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Corporate Social Responsibility Reporting, State Ownership, and Corporate Performance in China: Proof from Longitudinal Data of Publicly Traded Enterprises from 2006 to 2020

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Abstract**—**This paper offered the primary methodical proof on how Corporate Social Responsibility (CSR) reporting related to enterprise earnings in listed firms in China in light of most evidence focusing on cross-sectional data or data in a short span of time. Using full economic and business panel data on China's publicly listed enterprises from 2006 to 2020 over two decades in the China Stock Market & Accounting Research database, we found initial evidence of significant direct relations between CSR reporting and firm corporate performance in both state-owned and privately-owned firms over this period, supporting the stakeholder theory. Results also revealed that state-owned enterprises performed as well as private enterprises in the current period. But private enterprises performed better than state-owned enterprises in the subsequent years. Moreover, the release of social responsibility reports had the more significant impact on the financial performance of state-owned and private enterprises in the current period than in the subsequent periods. Specifically, CSR release was not significantly associated to the financial performance of state-owned enterprises on the lag of the first, second, and third periods. But it had an impact on the lag of the first, second, and third periods among private enterprises. Such findings suggested that CSR reporting helped improve the corporate financial performance of state-owned and private enterprises in the current period, but this kind of effect was more significant among private enterprises in the lag periods.

Keywords**—**China's Listed Firm, CSR reporting, financial performance, panel analysis.

I. INTRODUCTION

CHINA began the growth of stock markets lately and stock markets were set up in Shanghai in 1990 and Shenzhen in 1991. In 1997, the Chinese Communist Party's 15th Party Congress established the shareowner system, a crux of domestic companies' reorganization, which offers the avenue and platform for the State-Owned Enterprises (SOEs) to raise funds and therefore the development of the stock market further accelerated. In recent years, China has become the world's second largest economy. A majority of empirical corporate social responsibility disclosure (CSRD) studies have examined related activities in the western countries, in particular in Australia, New Zealand, the US, and the UK [1], with the scarcity of studies on China. This study focuses on the social reporting of publicly traded Chinese firms. This kind of social reporting is prevalent as enterprises are facing pressure to emphasize both social and financial performance [2]. CSRD is in its inception in China, although there has been media attention in this area as of today [3].

According to McWilliams and Siegel [4], "In existing studies of the relationship between CSR and financial performance [...] the results have been very mixed". Assessing the linkage between CSRD and financial performance is of paramount importance because it can enhance the sustainability of enterprises. This study aims to investigate the effects of CSRD on financial outcome based on accounting measures. China has become one of the world's most connected economies, and CSRD implementation in the country can thereby improve social sustainability reporting globally, as well as the international commercial landscape. Based on the 2006 to 2020 panel data of publicly listed state-owned and private enterprises, we found that more CSRD were associated better current year for both state-owned and private enterprises and subsequent year financial performances for private enterprises. These results were consistent with the stakeholder theory, which posits that a brand identity enhanced through CSRD may contribute to higher profitability in both current and subsequent years. Specifically, CSRD of donations increases firm performance both currently and subsequently.

II. LITERATURE REVIEW

The stakeholder theory has been used to illustrate the situation of enterprises practicing shareholder management by engaging in various tasks that comply with the expectancy of different stake-holders and thereby meeting performance targets and accomplishing objectives. The predominant views in the west of CSR, which focused on financial freedom and political liberty, the administration of justice for business, and a stakeholder view, have different stages of growth and therefore manifests differently in China [5]. Also, China should not be expected to institute the same type of CSR program as in western countries given the variability in the cultural context [6]. As such, China is a social connection-based rather than a regulation-based society, and the cultural orientation of social connections, where enterprises have a tendency to reciprocate rather than obeying rules, and enterprise may become less likely

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to undertake social responsibility [7]. Li et al. noted that as the economy develops and the market economy emerges, the guanxi type of governance becomes a burden to society. The authors suggested that governments in connection-based customs would likely emphasize less on social responsibility issues and residents have little power and interest in those issues, and results in enterprises facing little pressure to improve and act responsibly [8]. It appears probable that CSR will continue to get attention in China, as foreign direct investment expands and these enterprises would come under intense pressure from stakeholders alike to act responsibly in both domestic and international companies [9]. At present, it appears unlikely that China would be on the same level of CSR activities as we witness in western countries. Accordingly, there have been few studies on CSR in China, with a majority of studies in western countries. This study addresses such a research gap and examines the relationship between CSRD and corporate performance in China.

Roman et al. reviewed 46 papers examining the relation between CSR and enterprise performance between 1972 and 1997, and noted that 63% of the researchers had a direct relationship, 10% had a reverse relationship, and the rest had indecisive relations [10]. Simpson and Kohers examined state-owned banks in America and found that CSRD improved project performance [11]. In studies of extended periods of time, Ruf et al. concluded that CSRD in the present time generated more income in subsequent years. Other studies have found that in the short run, CSRD led to the decline of corporate profit but ultimately, the negative relations between CSRD and corporate performance disappeared [12]. Other scholars suggested that there was no relation between CSRD and financial performance no matter in the short or long term [13].

Based on the above discussions, there are divergent views as to the relation between CSRD and corporate performance. This study addresses this issue by examining the relations between CSRD and corporate financial performance in the present and subsequent periods.

Research question: What is the relation between CSRD and financial performance of SOEs and non-SOEs in current and subsequent periods?

III. Methods

A. Case Inclusion

This research selected all available statistics of 2006-2020 publicly traded companies in the Shanghai and Shenzhen Stock Exchanges. The reason for selecting this study timeframe is that 2006 marks the year that CSRD received widespread attention in Chinese society.

B. Variable Selection

CSRD

This paper selected the indicators: (1) “whether to disclose the social responsibility system construction and the improvement measures,” (2) “whether to disclose the public relations and charitable activities,” (3) “whether to disclose the customer protection measures,” and (4) “whether to disclose the protection measures for supplier rights” in the CSMAR database to reflect the disclosure of social responsibility status (disclosure uses 1; otherwise uses 2).

SOE and Non-SOE

The paper selected the indicator “state-owned shares” in the CSMAR database to distinguish SOEs (SOE takes 0; non-SOE takes 1).

Financial Performance

In general, two types of indicators are utilized to assess financial results, the market income index and the accounting index. The market income indicator measures the changes in stock price, for example, Tobin’s Q. Accounting indexes have been utilized to measure the enterprise’s financial standing, for example, return on assets (ROA) and return on equity (ROE). In view of the situation that stock exchanges in China is nascent and the financial results are more dependable and accessible, we chose accounting indicators to indicate the enterprise’s financial position. This paper chose ROE to reflect the financial position of the listed company.

Income

The income of a company is indicated by total fixed assets and net profit when examining company financial results in quantitative modeling.

C. Model Construction

This research constructed a multivariate regression model with random effects to examine the connection between disclosure of social responsibility and enterprise fiscal results. The basic model is: where α0 is a constant term, α1 toα7 are regression coefficients, and ε is a random disturbance term.

Model:

$$ROE = \alpha0 + \alpha1*Dummy + \alpha2*Total\ Asset + \alpha3*Net\ Profit + \alpha4*Delivery\ Protection + \alpha5*Customer\ Protection + \alpha6*Public\ Relations + \alpha7*System\ Construction + \varepsilon$$

In this model, the variable Dummy is a dummy variable that is equal to 0 if the companies are SOEs and are equal to 1 if the companies are non-SOEs. The variable Total Assets is total fixed assets, Net profit is the net profit, Delivery Protection is the disclosure of supplier rights, Customer Protection is the disclosure of customer protection measures, Public Relations is the disclosure of public relations and charitable activities, and System Construction is the disclosure of social responsibility measures.

IV. Results

A. General Output

This paper performed descriptive statistical examinations for all variables in the population and the results are shown in Table I.

Table I shows the descriptive statistical results of the study variables. Overall, the LNROE is relatively low, with an average value of -6.2508, the minimum value is -24.78, and the maximum value is 13.77. The ROE value was log-transformed to normalize the data to fit with the regression assumption. This suggests that the earnings of publicly traded companies vary to a great extent, and the total earnings is relatively low. As regards total assets, the minimum value is 15.64, the maximum value is 44.92, and the average value is 31.7917. This suggests that the asset value of publicly traded companies fluctuates greatly, and the general asset value is quite high.

B. Analysis of Bivariate Correlation

Table II portrays the findings of bivariate correlation analysis for the study variables. As shown in the table, social responsibility disclosure: delivery protection, customer protection, and public relations activities are significantly negatively associated with firm profit and assets at the level of 1%. At the same time, ROE is also positively related to firm profit and negatively associated with assets at the level of 1%. The above results preliminarily indicate that disclosure of social responsibility is positively related to and possibly affects enterprise income.

TABLE I
DESCRIPTIVE STATISTICS

Variables	N	Mean	min	max	SD
LNROE	392325	-6.2508	-24.78	13.77	2.19805
LNTOTAL ASSET	392325	31.7917	15.64	44.92	2.20560
LNLEVERAGE	392325	27.0316	14.91	38.21	2.242615
DELIVERY PRO	392325	1.65	1	2	0.476
PUBLIC RELAT	392325	1.44	1	2	0.497
SYSTEM CONS	392325	1.92	1	2	0.276
CUSTOMER PROT	392325	1.53	1	2	0.499

TABLE II
ANALYSIS OF BIVARIATE CORRELATIONS

	SOE	LNPROF	LNASSE	DELIVER	CUSTOM	PR	SYSTEM	LNROE
SOE	1	-0.078**	-0.124**	-0.020**	-0.022**	-0.021**	0.006	0.045**
LNPROF	-0.078**	1	0.788**	-0.013*	-0.011	-0.015**	0.005	0.314**
LNASSE	-0.124**	0.788**	1	-0.017**	-0.017**	-0.013*	-0.003	-0.132**
DELIVER	-0.020**	-0.013**	-0.017**	1	0.736**	0.501**	0.262**	-0.002
CUSTOM	-0.022**	-0.011	-0.017**	0.736**	1	0.629**	0.269**	0.007
PR	-0.021**	-0.015**	-0.013**	0.501**	0.629**	1	0.246**	-0002
SYSTEM	0.006	0.005	-0.003	0.262**	0.269**	0.246**	1	0.006
LNROE	0.045**	0.314**	-0.132**	-0.002	0.007	-0.002	0.006	1

**p < 0.01, *p < 0.05

TABLE III
EMPIRICAL RESULTS: FULL SAMPLE

Variables	t	t+1	t+2	t+3
SOE or private	-0.006* (-1.575)	0.013** (2.456)	0.03*** (5.278)	0.046*** (7.893)
LNNET PROFIT	1.091*** (169.304)	0.660*** (74.366)	0.474*** (51.753)	0.345*** (37.105)
LNASSET	-0.972*** (-149.980)	-0.628*** (-70.228)	-0.446*** (-48.270)	-0.324*** (-34.644)
DELIVERY	-0.014** (-2.324)	-0.017** (-2.115)	-0.028** (-3.301)	-0.018** (-2.123)
PR	-0.005 (-0.883)	-0.011* (-1.522)	-0.005 (-0.083)	-0.010 (-1.365)
SYSTEM CON	-0.005 (-1.200)	-0.001 (-0.198)	0.001 (0.192)	0.004 (0.634)
CUSTOMER	0.019** (2.821)	0.023** (2.591)	0.032*** (3.419)	0.022** (2.273)
Constant	0.000*** (-9.079)	0.000*** (-12.122)	0.000*** (-17.167)	0.000*** (-20.631)
Observations	392325	392325	392325	392325
Adjusted R-squared	0.481	0.17	0.092	0.052
	4233.182	849.802	419.046	226.536

***p < 0.01, **p < 0.05, p < 0.10
Dependent variable: ROE

C. Empirical Findings

This research used SPSS statistics to conduct multiple regression analysis on study variables affecting ROE of publicly traded enterprises in the Mainland to explore the research question proposed above. In view of the special economic nature of the Mainland's system, the type of company exerts a huge influence on the enterprise's profitability. Based on all sample regression, the paper performed regression for SOEs and non-SOEs separately to guarantee the validity of this research endeavor.

TABLE IV
EMPIRICAL FINDINGS: SOE

Variables	t	t+1	t+2	t+3
LNNET PROFIT	1.141*** (87.008)	0.664*** (36.306)	0.460*** (23.966)	0.324*** (16.657)
LNASSET	-1.071*** (-81.594)	-0.674*** (-36.887)	-0.484*** (-25.211)	-0.338*** (-17.378)
DELIVERY	-0.018* (-1.565)	0.001 (0.085)	-0.038** (-2.241)	-0.014 (-0.828)
PR	-0.020** (-1.948)	-0.016 (-1.163)	-0.010 (-0.654)	0.010 (0.688)
SYSTEM CON	0.004 (0.460)	0.007 (-0.653)	0.016 (1.328)	0.010 (0.807)
CUSTOMER	0.04** (3.061)	0.020 (1.099)	0.047** (2.525)	0.010 (0.541)
Constant	0.000** (-2.208)	0.000*** (-5.197)	0.000*** (-7.144)	0.000*** (-10.109)
Observations	37247	37247	37247	37247
Adjusted R-squared	0.49	0.165	0.084	0.043
F	1329.030	247.867	113.306	54.256

***p < 0.01, **p < 0.05, p < 0.10
Dependent variable: ROE

From the regression findings in Table III, the paper concluded that for the full sample in the current year, the dummy variable was negative and statistically significant, which means the fiscal findings of SOEs were better than non-SOEs. The SOEs performed better than the non-SOEs in the current year. But as time goes by, the dummy variable was positive and statistically significant, which means the non-SOEs performed better than the SOEs in the lag periods. Moreover, supplier rights disclosure was negatively associated with ROE, which indicates that disclosure of supplier protection was positively associated with corporate profit in the current year and in the lag periods. In contrast, customer protection disclosure was positively associated with ROE, which suggests that non-disclosure of such data was positively correlated with ROE.

From the regression findings in Table IV, the paper concluded that for the SOEs in the current year, the disclosure of public relations and charitable activities, as well as the supplier rights, was associated with better fiscal results. On the contrary, the non-disclosure of customer protection data was associated with better financial results. In the lag period, the influence of disclosure of social responsibility on the financial results became weaker.

TABLE V
EMPIRICAL FINDINGS: NON-SOES

Variables	t	t+1	t+2	t+3
LNNET PROFIT	1.067*** (145.301)	0.665*** (64.999)	0.477*** (46.087)	0.351*** (33.354)
LNASSET	-0.920*** (-125.237)	-0.598*** (-59.368)	-0.422*** (-40.751)	-0.312*** (-29.684)
DELIVERY	-0.012** (-1.778)	-0.023* (-2.515)	-0.024** (-2.501)	-0.019** (-1.973)
PR	0.000 (0.068)	-0.009 (-1.135)	-0.004 (-0.454)	-0.018** (-2.039)
SYSTEM CON	-0.008* (1.499)	-0.004 (-0.615)	-0.004 (-0.585)	0.002 (0.258)
CUSTOMER	0.012* (1.499)	0.024** (2.381)	0.027** (2.488)	0.025** (2.323)
Constant	0.000** (10.070)	0.000*** (-11.269)	0.000*** (-15.841)	0.000*** (-17.706)
Observations	99956	99956	99956	99956
Adjusted R-squared	0.477	0.170	0.093	0.051
F	3596.672	735.559	365.946	193.375

***p < 0.01, **p < 0.05, p < 0.10
Dependent variable: ROE

From the regression findings in Table V, the paper concluded that for the non-SOEs in the current year, the disclosure of supplier rights and social responsibility construction was associated with better fiscal results. On the contrary, the non-disclosure of customer protection data was associated with better financial results. As time goes by, the influence of non-disclosure of customer protection and disclosure of supplier rights have persisted and affected the financial results of non-SOEs.

V. DISCUSSION AND CONCLUSION

This paper collates and analyzes the evidence of China's publicly traded enterprises from 2006 to 2020 to statistically examine the influence of social responsibility disclosure on the enterprise financial results. The key discoveries are as follows: overall, social responsibility disclosure was positively associated with ROE. And SOEs performed better than non-SOEs in the current year but private enterprises have a better edge in the lag period. Secondly, the disclosure of social responsibility by SOEs and non-SOEs can both improve the financial performance of enterprises, but such effects are more salient for non-SOEs. Finally, this study concludes that the disclosure of social responsibility has the most important impact on the present financial performances of SOEs but such disclosure has more sustained influences on the financial performance of non-SOEs in the lag period.

These research conclusions have enlightened the readers to thoroughly comprehend the relation between social responsibility disclosure and corporate financial results, and it is useful for companies to enlighten their understanding of social responsibility disclosure and its impacts on company profits. The finding in both non-SOEs and non-SOEs is in line with previous research, confirming the stakeholder theory. Simpson and Kohers studied US state-owned banks and revealed that social responsibility disclosure improved financial performances [11]. Companies are driven to maximize profit but also need to engage in socially responsible activities [14]. Stakeholder theory suggests that firms must win the endorsement and support of their stakeholders so as to continue their operation, and consequently, would align their activities to meet the expectations of their stakeholders [15]. In addition, managers control the information disclosure and, in some cases, provide lots of information to show that the firms act responsibly to the public [16], but in other instances disclosing less information [17]. Disclosing lots of information to the public can be seen as a kind of impression management to affect the public perception [18] while providing less information to the public can be considered as an avoidance tactic to keep clear of a public controversy on some issues [19]. In this study, providing less information to the customer has shown to positively affect the financial profit of both state-owned and non-SOEs. Acting less transparently appears to be beneficial in such cases, so as to steer clear of public debate that might affect the firm's reputation. In other cases, selective disclosure of supplier protection information and charitable activities have shown to be associated with better financial performances in this study, suggesting that providing such information may positively affect public perception and financial performance of both state-owned and non-SOEs in the current year and in the lag period, echoing with studies showing that change in social responsibility was related to financial profit in the current and subsequent years [12], suggesting that long-term financial benefits may result when there is open disclosure of social responsibility activities. These research conclusions allow us to thoroughly comprehend the influence of social responsibility disclosure and financial outcome, and it is useful for state-owned and non-SOEs to strengthen their social responsibility disclosure because such disclosure may have long-term financial benefits.

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