of samples in the Corporate Citizens list is set as a dummy variable. For example, if one company is listed one year, then it will be given 1; otherwise, it will be given 0. This will enable us to determine whether the implementation of CSRs affects companies' stock value compensation and performance.

Financial Data Variables

Earnings per share (EPS):

EPS indicates profitability, which can be used to measure stock value but cannot determine the operating performance. High EPS correspond to high profitability per unit of capital, thereby indicating that a high profit can be created with few resources. The calculation is as follows:

$$\text{EPS} = (\text{net profit after tax} - \text{preferred share capital}) / \text{common share capital}$$

Return on assets (ROA):

ROA measures the net profit after tax generated by each dollar asset, reflecting whether an enterprise can effectively use its assets to generate its profitability, which is an important profitability indicator. It is also often used to explain the company's profitability and ability to use its total assets to create profitability for shareholders. The calculation is as follows:

$$\text{ROA} = \text{net profit after tax} + \text{interest expense} \times (1 - \text{income tax rate}) / \text{average total assets}$$

Tobin's Q (TOBINQ):

TOBINQ indicates when a company is willing to conduct new investment activities. TOBINQ is applied to stock investment behavior and can be rewritten as the value of each share of the stock divided by the issue cost per share. When $\text{TOBINQ} > 1$, it means that the market price of the stock is greater than the issuance cost, and the willingness of the entrepreneur to invest increases. Extending the stock investment behavior, when the stock value rises, the issuing companies always increase capital to issue new shares to raise funds to set up a factory. As the stock value rises, the TOBINQ will increase, and the interest in corporate investment will be strengthened. The capital increase activity will be more active.

$$\text{TOBINQ} = \text{company's market value} / \text{asset replacement cost}$$

Return:

annual return rate of individual stocks

$$\text{Annual rate of return} = [(1 + \text{monthly rate of return for the first trading month of this month}) \times (1 + \text{monthly rate of return for the second transaction of this month}) \times \dots \times (1 + \text{monthly return rate of the last trading month of this month})] - 1$$

Other variables: 0

Table 1 shows the other research variables of this study.

Table 1. Other variables

	Abbreviation	Definition
Leverage	LEV	Total Liabilities/Total Asset
Corporate Social Responsibility	CSR	Enterprises acquired from the Corporate Citizens list of <i>Common Wealth Magazine</i> from 2008 to 2017.
Enterprise Scale	SIZE	The natural logarithm total asset of enterprise.
Operating Cash Flow Ratio	OCR	Operating Cash Flow / Total Asset
Sales Growth Rate	SRGR	Current Operating Income/ Prior Period Operating Income +

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		Current Operating Income
Research and Development Expenses Ratio	RDR	Research and Development Expenses / Sales Revenue
Current Ratio	CR	Current Assets / Current Liabilities
Inventory Turnover	IT	Cost of Goods Sold / (Inventory at the Beginning of the Period + Ending Stocks)

RESEARCH RESTRICTION

The samples of CSRs in this study are selected from companies that are listed among the Corporate Citizens in *Common Wealth Magazine*. However, this selection criteria are freely chosen by the company, and no mandatory restriction exists. Thus, this approach may result in the omission of enterprises that practice CSRs but not participate in this list. Moreover, this study selects companies in the electronics, manufacturing, financial, and retail service industries as research samples. Thus, it may not be representative of other industries. The sample period is limited by the list of the Corporate Citizens in *Common Wealth Magazine* beginning in 2008.

$$EPS = \alpha + \beta_1 CSR + \beta_2 LEV + \beta_3 SRGR + \beta_4 SIZE + \beta_5 OCR + \beta_6 RDR + \beta_7 CR + \beta_8 IT + \varepsilon \quad (1)$$

$$RETURN = \alpha + \beta_1 CSR + \beta_2 LEV + \beta_3 SRGR + \beta_4 SIZE + \beta_5 OCR + \beta_6 RDR + \beta_7 CR + \beta_8 IT + \varepsilon \quad (2)$$

$$ROA = \alpha + \beta_1 CSR + \beta_2 LEV + \beta_3 SRGR + \beta_4 SIZE + \beta_5 OCR + \beta_6 RDR + \beta_7 CR + \beta_8 IT + \varepsilon \quad (3)$$

$$TOBINQ = \alpha + \beta_1 CSR + \beta_2 LEV + \beta_3 SRGR + \beta_4 SIZE + \beta_5 OCR + \beta_6 RDR + \beta_7 CR + \beta_8 IT + \varepsilon \quad (4)$$

DESCRIPTIVE STATISTICS

The observed value of this study is 6,780 datasets. The basic statistics of variables are shown in the following Table 2 as follows:

Table 2. The basic statistics of variables

	Sample Size	Mean	Stander Deviation	Mininum	Maximum
CSR	6780	0.1668142	0.3728374	0	1
RETURN	6780	2250667	37.68033	-46.1541	190.2983
ROA	6780	7.712684	9.891175	-17.86	37.6
TOBINQ	6780	6.734522	15.18417	-62.5	43.11
EPS	6780	2.246163	3.394683	-4.1	17.48
LEV	6780	0.3680603	0.2280395	0.0351311	0.952152
SIZE	6780	6.897903	0.9238828	5.260599	9.509887
RDR	6780	5.669627	9.733977	-5.8532	737.61
OCR	6780	0.0716669	0.1070045	-0.2117859	0.4190525
CR	6780	6.013219	269.5486	-63.7	268.69
IT	6780	26.78563	107.4879	-7.24	935.3
CR	6780	293.2439	728.3599	-16.9507	1.4308

ESTIMATED RESULTS

Impact of CSR

on EPS

The Table 3 shows that CSR, LEV, OCR, SRGR, and EPS are positively correlated and significant; SIZE is negatively significant.

EMPIRICAL ANALYSES

Model Setting

The study is divided into four different regression models, using EPS, ROA, TOBINQ, and annual return on stock (RETURN) as constraints to measure company performance and stock returns. Other major variables include CSR, firm size (SIZE), operating income growth rate (SRGR), financial leverage (LEV), research development rate (RDR), operating cash flow ratio (OCR), current ratio (CR), and inventory turnover ratio (IT). As a consequence, the four types of proposed multi-factor regression model are formally given by the following:

Among them, with a P -value < 0.01 , CSR has a significantly positive correlation with the regression coefficient of 0.588592 (T -value = 3.67), and statistical results show that if the company practices the CSR, then its EPS will rise. The regression coefficient of scale to EPS is -0.7781183 (T -value = 9.98), which indicates

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a significantly negative correlation. LEV has a significantly positive correlation with the regression coefficient of EPS of 2.138949 (T -value = 6.97). OCR has a significantly positive correlation with the regression coefficient of

Table 3. Impact of CSR on EPS

EPS	Regression coefficients	T-value	P-value
CSR	0.588592	3.67	0.000***
LEV	2.138949	6.97	0.000***
SIZE	-0.7781183	9.98	0.017**
OCR	11.13624	10.50	0.000***
SRGR	0.0000484	0.23	0.000***
RDR	-0.0084726	-1.39	0.103
IT	-3.228447	-0.96	0.339
CR	0.0202207	1.39	0.165

Note: Superscripts ***, **, and * indicate statistical significance at the 0.01, 0.05, and 0.10 level, respectively.

Impact of CSR on ROA

Table 4. Impact of CSR on ROA

ROA	Regression coefficients	T-value	P-value
CSR	3.280476	9.04	0.000***
LEV	-6.379619	5.30	0.003***
SIZE	0.3157581	1.61	0.000***
OCR	-4.200090	-5.95	0.000***
SRGR	0.002164	4.14	0.000***
CR	-0.1771313	-1.42	0.732
RDR	-0.0622978	-4.05	0.000***
IT	-0.0019001	-1.98	0.000***

Note: Superscripts ***, **, and * indicate statistical significance at the 0.01, 0.05, and 0.10 level, respectively.

The Table 4 shows that CSR, SIZE, SRGR, and ROA are significantly positive; LEV, OCR, RDR, and IT have a significantly negative relationship; but CSR is significantly positively correlated with ROA, thereby indicating that companies that practice CSRs perform better. With a P -value <0.01, the regression coefficient of LEV to ROA is -6.379619 (T -value = 5.30), thereby indicating a significantly negative correlation, and the regression coefficient of OCR to ROA is -4.200090 (T -value = -5.95), thereby indicating a significantly negative correlation. The regression coefficient of SRGR to ROA is 0.002164 (T -value = 4.14), thereby indicating a significantly positive correlation. RDR has a significantly negative correlation with the return coefficient of ROA of -0.0622978 (T -value = -4.05). The regression rate (IT) has a significantly negative correlation with the return coefficient of ROA of -0.0019001 (T -value = -1.98). Table 4 shows that the CSR is

Table 5. Impact of CSR on TOBINQ

TOBINQ	Regression coefficients	T-value	P-value
CSR	0.24194	0.40	0.195
LEV	-13.36025	-10.49	0.050**

11.13624 (T -value = 10.50). Table 3 summarizes the relationships of CSR, LEV, OCR, and SRGR to EPS. All are positively related.

significantly and positively related to ROA. Therefore, the company has a positive impact on corporate social responsibility, and the company's scale, SRGR, and ROA are all positively correlated. LEV, OCR, RDR, and IT are all negatively correlated with ROA.

Impact of CSR on TOBINQ

The Table 5 shows that SRGR, CR and TOBINQ are significantly positive, and LEV, SIZE, and OCR are significantly negative. However, CSR has no significant relationship with TOBINQ. At P -value <0.01, LEV has a significantly negative correlation with the regression coefficient of TOBINQ of -13.36025 (T -value = -10.49), and OCR has a significantly negative correlation with the regression coefficient of TOBINQ of -0.0000718 (T -value = -5.27). SRGR has a significantly positive correlation with the regression coefficient of TOBINQ of 0.0034643 (T -value = 4.03).

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SIZE	-3.963298	12.25	0.000***
OCR	-0.0000718	-5.27	0.000***
SRGR	0.0034643	4.03	0.000***
CR	15.78749	4.41	0.000***
RDR	-0.1907362	-9.97	0.305
IT	-3.7096	-0.15	0.878

Note: Superscripts ***, **, and * indicate statistical significance at the 0.01, 0.05, and 0.10 level, respectively.

The regression coefficient of SIZE to TOBINQ is -3.963298 (T -value = 12.25). The regression coefficient of OCR to TOBINQ is -0.0000718 (T -value = -5.27), thereby indicating a significantly negative correlation, and the regression coefficient of CR to the return on shareholders' equity is 15.78749 (T -value =

4.41). Table 5 shows that the CSR is not significant for TOBINQ; thus, CSR has no significant impact on TOBINQ. SRGR and CR are positively correlated with TOBINQ. LEV, OCR, and SIZE are all negatively correlated with TOBINQ.

Impact of CSR on RETURN

Table 6. Impact of CSR on RETURN

ROE	Regression coefficients	T-value	P-value
CSR	2.826662	-1.46	0.000***
LEV	-6.600335	-1.63	0.000***
SIZE	-0.3185238	-0.31	0.000***
OCR	0.452891	4.93	0.000***
SRGR	0.018411	6.74	0.206
CR	0.5065771	12.01	0.236
RDR	-0.0812927	-1.01	0.031**
IT	-14.80468	9.01	0.339

Note: Superscripts ***, **, and * indicate statistical significance at the 0.01, 0.05, and 0.10 level, respectively.

Table 6 shows that CSR and OCR are significantly positive; LEV, SIZE, and RDR are significantly negatively correlated, and CSR is significantly positively correlated with RETURN. At a P -value < 0.01 , the regression ratio of OCR to RETURN is 0.452891 (T -value = 4.93), and the regression coefficient of LEV is -6.600335 (T -value = -1.63), thereby indicating a significantly negative correlation. The coefficient of SIZE is -0.3185238 (T -value = -0.31) with a significantly negative correlation. Table 6 shows that the CSR is positive for RETURN; thus, CSR has a positive impact on RETURN. Moreover, OCR is also positive for RETURN and are thus related.

CONCLUSIONS

The results of this study show that the EPS, ROA, and RETURN of companies that practice CSRs are better than those of companies that do not undertake CSRs, proving that their profitability, corporate performance, and stock values will be significantly higher. These findings are consistent with the hypotheses of this study. Given that the CSR has become the focus of international capital markets, the Financial Supervisory Commission requires publicly issued companies to disclose CSR

information on a yearly basis in accordance with the "Code of Practice for CSR of Listed Companies," thereby allowing Taiwanese society and investors to begin paying attention to companies' activities. This study find that companies undertake CSRs have significantly better performance indicators, such as stock value, ROA, and EPS. Evidence means that when companies invest in various social welfare activities or fulfill its social obligations and release positive investment information, then these activities may affect investors' perception and investment behavior, and investors will be more inclined to purchase their stocks.

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