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CSR Practices and Corporate Financial Performance:
Evidence from China

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Abstract

Purpose - The purpose of this paper is to explore the relationship between corporate social responsibility (CSR) and corporate present and future value.
Design/methodology/approach - This paper intends to prove the relationship between CSR and corporate value once again by selecting A-share companies listed on the China Shenzhen Stock Exchange and Shanghai Stock Exchange from 2010 – 2017. This paper also examines the effect of five dimensions of CSR on corporate value in China.
Findings - Empirical evidence shows that CSR is conducive to corporate value. The fulfillment of social responsibilities improves firm value in the future. Further, the regression results show that the social responsibility of the non-state-owned enterprise (Non-SOEs) group has a more significant effect on corporate financial performance than on the state-owned enterprise (SOEs) group.
Research implications or Originality - This study has limitations. First, the grouping is only divided into two groups of SOEs and non-SOEs, and we did not consider foreign investments, that is, foreign-funded enterprises, for the comparative analysis. Second, only the linear relationship between CSR and corporate value was tested. In the future, we must determine whether there exists a nonlinear relationship between the two key concepts. Finally, there exists no research on CSR and corporate value by specific industries. Thus, the relationship between the five dimensions of CSR and corporate value should be investigated by specific industries.

Keywords: China, CSR, Financial Performance, SOEs, Non-SOEs
JEL Classifications: D21, M14, M41

Ⅰ. Introduction

Since the reform and opening up, China has achieved rapid economic development and has set numerous milestones. However, this transformation brought a series of social problems. In market competition, some enterprises prioritize profits and recklessly pursue the maximization of economic benefits. This has led to problems in environmental pollution, food safety, and quality defects. Under such circumstances, the implementation of corporate social responsibility (CSR) has attracted.

Enterprises are an important part of society and should actively participate in the resolution of social problems through CSR. The Chinese government has also begun to encourage and

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guide enterprises to assume social responsibility. It has issued social responsibility norms and guidelines: for example, the Guiding Opinions on the Implementation of Social Responsibility by Central Enterprises was issued in 2008, Guidelines on Social Responsibility of Chinese Industrial Enterprises and Industrial Associations in 2008, and Guidelines on Corporate Social Responsibility in China in 2015. These guidelines reflect the Chinese government's commitment to CSR.

Accordingly, some firms in China have actively assumed social responsibilities. In 2019, JD Group actively fulfilled its CSR. Since 2016, it has launched an e-commerce-targeted poverty alleviation plan[1]. As of December 31, 2019, JD Group has launched products in 832 poor counties across the country, with 3 million kinds of products and sales of over 75 billion yuan, directly driving the income of 900,000 impoverished households that have established files[2]. According to data released on April 17, 2019, "netizens" donated 30 billion yuan via the Alibaba platform, setting a world record; this has made Alibaba the world's largest donation platform. Alibaba not only has a charity donation platform, but also public welfare incentives based on user business behaviors, such as Ant Forest. At present, Alipay Ant Forest has 500 million users who have planted 100 million trees.

According to the Blue Book of Corporate Social Responsibility (2019), issued by the Chinese Academy of Social Sciences, the social responsibility development index of the top 300 Chinese enterprises (top 100 state-owned enterprises, top 100 private enterprises, and top 100 foreign-funded enterprises) is 32.7 points, and about 50% of the enterprise development index is below 20 points. It shows that the fulfillment of CSR by enterprises is still in the beginning stage. The public expects enterprises to participate in solving social problems and requires enterprises to consider social and environmental interests when pursuing economic interests. Thus, we pose the question: What kind of effect will CSR have on a firm in China?

In 1997, the British scholar John Elkington (1997) first proposed the concept of the triple bottom line to CSR[3]. Brammer et al. (2006) claim that the fulfillment of CSR will increase the firm's operating costs, thereby reducing operating performance. Backhaus et al. (2002) and Lubin and Esty (2010) believe that CSR can improve corporate reputation and brand value, thereby increasing operating performance. Porter and Kramer (2006) further contend that CSR can become a source of innovation and competitive advantage when it is linked to corporate strategy and business operations. Kengatharan et al. (2020) used Colombo-listed manufacturing firms as samples to study the effect of CSR on corporate performance, and the results show that firm management should pay more attention to CSR and attract more customers to buy their products as well as increase the value of the firm and wealth of shareholders. However, Bing and Li (2019) found that CSR significantly reduces corporate value. McWilliams and Siegel (2001) find that CSR has a neutral effect on financial performance.

A corporation generally refers to a legal entity or other socioeconomic organization that uses various factors of production such as land, labor, capital, technology, and entrepreneurial talent to provide goods or services to the market for profitability as well as implements in-

1) JD.com is the China's largest online retailer and its biggest overall retailer as well as the biggest internet company by revenue.

2) The establishment of files for poor households is based on the national rural poverty alleviation standard of farmers' per capita net income (equivalent to a constant price of 2,300 yuan in 2010) as the identification standard (each region can make corresponding adjustments according to local conditions).

3) The triple bottom line refers to the bottom line of the economy, environment, and society, that is, companies must perform the most basic economic, environmental, and social responsibilities.

dependent operation, self-financing, and independent accounting.

There are two opposing views on the issue of "whether a company should fulfill its social responsibilities": Freidman (1970) and Levitt (1958) state that CSR deviates from the goal of maximizing corporate value, denying the necessity of CSR. Davis et al. (1980) and Carroll (1999) found that social responsibility is the requirement of an economic environment wherein the enterprise is located and that supports the enterprise to fulfill its social responsibility. Both views attempt to answer whether CSR behavior can enhance corporate value. If there is evidence that corporate value can be improved through CSR, we can refute the view that CSR only increases corporate costs and wastes corporate resources.

Although related surveys and studies have shown that most scholars, entrepreneurs, and the public believe firms should bear certain social responsibilities, there are still shortcomings in the performance of CSR (see Blue Book of Corporate Social Responsibility, 2019). Incidents that violate social responsibilities occur frequently. Perhaps the effect of social responsibility on the value of an enterprise is not simply related or irrelevant, and perhaps not all social responsibilities can generate corporate value. In China, how to deal with CSR incidents, the effect of social responsibility behaviors on corporate value, and what kind of CSR variables play an important role in this activity have become important management issues that need to be resolved. Therefore, we analyze the impact of corporate social responsibility on the present and future value of corporations.

This research is organized as follows. First, we summarize the previous literature which we study to establish our hypotheses. We then describe the sample selection and five dimensions of CSR practices. Next, we report the regression results and discuss the significance of these results. In the final section, we state our conclusions and limitation of this study.

II. Hypothesis development

1. Effect of CSR on corporate value

The concept of CSR has undergone a long and diversified evolutionary process (Carroll, 1999). Bowen (1953) states that modern enterprises are the main body of social responsibility: Enterprise managers are the implementers of CSR and the voluntary principle of CSR performance. Carroll (1979) proposed a framework for CSR, comprehensively summarizing the types and scope thereof. In later research, Carroll (1999) notes that the 1950s was the modern era of social responsibility. In the 1960s CSR literature expanded, with greater attention toward defining it in the 1970s. Since then, further research focused on alternative themes.

Can CSR create value for a firm? What is the connection between social responsibility and corporate value? These issues have always been intensely discussed in academia. A large number of scholars have applied various methods to explore and explain this relationship, although there exist no conclusive results. Regarding this relationship, there are three views: positive correlation, negative correlation, and other relationships between CSR and corporate value.

In the first view, Bragdon and Marlin (1972) selected pulp and paper industry firms as samples to study the relationship between return on equity (ROE) and environmental pollution. They found that environmental protection and corporate financial performance are positively correlated. Moskowitz (1972) created the CSR index and found that firms that fulfill their social responsibilities better had significant excess returns on their stocks in the capital market. Burke

and Logsdon (1996) claim that CSR behaviors can bring economic benefits to enterprises as well as social benefits in the form of reputation. Indeed, firms that have a reputation for actively fulfilling social responsibilities are more favored by investors (McWilliams et al., 2006; Mackey et al., 2007). Enterprise products and services receive premium prices (Servaes and Tamayo, 2013), making CSR conducive to recruiting and retaining excellent employees (Greening and Turban, 2000). Chen and Wang (2011), Sun (2012), and Harjoto and Laksmana (2018) found significant and positive associations between CSR and corporate financial performance. Hu et al. (2018) also studied Chinese manufacturing firms from 2010 to 2015 to show that CSR has a positive relationship with firm value. In general, many previous studies have demonstrated a positive relationship between CSR and corporate value, but sometimes other results are reported as follows.

In the second view, Barnett (2007) claims that, even if the firm has idle resources, the cost of corporate social responsibility performance will weaken the firm's competitive advantage. Brammer and Millington (2008) contend that the performance of CSR will occupy the resources of the firm's production and investment and increase costs. Then, shareholders will strengthen supervision, or recover their invested resources, and the firm's agency costs will further rise[4]. Thus, CSR negatively affects firm performance. Lioui and Sharma (2012) found that corporate environmental and social responsibility is significantly, but negatively, correlated to return on asset (ROA) and Tobin's Q.

In the final view, Aras et al. (2010), based on research in emerging market countries, found that CSR does not correlate with corporate performance. McWilliams and Siegel (2000) found a neutral relationship between CSR and financial performance. Belu and Manescu (2013) also reveal a neutral relationship between the strategic CSR index and economic performance as measured by ROA and Tobin's Q when controlling for firm unobserved heterogeneity and past economic performance. Madorran and Garcia's (2016) findings on Spanish firms show no obvious relationship between CSR and financial performance. Despite the second and third views, we adopt the first view. Thus, we hypothesize as follows:

H1: CSR practices are positively associated with corporate financial performance.

2. Effect of CSR on future corporate value

Ruf et al. (2001) found that stakeholder theory can be a framework for investigating the relationship between corporate social responsibility practices and corporate financial performance. When management meets the needs of multiple stakeholders, the main stakeholder group, namely, shareholders, will benefit financially. Ruf et al. (2001) report that changes in corporate social responsibility practices is positively correlated with sales growth for the same year and subsequent years. This means the effect of corporate social responsibility practices on future corporate value.

4) Jensen and Meckling proposed the agency theory in 1976. The central task of the agent theory is to study how the principal can design the optimal contract to incentivize the agent in an environment of conflicting interests and asymmetric information. This theory later developed into contracting cost theory (contracting cost theory), which assumes that an enterprise comprises a series of contracts, including the contractual relationship between capital providers (shareholders and creditors, etc.) and capital managers (management authorities), enterprises and lenders, enterprises and customers, and enterprises and employees.

Chen and Wang (2011) found that CSR was significantly positively correlated with the future value of firm performance due to the time delay factors. Employing a sample of U.S. firms from 1993 to 2009, Harjoto and Jo (2015) found that CSR practices can play a positive role in the improvement of corporate value, with a lagging effect. That is, CSR has an effect on future firm value. Thus, we hypothesize:

H2: CSR practices are positively associated with future corporate financial performance.

3. Effect of CSR under Different Ownership Conditions

Since the characteristics of SOEs are different from those of non-SOEs, a comparative analysis of both firm types can provide a clearer understanding of the relationship between Chinese firms' CSR and corporate value (Zhang et al., 2015). SOEs consider non-economic goals when they perform corporate social responsibilities. However, when non-SOEs perform corporate social responsibilities, they pay more attention to maximizing economic profits. In SOEs, CSR practices may be driven by government pressure, which may cause agency problems. In particular, Chinese SOEs' response to CSR is politically driven, indicating that it is better to distinguish SOEs from non-SOEs when evaluating firms' CSR behavior (Li and Zhang, 2010). Kao et al. (2018) also found that the market favorably responded to corporate social responsibility practices of Non-SOEs, but not SOEs. Thus, we hypothesize:

H3: Compared with SOEs, the CSR practices of Non-SOEs are more positively associated with corporate value.

Ⅲ. Research design and sample selection

1. Sample selection

Because the social responsibility score of the China Hexun.com database began in 2010, we select A-share listed firms on the China Shenzhen Stock Exchange and Shanghai Stock Exchange during the period 2010–2017 for this study. In addition to extracting the CSR performance data from Hexun.com. database, the corporate financial data was mainly extracted from the China Stock Market & Accounting Research database. Financial-listed firms, ST-listed firms (ST refers to stocks that are specially treated by the Chinese stock exchange to warn of potential delisting risk), and firms with missing variables on the main indicators are deleted. We obtain a total of 16,387 sample observations from 2,997 firms.

To eliminate outliers in the sample, we winsorize the upper and lower 1 % of all continuous variables. Stata 15.0 was used for data analysis and the statistical significance of the reported regression coefficients is based on the heteroscedasticity consistent covariance matrix (White, 1980). In Table 1, Panel A shows the year distribution of the sample, and Panel B provides the distribution of the sample firms across different industries.[5)]

5) The industry classification based on China Securities Regulatory Commission's Industry Classification 2012 Edition.

Table 1. Distribution of Samples by Year and by Industry

Panel A: Sample Distribution by Year	
YEAR	N
2010	1,576
2011	1,818
2012	1,953
2013	1,922
2014	1,959
2015	2,103
2016	2,342
2017	2,714
Panel B: Sample Distribution by Industry	
Industries	N
Agriculture, forestry, animal husbandry and fishery	245
Mining industry	432
Manufacturing	10,405
Electricity, heat, gas and water production and supply	577
Construction industry	466
Wholesale and retail trade	915
Transportation, warehousing and postal services	559
Accommodation and Catering	71
Information Transmission, Software and Information Technology Services	1,002
Real estate	808
Leasing and business services	185
Scientific research and technical services	130
Water, Environment and Public Facilities Management	165
Residential services, repairs and other services	16
Education	9
Health and social work	30
Culture, sports and entertainment	194
Comprehensive	178
Total (Firm)	16,387(2,997)

2. Variable definition

2.1. Dependent variables

The explained variable is corporate value. In this study, the two most frequently used variables are adopted: corporate financial performance and corporate market value. Lee et al. (2016) and Raza et al. (2012) used ROE to investigate the relationship between CSR and corporate financial performance. Harjoto and Laksmana (2018), Harjoto and Jo (2015), Hu et al. (2018), O'Sullivan and McCallig (2012), and Servaes and Tamayo (2013) used Tobin's Q to investigate corporate market value. Therefore, we choose ROE to reflect the corporate financial performance recognized in the financial statements and Tobin's Q to reflect the corporate market value reflected in the stock price.

2.2. Independent variables

As in previous studies, the independent variables are the degree and level of CSR practices (Hu et al., 2018; Shi et al., 2018; Zhong et al., 2019; Yu et al., 2020). The indicator system covers CSR total score (TOSC); shareholder responsibilities (SHAR); employee responsibilities (STAF); supplier, customer, and consumer rights responsibilities (SUPP); environmental responsibility (ENVI), and social responsibility (SOCI). Each category has established two-level indicators (13 indicators) and three-level indicators (37 indicators) to comprehensively evaluate social responsibilities; it distributes them proportionally according to the weight of different industries (see Appendix 1).

Five key aspects of a company's shareholder responsibility (SHAR) are profit level, debt-paying ability, return on investment, penalty status, and innovation. Generally, corporate profitability and financial soundness are positively related to corporate value (Yuliana, 2019). High investment opportunities, corporate innovation, and compliance increase the competitiveness and reputation of a company. (Del Brio et al., 2003; Sukumar, 2020). Three key aspects of staff responsibility (STAF) are staff income and training, safe production, and taking care of employees. Since a company's products and services are created by its employees, rewards and recognition have a significant impact on employee motivation (Danish and Usman, 2010). When employees are motivated and satisfied with their work, they actively participate in the company's work and have a positive effect on the company's financial performance (Pang and Lu, 2018).

Three key aspects of the supplier, customer, and consumer rights responsibilities (SUPP) are product quality, after-sales service, and integrity and fair competition. Improved relationships with suppliers, such as increased communication and geographic proximity, affect product quality and other costs. (Cannon and Homburg, 2001). In addition, when companies fulfill their customer responsibilities, they can increase customer satisfaction and have a positive effect on corporate value (O'Sullivan and McCallig, 2012). Environmental responsibility (ENVI) means environmental protection and governance. Singh et al. (2014) regard environmental protection investment as an advantageous resource for enterprises, which can bring a good reputation to enterprises, help improve enterprise efficiency, reduce waste, and enhance enterprise value. Lee et al. (2016) found that the relationship between environmental responsibility performance and firm ROE is positive and statistically significant. Social responsibility mainly includes income tax profit ratio and total social donations. Galaskiewicz (1985) and Brammer et al. (2005) believe that firms use charitable donations to obtain key resources to improve their business environment, although charitable donations incur direct costs. Thus, there is a significant positive correlation between corporate donations and financial performance.

2.3. Control variables

Based on previous studies, various control variables affecting corporate value are included in the regression analysis model. Company age (AGE), company size (SIZE), and top 10 shareholder ratio (TOP10) are used as control variables that can discriminate company characteristics. Next, as financial variables, the debt-to-assets ratio(LEV), sustainable growth rate (SGR), increased rate of major business revenue (IRBR), and net cash flow from operating activities (CF) is used. Both the industry dummy variable (INDUSTRY) and the year dummy variable (YEAR) are used as control variables because they affect the company value.

3. Model setting

$$ROE(TOBINQ) = \alpha + \beta_1 CSR + \beta_2 CF + \beta_3 AGE + \beta_4 IRBR + \beta_5 SGR + \beta_6 TOP10 + \beta_7 LEV + \beta_8 SIZE + \sum YEAR + \sum INDUSTRY + \epsilon \quad (1)$$

Dependent Variables

ROE	=	Return on equity. Net income divided by stockholders equity
TOBINQ	=	Market value of equity plus the book value of debt/Total asset
ROE1	=	Future(t+1) ROE
TOBINQ1	=	Future(t+1) TOBINQ
ROE2	=	Future(t+2) ROE
TOBINQ2	=	Future(t+2) TOBINQ

Independent Variables (CSR)

TOSC	=	Corporate social responsibility total score (SHAR + STAF + SUPP + ENVI + SOCI)
SHAR	=	Shareholder responsibility
STAF	=	Staff responsibility
SUPP	=	Supplier, customer, and consumer rights responsibilities
ENVI	=	Environmental responsibility
SOCI	=	Social responsibility

Control Variables

CF	=	Net cash flow from operating activities
AGE	=	Years of company establishment
IRBR	=	Increase rate of main business revenue
SGR	=	Sustainable growth rate
TOP10	=	The total shareholding ratio of the top ten shareholders
LEV	=	Total liabilities/Total assets
SIZE	=	Enterprise size

IV. Empirical process and result analysis

1. Descriptive statistics

Table 2 presents the sample descriptive statistics of the regression variables. The mean (median) value of ROE is 0.071 (0.073), the mean (median) value of ROE1 is 0.063 (0.068), and the mean (median) value of ROE2 is 0.056 (0.064). The mean (median) of TOBINQ is 2.804 (2.144), the mean (median) of TOBINQ1 is 2.460 (1.891), and the mean (median) of TOBINQ2 is 2.380 (1.833). The maximum (minimum) values of TOSC, SHAR, STAF, SUPP, ENVI, and SOCI are respectively 79.170(-4.160), 26.280 (-3.210), 15.000 (0.000), 20.000 (0.000), 23.000(0.000), and 22.220(-9.090), indicating that different listed firms have considerable differences in fulfilling their CSR. The social responsibility indicator appears negative because of the negative income tax. If the tax refund or offset is not carried forward, the income tax has a negative number.

Table 2. Descriptive Statistics for Variable Measures

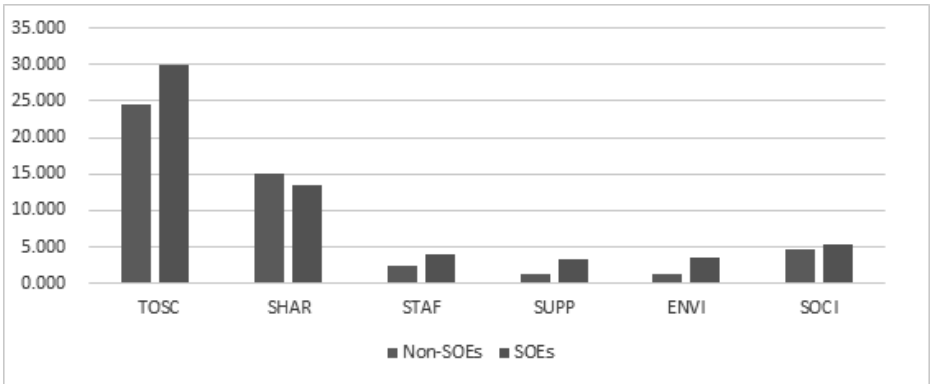
Variables	Mean	Std	Min	Q1	Median	Q3	Max
ROE	0.071	0.001	-0.664	0.035	0.073	0.114	0.347
TOBINQ	2.804	0.016	0.859	1.475	2.144	3.375	19.115
ROE1	0.063	0.001	-0.960	0.030	0.068	0.111	0.347
TOBINQ1	2.460	0.014	0.801	1.342	1.891	2.909	18.323
ROE2	0.056	0.001	-1.147	0.027	0.064	0.108	0.343
TOBINQ2	2.380	0.014	0.797	1.297	1.833	2.797	19.380
TOSC	26.766	0.135	-4.160	17.300	22.620	28.850	79.170
SHAR	14.360	0.046	-3.210	10.770	14.850	18.600	26.280
STAF	3.030	0.027	0.000	0.810	1.720	3.730	15.000
SUPP	2.189	0.041	0.000	0.000	0.000	0.000	20.000
ENVI	2.266	0.044	0.000	0.000	0.000	0.000	23.000
SOCI	4.911	0.033	-9.090	2.520	4.350	6.940	22.220
CF	0.042	0.001	-0.224	0.003	0.042	0.083	0.257
IRBR	0.215	0.004	-0.575	0.001	0.129	0.301	4.124
AGE	15.614	0.043	2.000	12.000	16.000	19.000	32.000
SGR	0.058	0.001	-0.404	0.022	0.053	0.091	0.413
TOP10	0.594	0.001	0.213	0.483	0.606	0.717	0.908
LEV	0.418	0.002	0.028	0.242	0.408	0.584	0.884
SIZE	22.046	0.010	19.491	21.093	21.857	22.790	26.186

Table 3 shows the results of the univariate tests. After splitting the sample into Non-SOEs and SOEs, we measure the mean difference of each group for t-tests. All research variables have a significant t-value. ROE (0.077) and TOBINQ (3.282) in the Non-SOEs group are more than ROE (0.063) and TOBINQ (2.129) in the SOEs group. Thus, the value of Non-SOEs is greater than that of SOEs. In fulfilling CSR, TOSC is 24.564 in the Non-SOEs group, less than 29.876 in the SOEs group, indicating that SOEs perform higher CSR than Non-SOEs, as shown in Figure 1 CSR Statistics-Sample(mean) Split by Ownership. The univariate test results are not like our prediction. Based on the results, we can explain that all aspects of the CSR score of SOEs are much higher than that of the Non-SOEs except SHAR. In the case of SOEs, the government may put pressure on corporate CSR practices.

Table 3. Summary Statistics-Sample (Mean) Split by Ownership

	Non-SOEs N =9,594	SOEs N =6,793	dif	t value	p value
ROE	0.077	0.063	0.014	9.400	0.000
TOBINQ	3.282	2.129	1.153	36.250	0.000
TOSC	24.564	29.876	-5.312	-19.600	0.000
SHAR	14.996	13.463	1.533	16.550	0.000
STAF	2.307	4.052	-1.746	-32.850	0.000
SUPP	1.381	3.331	-1.950	-24.150	0.000
ENVI	1.285	3.652	-2.367	-27.350	0.000
SOCI	4.596	5.356	-0.761	-11.550	0.000
CF	0.040	0.044	-0.005	-3.950	0.000
IRBR	0.244	0.174	0.071	9.200	0.000
AGE	14.609	17.033	-2.425	-28.500	0.000
SGR	0.060	0.055	0.005	3.700	0.000
TOP	0.606	0.576	0.030	12.650	0.000

Figure1. CSR Statistics-Sample (Mean) Split by Ownership



2. Correlation analysis of variables

Table 4 is the Pearson correlation analysis results of the main variables. Evidently, the correlation coefficients of TOSC, SHAR, STAF, SUPP, ENVI, SOCI, and ROE are respectively 0.387, 0.731, 0.103, 0.102, 0.071, and 0.257, indicating positive correlation. The correlation coefficients with TOBINQ are -0.103, 0.081, -0.132, -0.121, -0.141, and -0.09, indicating negative correlation for all except SHAR.

Thus, the preliminary findings show that fulfilling CSR can improve the short-term financial performance of enterprises. In addition, CF, IRBR, SGR, and ROE (TOBINQ) are positively related, indicating that firms with good growth and financial flexibility have relatively high corporate value. LEV, AGE, and ROE (TOBINQ) are negatively related, indicating that listed firms with lower debt levels and younger firms have relatively higher corporate values.

Table 4. Pearson Correlations of Regression Variables

Panel A:Pearson Correlations of Dependent Variables and Independent Variables						
Variables	TOBINQ	ROE	TOBINQ1	ROE1	TOBINQ2	ROE2
ROE	0.111***					
TOBINQ1	0.693***	0.053***				
ROE1	0.119***	0.401***	0.089***			
TOBINQ2	0.472***	0.010	0.706***	0.034***		
ROE2	0.074***	0.273***	0.100***	0.338***	0.079***	
TOSC	-0.103***	0.387***	-0.097***	0.233***	-0.094***	0.161***
SHAR	0.081***	0.731***	0.056***	0.426***	0.035***	0.289***
STAF	-0.132***	0.103***	-0.119***	0.088***	-0.111***	0.061***
SUPP	-0.121***	0.102***	-0.104***	0.081***	-0.095***	0.055***
ENVI	-0.141***	0.071***	-0.125***	0.053***	-0.114***	0.028***
SOCI	-0.09***	0.257***	-0.083***	0.123***	-0.073***	0.103***
	TOSC	SHAR	STAF	SUPP	ENVI	
SHAR	0.535***					

STAF	0.834***	0.181***				
SUPP	0.871***	0.182***	0.829***			
ENVI	0.839***	0.146***	0.865***	0.877***		
SOCI	0.466***	0.23***	0.167***	0.239***	0.114***	
Panel B: Pearson Correlations of Regression Variable						
	TOBINQ	ROE	TOBINQ1	ROE1	TOBINQ2	ROE2
CF	0.108***	0.286***	0.101***	0.245***	0.06***	0.194***
IRBR	0.051***	0.202***	0.004	0.11***	-0.007	0.04***
AGE	-0.061***	-0.041***	-0.066***	-0.015**	-0.092***	0.006
SGR	0.090***	0.914***	0.031***	0.374***	-0.017**	0.238***
TOP10	0.09***	0.200***	0.048***	0.162***	0.033***	0.118***
LEV	-0.388***	-0.126***	-0.355***	-0.077***	-0.338***	-0.056***
SIZE	-0.485***	0.091***	-0.475***	0.058***	-0.479***	0.045***
	TOSC	SHAR	STAF	SUPP	ENVI	SOCI
CF	0.168***	0.306***	0.056***	0.072***	0.06***	0.045***
IRBR	0.035***	0.093***	0.003	-0.021***	-0.02**	0.061***
AGE	-0.027***	-0.124***	-0.001	-0.008	-0.04***	0.127***
SGR	0.332***	0.584***	0.106***	0.096***	0.069***	0.241***
TOP10	0.124***	0.323***	0.011	0.005	0.018**	0.02***
LEV	0.031***	-0.326***	0.168***	0.115***	0.132***	0.125***
SIZE	0.324***	0.097***	0.344***	0.278***	0.294***	0.179***

All independent variables and control variables are checked for multicollinearity by analyzing variance inflation factors (VIF). All VIFs are well below the value of 5 for the dependent variables ROE and TOBINQ. Thus, the model does not have multicollinearity problem.

3. Analysis of regression results

Table 5 shows the regression results on the relationship between corporate social responsibility practices and corporate financial performance. Table 5 Model (1) shows that TOSC is positively significant for ROE (coefficient = 0.0005, robust t = 19.22), indicating that CSR total score is positively associated with corporate financial performance. Model (2) shows that SHAR is positively significant for ROE (coefficient = 0.005, robust t = 33.11), indicating that shareholder responsibility is positively associated with corporate financial performance. Model (3) shows that STAF is positively significant for ROE (coefficient = 0.0003, robust t = 2.67), indicating that staff responsibility is positively associated with corporate financial performance. Model (4) shows that SUPP is positively significant for ROE (coefficient = 0.0003, robust t = 4.03), indicating that supplier, customer, and consumer rights responsibilities are positively associated with corporate financial performance. Model (5) shows that ENVI is positively significant for ROE (coefficient = 0.0001, robust t = 2.35), indicating that environmental responsibility is positively associated with corporate financial performance. Model (6) also shows that SOCI is positively significant for ROE (coefficient = 0.0012, robust t = 15.32), indicating that social responsibility is positively associated with corporate financial performance. The above results all provide strong support for Hypothesis 1 that CSR is positively associated with corporate value. These results are not very different from those reported by most previous studies.

Table 6 shows the regression results on the relationship between corporate social responsibility practices and corporate market value. In Table 6, Model (1) shows that TOSC is positively significant for TOBINQ (coefficient = 0.007, robust t = 9.51), indicating that CSR total score is positively associated with corporate market value. Model (3) shows that STAF is positively significant for TOBINQ (coefficient = 0.049, robust t = 14.25), indicating that staff responsibility is positively associated with corporate market value. Model (4) shows SUPP is positively significant for TOBINQ (coefficient = 0.025, robust t = 11.25), indicating that supplier, customer, and consumer rights responsibilities are positively associated with corporate market value. Model (5) shows that ENVI is positively significant for TOBINQ (coefficient = 0.023, t = 11.90), indicating that environmental responsibility is positively associated with corporate market value. However, the results of Model (2) and Model (6) are different from Table 5. SHAR is not significant for TOBINQ (coefficient = -0.005, robust t = -1.57) and SOCI is negatively significant for TOBINQ (coefficient = -0.008, t = -2.17). These results mean that the capital market responds differently to shareholder responsibility and social responsibility of CSR and partially support Hypothesis 1.

Table 5. Regression Results of ROE on CSR

	(1)	(2)	(3)	(4)	(5)	(6)
Intercept	-0.006	-0.005	-0.051***	-0.049***	-0.052***	-0.049***
	(-0.70)	(-0.67)	(-5.91)	(-5.89)	(-6.25)	(-6.3)
TOSC	0.0005***					
	(19.22)					
SHAR		0.005***				
		(33.11)				
STAF			0.0003***			
			(2.67)			
SUPP				0.0003***		
				(4.03)		
ENVI					0.0001**	
					(2.35)	
SOCI						0.0012***
						(15.32)
CF	0.080***	0.039***	0.088***	0.088***	0.088***	0.086***
	(11.35)	(6.67)	(12.11)	(12.11)	(12.13)	(11.9)
IRBR	0.00001	0.0004	-0.001	-0.0005	-0.001	-0.001
	(0.01)	(0.44)	(-0.52)	(-0.46)	(-0.51)	(-0.48)
AGE	-0.0002***	0.0001**	-0.0002***	-0.0002***	-0.0002***	-0.0002***
	(-2.87)	(2.39)	(-2.64)	(-2.7)	(-2.62)	(-3.55)
SGR	0.952***	0.808***	0.977***	0.977***	0.977***	0.967***
	(78.17)	(54.54)	(84.04)	(84.12)	(84.39)	(83.6)
TOP10	0.030***	0.004**	0.031***	0.031***	0.031***	0.030***
	(14.67)	(2.08)	(15.03)	(15.08)	(15.01)	(14.75)
LEV	-0.041***	0.008**	-0.049***	-0.048***	-0.049***	-0.048***
	(-13.65)	(1.99)	(-17.23)	(-17.14)	(-17.33)	(-17.07)
SIZE	0.001	-0.002***	0.003***	0.003***	0.003***	0.003***
	(1.33)	(-4.6)	(7.05)	(7.15)	(7.49)	(7.24)
YEAR	Included	Included	Included	Included	Included	Included
INDUSTRY	Included	Included	Included	Included	Included	Included
N	16387	16387	16387	16387	16387	16387
R-squared	0.861	0.898	0.855	0.855	0.855	0.857
F	839.746***	1617.872***	662.994***	642.269***	636.039***	684.381***

*** p<0.01, ** p<0.05, * p<0.1

Table 6. Regression Results of TOBINQ on CSR

	(1)	(2)	(3)	(4)	(5)	(6)
Intercept	19.677***	18.933***	20.011***	19.742***	19.765***	18.941***
	(56.88)	(56.67)	(56.42)	(56.76)	(56.49)	(57.18)
TOSC	0.007***					
	(9.51)					
SHAR		-0.005				
		(-1.57)				
STAF			0.049***			
			(14.25)			
SUPP				0.025***		
				(11.25)		
ENVI					0.023***	
					(11.9)	
SOCI						-0.008**
						(-2.17)
CF	1.643***	1.820***	1.692***	1.709***	1.719***	1.783***
	(7.51)	(8.27)	(7.76)	(7.82)	(7.86)	(8.14)
IRBR	0.154***	0.144***	0.153***	0.156***	0.154***	0.145***
	(4.02)	(3.76)	(4.01)	(4.07)	(4.02)	(3.78)
AGE	0.008***	0.008***	0.008***	0.007***	0.008***	0.008***
	(2.88)	(2.83)	(2.82)	(2.75)	(2.88)	(3.07)
SGR	2.719***	3.251***	2.964***	2.984***	3.020***	3.136***
	(11.99)	(11.95)	(13.56)	(13.6)	(13.76)	(14.15)
TOP10	1.589***	1.637***	1.650***	1.641***	1.635***	1.611***
	(18.53)	(18.66)	(19.24)	(19.12)	(19.04)	(18.71)
LEV	-0.563***	-0.737***	-0.635***	-0.628***	-0.646***	-0.683***
	(-6.38)	(-7.35)	(-7.34)	(-7.24)	(-7.45)	(-7.89)
SIZE	-0.827***	-0.784***	-0.841***	-0.825***	-0.826***	-0.787***
	(-47.54)	(-46.23)	(-47.43)	(-47.61)	(-47.42)	(-47.54)
YEAR	Included	Included	Included	Included	Included	Included
INDUSTRY	Included	Included	Included	Included	Included	Included
N	16387	16387	16387	16387	16387	16387
R-squared	0.460	0.458	0.463	0.461	0.461	0.458
F	252.633***	251.47***	253.756***	253.149***	252.297***	249.245***

*** p<0.01, ** p<0.05, * p<0.1

Table 7 shows the relationship between CSR practices and future corporate value. In Table 7, Model (1) ~ (4) report that TOSC is positively significant for ROE1 (coefficient = 0.001, robust t = 11.66), TOSC is positively significant for TOBINQ1 (coefficient = 0.006, t = 9.63), TOSC is positively significant for ROE2 (coefficient = 0.001, t = 8.34), and TOSC is positively significant for TOBINQ2 (coefficient = 0.002, t = 2.71), respectively. These results can be judged as supporting Hypothesis 2 that CSR practices have a positive relationship with future corporate value. However, the results of several additional analyses are different from Table 7. First, more control variables were included in the regression model. ROE is added to Model (1), TOBINQ is added to Model (2), ROE and ROE1 are added to Model (3), and TOBINQ and TOBINQ1 are added to Model (4), respectively. The results of Model (1) and Model (2) are not significant, but the results of Model (3) and Model (4) are statistically significant. That is, TOSC is positively significant for TOBINQ1 (coefficient = 0.003, robust t = 4.63) and TOSC is positively significant for TOBINQ2 (coefficient = -0.001, robust t = -2.08). Next, change

variables are used. The difference between ROE1(TOBINQ1) and ROE (TOBINQ) and the difference between ROE2 (TOBINQ2) and ROE1(TOBINQ1) are calculated and used as dependent variables. The results of these analyses are not significant except for Model (4). In Model (4), TOSC is negatively significant for TOBINQ2 (coefficient = -0.004, robust t = -4.75). Overall, we can guess that CSR practices may respond to corporate market values after a year or two.

Table 8 presents the results of Non-SOEs and SOEs in the entire sample period. Model (1) shows that Non-SOEs' TOSC is positively significant for ROE (coefficient = 0.0007, robust t = 19.19) and Model (2) shows that SOEs' TOSC is positively significant for ROE (coefficient = 0.0003, robust t = 8.59). Similarly, Model (3) shows that Non-SOEs' TOSC is positively significant for TOBINQ (coefficient = 0.006, robust t = 4.51) and Model (4) shows that SOEs' TOSC is positively significant for TOBINQ (coefficient = 0.005, t = 5.85). Therefore, compared with SOEs, the CSR practices of Non-SOEs have a more significant effect on corporate financial performance for ROE, moderately supporting Hypothesis 3. In the case of corporate market value, we cannot find strong evidence that the CSR practices of Non-SOEs have a more significant effect than that of SOEs.

Table 7. Regression Results of Future Corporate Value on CSR

	(1) ROE1		(2) TOBINQ1		(3) ROE2		(4) TOBINQ2	
Intercept	-0.041**	(-1.99)	15.890***	(49.99)	-0.044**	(-1.97)	14.688***	(45.98)
TOSC	0.001***	(11.66)	0.006***	(9.63)	0.001***	(8.34)	0.002***	(2.71)
CF	0.248***	(18.35)	1.728***	(8.91)	0.252***	(15.75)	1.553***	(8.37)
IRBR	0.008***	(3.77)	0.136***	(4.78)	-0.0003	(-0.12)	0.111***	(3.69)
AGE	0.0004**	(2.19)	0.011***	(4.78)	0.001***	(3.90)	0.013***	(5.34)
SGR	0.368***	(20.64)	1.289***	(6.49)	0.248***	(12.59)	0.148	(0.80)
TOP10	0.069***	(12.08)	1.112***	(14.54)	0.068***	(10.05)	0.918***	(12.16)
LEV	-0.035***	(-5.26)	-0.474***	(-5.65)	-0.038***	(-5.23)	-0.584***	(-6.75)
SIZE	0.001	(0.59)	-0.681***	(-42.32)	0.001	(0.56)	-0.599***	(-37.49)
YEAR	Included		Included		Included		Included	
INDUSTRY	Included		Included		Included		Included	
N	16345		15924		16323		15920	
R-squared	0.200		0.432		0.106		0.393	
F	75.10***		209.02***		40.19***		196.96***	

*** p<0.01, ** p<0.05, * p<0.1

Table 8. Regression Results of Corporate Value on CSR by Two Groups

	ROE				TOBINQ			
	(1)NON-SOEs		(2)SOEs		(3)NON-SOEs		(4)SOEs	
Intercept	-0.033**	(-2.44)	-0.037***	(-2.95)	25.178***	(42.97)	14.955***	(36.68)
TOSC	0.0007***	(19.19)	0.0003***	(8.59)	0.006***	(4.51)	0.005***	(5.85)
CF	0.108***	(11.09)	0.037***	(3.75)	2.527***	(8.21)	0.325	(1.16)
IRBR	0.001	(0.42)	-0.0002	(-0.12)	0.185***	(3.27)	0.044	(1.28)
AGE	-0.0001	(-0.80)	-0.0001	(-0.65)	0.016***	(4.26)	-0.003	(-0.81)
SGR	0.868***	(46.26)	1.022***	(68.53)	4.187***	(10.89)	1.5178***	(6.71)

TOP10	0.039***	(14.61)	0.016***	(4.78)	1.489***	(12.30)	1.308***	(11.07)
LEV	-0.025***	(-5.35)	-0.050***	(-12.81)	-0.354***	(-2.64)	-0.943***	(-8.85)
SIZE	0.001*	(1.78)	0.002***	(3.74)	-1.094***	(-38.38)	-0.583***	(-29.08)
YEAR	Included		Included		Included		Included	
INDUSTRY	Included		Included		Included		Included	
N	9594		6793		9594		6793	
R-squared	0.825		0.901		0.480		0.416	
F	427.96***		519.69***		227.36***		87.69***	

*** p<0.01, ** p<0.05, * p<0.1

4. Additional Analyses

To analyze the effect of the endogeneity problem, we select an instrumental variable of CSR such as the annual mean value of CSR in the provincial administrative regions wherein the firm is registered. Enterprises in the same province will be affected by the same social responsibility rules, similar competition conditions, and cultural traditions in the region when making socially responsible investment decisions. Therefore, the CSR annual mean value of the same region is related to the CSR of a single firm, and it will not be affected by a single CSR activity. So, the CSR annual mean value of the same region can be used as an instrumental variable of CSR (Cai et al., 2016)[6]. At the same time, the one-period lagging CSR variable is used as an instrumental variable, because the lagging variables are predetermined variables. In Table 9, the Cragg-Donald F statistics show that the selected instrumental variable is not a weak instrumental variable. The regression results do not change, supporting Hypothesis 1.

Table 9. Regression Results of Corporate Value on CSR using 2SLS

	ROE (1)		TOBINQ (2)	
Intercept	-0.012	(-1.37)	21.067***	(52.18)
TOSC	0.0005***	(12.6)	0.019***	(14.30)
Control Variables	Included		Included	
YEAR Dummy	Included		Included	
INDUSTRY Dummy	Included		Included	
N	14801		14801	
R-squared	0.866		0.456	
F	378.16***		378.16***	

*** p<0.01, ** p<0.05, * p<0.1

6) China has a total of 34 provincial administrative regions, including 23 provinces, 5 autonomous regions, 4 municipalities, and 2 special administrative regions.

Ⅴ. Conclusion

By collating and summarizing the findings from the extant literature, we investigate the relationship between corporate social responsibility (CSR) and corporate present and future value to explain their relationship. Using the 2010–2017 China Shenzhen Stock Exchange and Shanghai Stock Exchange A-share listed firms, we also examine the effect of five dimensions of CSR practices on future corporate value in China based on a sample of state-owned and non-state-owned enterprises.

we find that, first, CSR practices are beneficial to corporate value. Further analysis including five aspects of CSR practices found that shareholder responsibility, staff responsibility, supplier, customer, and consumer rights responsibilities, environmental responsibility, and social responsibility are all conducive to corporate financial performance. However, shareholder responsibility and social responsibility are not beneficial for corporate market value. Second, based on the various empirical tests, we can guess that CSR practices still respond to the corporate market value of a company after one or two years. Whether the impact of CSR practices continues or is merely delayed requires further analysis. Third, the regression results for SOEs and Non-SOEs show that the CSR practices of Non-SOEs have a more significant effect on corporate financial performance. In the case of corporate market value, we cannot find strong evidence that the CSR practices of Non-SOEs have a more significant effect than that of SOEs.

This study also has limitations. First, the grouping is only divided into two groups of SOEs and non-SOEs, and we did not consider foreign investments, that is, foreign-funded enterprises, for the comparative analysis. Second, only the linear relationship between CSR and corporate value was tested. In the future, we must determine whether there exists a nonlinear relationship between the two key concepts. Finally, there exists no research on CSR and corporate value by specific industries. Thus, the relationship between the five dimensions of CSR and corporate value should be investigated by specific industries.

References

Aras, G., A. Aybars, and O. Kutlu (2010). "Managing Corporate Performance", *International Journal of productivity and Performance management,* 59(3), 229-254.

Backhaus, K. B., B. A. Stone, and K. Heiner (2002). "Exploring the Relationship between Corporate Social Performance and Employer Attractiveness", *Business & Society,* 41(3), 292-318.

Barnett, M. L. (2007). "Stakeholder Influence Capacity and the Variability of Financial Returns to Corporate Social Responsibility", *Academy of Management Review*, 32(3), 794-816.

Belu, C., and C. Manescu (2013). "Strategic Corporate Social Responsibility and Economic Performance", *Applied Economics*, 45(19), 2751-2764.

Bing, T., and M. Li (2019). "Does CSR Signal the Firm Value? Evidence from China", *Sustainability*, 11(15), 4255.

Bowen, H. R. (1953). "The Social Responsibilities of the Businessman", Harpor & Row, New York.

Bragdon, J. H., and J. Marlin (1972). "Is Pollution Profitable", *Risk management*, 19(4), 9-18.

Brammer, S., and A. Millington (2005). "Profit Maximization vs. Agency: An Analysis of Charitable Giving by UK Firms", *Cambridge Journal of Economics*, 29(4), 517-534.

Brammer, S., C. Brooks, and S. Pavelin (2006). "Corporate Social Performance and Stock Returns: UK Evidence from Disaggregate Measures." *Financial Management,* 35(3), 97-116.

Brammer, S., and A. Millington (2008). "Does it Pay to be Different? An Analysis of the Relationship between Corporate Social and Financial Performance", *Strategic Management Journal,* 29(12), 1325-1343.

Burke, L., and J. M. Logsdon (1996). "How Corporate Scial Responsibility Pays Off", *Long Range Planning*, 29(4), 495-502.

Cai, L., J. Cui, and H. Jo (2016). "Corporate Environmental Responsibility and Firm Risk", *Journal of Business Ethics*, 139(3), 563-594.

Cannon, J. P., and C. Homburg (2001). "Buyer–Supplier Relationships and Customer Firm Costs", *Journal of Marketing*, 65(1), 29-43.

Carroll, A. B. (1979). "A Three-Dimensional Conceptual Model of Corporate Performance", *Academy of Management Review*, 4(4), 497-505.

Carroll, A. B. (1999). "Corporate Social Responsibility: Evolution of a Definitional Construct", *Business & Society*, 38(3), 268-295.

Chen, H., and X. Wang (2011). "Corporate Social Responsibility and Corporate Financial Performance in China: An Empirical Research from Chinese Firms", *Corporate Governance International Journal of Business in Society*, 11(4), 361-370.

Danish, R. Q., and A. Usman (2010). "Impact of Reward and Recognition on Job Satisfaction and Motivation: An Empirical Study from Pakistan", *International Journal of Business and Management,* 5(2), 159-167.

Davis, K. F., W. C. Frederick, and R. L. Blomstrom (1980). "Business and Society: Concepts and Policy Issues. McGraw-Hill.

Del Brio, E., A. De Miguel, and J. Pindado (2003). "Investment and Firm Value: an Analysis using Panel Data", *Applied Financial Economics*, 13(12), 913-923.

Elkington, J. (1997). "The Triple Bottom Line", *Environmental Management: Readings and Cases*, 2, 49-66.

Friedman, M. (1970). "The Social Responsibility of Business Is to Increase Its Profits", *The New York Times Magazine,* 9:173-178

Galaskiewicz. (1985). "Social Organization of an Urban Grants Economy : a Study of Business Philanthropy and Nonprofit Organization", Orlando Fla : Academic Press.

Greening, D. W., and D. B. Turban (2000). Corporate Social Performance as a Competitive Advantage in Attracting a Quality Workforce", *Business & Society*, 39(3), 254-280.

Harjoto, M. A., and H. Jo (2015). "Legal vs. Normative CSR: Differential Impact on Analyst Dispersion, Stock Return Volatility, Cost of Capital, and Firm Value", *Journal of Business Ethics*, 128(1),1-20.

Harjoto, M., and I. Laksmana (2018). "The Impact of Corporate Social Responsibility on Risk Taking and Firm Value", *Journal of Business Ethics*, 151(2), 353-373.

Hu, Y., S. Chen, Y. Shao, and S. Gao (2018). "CSR and Firm value: Evidence from China", *Sustainability*, 10(12): 4597.

Kao, E. H., Yeh, C. C., Wang, L. H., and H. G. Fung (2018). "The Relationship between CSR and Performance: Evidence in China", *Pacific-Basin Finance Journal*, 51, 155-170.

Kengatharan, L., D. J. Suganya, and R. G. R. Sulochani (2020). "Corporate Social Responsibility and Firm Performance: Evidence from Manufacturing Companies in Sri Lanka", *International Journal of Accounting and Business Finance*, 6(1), 42 - 52.

Lee, K. H., B. C. Cin, and E. Y. Lee (2016). "Environmental Responsibility and Firm Performance: the Application of an Environmental, Social and Governance Model", *Business Strategy and the Environment,* 25(1), 40-53.

Levitt, T. (1958). "The Dangers of Social-Responsibility", *Harvard Business Review*, 36(5), 41-50.

Li, W., and R. Zhang (2010). "Corporate Social Responsibility, Ownership Structure, and Political Interference: Evidence from China", *Journal of Business Ethics*, 96(4), 631-645.

Lioui, A., and Z. Sharma (2012). "Environmental Corporate Social Responsibility and Financial Performance: Disentangling Direct and Indirect Effects", *Ecological Economics*, 78, 100-111.

Lubin, D. A., and D. C. Esty (2010). "The Sustainability Imperative", *Harvard Business Review*, 88(5), 42-50.

Mackey, A., T. B. Mackey, and J. B. Barney (2007). "Corporate Social Responsibility and Firm Performance: Investor Preferences and Corporate Strategies", *Academy of Management Review*, 32(3), 817-835.

Madorran, C., and T. Garcia (2016). "Corporate Social Responsibility and Financial Performance: the Spanish Case", *Revista de Administração de Empresas,* 56(1), 20-28.

McWilliams, A., and D. Siegel (2000). "Corporate Social Responsibility and Financial Performance: Correlation or Misspecification?", *Strategic Management Journal*, 21(5), 603-609.

McWilliams, A., and D. Siegel (2001). "Corporate Social Responsibility: A Theory of the Firm Perspective", *Academy of Management Review*, 26(1), 117-127.

McWilliams, A., D. S. Siegel, and P. M. Wright (2006). "Corporate Social Responsibility: Strategic Implications", *Journal of Management Studies*, 43(1), 1-18.

Moskowitz, M. (1972). "Choosing Socially Responsible Stocks", *Business and Society Review*, 1(1), 71-75.

O'Sullivan, D., and J. McCallig (2012). "Customer Satisfaction, Earnings and Firm Value", *European Journal of Marketing*, 46(6), 827-843.

Pang, K., and C. S. Lu (2018). "Organizational Motivation, Employee Job Satisfaction and Organizational Performance", *Maritime Business Review,* 3(1), 36-52.

Porter, M. E., and M. R. Kramer (2006). "The Link between Competitive Advantage and Corporate Social Responsibility", *Harvard Business Review*, 84(12), 78-92.

Raza, A., M. I. Ilyas, R. Rauf, and R. Qamar (2012). "Relationship between Corporate Social Responsibility (CSR) and Corporate Financial Performance (CFP): Literature Review Approach", *Elixir Financial Management*, 46(9), 8404-8409.

Ruf, B. M., K. Muralidhar, R. M. Brown, J. J. Janney, and K. Paul. (2001). "An Empirical Investigation of the Relationship between Change in Corporate Social Performance and Financial Performance: A Stakeholder Theory Perspective", Journal of Business Ethics, 32(2), 143-156.

Servaes, H., and A. Tamayo (2013). "The Impact of Corporate Social Responsibility on Firm Value: The Role of Customer Awareness", *Management Science,* 59(5), 1045-1061.

Shi, H., X. Zhang, and J. Zhou (2018). "Cross-listing and CSR Performance: Evidence from AH Shares", *Frontiers of Business Research in China*, 12(1), 1-15.

Singh, N., Y. H. Park, C. R. Tolmie, and B. Bartikowski (2014). "Green Firm-Specific Advantages for Enhancing Environmental and Economic Performance", *Global Business and Organizational Excellence*, 34(1), 6-17.

Sukumar, A., V. Jafari-Sadeghi, A. Garcia-Perez, and D. K. Dutta (2020). "The Potential Link between Corporate Innovations and Corporate Competitiveness: Evidence from IT Firms in the UK", *Journal of Knowledge Management*, 24(5), 965-983.

Sun, Li. (2012). "Further Evidence on the Association between Corporate Social Responsibility and Financial Performance", *International Journal of Law and Management*, 54(6), 472-484.

White, H. (1980). "A Heteroskedasticity-Consistent Covariance Matrix Estimator and a Direct Test for Heteroskedasticity", *Econometrica: journal of the Econometric Society,* 48(4), 817-838.

Yu, F., Y. Shi, and T. Wang (2020). "R&D Investment and Chinese Manufacturing SMEs Corporate Social Responsibility: The Moderating Role of Regional Innovative Milieu", *Journal of Cleaner Production,* 258, 120840.

Yuliana, I. (2019). "Profitability Relation, Corporate social Responsibility Fund, and Environmental Performance with Firm Value", *Management and Economics Journal*, 3(2), 131-141.

Zhang, M., L. Tong, J. Su, and Z. Cui (2015). "Analyst Coverage and Corporate Social Performance: Evidence from China", *Pacific-Basin Finance Journal,* 32, 76-94.

Zhong, M., R. Xu, X. Liao, and S. Zhang (2019). "Do CSR Ratings Converge in China? A Comparison between RKS and Hexun scores", *Sustainability*, 11(14), 392.

Appendix 1. Hexun.com listed company corporate social responsibility professional evaluation index system

First level indicators	Secondary indicators	Level three indicators
Shareholder responsibility (Weights : 30%)	Profit level (10%)	Return on Total Assets (2%)
		Return on Equity (2%)
		Main Operating Profit Ratio (2%)
		Ratio of profits to cost and expense (1%)
		Undivided Profit Per Share (2%)
		Earnings Per Share (1%)
	Debt paying ability (3%)	Cash Ratio (0.5%)
		Equity Ratio (0.5%)
		Current Ratio (0.5%)
		Quick Ratio (0.5%)
		Debt to asset ratio (1%)
	Return on investment (8%)	Dividend Yield Ratio (2%)
		Dividends/Financing (3%)
		Dividends/Distributable profits (3%)
	Penalty status (5%)	Number of penalties imposed on the company and related persons by the exchange (5%)
	Innovation (4%)	Total product development expenditure (1%)
		technological innovation concept. (1%)
		Number of technological innovation projects (2%)
Staff responsibility (Weights : 15%) (Consumer industry weights:10%)	Staff income and training (5%) (Consumer industry 4%)	Income per employee (4%) (Consumer industry 3%)
		conduct staff skills training (1%) (Consumer industry 1%)
	Safe Production (5%) (Consumer industry 3%)	safety inspection (2%) (Consumer industry 1%)
		safety training (3%) (Consumer industry 2%)
	Take care of employees (5%) (Consumer industry 3%)	Consciousness of condolences (1%) (Consumer industry 1%)
		Condolences to employees (2%) (Consumer industry 1%)
		Condolence money (2%) (Consumer industry 1%)
Supplier, customer, and consumer rights responsibilities (Weights : 15%) (Consumer industry weights: 20%)	product quality (7%) (Consumer industry 9%)	Quality management awareness (3%) (Consumer industry 5%)
		Quality Management System Certificate (4%) (Consumer industry 4%)
	After-sales service (3%) (Consumer industry 4%)	customer satisfaction survey (3%) (Consumer industry 4%)
	Integrity and fair competition(5%) (Consumer industry 7%)	Fair competition among suppliers (3%) (Consumer industry 4%)
		Anti-commercial bribery training (2%) (Consumer industry 3%)

Environmental responsibility (Weights : 20%) (Manufacturing industry weights: 30%) (Service industry weights:10%)	Environmental protection and governance (20%) (Manufacturing industry 30%) (Service industry 10%)	Awareness of environmental protection (2%) (Manufacturing industry 4%) (Service industry 2%)
		Environmental management system certification (3%) (Manufacturing industry 5%) (Service industry 2%)
		Amount invested in environmental protection (5%) (Manufacturing industry 7%) (Service industry 2%)
		Number of types of pollutants discharged (5%) (Manufacturing industry 7%) (Service industry 2%)
		Number of types of energy saving (5%) (Manufacturing industry 7%) (Service industry 2%)
Social responsibility (Weights:20%) (Manufacturing industry 10%) (Service industry 30%)	Degree of social contribution (20%) (Manufacturing industry 10%) (Service industry 30%)	Income Tax Profit Ratio (10%) (Manufacturing industry 5%) (Service industry 15%)
		Total social donations (10%) (Manufacturing industry 5%) (Service industry 15%)

Note: The professional evaluation system for the social responsibility report of listed companies examines the five dimensions of shareholder responsibility, staff responsibility, supplier, customer and consumer rights responsibility, environmental responsibility, and social responsibility. Each category has established secondary and tertiary indicators to assess social responsibility comprehensively. Evaluation. Among them, 13 secondary indicators and 37 tertiary indicators are involved.

Note on the distribution of weights in different industries: By default, shareholders account for 30%, staff account for 15%, suppliers, customers, and consumer rights account for 15%, environmental responsibility accounts for 20%, and social responsibility accounts for 20%. Among them, the weight of staff responsibility in the consumer industry accounted for 10%, the weight of supplier, customer and consumer rights and interests accounted for 20%, and the weight of other indicators remained unchanged; the weight of environmental responsibility in the manufacturing industry accounted for 30%, the weight of social responsibility accounted for 10%, and the weight of other indicators remain unchanged; the weight of environmental responsibility in the service industry accounts for 10%, the weight of social responsibility accounts for 30%, and the weight of other indicators remains unchanged.

The Data source of the professional evaluation system for the social responsibility report of listed companies: the social responsibility report and annual report issued by the Shanghai Stock Exchange company through the official website; Social responsibility reports and an annual reports issued by Shenzhen Stock Exchange companies through the official website.

Description of the scoring section: According to the nature of the indicators, it is divided into two categories, one is a numerical indicator, and the other is a logical indicator. Numerical indicators get accurate scores based on the calculation model of Hexun Data Center; logical indicators are scored based on whether the social responsibility report discloses the indicator and whether the disclosure is detailed or not