9-19-2012

Corporate social responsibility and firm performance : evidence from China

Ho Yin WONG

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CORPORATE SOCIAL RESPONSIBILITY
AND FIRM PERFORMANCE:
EVIDENCE FROM CHINA

WONG HO YIN

MPHIL

LINGNAN UNIVERSITY

2012

CORPORATE SOCIAL RESPONSIBILITY AND FIRM PERFORMANCE: EVIDENCE FROM CHINA

by
WONG Ho Yin

A thesis
submitted in partial fulfillment
of the requirements for the Degree of
Master of Philosophy in Business
(Accountancy)

Lingnan University

2012

ABSTRACT

CORPORATE SOCIAL RESPONSIBILITY
AND FIRM PERFORMANCE:
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by

WONG HO YIN

Master of Philosophy

A series of China’s product safety scandals have recently aroused global concerns over the business ethics and corporate social responsibility (CSR) in China. General public believe that companies have a responsibility towards the society that goes beyond their obligation of maximizing profits. The aims of this research are to understand the development of CSR in China over the past few years and measure the effects of CSR on firm performance by examining the standalone CSR reports for the period 2008-2009. The latest data indicate that Chinese companies have been making progress in their CSR practices. The results of this study show that the prior financial performance is positively associated with CSR disclosure and the CSR disclosure has a significant and positive effect on the firm financial performance in the next year.

DECLARATION

I declare that this is an original work based primarily on my own research, and I warrant that all citations of previous research, published or unpublished, have been duly acknowledged.

(WONG HO YIN)

12 JULY 2012

CERTIFICATE OF APPROVAL OF THESIS

CORPORATE SOCIAL RESPONSIBILITY AND FIRM PERFORMANCE: EVIDENCE FROM CHINA

by
WONG Ho Yin

Master of Philosophy

Panel of Examiners:

SIGNED
Dr LUI Man-ching (Chairman)

SIGNED
Dr YUEN Lai-mei, Susana (External Member)

SIGNED
Dr CHENG Lai-sheung, Suwina (Internal Member)

SIGNED
Dr LO Wai-yee, Agnes (Internal Member)

Chief Supervisor:

Dr CHENG Lai-sheung, Suwina

Approved for the Senate:

SIGNED
Prof. Jesús SEADE
Chairman, Postgraduate Studies Committee

19 SEP 2012
Date

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ACKNOWLEDGMENTS

First and foremost I would like to express my immense gratitude to Dr. Suwina Cheng and Professor Phyllis Mo for their inspiration and motivation during my MPhil study. Second, I thank the panel examiners of my final defense: Dr. Susana Yuen, Dr. Gladie Lui, Dr. Agnes Lo and Dr. Suwina Cheng for their valuable comments and suggestions. My special thanks go to Dr. Suwina Cheng, who has been my supervisor in the past two academic years. As a new researcher, I faced many obstacles, hurdles and challenges. She has been providing me with valuable advices and comments. This study could not been completed without her patience, encouragement and motivation. Various seminars and coursework have made my research life more fruitful and meaningful. Thank Professor Chan Koon Hung and Dr. Suwina Cheng for their encouragement, I attended a conference organized by the International Journal of Arts and Science in France in May 2012. Feedbacks and advices from other scholars are useful and have enriched my research.

CORPORATE SOCIAL RESPONSIBILITY AND FIRM PERFORMANCE: EVIDENCE FROM CHINA

Chapter 1 Introduction

Recently, there have been growing concerns over corporate social responsibility (CSR). Corporate scandals have drawn public attention to the social roles and responsibilities of business enterprises. The general public believes that businesses have responsibilities toward society, and companies are now under intense public scrutiny. CSR has become an important research topic in business studies (Sweeney, 2009). In recent decades, various studies have examined the determinants of CSR and the effects that practicing CSR has on businesses.

The aims of this study are to understand the development of CSR in China and measure the effects of CSR on firm performance. According to the Research Report on Corporate Social Responsibility in China (Blue Book, 2009), CSR implementation and practice are far behind those in other developed countries. This study provides useful information on the early stages of China's CSR development and address two gaps in the literature. First, this is an empirical study focusing on CSR and its effect on firm performance in China since the Shanghai Stock Exchange issued the "Notice on Strengthening Listed Companies' Assumption of Social Responsibility (Shanghai CSR Notice)" and "The Guidelines on

Listed Companies' Environmental Information Disclosure” in 2008. CSR is usually voluntary and companies are not mandated to implement related practices. A better understanding of the Chinese experience would raise the awareness of CSR’s importance and contribute to social development in China.

Second, the relationship between CSR performance and financial performance is complex and inconclusive (Angelidis et al., 2008). Although much research on CSR in China has been carried out recently, few studies have focused on the relationship between CSR and financial performance. This study not only examines that relationship, but also investigates the effects of specific socially responsible activities.

I use simple linear regression models to test the relationship between CSR performance and firm performance in both the current and subsequent years. I investigate the effects of CSR practices on firm performance in terms of economic profits, sales, and market returns to provide new insights into China’s CSR development and its effect on firm performance. Specifically, this study is driven by the following objectives.

Objective one - *To investigate the characteristics of companies that are more likely to issue a standalone CSR report*. Although there has been a significant growth in the number of companies issuing CSR reports, the percentage in China is still low considering the size of the country and the number of organizations. CSR awareness in the business community and the general public is low (Blue Book, 2009). A better understanding of the Chinese companies that publish separate CSR reports may help to promote the practice.

Objective two - *To explain the relationship between CSR contributions and firm performance*. While numerous studies have investigated this relationship, the results are inconclusive. This study examines the relationship between these two sets of variables in a Chinese context. The findings not only pertain to financial performance, but also to sales and market performances, providing comprehensive insights into the CSR concerns expressed by stakeholders, particularly shareholders and customers.

The remaining chapters are arranged as follows - In Chapter 2, CSR is defined and CSR reporting is discussed. In Chapter 3, CSR development in China is addressed. In Chapter 4, the literature on the relationship between CSR and financial performance is reviewed. In Chapters 5 and 6, hypotheses are developed and the research method is illustrated. In Chapter 7, sample and descriptive statistics are reported. In Chapters 8 and 9, findings and conclusions are presented.

Chapter 2 Corporate Social Responsibility

2.1 Overview

Some businesses have generated profit without considering their social responsibilities. The general public expects more of business enterprises; they expect companies to contribute to society, not just maximize profits. In response to supply chain pressure, stakeholder engagement (The Institute of Chartered Accountants, 2004), and wider media coverage (LRQA, 2010), companies are now seeking to improve their sustainability performance and become socially responsible for pragmatic reasons.

2.2 Defining CSR

The terms corporate social responsibility (CSR) and corporate citizenship are used interchangeably (The Institute of Chartered Accountants, 2004). CSR is a broad and complex concept with several definitions. Broadly, CSR is a business's contribution to sustainable development (United Nations, 2007) by meeting the needs of the present without sacrificing the ability to meet those of the future (The Institute of Chartered Accountants, 2004).

CSR also allows companies to voluntarily integrate social and environmental concerns into their business operations and their interactions with stakeholders (European Commission, 2002). It extends beyond legal compliance, and companies are encouraged to voluntarily implement CSR initiatives to address various stakeholder needs.

Businesses engage in CSR activities on a discretionary basis. Viewing CSR as a strategic marketing tool (Qu, 2007) gives them a competitive advantage in the market that may make them more capable of responding to public expectations and fulfilling their social and environmental responsibilities. As a result of these activities, businesses develop a better public image (Lancaster, 2004), which can help companies attract more customers (Ruf et al., 1998) and better employees (Gatewood et al., 1993).

In contrast, if businesses do not perceive the value or benefits of CSR, they may take an obstructive stance toward social responsibility, i.e., their behavior will not meet public expectations (Fischer, 2004). These companies follow Milton Friedman's argument (1970) that, the sole and primary goal of a business is "to make as much money as possible while conforming to the basic rules of the society." As CSR activities do not directly generate returns for businesses, their contributions are sometimes deemed to be a misallocation of funds and may lead to objections from shareholders.

2.3 CSR reporting

Corporate Social Responsibility reporting (CSR reporting) helps to convey information about businesses' CSR initiatives to stakeholders and society. It also reflects their vision, values and personalities. Through CSR reports, stakeholders are able to assess a company's reputation. Therefore, CSR reporting has become a mechanism for promoting business values. According to Craib and PwC (2010), it has "become critical to a company's credibility, transparency, and endurance."

CSR reporting can reduce information asymmetry between companies and their stakeholders. As Generally Accepted Accounting Principles (GAAP) disallow the recognition of intangible assets related to sustainability in financial statements, human and social capital cannot be adequately included in statement of financial position (The Institute of Chartered Accountants, 2004). Consequently, financial statement users may underestimate a firm's value. In practice, CSR reports can help fill this information gap. For example, some companies recognize the net present value of future carbon liabilities and social and human capital in the stand-alone CSR reports, which allow users to assess the effects of CSR performance on firm performance (The Institute of Chartered Accountants, 2004).

If CSR reporting is of high quality, stakeholders are provided with reliable and relevant CSR information that helps to close the information gap between the companies and stakeholders (The Institute of Chartered Accountants, 2004). Therefore, quality CSR reporting increases a company's reputation and strengthens its competitiveness.

However, companies in emerging markets do not fully recognize its importance. According to Alon et al. (2010), Chinese listed companies are less communicative about CSR issues than companies in other developing countries, such as Brazil, Russia, and India. Neither Chinese companies nor their stakeholders are aware of the importance of CSR. As most Chinese companies pursue profit maximizing activities, CSR initiatives may not be fully reported and communicated to the public. If the CSR information, particularly that pertaining to stakeholders' information needs, is not comprehensively presented, then the value of publishing stand-alone CSR reports is reduced. This proposition is in line with Vurro and Perrini's (2011) argument that relevant CSR information helps stakeholders to differentiate between socially responsible and irresponsible companies in emerging economies. Vurro and Perrini investigate the companies in the Fortune Global 100 and confirm that the breadth of CSR disclosure is related to CSR performance, but they reject the proposition that CSR depth is related to CSR performance. Their findings show that the "best social performers from emerging economies are more likely to broaden the disclosure beyond the narrow set of critical areas" (Vurro and Perrini, 2011).

CSR reporting is governed by a third-party standard but the adoption remains voluntary (Vurro and Perrini, 2011). To enhance the credibility of CSR information, CSR reports should be prepared using the Global Reporting Initiative (GRI) guidelines. GRI guidelines include 13 economic indicators, 35 environmental indicators and 49 social indicators. To further improve the credibility of CSR reports and build stakeholder confidence, the reports should be verified by independent auditors.

2.4 The conceptual framework

The specific nature of companies' social responsibilities is controversial. Classical economists argue that companies are only responsible for their shareholders' needs, whereas other scholars argue that corporate responsibilities extend to all stakeholders.

2.4.1 Shareholder theory

According to the shareholder theory, the goal of companies is to maximize shareholders' wealth. Following Milton Friedman (1970), the sole responsibility of companies is to "make as much money as possible while conforming to the basic rules of the society, both those embody in law and those embody in ethical custom." As a company is deemed to be a vehicle for creating wealth for those who risk capital (Greenwood, 2001), maximizing profit is necessary for its survival. As managers have agency relationships with shareholders, they have a fiduciary duty to maximize profit (Friedman, 1970) and will only undertake projects that have a positive financial value.

Therefore, CSR initiatives may lead to objections from shareholders. According to Ruf et al. (1998), CSR contributions are outflows of economic resources that cannot create wealth for shareholders. From the standpoint of the shareholders, CSR contributions ruin their investment. However, shareholder theory does not prohibit CSR contributions that create value (Sweeney, 2009). In this case, the cost-benefit principle dictates a firm's CSR considerations, including contributions and disclosure. Under the shareholder theory, CSR is justified if the related future income is expected to be higher than the current associated costs.

2.4.2 Stakeholder theory

Freeman (1984) argues that companies' responsibilities are not limited to shareholders, but encompass their stakeholders, groups of people who can affect or be affected by the companies, such as employees, customers and financiers. As stakeholders can contribute to a company's wealth capacity (Post et al, 2002), to sustain growth, companies should prioritize stakeholders' interests (Van der Laan, 2009) and take their perspectives and activities into consideration. In this case, CSR disclosure is used as a means of displaying company accountability (Van der Laan, 2009).

The underlying argument has two strands. First, stakeholders provide the resources, such as capital, labor and revenue (Sweeney, 2009). If companies act irresponsibly toward employees, customers, and society, then they risk losing these critical resources. Second, stakeholders are both potential beneficiaries and risk bearers (Post et al., 2002). They are exposed to risks associated with socially irresponsible behavior, such as poor quality products or exploitation of labor and the natural environment. According to the distribution justice principle (Sweeney, 2009), firm's profit should be divided among all of the risk takers, including stakeholders.

Metcalfe's (1998) sub-classification of stakeholders into primary and secondary has helped to clearly define this concept. Primary stakeholders are those whose participation is critical to a company's operation, e.g., customers, employees, and shareholders. Secondary stakeholders are people who affect or are affected by a company's activities, but are not engaged in company transactions, e.g., the media (Metcalfe, 1998). This distinction clarifies the determinants of CSR initiatives.

Stakeholder theory can be broken into three parts: descriptive, normative, and instrumental

(Donald and Preston, 1995). The first is the description of the specific characteristics of responsible companies. The second is the justification for the actions taken by the company based on the moral guidelines (Donald and Preston, 1995). The third is the connection between the stakeholder approach and the desired outcome (Donald and Preston, 1995). It examines the link between CSR performance and firm performance, contributing to the understanding of the instrumental part of this theory.

Stakeholder theory is used to explain the motivations for CSR reporting. Roberts (1992) uses stakeholder theory to analyze the determinants of CSR disclosure using logistic regression. He examines the link between CSR disclosure and stakeholder power, and a firm's strategic posture and past economic performance respectively. Specifically, he uses percentage of ownership, donations to political parties and leverage ratio as proxies for stakeholder power, and the number of public affairs staff and philanthropic foundations as proxies for strategic posture. In addition, he uses stock-market and accounting-based measures to test the effect of economic performance in the previous year on a firm's decision regarding CSR disclosure in the current year. As the information on the proxies for stakeholder power and firms' strategic posture are difficult to obtain from Chinese firms, this study focuses on testing the relationship between economic performance and the publication of CSR reports.

2.4.3 Legitimacy theory

Legitimacy theory is also commonly used to explain the motivations for CSR reporting (Van der Laan, 2009). It states that “the actions of an entity are desirable, proper, or appropriate within some socially constructed system of norms, values, beliefs and definitions” (Suchman, 1995). Accordingly, companies are required to match their behavior to social expectations.

However, legitimacy gaps are common when corporate performance does not match stakeholders’ expectations. According to the Blue Book (2009), nearly half of all stakeholders believe that Chinese listed companies do not show enough concern for the natural environment, their employees, or their customers. Therefore, a company may use CSR disclosure to seek legitimacy from its stakeholders and to fill in the gap between expectation and reality by “demonstrating the appropriateness of its output, methods, or goals through education and information.” (Dowling and Pfeffer, 1975; Lindblom,1993). As a result of these issues, there has been a sharp increase in the number of CSR reports since 2007. In 2007, 38 CSR reports were released in China, compared with the 582, in various forms,released in 2009, compared with that of 38 in 2007 (China WTO Tribune, 2009). This may reflect companies’ perceptions that CSR reports are a legitimacy device to align stakeholders’ perceptions of a company with their expectations of good corporate behavior (Vurro and Perrini, 2011).

Based on the above discussion, I argue that companies use CSR to discharge accountability and legitimize business operations.

Chapter 3 CSR Development in China

Public awareness of CSR in China was low before the mid-2000s. A series of corporate scandals in the 2005-2007 period raised awareness of business ethics and CSR. The food safety and counterfeit product scandals led investors and the public to lose confidence in the companies involved, and this was reflected in the drop in the companies' stock prices and a sharp decrease in sales revenues. As a result, many Chinese companies now recognize the business risks associated with social obstruction and have changed their attitudes toward CSR.

A series of product safety incidents involving food and other products have drawn considerable public attention, leading to rising concerns over businesses' social responsibilities. The Chinese government and the general public now have higher expectations of Chinese companies' CSR performance. According to the Blue Book (2009), nearly 96% of customers claim that they intend to purchase products from socially responsible companies and 90% of investors claim that they would not invest in companies with a negative image.

Despite increasing emphasis on CSR in China, it remains far below social expectations. According to the report "Research Report on Corporate Social Responsibility of China" issued by the Social Policy Research Center of the Chinese Academy of Social Science and the Social Science Academic Press in 2009 (Blue Book, 2009), the CSR performance of the top 100 Chinese listed companies, measured in terms of responsibility management, market responsibility, social responsibility and environmental responsibility, is far below the international standard. The average score for Chinese enterprises is 31 out of 100 points. About one-fifth of the companies do not have a sound CSR system. Furthermore, many Chinese companies have little awareness of CSR and that the CSR practiced by Chinese firms is of low quality.

Commenting on China's CSR at APEC 2009, the Chinese President, Hu Jintao, said, "Enterprises should become aware of global responsibility, voluntarily include social responsibility in their business strategy, optimize business model and seek harmony between economic and social benefits." With strong encouragement from the Central Government, China has begun promoting CSR awareness (LRQA, 2010). Attempting to make state-owned enterprises role models for society, the State Asset Supervision and Administration Commission guidelines, issued in 2008, encourage state-owned enterprises to assume responsibility for their stakeholders, society, and the natural environment (SynTao, 2008).

Also in 2008, the Shanghai Stock Exchange (SSE) issued a "Notice on Strengthening

Listed Companies' Assumption of Social Responsibilities" and the "Guidelines on Listed Companies' Environmental Information Disclosure" to encourage listed companies to undertake CSR initiatives and to disclose CSR information to the public. In response to pressure from the government and stakeholders, more companies have published their first stand-alone report; they believed these reports are legitimacy devices designed to promote alignment with stakeholder perceptions and expectations. According to the Development Center for Chinese CSR and the China WTO Tribune (2009), there were 582 CSR reports in various forms, released in 2009, which is 3.44 times more than were released in 2008. However, these reports were below international standards; only 2.2% were in both Chinese and English, 7.8% were prepared according to international guidelines, and 6.1% were audited.

Chapter 4 Corporate Social Responsibility and Firm Performance

The PricewaterhouseCoopers 6th Annual Global CEO Survey (2003) examines prospects for economic growth, efforts to rebuild public trust, and corporate social responsibility issues. They survey 1000 CEOs from 43 countries, 79% of whom agree that sustainability is important to the profitability of any company. Numerous studies have explored the relationship between CSR and firm performance. However, the findings are inconclusive. Roman et al. (1999) review 46 studies focusing on the CSR-performance relationship and find that 63% demonstrate a positive relationship, 10% confirm a negative relationship, and the rest of the results are inconclusive.

Davis (1973) argues that companies supporting CSR activities can capture a favorable public image, which helps to attract customers and better employees; in the long-run, this serves the interests of the companies. In contrast, irresponsible companies may acquire an unfavorable public image that, in turn, devaluates the companies' products (Roberts, 2003). Therefore, public image is a major determinant of firm profitability and success.

To increase profitability, a company can either increase its revenue or reduce its costs. Some studies have suggested that adopting CSR helps to develop a good business image that can result in higher sales. Webster (1975) finds that customers consider the social consequences of companies' actions during purchase acts. In China, 96.6% of customers intend to purchase from socially responsible companies (Blue Book, 2009). In addition, other studies have contended that CSR initiatives aid businesses by reducing costs. Epstein and Roy (2001) report that CSR not only reduces various costs, it also promotes efficiency in the use of resources. Friedman and Miles (2001) argue that engaging in CSR activities can reduce the waste and the associated treatment costs. Moreover, productivity can be enhanced by implementing energy conservation and other environmental friendly programs. McWilliams and Siegal (2001) also mention that CSR can reduce social and environment costs, so as to increase corporate profit.

From the economic point of view, if the benefits associated with CSR are higher than the costs incurred, companies are more willing to make CSR commitments.

The complex relationship between CSR and firm performance has attracted a great deal of interest from academia. Lin et al. (2009) investigate 1000 Taiwan cases of long-term R&D expenditures and find that CSR does not have much positive effect on short-term financial performance, but that it significantly influences a firm's long-term performance. However, other researchers contend that CSR expenditure decreases a firm's resources in the short term and that companies with good previous financial performance (i.e., resources) are more likely to initiate the socially responsible activities (Scholtens, 2008; McGuire et al., 1988). McGuire et al. (1988) evaluate both the market and accounting returns, and report that previous performance is more closely related to CSR than subsequent performance. Scholtens (2008) applies simple OLS with distributed lags and Granger causation tests in his study and finds that financial performance precedes social performance. From a business perspective, the CSR will precede financial performance if it is seen as a strategic marketing tool (Qu, 2007) that helps to expand a firm's market share in the short run. In contrast, the financial performance will precede CSR if it is treated as a long term investment that enhances the company's sustainability.

The Chinese government's increasing involvement in CSR has propelled its development in China since 2008. Recent CSR research has focused on Chinese corporations, but very little effort has been made to evaluate the relationship between CSR and firm performance in China. Cheung et al. (2012) construct a CSR index to measure the quality of CSR practices in 100 major Chinese listed companies. Their results show that Chinese companies, the overseas-listed and more profitable companies in particular, improved their CSR practices in the 2004-2007 period, and the market rewarded these improvements. Chen and Wang's study (2011) assesses the association between CSR and financial performance by surveying 141 Chinese firms over the 2007-2008 period. They note that variations in CSR and financial performance influence each other significantly, and that CSR activities can both improve the performance in the current year and have a significant relationship with the performance in the coming year.

Chapter 5 Hypotheses

Previous research on CSR disclosure suggests that CSR disclosure decisions are associated with a firm's profitability (Brammer and Pavelin, 2008). Profit is an essential source of funding for the publication of stand-alone reports (Brammer and Pavelin, 2008; Gamerschlag et al., 2011). Therefore, only profitable firms can afford to issue stand-alone reports. Moreover, according to the political cost theory (Watts and Zimmerman, 1986), large companies are more likely to attract the attention of the government and stakeholders because of their significant market power. To avoid provoking a negative public image (Reverte, 2009), profitable firms have stronger incentives to disclose CSR information than less profitable firms (Bewley and Li 2000). Based on these arguments, the following hypothesis is developed.

> **Hypothesis 1**: There is a positive association between firm performance in year t and the publication of a CSR report in year t+1.

The stockholder theory holds 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 rule of game," (Friedman, 1970). Profit is the sole motivation for any business behavior, including CSR reporting and initiatives. CSR reporting creates additional costs and, as a result, reduces profit. Companies may not be willing to invest their resources in CSR reporting. However, if companies perceive that CSR reporting helps generate future profit and that the future income exceeds the current associated costs, they may publish stand-alone CSR reports. In this case, it is assumed that the publication of CSR reports will lead to better firm performance. This argument is derived from Vurro and Perrini's study (2011), which reveals that the breadth of CSR disclosure is associated with better current CSR performance, and Chen and Wang's study (2011), which reveals that CSR performance influences firm performance in both the current and subsequent years. As stakeholders are important resource providers for Chinese listed firms, companies are motivated to publish stand-alone CSR reports, which serve as legitimacy tools to align stakeholder perceptions and expectations (Vurro and Perrini, 2011). As stakeholders favor companies with legitimate and appropriate disclosure and reporting(Vurro and Perrini, 2011), the publication of a CSR report may result in a more favorable image. A better corporate image may eventually translate into better firm performance. Based on the foregoing discussion, I develop the following hypothesis.

Hypothesis 2: There is a positive association between the publication of a CSR report in year t and firm performance in year t+1.

The PwC's survey (2003) indicates that 79% of CEOs agree that CSR performance is important to firm performance. Based on stakeholder theory, managers conduct CSR initiatives to "gain their [stakeholders] support and approval; or to distract their opposition or disapproval" (Gray et al., 1996) if they value stakeholders' resources (Ullmann, 1985). This may translate into higher sales and lower operating costs. This proposition is based on Webster's (1975) argument that customers consider the social effect of companies' actions when making purchasing decisions, and on the studies by Epstein and Roy (2001), Friedman and Miles (2001), and McWilliams et al.'s (2001), which suggest that CSR reduces various costs including wastage, treatment and environmental costs. Therefore, companies are motivated to undertake different forms of CSR initiatives that will have different effects on firm performance. Moreover, Chen and Wang's (2011) survey of 141 Chinese firms confirms that CSR activities can improve firm performance in both the current year and subsequent years respectively. I therefore propose the following two hypotheses about the effect of current CSR practices on performance in the current and subsequent years.

Hypothesis 3: There is a positive association between CSR performance in year t and firm performance in year t.

Hypothesis 4: There is a positive association between CSR performance in year t and firm performance in year t+1.

Chapter 6 Models and Variables

Four regression models are formulated to test the relationship between CSR reports and firm performance.

6.1 Probit regression

The following probit regression model is developed to examine the characteristics of SSE-listed firms that are more likely than others on the SSE to issue stand-alone CSR reports.

$$Issue_{t+1} = \beta_0 + \beta_1\, ROA_t + \beta_2\, Mkt_t + \beta_3\, \%\Delta Sale_t + \beta_4\, TobinQ_t + \beta_5\, LnAsset_t$$
$$+ \beta_6\, D/E_t + \beta_7\, SOE_t + \beta_8\, FI_t + \beta_9\, Issue_{t+}\, \beta_{10} Year_t + \beta_{11}\, Industry_t + \varepsilon \qquad (1)$$

The dependent variable ($Issue_{t+1}$) is a dummy variable that measures whether a company would issue a standalone CSR report in the subsequent year; it takes the value of 1 if the company issues a stand-alone CSR report during year t+1, and otherwise 0. Publishing a CSR report increases a company's costs in the current year; it is likely that companies with richer resources are more willing to issue CSR reports. I expect that firms with better performance in year t are more likely to issue stand-alone CSR reports in year t+1.

The independent variables are return on assets (ROA_t), market return (Mkt_t), percentage change of sales (%ΔSales$_t$) and Tobin's Q (TobinQ$_t$). Return on assets (ROA$_t$) is a profitability ratio, measured by profit after tax divided by total assets. Companies with a higher ROA in year t are more likely to issue CSR reports in the subsequent year. Therefore, I predict that there is a positive association between the dependent variable (Issue$_{t+1}$) and returns on assets (ROA$_t$).

Market return (Mkt$_t$) is an independent variable that is used to test the relationship between market performance and the issuance of stand-alone CSR reports. The variable is calculated as the change in share prices plus the cash dividend in the current year, divided by the beginning share price. Shareholders expect to maintain a constant growth rate in a share return, and companies are thus under pressure to improve the share prices. In addition to profitability, companies may need to promote their images and reputations so as to increase both the trading volume and stock price. Therefore, I predict that there is a positive association between the dependent variable (Issue$_{t+1}$) and market return (Mkt$_t$).

Percentage change of sales (%ΔSales$_t$) is used to measure the relationship between the sales performance and the issuance of separate CSR reports. The variable is calculated as the difference in sales in a year divided by sales in the previous year. Companies with an increase in sales revenue in year t are more likely to issue CSR reports in the subsequent year, as sales revenue from operating activities may eventually lead to higher cash flows. Therefore, companies can better afford to pay the preparation costs. Based on the above discussion, I predict that there is a positive association between the dependent variable ($Issue_{t+1}$) and change of sales ($\%\Delta Sales_t$).

Finally, the model also analyzes the relationship between Tobin's Q ($TobinQ_t$) and the issuance of separate CSR reports. Tobin's Q is the market-perceived net worth of a company and calculated as the total market value divided by total asset value. A higher Tobin's Q ratio corresponds to a high perceived market value of the company. A higher market to book ratio implies that intangible assets may not be recognized in the books. Thus, companies with higher Tobin's Q are motivated to voluntarily disclose the information associated with intangible assets (i.e. human capital). It is predicted that there is a positive association between the dependent variable ($Issue_{t+1}$) and Tobin's Q ($TobinQ_t$).

Previous studies show that there are significant relationships between the publication of CSR reports and firm size, leverage, shareholdings and firm performance respectively. To control for these different effects, several control variables are included in the regressions. According to Roberts (1992), large and profitable firms are more likely to disclose CSR activities, as more shareholders are interested in corporate socially responsibility activities. There is also a positive correlation with company size and CSR activity (Robert, 1992). In particular, large firms may have more onsite resources to support their extra activities than small firms. The variable of total assets ($LnAsset_t$) is used to control for the firm size.

Three variables, leverage (D/E_t), percentage of state-owned shares (SOE_t) and foreign investment (FI_t), are used to control for the influence of capital structure on a company's decision. Leverage ($D/E_{t)}$ is measured by dividing the total debts by total shareholders' equity. Percentage of state-owned shares (SOE_t) is calculated by dividing the number of state-owned shares by the total outstanding shares of the company. The numbers of "state-owned shares" (Numerator) and "outstanding shares" (Denominator) are extracted from the CSMAR database. Foreign investment (FI_t) is a dummy variable that takes the value of 1 if the company's shares can be purchased by foreign investors on either the Shanghai or overseas market, and otherwise 0. The rationale for the inclusion of FI_t is that foreign investors may bring in better internal control systems and new management methods that could affect management decisions on CSR initiatives (Chan et al., 2010). $Issue_t$ is used to control for the influence of the same disclosure practice in the previous year, as companies are likely to follow the practices from the previous year. $Industry_t$ controls for the effects of industry, as industry characteristics, including intensity of competition, legal risks, and consumer visibility, may influence the company's disclosure design (Robert, 1992). Finally, $Year_t$ is used to control for different economic environments in individual years.

To maintain observations with negative values, 1 is added to the firm performance variables in various regressions, i.e., ROA, Mkt, and %ΔSales (Howell, 1992). Moreover, natural logarithmic transformation is also used for variables, ROA, Mkt, %ΔSales, TobinQ and Asset, to correct positive skewness (Kang et al., 2010).

6.2 CSR reporting and subsequent firm performance

The following regression model is used to test the relationship between the issuance of stand-alone CSR reports and firm performance in the next year for all of the non-finance companies listed on the Shanghai Stock Exchange.

$$Perf_{t+1} = \beta_0 + \beta_1\, Issue_t + \beta_2\, Asset_t + \beta_3\, D/E_t + \beta_4\, SOE_t + \beta_5\, FI_t + \beta_6\, Year_t + \beta_7 Industry_t + \varepsilon \quad (2)$$

The dependent variable ($Perf_{t+1}$) represents the performance of the sample companies in the subsequent year. Four proxies for firm performance, $Ln(1+ROA_{t+1})$, $Ln(1+Mkt_{t+1})$, $Ln(1+\%\Delta Sales_{t+1})$, and $Ln(TobinQ_{t+1})$, are used in this model.

Their measurements are very similar to those in the probit model; however, performance in the previous year is measured in the probit regression, whereas performance in the coming year is measured in this regression. The sole independent variable ($Issue_t$) denotes whether the company issues a stand-alone report in the current year; it takes a value of 1 if a CSR report is issued in year t, and otherwise 0. Companies with better CSR performance are more likely to use a stand-alone report to promote their reputation and image. Consequently, CSR reports may have a positive influence on firm performance. Therefore, it is predicted that there is a positive association between the issuance of CSR reports in year t and firm performance in the year t+1.

As in the probit model, several control variables ($LnAsset_t$, D/E_t, SOE_t, FI_t, $Year_t$ and Ind_t), are used in the regression to control for the effects of size, leverage, capital structure, year, and industry.

6.3 Current CSR initiatives and firm performance

The following regression is used to assess the relationship between the individual CSR activities in year t and firm performance in the same year for firms issuing stand-alone reports in 2008 and 2009.

$$Perf_t = \beta_0 + \beta_1 Area_t + \beta_2 Exp_t + \beta_3 Asset_t + \beta_4 D/E_t + \beta_5 SOE_t + \beta_6 FI_t + \beta_7 Year_t + \beta_8 Industry_t + \varepsilon \quad (3)$$

The dependent variable ($Perf_t$) in this regression represents the performance of the company in year t. It is operationalized as return on assets ($Ln(1+ROA_t)$), market return ($Ln(1+Mkt_t)$), percentage of change of sales ($Ln(1+(\%\Delta Sales_t))$), and Tobin's Q ($Ln(TobinQ_t)$).

The independent variables are $Area_t$, which represents the company's concerns for employees, customers, suppliers, the general public and pollution, and Exp_t, which is the company's monetary contributions to the areas of disaster relief, infrastructure, poverty, education, charity, arts, welfare, environment, and employee welfare. $Area_t$ and Exp_t are used to capture the effect of individual CSR initiatives on firm performance. In the regression, $Area_t$ is used to measure socially responsible endeavors that cannot be expressed in a specific monetary value and Exp_t is used to measure socially responsibile endeavors that can be expressed in pecuniary terms. To assess company's concerns for different stakeholders, I examine the CSR reports to identify whether the company has committed to or contributed to any of the above areas. Five dummy variables ($Employee_t$, $Customers_t$, $Supplier_t$, $Public_t$, and $Pollution_t$) are constructed, and each takes the value of 1 if the company has made commitments in the area and otherwise 0. Exp_t measures the amounts donated or used in different areas including disaster relief, infrastructure, poverty, education, charity, arts, welfare, environment, and employees welfare. Nine variables ($E\_Disasters_t$, $E\_Infrastructure_t$, $E\_Poverty_t$, $E\_Education_t$, $E\_Charity_t$, E_Art_t, $E\_Environment_t$, $E\_Employee_t$, and E_Others_t) are created to reflect the spending in each area. For standardization purposes, I divide each amount by the company's sales.

The model in this section includes the same control variables as regressions (1) and (2).

6.4 Current CSR initiatives and subsequent firm performance

The following regression is used to test the relationship between the individual CSR activities in year t and firm performance in year t+1 for companies issuing CSR reports during the sample period.

$$Perf_{t+1} = \beta_0 + \beta_1 Area_t + \beta_2 Exp_t + \beta_3 Hon_t + \beta_4 GRI_t + \beta_5 Aud_t + \beta_6 Asset_t$$
$$+ \beta_7 D/E_t + \beta_8 SOE_t + \beta_9 FI_t + \beta_{10} Year_t + \beta_{11} Industry_t + \varepsilon \qquad (4)$$

Following the previous regression model, the dependent variable is firm performance. As in regression (3), very similar proxies for firm performance, $Ln(1+ROA_{t+1})$, $Ln(1+Mkt_{t+1})$,

$Ln(1+(\%\Delta Sales_{t+1})$, and $LnTobinQ_{t+1}$, are used. The only difference is that equation (3) measures the performance in the current year, whereas equation (4) in this section assesses the performance in the subsequent year. Equation (4) also examines the same independent variables, $Area_t$ and Exp_t, as equation (3).

Three new independent variables, Hon_t, GRI_t, and Aud_t, are introduced in the regression to assess firms' significant contributions and the quality of the separate reports. These variables are not included in equation (3) as the annual CSR information is not available until the subsequent year. Therefore, performance is less likely be affected by Hon_t, GRI_t, and Aud_t in the same year. The variable Hon_t is a proxy for CSR contributions and it represents the number of awards received by the company for outstanding CSR performance in the areas of environment ($H\_Environmen_t$, charity ($H\_Charity_t$), employee welfare ($H\_Employees_t$), and areas other than the above (H_Others_t) in year t. GRI_t and Aud_t are variables that measure the quality of the reports and control for the effect of disclosure structure and the quality of released CSR information (Dando and Swift, 2003). GRI_t is a dummy variable indicating whether the report is prepared following the GRI guidelines; it takes the value of 1 if followed, and otherwise 0. Aud_t is also a dummy variable denoting whether the report is audited by independent assurer, either an auditor or environmental expert; it takes the value of 1 if audited, and otherwise 0.

Chapter 7 Sample and Descriptive Statistics

7.1 Sample and data collection

There has been a sharp increase in the number of stand-alone CSR reports since the Shanghai Stock Exchange issued "A Notice on Strengthening Listed Companies' Assumption of Social Responsibilities" and "The Guidelines on Listed Companies' Environmental Information Disclosure" in 2008. These CSR reports provide the data for this study.

The sample in this study consists of non-finance companies listed on the Shanghai Stock Exchange in 2008 and 2009. As all finance companies are required to issue stand-alone CSR reports, the inclusion of finance companies in the sample may lead to a misinterpretation of the voluntary nature of CSR disclosure in other industries and the link between CSR initiatives and firm performance. Therefore, financial institutions are excluded from the final sample. To test the lag effect, I also collect the relevant performance data for 2009 and 2010. To be included in the sample, companies' financial information must be available in the China Securities Market Research Database (CSMAR). Companies traded on the Shenzhen Stock Exchange are not considered in this study because regulatory rules and CSR guidelines in these two exchanges are not comparable for the period under investigation.

To measure the CSR performance, I obtain the CSR reports from the China Sustainability Reporting Resource Center website, which is owned by the Center for Environmental Education and Communications (CEEC) of the State Environmental Protection Administration (SEPA) of China and Syn Tao. The former is a governmental body that promotes environmental publicity and the latter is a consulting company that promotes CSR in China. The Chinese names of the listed companies are input into the website during in the search for stand-alone CSR reports.

To test H1, 1661 firm-year observation for the 2008-2009 period are input into the probit regression. During the probit regression analysis, 79 observations are dropped by the program due to missing data problems. When running equation (2), a further 73, 72, 76 and 74 observations are dropped from panels A, B, C and D, respectively, due to further missing data problems.

To test H2 and H3, 388 firm-year observations, including only companies issuing stand-alone CSR reports, are used. When running equations (3) and (4), 15 and 2 observations are dropped from panel D in each equation due to missing data problems.

Table 1 presents the distribution of the total observations by year and by industry. There are

825 observations for 2008, and 836 for 2009.

[INSERT TABLE 1 HERE]

Table 1 shows the number of companies issuing stand-alone reports by year and by industry. There are 183 observations in 2008 and 205 in 2009, making up 22.18% and 24.52% of the total observations in 2008 and 2009, respectively.

7.2 Descriptive statistics of the sample companies

Table 2 summarizes the descriptive statistics for the sample companies traded on the Shanghai Stock Exchange and companies issuing separate CSR reports in 2008 and 2009. The statistics for the full sample are listed below, with those for the sub-sample in parentheses. The means value for all companies (for companies issuing separate CSR reports) are as follows: return on total assets 37.6% (7%), market return 41.7% (35.4%), change in sales 18.6% (14.9%) and Tobin's Q ratio 2.297 (1.61).The statistics show that companies issuing stand-alone CSR reports have relatively low financial and market performances.

[INSERT TABLE 2 HERE]

Table 2 shows that the average total asset value is RMB11932 million (RMB 20000 million), leverage is 1.818 (2.585), proportion of state-owned equity is 17% (18.5%) and foreign investment is 4.55% (9%) for all of the companies (for companies issuing separate CSR reports). The results show that companies issuing stand-alone CSR reports own assets of higher value and have higher leverage. Specifically, they have a 67% higher asset value than the value in the full sample and higher risk in terms of leverage. As for the equity structure, the sub-sample has a higher proportion of state-owned equity and foreign investment.

7.3 Descriptive Statistics of CSR initiatives

Table 5 summarizes the descriptive statistics for the CSR initiatives that are tested in regressions (3) and (4). As shown in Table 5, companies listed on SSE do not show equal concerns for all primary stakeholders. Whereas 93% and 84% of the companies are concerned about their employees and customers, respectively, only 28% of the companies show concern for their suppliers.

[INSERT TABLE 5 HERE]

Table 5 also shows that companies underspend on social programs and activities. An average of 0.1% of total revenue is spent on environmental protection compared with 0.051% and 0.055% on disaster relief and employee improvement, respectively. The expenditure on infrastructure is even less and amounts to less than 0.03% of total revenue. Social awards reflect a company's contribution in all of the different areas. The average number of awards companies received recognizing their contributions to environmental protection, charity, and employee welfare are 0.43, 0.21 and 0.22, respectively.

In terms of reporting quality, only 5% of the CSR reports are prepared following the Global Reporting Initiative (GRI) framework and 3% are audited by independent assurers. This shows that the CSR reports in China do not conform to generally accepted international standards.

Chapter 8 Regression results

8.1 Companies issuing CSR reports

This section examines the characteristics of companies issuing stand-alone CSR reports. Table 3 reports the results of the probit regression analysis for equation (1) where the dependent variable ($Issue_{t+1}$) takes the value of 1 if companies issue a stand-alone CSR report at time t+1, and otherwise 0.

[INSERT TABLE 3 HERE]

The final sample for probit analysis contains 1582 firm-year observations. Table 3 shows that companies with a higher return on assets ($Ln\_(1+ROA_t)$) are more willing to publish CSR reports in year t+1 and the results are significant and positive at the 0.01 level. In other words, companies that generate higher economic profit in year t are more able to prepare and disseminate CSR information. Consistent with the previous discussion, firms with higher financial capabilities in year t are more likely to issue stand-alone CSR report in the subsequent year, t+1.

In addition, as shown in Table 3, companies with higher asset values ($LnAsset_t$) are more likely to issue CSR reports. The result is significant and positive at the 0.01 level.

Moreover, the probit analysis shows that the decision to issue CSR reports in the current year is influenced by the decision in the previous year. The result is significant and positive at the 0.01 level. Table 3 also shows that mineral companies and foreign invested companies are less likely to issue CSR reports. The result is significant and negative at the 0.01 level.

8.2 Issuance of CSR reports

This section analyzes the association between the issuance of stand-alone CSR reports in year t and the firm performance in year t+1. Table 4 exhibits the regression results for equation (2) where the dependent variables are $Perf_{t+1}$ in year t+1. The $Perf_{t+1}$ variable is operationalized as $Ln(1+ROA_{t+1})$, $Ln(1+Mkt_{t+1})$, $Ln(1+\%\Delta Sales_{t+1})$, and $Ln(TobinQ_{t+1})$.

[INSERT TABLE 4 HERE]

Panel A of Table 4 shows that there is a positive association between CSR report issuance in year t and $Ln(1+ROA_{t+1})$ in year t+1, and that the coefficient of the independent variable ($Issue_t$) is significant and positive at the 0.01 level. The results demonstrate that the issuance of CSR reports is more likely to be associated with a higher return on assets in the subsequent year.

Separate CSR reporting in year t seems to have no effect on other performance proxies. The results in Panels B, C, and D show that there is no association between CSR report issuance in year t and $Ln(1+Mkt_{t+1})$, $Ln(1+\%\Delta Sales_{t+1})$, and $Ln(TobinQ_{t+1})$. Therefore, H2 is partially supported.

8.3 Current firm performance

This section assesses the association between the individual CSR contributions in year t and firm performance in the same year. Table 6 illustrates the empirical results for equation (3), where the dependent variable is $Perf_t$ in year t. $Perf_t$ is operationalized as $Ln(1+ROA_t)$, $Ln(1+Mkt_t)$, $Ln(1+\%\Delta Sales_t)$, and $Ln(TobinQ_t)$.

[INSERT TABLE 6 HERE]

The findings show that companies concerns in different areas have no instant effect on a firm's current performance. However, contributions to disaster relief ($E\_Disaster_t$) are significantly and positively associated with $Ln(1+ROA_t)$ (t-value=2.25), $Ln(1+Mkt_t)$ (t-value=2.861), and $Ln(TobinQ_t)$ (t-value=2.26). Contributions to employee welfare ($E\_Employee_t$) are significantly but negatively associated with $Ln(1+Mkt_t)$ (t-value=-1.974).

However, the results also show that the individual CSR initiatives have no effect on current sales performance ($Ln(1+\%\Delta Sales_{t+1})$), except for contributions to education ($E\_Education_t$). Its coefficient is significant and negative (t-value = -5.581), indicating that CSR initiatives in education in year t are associated with lower sales in the same year. Therefore, H3 is partially supported.

8.4 Subsequent firm performance

This section examines the association between individual CSR initiatives in year t and the firm performance in year t+1. Table 7 illustrates the empirical findings for equation (4) where the dependent variable is $Perf_{t+1}$ in year t+1. $Perf_{t+1}$ is operationalized as $Ln(1+ROA_{t+1})$, $Ln(1+Mkt_{t+1})$, $Ln(1+\%\Delta Sales_{t+1})$, and $Ln(TobinQ_{t+1})$.

[INSERT TABLE 7 HERE]

Table 7 shows that contributions to disaster relief ($E\_Disaster_t$) continuously effect firm performance in the subsequent year. $E\_Disaster_t$ is significantly and positively associated with $Ln(1+ROA_{t+1})$ (t-value=4.755) and $Ln(TobinQ_t)$ (t-value=2.638). Of all the CSR initiative variables, only donation to education ($E\_Education_t$) is significantly and positively associated with $Ln(1+\%\Delta Sales_{t+1})$ (t-value=4.339). Donation to charity is significantly and positively associated with Ln($TobinQ_{t+1}$) (t-value=2.921). However, the environmental improvement expenditure is significantly and negatively associated with Ln(1+ROA_{t+1}) at the 0.10 level (t-value=-1.815), and concern for suppliers is significantly and negatively associated with Ln(1+Mkt_{t+1}) at the 0.05 level (t-value=-2.172). Table 7 also measures the effect of reporting quality on future firm performance. Although following GRI guidelines is positively related to next year's market performance Ln(1+Mkt_{t+1}), auditing CSR reports has no effect. Therefore, H4 is partially supported.

The following table summarizes the results of the hypothesis tests in this study.

[INSERT TABLE 8 HERE]

Chapter 9 Conclusion

9.1 Discussion

Responding to public demands for CSR, the Chinese Government has implemented various guidelines and rules to encourage both local and foreign-invested companies to integrate CSR initiatives into their business activities. More companies are attempting to conduct CSR activities that contribute to society and to various stakeholders. CSR reports are regarded as a communication tool to help stakeholders' understand how the companies pursue CSR activities, and more companies are opting to issue stand-alone CSR reports that document their contributions to different areas.

This study addresses the issues of the quality of CSR reports in China. Although only 5.05% of Chinese listed firms issued CSR reports in 2007 (Gao, 2011), 22.18% and 24.52% of firms listed on SSE publishing separate CSR reports in 2008 and 2009, respectively. However, the descriptive statistics in this study show that only 5% of these stand-alone reports use a Global Reporting Initiative framework, and only 3% are reviewed by independent assurers. This suggests that the quality of the reports is far below the international level. The surge in the number of CSR reports indicates that there is only an improvement in the "form" of CSR reporting, not the "substance" of the information. The sharp increase in the number of CSR reports can be explained by the legitimacy theory. Chinese listed companies may intend to use CSR disclosure to enhance their legitimacy and to restore the discrepancy between stakeholders' perception of corporate responsibility and their expectations.

The empirical results show that profitability is the major concern of SSE-listed firms with respect to CSR disclosure. Firms with more resources (e.g., profit) are more likely to issue CSR reports, and issuing CSR reports leads to a higher economic profit in the subsequent year. The findings indicate that the predominant factor determining CSR initiatives is a company's profitability. As a golden rule, a business has to generate profit to cover its costs for survival and to provide funds for growth. For a business to maximize its profit, it must satisfy the needs of its stakeholders, particularly its customers. Therefore, companies do not undertake voluntary activities for altruistic reasons, but for their own self-interests (Friedman, 1970).

However, the findings in this study do not confirm that CSR reporting is related to an increase in sales, although some previous studies evidence have shown a positive relationship between CSR and sales (Prado-Lorenzo et al. 2008). These results suggest that one of the key profit drivers for companies with respect to CSR is cost reduction (Epstein and Roy, 2001; Kong et al., 2002). CSR can reduce social and environment costs and thereby increase corporate profit (McWilliams and Siegal, 2001).

The growing global concern over the exploitation of child labor and the natural environment has accelerated the development of CSR in China. The descriptive statistics given above show that companies undertaking CSR spend more resources on employee welfare and on environmental protection than on other causes in the 2008-2009 period. However, the insignificant association of these two social responsibility areas with firms' performance suggests that the expenditure may be a reaction to international pressure.

The findings also show that donation to disaster recovery is significantly and positively associated with economic and market-related performance. During the sample period, there was an earthquake in Sichuan (in 2008) and deadly flooding caused by typhoon Morakot in Taiwan (in 2009). Many companies fulfilled their responsibilities as corporate citizens and donated to the natural disaster recovery effort. Such donations increase a company's reputation and standing in the market and make investors more willing to invest in the company. In addition, CSR initiatives in disaster recovery help to promote employee morale and productivity. As a result, firm performance is improved (Soloman and Hansen, 1985; Weber, 2008).

China’s CSR principles and practices may differ from those in Western countries. Although CSR is usually initiated by individuals or individual enterprises in countries like the USA or the UK, in China, it is largely backed or directed by the government. These difference may reflect cultural differences, such as individualism, uncertainty avoidance, power distance, and masculinity (Hofstede, 2001). This also suggests that Chinese stakeholders may respond to CSR initiatives differently than stakeholders in other countries. This requires further investigation.

Finally, the significant positive association between GRI-format reports and market-related performance indicates that international CSR standards increase investors’ confidence. Investors are more willing to invest in companies that follow international standards.

9.2 Limitations of the research

This study has several limitations. First, the sample of companies issuing standalone reports is relatively small. The development of CSR is at the elementary stage in China and only 24.52% of the companies listed on the SSE issued stand-alone CSR reports in 2009. Therefore, the behavior of the companies undertaking CSR may not fully represent the CSR attitudes of all of the companies listed on the SSE. This may make it difficult to generalize the results to the overall population.

The second limitation is the relatively short sample period. Due to time constraints, the research only covers a two-year period. This is not sufficient for the study of the long-term effect of CSR performance on firm performance, and this study can only analyze the effect on firm performance in the subsequent year. The short sample period does not allow me to evaluate the effectiveness of the SSE guidelines on CSR by comparing the performance between pre- and post-enforcement periods.

The third limitation is that the study does not include cross-country comparisons. A very limited number of CSR reports in China are prepared using the Global Reporting Initiative Framework and audited by independent assurers. The inconsistency with the international standards makes cross-border comparisons difficult.

9.3 Recommendation for future studies

There is a growing trend for Chinese listed firms to disclose CSR information. It is expected that more stand-alone CSR reports will be published in the future. Therefore, replication studies are possible and should be carried out. An increased sample size in future studies may allow higher levels of generalization.

A longitudinal study that addresses the long-term relationship between CSR performance and firm performance by measuring the CSR initiative over time (Sweeney, 2009) could also be constructed when the CSR data for subsequent year is available.

9.4 Managerial implications

The empirical findings confirm that CSR reporting is associated with higher economic profit in the subsequent year. My study provides further evidence for managers that CSR may develop customer trust, mitigate reputation risks, and create long-term shareholder value. Moreover, the results suggest that donations to disaster recovery can improve the company's financial and market-related performance in both the current year and the subsequent year. Although CSR is still under-developed in China, management should be aware of the strategic benefits that firms may attain from engaging in CSR activities. A better understanding and practice of CSR among Chinese companies will not only enhance companies' financial and sustainability performance, it will also advance the development of CSR in China.

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Table 1

Sample Companies by Industry

Industry	2008		2009	
	All Companies	Companies Issue CSR Report	All Companies	Companies Issue CSR Report
Conglomerate	35	6 (3.28%)	35	7 (3.41%)
Cultural	10	2 (1.09%)	11	2 (0.98%)
Social Services	16	4 (2.19%)	18	4 (1.95%)
Real Property	64	15 (8.20%)	64	15 (7.32%)
Retail and Wholesale	62	8 (4.37%)	62	8 (3.90%)
Information and Technology	42	6 (3.28%)	42	5 (2.44%)
Transportation	45	16 (8.74%)	47	17 (8.29%)
Construction	22	5 (2.73%)	24	6 (2.93%)
Utilities	42	12 (6.56%)	42	10 (4.88%)
Manufacturing	439	103 (56.28%)	443	120 (58.53%)
Mineral	29	3 (1.64%)	29	6 (2.93%)
Agriculture	19	3 (1.64%)	19	5 (2.44%)
Total	825	183 (100%)	836	205 (100%)
Issue Separate CSR Report		22.18%		24.52%

Table 2
Descriptive Statistics for Characteristics of Sample Companies on Shanghai Stock Exchange, China during 2008, 2009

		All Companies (n = 1588)				Companies issue Separate CSR Reports (n = 388)			
Variables	Definition	Min.	Max.	Mean	Std. Deviation	Min.	Max.	Mean	Std. Deviation
Issue	Dummy variable, 1 if the company issues a separate CSR report, 0 otherwise.	0	1	0.240	0.429	1	1	1	0
ROA	Return on total assets, i.e. profit after tax divided by total assets.	-20.194	12.825	0.376	0.646	-0.124	0.301	0.07	0.053
Mkt	Market Return, i.e. the change in share prices plus cash dividend in a year divided by the share price at the beginning of the year.	-0.862	6.630	0.417	1.162	-0.854	4.324	0.354	1.019
%ΔSales	Percentage change in Sales, i.e. the change in Sales in the year divided by the sales in the previous year.	-1	25.262	0.186	1.074	-0.902	5.813	0.149	0.539
TobinQ	Tobin's Q ratio, i.e. total market value divided by the total asset value of the firm.	0.477	389.216	2.297	10.477	0.610	8	1.61	0.951
Asset	Total asset value of the firm. (RMB in million)	4.963	1450742	11932	60895	412	900000	20000	62510
D/E	Leverage, i.e. total debt divided by total shareholder equity.	0.002	27.210	1.818	5.360	0.805	25.550	2.585	19.745
SOE	Proportion of state-owned equity in a firm.	0	0.863	0.170	0.221	0	0.802	0.185	0.228
FI	Foreign investment in the firm, 1 if foreign investors can acquire the company's shares in either Shanghai or overseas markets, 0 otherwise.	0	1	0.0455	0.208	0	1	0.090	0.291

Table 3

Results of Probit Analyses for Separate CSR Reports and Firm Characteristics of Sample Companies in Shanghai, China for 2008,2009 (t+1)

(n = 1582)

Dependent Variable: Binary variable equaling 1 if a separate CSR report issued at time *t+1*

Variables	Estimate	Standard Error	Significant
Constant	1.366	3.806	(0.720)
$Ln(1+ROA_t)$	11.457	2.123	(0.000)***
$Ln(1+Mkt_t)$	0.086	0.306	(0.780)
$Ln(1+\%\Delta Sales_t)$	-0.230	0.265	(0.387)
$LnTobinQ_t$	0.216	0.359	(0.547)
$LnAsset_t$	0.805	0.107	(0.000)***
D/E_t	0.002	0.014	(0.869)
SOE_t	-0.466	0.312	(0.135)
FI_t	-0.102	0.225	(0.000)***
$Issue_t$	8.253	0.000	(0.000)***
Year_2009	0.997	0.249	(0.648)
Conglomerate	0.026	0.409	(0.948)
Cultural	0.115	0.550	(0.834)
Social Services	-0.049	0.468	(0.917)
Real Properties	0.111	0.380	(0.770)
Retails and Wholesales	-0.098	0.381	(0.796)
Information Technology	0.423	0.389	(0.276)
Transportation	0.337	0.385	(0.382)
Construction	0.011	0.433	(0.980)
Utilities	0.247	0.390	(0.527)
Manufacturing	0.100	0.347	(0.773)
Mineral	-1.063	0.449	(0.018)***
Chi-Squared	231.671		
P Value	0.000		

(statistically significant at the 0.10 level; ** statistically significant at the 0.05 level; ***statistically significant at the 0.01 level)*

Variable Definition		
$Issue_{t+1}$	=	Dummy variable, 1 if the company issues a separate CSR report, 0 otherwise
$Ln(1+ROA_t)$	=	Natural logarithmic of (1+return on total assets), i.e. profit after tax divided by total assets
$Ln(1+Mkt_t)$	=	Natural logarithmic of (1+Market Return), i.e. the change in share prices plus cash dividend in a year divided by the share price at the beginning of the year.
$Ln(1+\%\Delta Sales_t)$	=	Natural logarithmic of (1+Percentage change in Sales), i.e. the change in Sales in the year divided by the sales in the previous year.
$LnTobinQ_t$	=	Natural logarithmic of Tobin's Q ratio, i.e. total market value divided by the total asset value of the firm
$LnAsset_t$	=	Natural logarithmic of total asset value of the firm.
D/E_t	=	Leverage, i.e. total debt divided by total shareholder equity.
SOE_t	=	Proportion of state-owned equity in a firm
FI_t	=	Foreign investment in the firm, 1 if foreign investors can acquire the company's shares in either Shanghai or overseas markets, 0 otherwise.

Table 4

Results of Regression Analyses for CSR Report Issuance & Future Firm Performance of Sample Companies in Shanghai, China for 2008,2009 (t)

Variables	PANEL A $Ln(1+ROA_{t+1})$	PANEL B $Ln(1+Mkt_{t+1})$	PANEL C $Ln(1+\%\Delta Sales_{t+1})$	PANEL D $LnTobinQ_{t+1}$
Constant	-0.032	0.847	-0.149	2.603
	(-1.688)*	(13.337)***	(-1.502)	(31.083)***
$Issue_t$	0.008	-0.008	0.005	0.013
	(3.603)***	(-1.072)	(0.409)	(1.225)
$LnAsset_t$	0.004	-0.058	0.016	-0.239
	(2.242)**	(-8.698)***	(1.589)	(-27.178)***
D/E_t	-0.000	-0.000	0.001	-0.002
	(-2.172)**	(-0.234)	(0.559)	(-2.751)***
SOE_t	0.000	-0.008	0.028	-0.126
	(0.095)	(-0.481)	(1.160)	(-6.053)***
FI_t	-0.005	-0.029	-0.042	0.044
	(-1.436)	(-2.478)**	(-2.384)**	(2.865)***
Year Dummy	Yes	Yes	Yes	Yes
Industry Dummy	Yes	Yes	Yes	Yes
No. of observations	1588	1589	1585	1587
Adjusted R^2	0.049	0.653	0.062	0.444
F-Statistics	5.875	177.193	7.165	75.848

(t-statistics in parentheses: * statistically significant at the 0.10 level; ** statistically significant at the 0.05 level; ***statistically significant at the 0.01 level *)*

Results corrected for heteroskedasticity

Variables definitions

$Ln(1+ROA_{t+1})$	=	Natural logarithmic of (1+return on total assets), i.e. profit after tax divided by total assets.
$Ln(1+Mkt_{t+1})$	=	Natural logarithmic of (1+Market Return), i.e. the change in share prices plus cash dividend in a year divided by the share price at the beginning of the year.
$Ln(1+\%\Delta Sales_{t+1})$	=	Natural logarithmic of (1+Percentage change in Sales), i.e. the change in Sales in the year divided by the sales in the previous year.
$LnTobinQ_{t+1}$	=	Natural logarithmic of Tobin's Q ratio, i.e. total market value divided by the total asset value of the firm
$Issue_t$	=	Dummy variable, 1 if the company issues a separate CSR report, 0 otherwise
$LnAsset_t$	=	Natural logarithmic of total asset value of the firm.
D/E_t	=	Leverage, i.e. total debt divided by total shareholder equity.
SOE_t	=	Proportion of state-owned equity in a firm
FI_t	=	Foreign investment in the firm, 1 if foreign investors can acquire the company's shares in either Shanghai or overseas markets, 0 otherwise.

Table 5
Descriptive Statistics for CSR Initiatives in Separate CSR Reports issued by Sample Companies on the Shanghai Stock Exchange, China during 2008-2009
(n = 388)

Variables	Definition	Minimum	Maximum	Mean	Std. Deviation
Area	*The CSR areas (i.e. employees, customers, suppliers, general public and pollution) in which the company shows its concerns.*				
Employees	Dummy variable, 1 if the separate CSR mentions this area, 0 otherwise.	0	1	0.93	0.256
Customers	Dummy variable, 1 if the separate CSR mentions this area, 0 otherwise.	0	1	0.84	0.363
Suppliers	Dummy variable, 1 if the separate CSR mentions this area, 0 otherwise.	0	1	0.28	0.452
Public	Dummy variable, 1 if the separate CSR mentions this area, 0 otherwise.	0	1	0.89	0.308
Pollution	Dummy variable, 1 if the separate CSR mentions this area, 0 otherwise.	0	1	0.91	0.280
Exp	*The monetary amount the company donates to or spends on different social activities divided by the sales in the year.*				
E_Disaster	The amount the company donates to disaster fund divided by the sales.	0	0.0149	0.00051	0.00150
E_Infrastructure	The amount the company spends on infrastructure divided by the sales.	0	0.0453	0.00030	0.00318
E_Poverty	The amount the company donates to helping the poor divided by the sales.	0	0.0205	0.00013	0.00125
E_Education	The amount the company donates to education fund divided by the sales.	0	0.0125	0.00011	0.00076
E_Charity	The amount the company donates to charity organizations divided by the sales.	0	0.0144	0.00020	0.00113
E_Art	The amount the company donates to arts divided by the sales.	0	0.0007	0.000005	0.00005
E_Environmnt	The amount the company donates to improving the environment divided by the sales.	0	0.0437	0.00114	0.00408
E_Employees	The amount the company spends on improving employees' life divided by the sales.	0	0.0477	0.00055	0.00335
E_Others	The amount the company donates to or spends on other areas	0	0.0505	0.00018	0.00259
Hon	*Awards received by the company for its significant contributions to different areas.*				
H_Environment	Number of awards for contributions to improving the environment.	0	8	0.43	0.971
H_Charity	Number of awards for donating and helping different charity organizations.	0	4	0.21	0.575
H_Employees	Number of awards for caring the employees.	0	5	0.22	0.644
H_Others	Number of awards for other social contributions.	0	5	0.35	0.812
GRI	Dummy variable, 1 if the company follows the GRI guidelines to prepare its separate CSR report, 0 otherwise.	0	1	0.05	0.224
Audit	Dummy variable, 1 if the separate CSR report has been audited, 0 otherwise.	0	1	0.03	0.157

Table 6

Results of Regression Analyses for CSR Initiatives and Current Firm Performance of Sample Companies on the Shanghai Stock Exchange, China for 2008,2009 (t)

Variables	PANEL A $Ln(1+ROA_t)$	PANEL B $Ln(1+Mkt_t)$	PANEL C $Ln(1+\%\Delta Sales_t)$	PANEL D $LnTobinQ_t$
Constant	0.018	-0.029	-0.302	1.042
	(0.803)	(-0.176)	(-1.946)**	(6.716)***
$Employees_t$	-0.006	-0.020	-0.017	0.064
	(-0.881)	(-0.383)	(-0.358)	(1.370)
$Customers_t$	0.000	0.029	-0.003	0.030
	(-0.066)	(1.014)	(-0.094)	(1.158)
$Suppliers_t$	0.002	0.010	-0.009	-0.018
	(0.911)	(0.493)	(-0.484)	(-1.030)
$Public_t$	0.000	-0.049	0.005	-0.041
	(0.092)	(-1.243)	(0.146)	(-1.145)
$Pollution_t$	0.010	-0.022	-0.007	-0.018
	(1.615)	(-0.472)	(-0.167)	(-0.440)
$E\_Disaster_t$	1.730	16.138	8.480	11.517
	(2.251)**	(2.861)***	(1.603)	(2.260)***
$E\_Infrastructure_t$	-0.023	-0.520	-0.813	3.804
	(-0.069)	(-0.211)	(-0.351)	(1.704)
$E\_Poverty_t$	-0.438	2.187	3.868	-1.199
	(-0.518)	(0.352)	(0.665)	(-0.214)
$E\_Education_t$	2.288	5.194	-57.945	-4.316
	(1.517)	(0.469)	(-5.581)***	(-0.432)
$E\_Charity_t$	0.394	-14.718	0.878	14.806
	(0.280)	(-1.422)	(0.090)	(1.582)
E_Art_t	1.366	79.364	123.411	-230.007
	(0.062)	(0.488)	(0.808)	(-1.563)
$E\_Environment_t$	-0.046	0.271	-0.546	-0.428
	(-0.177)	(0.141)	(-0.304)	(-0.247)
$E\_Employees_t$	0.018	-4.506	-0.011	-0.735
	(0.057)	(-1.974)**	(-0.005)	(-0.356)
E_Others_t	0.662	11.089	1.172	1.809
	(1.165)	(2.660)***	(0.300)	(0.480)
$LnAsset_t$	0.002	-0.028	0.046	-0.106
	(0.717)	(-1.804)*	(3.136)***	(-7.121)***
D/E_t	-0.002	0.007	0.001	-0.007
	(-5.476)***	(2.250)**	(0.445)	(-2.247)***
SOE_t	0.002	0.009	0.019	-0.151
	(0.472)	(0.244)	(0.551)	(-4.471)***
FI_t	0.004	-0.020	-0.065	-0.005
	(1.123)	(-0.717)	(-2.455)**	(-0.193)
Year Dummy	Yes	Yes	Yes	Yes
Industry Dummy	Yes	Yes	Yes	Yes
No. of observations	388	388	388	373
Adjusted R^2	0.091	0.845	0.111	0.454
F-Statistics	2.251	69.405	2.565	11.303

*(t-statistics in parentheses: * statistically significant at the 0.10 level; ** statistically significant at the 0.05 level; ***statistically significant at the 0.01 level)*

Results corrected for heteroskedasticity

Variable Definition		
$Ln(1+ROA_t)$	=	Natural logarithmic of (1+return on total assets), i.e. profit after tax divided by total assets.
$Ln(1+Mkt_t)$	=	Natural logarithmic of (1+Market Return), i.e. the change in share prices plus cash dividend in a year divided by the share price at the beginning of the year.
$Ln(1+\%\Delta Sales_t)$	=	Natural logarithmic of (1+Percentage change in Sales), i.e. the change in Sales in the year divided by the sales in the previous year.
$LnTobinQ_t$	=	Natural logarithmic of Tobin's Q ratio, i.e. total market value divided by the total asset value of the firm.
$Employees_t$	=	Dummy variable, 1 if the separate CSR mentions employees, 0 otherwise.
$Customers_t$	=	Dummy variable, 1 if the separate CSR mentions customers, 0 otherwise.
$Suppliers_t$	=	Dummy variable, 1 if the separate CSR mentions suppliers, 0 otherwise.
$Public_t$	=	Dummy variable, 1 if the separate CSR mentions general public, 0 otherwise.
$Pollution_t$	=	Dummy variable, 1 if the separate CSR mentions pollution protection, 0 otherwise.
$E\_Disaster_t$	=	The amount the company donates to disaster fund divided by the sales.
$E\_Infrastructure_t$	=	The amount the company spends on infrastructure divided by the sales.
$E\_Poverty_t$	=	The amount the company donates to helping the poor divided by the sales.
$E\_Education_t$	=	The amount the company donates to education fund divided by the sales.
$E\_Charity_t$	=	The amount the company donates to charity organizations divided by the sales.
E_Art_t	=	The amount the company donates to arts divided by the sales.
$E\_Environment_t$	=	The amount the company donates to improving the environment divided by the sales.
$E\_Employees_t$	=	The amount the company spends on improving employees' life divided by the sales.
E_Others_t	=	The amount the company donates to or spends on other areas.
$LnAsset_t$	=	Natural logarithmic of total asset value of the firm.
D/E_t	=	Leverage, i.e. total debt divided by total shareholder equity.
SOE_t	=	Proportion of state-owned equity in a firm.
FI_t	=	Foreign investment in the firm, 1 if foreign investors can acquire the company's shares in either Shanghai or overseas markets, 0 otherwise.

Table 7
Results of Regression Analyses for CSR Initiatives and Future Firm Performance of Sample companies on the Shanghai Stock Exchange, China for 2008,2009 (t)

Variables	PANEL A $Ln(1+ROA_{t+1})$	PANEL B $Ln(1+Mkt_{t+1})$	PANEL C $Ln(1+\%\Delta Sales_{t+1})$	PANEL D $LnTobinQ_{t+1}$
Constant	0.001	1.066	-0.296	1.824
	(0.035)	(7.444)***	(-1.946)*	(10.226)***
$Employees_t$	-0.011	0.030	-0.069	0.087
	(-1.551)	(0.688)	(1.463)	(1.611)
$Customers_t$	0.001	0.015	0.016	0.016
	(0.242)	(0.623)	(0.617)	(0.527)
$Suppliers_t$	-0.002	-0.038	-0.012	-0.042
	(-0.603)	(-2.172)**	(-0.659)	(-1.943)
$Public_t$	0.006	0.020	0.047	-0.017
	(1.154)	(0.607)	(1.327)	(-0.412)
$Pollution_t$	0.009	-0.026	0.021	-0.035
	(1.433)	(-0.650)	(0.487)	(-0.730)
$E\_Disaster_t$	3.738	-1.722	6.456	15.802
	(4.755)***	(-0.350)	(1.235)	(2.638)***
$E\_Infrastructure_t$	-0.075	-0.620	2.306	3.539
	(-0.217)	(-0.289)	(1.012)	(1.355)
$E\_Poverty_t$	-0.330	-0.839	-3.081	-4.171
	(-0.396)	(-0.161)	(-0.555)	(-0.656)
$E\_Education_t$	2.300	5.206	43.343	-4.774
	(1.531)	(0.554)	(4.339)***	(-0.417)
$E\_Charity_t$	1.330	8.645	-6.803	31.457
	(0.940)	(0.978)	(-0.723)	(2.921)***
E_Art_t	1.735	136.991	8.094	-125.326
	(0.078)	(0.991)	(0.055)	(-0.744)
$E\_Environment_t$	-0.472	-1.548	-2.177	-0.724
	(-1.815)*	(-0.952)	(-1.260)	(-0.365)
$E\_Employees_t$	0.095	0.582	-0.027	0.542
	(0.303)	(0.297)	(-0.013)	(0.227)
E_Others_t	0.407	4.438	5.341	-0.283
	(0.717)	(1.250)*	(1.415)	(-0.065)
$H\_Environment_t$	0.000	0.009	-0.009	0.001
	(0.204)	(1.099)	(-1.081)	(0.143)
$H\_Charity_t$	-0.002	-0.002	0.001	0.003
	(-1.028)	(-0.191)	(0.047)	(0.180)
$H\_Employees_t$	-0.001	0.002	0.014	-0.010
	(-0.773)	(0.171)	(1.206)	(-0.703)
H_Others_t	0.001	-0.008	-0.010	-0.016
	(0.548)	(-0.885)	(-0.984)	(-1.350)
GRI_t	0.001	0.059	-0.008	-0.049
	(0.196)	(1.429)**	(-0.185)	(-0.975)
$Audit_t$	0.008	-0.045	-0.006	0.043
	(0.986)	(-0.879)	(-0.112)	(0.692)
$LnAsset_t$	0.002	-0.083	0.030	-0.172
	(0.838)	(-6.055)***	(2.051)**	(-10.063)***
D/E_t	-0.001	0.003	0.003	-0.006
	(-2.211)**	(0.955)	(0.944)	(-1.654)*
SOE_t	0.002	-0.004	0.038	-0.137
	(-0.301)	(-1.390)	(1.115)	(-3.512)***
FI_t	0.003	-0.012	-0.036	0.026
	(0.910)	(-0.522)	(-1.425)	(0.882)
Year Dummy	Yes	Yes	Yes	Yes
Industry Dummy	Yes	Yes	Yes	Yes
No. of observations	388	388	388	386
Adjusted R^2	0.075	0.636	0.158	0.386
F-Statistics	1.849	19.222	2.958	7.505

(*t-statistics in parentheses:* * statistically significant at the 0.10 level; ** statistically significant at the 0.05 level; ***statistically significant at the 0.01 level)
Results corrected for heteroskedasticity

Variable defintions		
$Ln(1+ROA_{t+1})$	=	Natural logarithmic of (1+return on total assets), i.e. profit after tax divided by total assets.
$Ln(1+Mkt_{t+1})$	=	Natural logarithmic of (1+Market Return), i.e. the change in share prices plus cash dividend in a year divided by the share price at the beginning of the year.
$Ln(1+\%\Delta Sales_{t+1})$	=	Natural logarithmic of (1+Percentage change in Sales), i.e. the change in Sales in the year divided by the sales in the previous year.
$LnTobinQ_{t+1}$	=	Natural logarithmic of Tobin's Q ratio, i.e. total market value divided by the total asset value of the firm.
$Employees_t$	=	Dummy variable, 1 if the separate CSR mentions employees, 0 otherwise.
$Customers_t$	=	Dummy variable, 1 if the separate CSR mentions customers, 0 otherwise.
$Suppliers_t$	=	Dummy variable, 1 if the separate CSR mentions suppliers, 0 otherwise.
$Public_t$	=	Dummy variable, 1 if the separate CSR mentions general public, 0 otherwise.
$Pollution_t$	=	Dummy variable, 1 if the separate CSR mentions pollution protection, 0 otherwise.
$E\_Disaster_t$	=	The amount the company donates to disaster fund divided by the sales.
$E\_Infrastructure_t$	=	The amount the company spends on infrastructure divided by the sales.
$E\_Poverty_t$	=	The amount the company donates to helping the poor divided by the sales.
$E\_Education_t$	=	The amount the company donates to education fund divided by the sales.
$E\_Charity_t$	=	The amount the company donates to charity organizations divided by the sales.
E_Art_t	=	The amount the company donates to arts divided by the sales.
$E\_Environment_t$	=	The amount the company donates to improving the environment divided by the sales.
$E\_Employees_t$	=	The amount the company spends on improving employees' life divided by the sales.
E_Others_t	=	The amount the company donates to or spends on other areas.
$H\_Environment_t$	=	Number of awards for contributions to improving the environment.
$H\_Charity_t$	=	Number of awards for donating and helping different charity organizations.
$H\_Employees_t$	=	Number of awards for caring the employees.
H_Others_t	=	Number of awards for other social contributions.
GRI_t	=	Dummy variable, 1 if the company follows the GRI guidelines to prepare its separate CSR report, 0 otherwise.
$Audit_t$	=	Dummy variable, 1 if the separate CSR report has been audited, 0 otherwise
$LnAsset_t$	=	Natural logarithmic of total asset value of the firm.
D/E_t	=	Leverage, i.e. total debt divided by total shareholder equity.
SOE_t	=	Proportion of state-owned equity in a firm.
FI_t	=	Foreign investment in the firm, 1 if foreign investors can acquire the company's shares in either Shanghai or overseas markets, 0 otherwise.

Table 8
Table for hypotheses supported/ not supported

	Economic Performance	Market Performance	Sales Performance
H1: The separate CSR reporting in year t is positively related to firms' performance in year t-1	Support	Not support	Not support
H2: There is a positive association between CSR report issuance in year t and firm's performance in year t+1.	Support	Not support	Not support
H3: There is a positive association between CSR performance in year t and firm's performance in year t.	Partially support	Partially support	Not support
H4: There is a positive association between CSR performance in year t and firm's performance in year t+1	Partially support	Partially support	Partially support