Do Companies Need Financial Flexibility for Sustainable Development?

Haifeng Zhang [1,2], Zhuo Zhang [1,*] and Ekaterina Steklova [3,*]

[1]   College of Economics and Management, Nanjing University of Aeronautics and Astronautics, Nanjing 211106, China; zhanghaifeng027@126.com
[2]   Management Science, University of Waterloo, Waterloo, ON N2L 3G1, Canada
[3]   Tengfay Consulting, 64 Meadowlane Dr, Kitchener, ON N2N1E9, Canada
*   Correspondence: zhangzhuo@nuaa.edu.cn (Z.Z.); steklovakate@gmail.com (E.S.)

Abstract: Reserve financial flexibility relates to the long-term development of enterprises. Enterprise managers pay more and more attention to the financial flexibility of reserves, which, however, will cause problems such as insufficient investment and inefficient use of funds. This paper collects data from the listed companies in the Shanghai and Shenzhen Stock Exchanges from 2009 to 2017. Our main results include the following. First, corporate social responsibility has a certain substitution effect on financial flexibility. Second, after excluding state-owned enterprises and politically-linked enterprises, there is a stronger substitution effect between social responsibility and financial flexibility for private enterprises without political connections. Third, the substitution effect between social responsibility and financial flexibility is stronger in companies with high environmental uncertainty and financing constraints. Furthermore, using a 2SLS procedure, we have verified that the substitution effect between social responsibility and financial flexibility is robust.

Keywords: corporate social responsibility; financial flexibility; substitution effect; sustainable development

1. Introduction

Financial flexibility refers to the ability of a corporation to acquire financial resources in a timely manner in order to prevent or take advantage of uncertain events, seize valuable investment opportunities [1], and maximize enterprise valuation [2]. The typical reasons for enterprises to reserve financial flexibility are to minimize the negative impacts of environmental uncertainty and financing constraints on enterprise survival and success. On the other hand, for sustainable development, enterprises need to actively perform social responsibility [3], seek political association [4], and acquire resources, especially financial resources, that will also affect the enterprise's environmental uncertainty and financial flexibility reserves. Hence, whether for financial flexibility or for social responsibility fulfillment, enterprises have the motivation to alleviate environmental uncertainty and financial constraints. Also, one may conjecture that there is a substitution relationship between corporate social responsibility (CSR) and financial flexibility.

In the process of enterprise development, enterprises often face problems such as legality, information asymmetry, and difficulty in obtaining external resources, which will lead to severe environmental uncertainty and financing constraints. Therefore, enterprises need to reserve certain financial flexibility to prevent potential threats to their sustainable development and at the same time to improve their legitimacy by actively fulfilling social responsibilities and establishing competitive advantages. Therefore, how to obtain financial flexibility is one of the most important issues for corporations. DeAngelo [2] provides the first research to systematically explain how corporations

obtain financial flexibility, and to propose that the acquisition of financial flexibility should be examined and analyzed from three aspects: cash flexibility, debt flexibility, and equity flexibility. So far, research on financial flexibility has mainly focused on three aspects: the definition of financial flexibility [5–8], the impact of financial flexibility on corporate investment and financing [9–11], and the impact of financial flexibility on corporate performance or valuation [12–15].

CSR refers to the fact that enterprises not only generate profit and bear legal responsibilities to shareholders and employees, but also bear responsibilities to consumers, communities, and the environment. CSR requires companies to go beyond the traditional concept of making profit as the sole goal and emphasizes the need to focus on the value of people in the production process, and the company's contribution to the environment, consumers, and society. There has been a lack of research on the impact of CSR on financial flexibility, but some studies have explored the impact of CSR on cash holdings and debt levels. Although the research on CSR's impact on cash-holding levels [16–18] and debt levels [19,20] does not consider financial flexibility, analyzing financial flexibility must consider the cash-holding level and debt level. Therefore, these studies provide a certain reference for our research on how CSR impacts financial flexibility.

Regarding the impact of CSR on cash-holding level, the results in the literature have been inconsistent. Cheung A. [21] believes that CSR can increase the social capital of a company [16], reduce its idiosyncratic risk, and improve the loyalty from investors and/or customers, further reducing its idiosyncratic risk [22]. Lower systematic risk may decrease cash holdings [23]. However, this also induces firms to hold a short debt-maturity structure, with higher refinancing risks that higher cash holdings may mitigate. A large number of studies have shown that CSR has an impact on corporate financing costs and liabilities. Cheng, et al., [24] show that firms with better CSR performance face significantly lower capital constraints. Goss and Roberts [25] find that firms with the worst CSR scores pay seven to 18 basis points more on their bank debt compared to firms with higher scores. Dhaliwal, et al. [26] and El Ghoul et al. [27] find that the voluntary disclosure of CSR activities leads to a reduction in the firm's cost of capital while attracting dedicated institutional investors and analyst coverage.

All in all, existing research has explored the relationship between the level of cash holdings or liabilities and CSR. However, few studies have explored the impact of CSR on corporate financial flexibility. Hence, in this paper, we fill this important research gap. Specifically, this paper collects the data of the listed public companies in China from the years of 2009 to 2017 to test the substitution effect of CSR on financial flexible reserves. Our results confirm a substitution relationship between CSR and financial flexibility reserves. Moreover, under high environmental uncertainty and more severe financing constraints, the substitution effect between CSR and financial flexible reserves is more pronounced. The main contributions of this study include the followings. First, the theoretical framework for analyzing the substitution effect between CSR and reserve financial flexibility is proposed for the first time. Second, the influence of CSR on reserve financial flexibility is examined from three aspects: political connections, environmental uncertainty, and financing constraint.

The rest of this paper is organized as follows. Section 2 provides theoretical analysis and develops our research hypotheses. Section 3 introduces the data, variables, and models for the empirical analysis. Section 4 presents and analyzes the empirical results. Concluding remarks and policy recommendations are presented in Section 5. Finally, the potential limitations of this paper and future research directions are proposed.

2. Theoretical Analysis and Hypothesis Development

The financial flexibility of corporate reserves stems from environmental uncertainty and financing constraints. Environmental uncertainty requires enterprises to reserve financial flexibility, to maintain the ability to minimize environmental threats, and to quickly mobilize funds to seize investment opportunities when they come. Financing constraints also require enterprises to reserve financial flexibility to cope with financing bottlenecks caused by higher external financing costs than internal

financing costs, and to provide certain financial resource guarantees to realize prevention and utilization capabilities.

CSR can help minimize environmental uncertainty in two ways. First, CSR can enhance the trust of corporate stakeholders. CSR activities are often associated with a stronger reputation [28] and a stronger commitment to honor implicit contracts [29]. This stronger reputation in turn can increase the ability to attract and retain excellent employees [30], provide better products and sales services, attract socially responsible consumers [31,32], improve organizational legitimacy [33], and attract socially responsible external financial resources [34,35]. These factors can reduce the negative impact of external market shocks on companies. Second, CSR can influence the ability of corporate governance [36]. CSR information disclosure can play the media's public-opinion-guiding role, which is conducive to improving the level of corporate governance and improving the ability of enterprises to cope with the uncertainty of the external environment. As a mechanism to coordinate the interests of managers and shareholders, corporate governance will affect the responsibility of enterprises to stakeholders, and will also have a positive impact on the corporate performance [37]. Jamali [38], and Sharma [39] find that corporate governance and corporate social responsibility has a synergistic effect. Through the analysis above, it can be seen that CSR can improve the trust of the company's stakeholders and corporate governance, improve corporate performance, and enhance its ability to acquire resources and resist risks in uncertain environments.

Furthermore, CSR can help alleviate corporate financing constraints in two ways. On the one hand, CSR can reduce the agency cost of the company. First, CSR activities can help reduce agency costs by eliminating the information asymmetry between internal and external stakeholders. Second, superior CSR performance is linked to better stakeholder engagement, limiting the likelihood of short-term opportunistic behavior [40,41] and hence reducing overall agent costs. Moreover, superior engagement with stakeholders can enhance a firm's revenue or profit generation. This can further contribute toward the sustainability of superior profitability [42]. On the other hand, as CSR reduces information asymmetry between the company and its stakeholders [43], CSR information disclosure increases transparency [44], gains the trust of stakeholders [45], and eases the enterprise financing constraints.

In short, CSR can alleviate environmental uncertainty and financing constraints, which will inevitably affect the financial flexibility of enterprises. Therefore, we put forward the following hypothesis.

Hypothesis 1 (H1): *Corporate social responsibility will have a substitution effect on financial flexibility.*

CSR influences the relationship between firms and stakeholders and has the potential to drive firm performance through customer influence. When environmental uncertainty is high, market competition is usually more intense, and enterprises need to obtain more support from stakeholders to effectively cope with the impact of external risks on enterprise development. Enterprises have the motivation to improve the level of social responsibility performance and maintain their competitive advantages. On the contrary, when the environmental uncertainty is low and the market demands and change trends are relatively stable, enterprises are more likely to invest resources in the process of expanding production, and the motivation to improve the quality of social responsibility is weak.

Sun and Price [46] research the impact of environmental uncertainty on increasing customer satisfaction through CSR. They find that CSR contributes to increased customer satisfaction for large firms, in highly competitive environments and in highly dynamic industries. Luo and Bhattacharya [47] find that CSR promotes satisfied customers, increasing the firm's performance. The improvement of enterprise performance can further reduce the enterprise to reserve financial flexibility. Therefore, we expect the following.

Hypothesis 2 (H2): *The higher the environmental uncertainty, the stronger the substitution effect of CSR on financial flexibility.*

Enterprises with higher financing constraints have more salient information asymmetry [48,49]. When information asymmetry is more salient, fulfilling and disclosing CSR can better improve the relationship with stakeholders and alleviate the financing constraints of an enterprise [50]. This is because asymmetric information in an enterprise can easily lead to serious agency problems in its management. CSR can more effectively reduce the potential agency problems, improve the relationship between the enterprise and stakeholders, alleviate financial constraints, and hence improve financial performance. Therefore, the following is hypothesized.

Hypothesis 3 (H3): *The higher the financing constraints, the stronger the substitution effect of CSR on financial flexibility.*

3. Data, Variables, and Models

3.1. Sample and Data

This study uses Chinese listed companies as samples to study the substitution effect between CSR and financial flexibility, with data from the years of 2009 to 2017. In order to make the data more robust, we processed the data as follows: firstly, the financial and insurance companies were deleted; secondly, the ST-type and PT-type (The Shanghai and Shenzhen stock exchanges of China have special treatment for the trading of the shares of listed companies with abnormal financial conditions.) companies were deleted, and the companies with incomplete variable data were deleted; finally, we collected 19,060 observations for 3359 companies. To control the influence of extreme values, we are winsorized the quantiles of continuous variables below 1% and above 99%.

3.2. Variable

Research variables include explanatory variables, explained variables, and control variables in this paper. The explained variables relate to financial flexibility, the explanatory variables relate to CSR. The following is the calculation method of explanatory variables and explained variables.

(1) Financial flexibility (cwrx). Existing literature research on how to obtain and maintain financial flexibility mainly focuses on cash policy, capital structure policy, and payment policy. Myers et al. [9] believe that companies can hold large amounts of cash to obtain financial flexibility. Pinegar et al. [51], Graham, et al. [52], and Bancel, et al. [53] believe that companies can retain "a considerable amount of unused borrowing capacity", that is, companies that maintain low debt can have certain financial flexibility to help companies seize more investment opportunities. Lie [54] believes that companies can obtain financial flexibility through dividend policies. DeAngelo, et al. [2] believes that enterprises can obtain financial flexibility through a combination method of cash-holding policies, dividend policies, and capital structure.

Marchica [55] measures the corporate financial flexibility from a single indicator method of either financial leverage or cash holdings. DeAngelo [2] and Arslan [14] believe that it is more reasonable to measure the corporate financial flexibility from multiple indicators, such as both financial leverage and cash holdings. Doidge, et al. [56] believe that a financial flexibility indicator system should be established to measure the corporate financial flexibility. By assigning different weights to different indicators, it is more reasonable to obtain a comprehensive score as an enterprise's financial flexibility indicator. This paper draws on studies such as Arslan [14], and only adopts two aspects: debt financing flexibility that reflects the ability of an enterprise to obtain external funds, and cash flexibility that reflects the ability of an enterprise to call internal funds.

A company's high cash holdings or low asset–liability ratios do not mean that the company has financial flexibility. Only when the company's cash holdings are higher than those in similar industries, or the enterprise's asset–liability ratios are lower than those in similar industries, can it indicate that the company has financial flexibility. The calculation formula for financial flexibility is as follows:

Financial flexibility = Cash flexibility + Liability flexibility
Cash flexibility (cfrx) = (Corporate cash holdings − average industry cash holdings)
Liability flexibility (lfrx) = Max (0, average industry debt ratio − corporate debt ratio)

Cash holdings are the ratio of cash and cash equivalents to total assets, while corporate debt ratio is the ratio of total liabilities to total assets. The mean value of cash holdings and the mean value of industrial debt ratio are represented by the mean value of corresponding indicators of sample data. The higher the value of financial flexibility, the better the level of financial flexibility.

(2) CSR. In the data of the listed companies in China, there are no authoritative CSR evaluation companies. With reference to KLD ratings (KLD- a social choice investment advisory firm) in the United States, this article constructs the CSR measurement index from the perspective of stakeholders. According to Carroll [57], corporates need to perform social responsibility to governments, employees, suppliers, consultants, financial institutions, and communities. From the financial data published by Chinese listed companies, we took out the financial data of enterprises' input to governments, employees, suppliers, consultants, financial institutions, and communities for calculation, and assigned the same weight to each stakeholder. Finally, we added them up to obtain the comprehensive performance of enterprises in fulfilling their social responsibilities. The specific calculation steps are as follows:

Government liability (ZFRP) = (taxes paid − tax refunds received + taxes payable)/ total revenue.

Employee responsibility performance (YGRP) = (cash paid to employees + employee compensation payable)/total revenue.

Supplier liability performance (GYRP) = (cash paid for goods received services + accounts payable + notes payable)/total revenue.

Customer responsibility performance (GKRP) = (cash received from selling goods and providing services + accounts receivable + notes receivable)/total revenue.

Financial institution liability performance (JRRP) = cash paid for debt repayment/total revenue.

Social responsibility performance (SHRP) = donation expenditure/total revenue.

The higher the value of ZFRP, YGRP, GYRP, GKRP, JRRP, and SHRP, the better the performance of enterprises responsibility to governments, employees, suppliers, customers, financial institutions, and communities.

Finally, by giving equal weight to all stakeholders, the total level of CSR can be obtained.

$$CSR = (ZFRP + YGRP + GYRP + GKRP + JRRP + SHRP)/6 \qquad (1)$$

According to the average value of annual CSR in the industry, enterprises are divided into a high CSR group and low CSR group.

(3) Environmental uncertainty (unenc)

This article uses the China Economic Policy Uncertainty Index jointly published by Stanford University and the University of Chicago to measure the uncertainty of the external living environment of Chinese companies [58]. The index was constructed by Baker et al. [59]. It is obtained by searching and filtering news reports related to economic policy uncertainty, etc., and calculating the number of articles related to China's policy uncertainty.

According to the mean value of annual environmental uncertainty index, enterprises are divided into a high environmental uncertainty group and low environmental uncertainty group.

(4) Financing constraints (fc)

Since the groundbreaking research by Fazzari et al. [60] on financing constraints, many scholars have used different classification criteria to distinguish between financing-constrained enterprises and non-financing-constrained enterprises. These classification standards mainly involve the characteristics of the enterprise related to the cost of information, such as the dividend payment status of the enterprise, whether it is affiliated with an enterprise group, the size of the enterprise, the age of the enterprise, the credit rating of the bonds issued by the enterprise, or the age of the enterprise [61].

The shortcomings of these classifications are that they only consider a certain type of indicators of corporate financing, and lack a comprehensive description of corporate financing status. Therefore, Lamont et al. [62] use the Kaplan and Zingales [63] method to measure the financing constraints of different companies (KZ index, for short).

For the measurement of corporate financing constraints in this paper, we refer to the method in reference to Lamont et al. [61]. The specific calculation formula is as follows:

$$KZ_{it} = -1.001909CF_{it} + 3.139193TLTD_{it} - 39.36780TDIV_{it} - 1.314759CASH_{it} + 0.2826389Q_{it}$$

According to the average value of annual enterprise financing constraint index in the industry, enterprises are divided into a high financing constraint group and low financing constraint group.

(5) Control variables. In order to reduce the influence of the enterprise's own factors and external environmental factors on the model, company size (zczj), company age (age), return on total assets (roa), growth rate of total assets (grow), region (dq), industry (hydm), and year were selected as control variables.

3.3. Model and Method

This paper establishes the following econometric model for an empirical test:

$$cwrx_{it} = \beta_0 + \beta_1 shzr_{it} + \beta_2 con_{it} + \varepsilon_{it} \tag{2}$$

$cwrx_{it}$ is the financial flexibility of i corporate in t year; $shzr_{it}$ is the CSR of i corporate in t year, con_{it} is the control variable in the model. β_1 is the effect coefficient of CSR on corporate financial flexibility.

We used the software Stata14 for the empirical data analysis below.

4. Empirical Test

4.1. Descriptive Statistical Analysis

We undertook a descriptive statistical analysis on the main variables, and the results are presented in Table 1. It was found that the average level of financial flexible reserves of listed companies in China is 0.08, and the level of CSR is 0.43, which is relatively low as a whole. We also analyzed the correlation between the main variables, as shown in Table 2. From Table 2, we can see that the values of the phase relations of all variables are less than 0.4. Multi-collinearity will affect the regression result, and we have also tested the expansion factor (VIF) of the variable, as shown in Table 2. The maximum value of the VIF is 1.28, and the mean value is 1.18. It can be seen from the phase relation value and the test of the expansion factor that there is no serious multi-collinearity in the model regression.

Table 1. Descriptive statistics of main variables.

Variable	N	Average Value	Min Value	Median Value	Max Value	Standard Error
cwrx	19060	0.08	−0.21	0.02	0.74	0.210
CSR	19060	0.43	0.05	0.43	0.92	0.13
unenc	19060	213.8	98.89	181.3	364.8	103.0
fc	19060	3.44	2.90	3.40	4.06	0.29
roa	19060	0.0500	0	0.0400	0.190	0.0400
zczj	19060	22.04	19.85	21.85	26.05	1.270
age	19060	8.890	0	7	27	6.820
grow	19060	0.270	−0.180	0.130	2.820	0.460

Table 2. Correlation analysis of main variables.

Variable	cwrx	CSR	roa	zczj	age	grow	Average VIF
cwrx	1						
CSR	−0.239***	1					
roa	0.333***	−0.344***	1				
zczj	−0.352***	0.142***	−0.137***	1			
age	−0.284***	0.092***	−0.206***	0.386***	1		
grow	0.270***	−0.030***	0.139***	−0.103***	−0.277***	1	
VIF	/	1.15	1.19	1.19	1.28	1.09	1.18

*** represents 1% significance level.

4.2. Regression Analysis

4.2.1. Hypothesis 1 Examination

First, we analyzed the substitution effect of CSR on financial flexibility by using the collected data of Chinese A-share listed companies from the years of 2009 to 2017. The results are shown in Table 3. It can be seen that the regression coefficient value of CSR is −0.0827 ($p < 1\%$). It shows that the fulfillment of social responsibility by Chinese listed companies has a certain substitution effect on financial flexibility. According to literature reports [64], CSR will bring political resources to the company, and the political connection background of the company can improve the company's ability to resist risks. At the same time, most of the state-owned enterprises in China have a government background and can obtain better government asylum. These factors will affect the substitution effect of CSR on financial flexibility. Therefore, in order to eliminate these interferences, we deleted the samples of politically connected companies (one of the five situations in which the actual controller or chairman (general manager) of an enterprise has been or is currently: a deputy to the National People's Congress, a party representative, a member of the Chinese people's political consultative conference, a leader of the federation of industry and commerce, or a party and government official, defines the enterprise as politically relevant) and state-owned enterprises (state-owned enterprises refers to companies whose corporate control lies in the central or local government) in the total sample, and then conducted regression analysis, the results of which are shown in m2. The substitution effect of CSR on financial flexibility still exists, the value of the regression coefficient is −0.0921 ($p < 1\%$), larger than the value in m1 (−0.0827, $p < 1\%$). This shows that the substitution effect of CSR on financial flexibility will not be reduced by the factors of government asylum. Therefore, in the following analysis, we conducted empirical analysis after excluding the sample enterprises with political connections.

CSR can be regarded as an investment behavior. It may reduce the cash reserve or increase the size of liabilities of the enterprise. Higher CSR performance is closely related to tighter cash constraints [65]. If the negative relationship between CSR and financial flexibility is because of CSR investment behavior, then as the CSR increases, this negative relationship will intensify. According to the average CSR in the industry each year, we divide the sample into two groups of high CSR and low CSR. In Table 3, m3 is the low CSR group and m6 is the high CSR group. The CSR regression coefficient value in m3 is −0.1543 ($p < 1\%$), which is higher than the value in m6 (−0.0912, $p < 1\%$). It shows that as the level of CSR increases, the restraint on corporate financial flexibility has not been exacerbated. In other words, the suppression effect of CSR on financial flexibility is not due to the reduction of corporate cash reserves, nor is it due to the improvement of corporate debt ratio due to the fulfillment of corporate social responsibility.

Table 3. Analysis of the substitution effect of corporate social responsibility (CSR) on financial flexibility.

Variable	Total Sample		Get Rid of State-Owned and Politically Connected Companies					
	CSR		Low-CSR			High-CSR		
	cwrx	cwrx	cwrx	cfrx	lfrx	cwrx	cfrx	lfrx
	m1	m2	m3	m4	m5	m6	m7	m8
CSR	−0.0827***	−0.0921***	−0.1543***	−0.0767**	−0.0806***	−0.0912***	−0.0552**	−0.0367**
	(0.0103)	(0.0182)	(0.0384)	(0.0302)	(0.0173)	(0.0319)	(0.0240)	(0.0146)
roa	0.0401***	0.0376***	0.0365***	0.0206***	0.0152***	0.0293***	0.0191***	0.0107***
	(0.0026)	(0.0043)	(0.0065)	(0.0051)	(0.0029)	(0.0062)	(0.0047)	(0.0028)
zczj	−0.0807***	−0.0915***	−0.1119***	−0.0537***	−0.0625***	−0.0763***	−0.0415***	−0.0348***
	(0.0028)	(0.0049)	(0.0079)	(0.0062)	(0.0036)	(0.0069)	(0.0052)	(0.0032)
age	−0.0115	−0.00130	−0.0063***	−0.0058***	−0.0008	0.0027	0.00230	0.0004
	(0.0211)	(0.0014)	(0.0023)	(0.0018)	(0.0010)	(0.0019)	(0.0015)	(0.0009)
grow	0.0986***	0.0924***	0.0901***	0.0792***	0.0207***	0.0913***	0.0745***	0.0182***
	(0.0023)	(0.0032)	(0.0044)	(0.0035)	(0.0020)	(0.0051)	(0.0039)	(0.0023)
dq	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
hydm	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
year	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
_cons	1.8851***	2.0836***	2.5201***	1.0982***	1.5323***	1.7092***	0.8464***	0.8423***
	(0.1132)	(0.1109)	(0.1766)	(0.1386)	(0.0794)	(0.1710)	(0.1288)	(0.0782)
N	19060	8989	4942	4942	4942	4047	4047	4047
r2	0.725	0.738	0.790	0.743	0.823	0.759	0.703	0.803
r2_a	0.665	0.652	0.677	0.604	0.727	0.627	0.539	0.695
F	121.9	81.20	47.69	40.75	35.43	25.39	21.40	18.87

*** represents 1% significance level, ** represents 5% significance level.

According to the definition of financial flexibility, we split financial flexibility into cash flexibility and liability flexibility. At the same time, the companies' cash flexibility and liability flexibility levels are each divided into two groups based on the annual industry average: a high cash flexibility group and low cash flexibility group, as well as a high debt flexibility group and low debt flexibility group. From Table 3, we find that the restraint effect of CSR on cash flexibility and liability flexibility has not been strengthened with the improvement of the CSR level. In the low CSR group, the CSR regression coefficient value in m4 is −0.0767 ($p < 5\%$) less than the m5, but the CSR regression coefficient value in m7 is −0.0552 ($p < 5\%$) greater than the m8 in the high CSR group. It shows that the substitution effect of CSR on financial flexibility is more reflected in the impact on corporate liabilities.

4.2.2. Hypothesis 2 Examination

Table 4 reports the substitution effect of CSR on financial flexibility in the context of different environmental uncertainties and financing constraints. In the low environmental uncertainty group (m9), it can be seen that the regression coefficient of CSR is −0.0882 ($p < 1\%$), which is less than the high environmental uncertainty group (−0.0266, $p < 10\%$) in m10. When the substitution effect of CSR on financial flexibility is affected by the government shelter effect, it will decrease with the increase of environmental uncertainty. Therefore, after deleting the samples of political correlation and state-owned enterprises, we conducted the regression analysis again according to the level of environmental uncertainty. In the low environmental uncertainty group, the CSR regression coefficient is −0.0841 ($p < 1\%$) in m13, greater than the high environmental uncertainty group (−0.1352, $p < 1\%$). This shows that after removing the interference factor of government protection, the substitution effect of CSR on financial flexibility is more significant when the environmental uncertainty is high. Hypothesis 2 is verified.

4.2.3. Hypothesis 3 Examination

In the low financing constraint group, the regression coefficient of CSR is -0.0952 ($p < 1\%$) in m12, which is smaller than the coefficient of CSR (-0.0774, $p < 1\%$)) in m13 (high financing constraints group). We can also find that when considering financing constraints, the substitution effects of CSR and financial flexibility are affected by political connections and the state-owned enterprises. When we deleted the samples of political correlation and state-owned enterprises, we conducted the regression analysis again according to the level of financing constraints. In the low financing constraints group, the regression coefficient of CSR is -0.0903 ($p < 1\%$) in m15, which is greater than the high financing constraints group (-0.0910, $p < 1\%$)) in m16. This shows that after removing the interference factor of government protection, the substitution effect of CSR on financial flexibility is more significant when the financing constraint is high. Hypothesis 3 is verified.

Table 4. Analysis of the substitution effect of CSR on financial flexibility under different environmental uncertainties and financing constraints.

Variable	Total Sample				Get rid of State-Owned and Politically Connected Companies			
	Low-unenc	High-unenc	Low- fc	High- fc	Low-unenc	High-unenc	Low- fc	High- fc
	m9	m10	m11	m12	m13	m14	m15	m16
CSR	−0.0882***	−0.0266*	−0.0952***	−0.0774***	−0.0841***	−0.1352***	−0.0903***	−0.0910***
	(0.0160)	(0.0142)	(0.0189)	(0.0123)	(0.0296)	(0.0329)	(0.0350)	(0.0218)
roa	0.0305***	0.0306***	0.0419***	0.0371***	0.0279***	0.0424***	0.0419***	0.0331***
	(0.0035)	(0.0039)	(0.0046)	(0.0033)	(0.0060)	(0.0082)	(0.0074)	(0.0056)
zczj	−0.0991***	−0.0311***	−0.1033***	−0.0621***	−0.1173***	−0.0742***	−0.1068***	−0.0797***
	(0.0043)	(0.0041)	(0.0065)	(0.0032)	(0.0078)	(0.0090)	(0.0111)	(0.0059)
age	−0.0133	0.0028***	−0.0156	0.0050***	−0.0022	−0.0045*	−0.0079***	0.0024
	(0.0212)	(0.0009)	(0.0207)	(0.0009)	(0.0020)	(0.0023)	(0.0027)	(0.0018)
grow	0.1134***	0.0522***	0.0996***	0.0743***	0.1084***	0.0559***	0.0839***	0.0782***
	(0.0028)	(0.0041)	(0.0036)	(0.0031)	(0.0040)	(0.0073)	(0.0050)	(0.0044)
dq	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
hydm	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
year	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
_cons	2.3610***	0.6233***	2.3261***	1.4033***	2.6778***	1.7561***	2.4162***	1.8581***
	(0.1502)	(0.0937)	(0.1820)	(0.0718)	(0.1777)	(0.2072)	(0.2942)	(0.1331)
N	11552	7508	7829	11231	5150	3839	3845	5144
r2	0.782	0.706	0.816	0.727	0.797	0.802	0.829	0.740
r2_a	0.714	0.475	0.732	0.637	0.703	0.573	0.721	0.613
F	101.6	16.25	62.42	46.95	65.08	19.44	46.51	26.44

*** represents 1% significance level, * represents 10% significance level.

4.2.4. Further Study

We also distinguished between the companies that are both highly environmentally uncertain and highly financially constrained from other types ('other types' here means that the environmental uncertainty of the enterprise is low, or the financing constraint of the enterprise is low, or both are low) of companies in the sample, and re-analyze companies with different levels of CSR, the result are shown in Table 5. In the total samples, enterprises (m10, m12) that are simultaneously affected by high environmental uncertainty and high financial constraints have lower substitution effects of CSR and financial flexibility than other enterprises (m9, m11). However, after removing the samples of state-owned enterprises and politically affiliated enterprises, the sample enterprises (m16) that are highly affected by environmental uncertainty and financing constraints at the same time have a better substitution effect on financial flexibility when they perform high levels of social responsibility. It shows that for non-political private enterprises, increasing the social responsibility level will have a better substitution effect of financial flexibility, which can effectively deal with the difficulties caused by environmental uncertainty and financing constraints for corporate development.

Table 5. Samples with high environmental uncertainty and high financing constraints.

Variable	Total sample				Get rid of state-owned and politically connected companies			
	Low-CSR		High-CSR		Low-CSR		High-CSR	
	m9	m10	m11	m12	m13	m14	m15	m16
CSR	−0.1383***	0.1057*	−0.0713***	−0.0264	−0.1926***	−0.101	−0.0950**	−0.1520**
	(0.0259)	(0.0622)	(0.0224)	(0.0435)	(0.0499)	(0.1116)	(0.0416)	(0.0752)
roa	0.5427***	0.4725**	0.5150***	0.4950***	0.5689***	0.0263	0.7409***	0.7412***
	(0.0634)	(0.1898)	(0.0755)	(0.1513)	(0.1055)	(0.2840)	(0.1297)	(0.2662)
zczj	−0.1113***	−0.0690***	−0.0697***	−0.0542***	−0.1310***	−0.0095	−0.0925***	−0.0502***
	(0.0059)	(0.0142)	(0.0053)	(0.0098)	(0.0107)	(0.0258)	(0.0096)	(0.0177)
age	−0.0118	0.0085**	0.0075***	0.0109***	−0.0046*	−0.0187**	0.0067***	0.0030
	(0.0221)	(0.0035)	(0.0012)	(0.0023)	(0.0027)	(0.0072)	(0.0025)	(0.0045)
grow	0.1098***	0.0366**	0.1112***	0.0302***	0.0965***	0.0012	0.1143***	0.0265**
	(0.0035)	(0.0146)	(0.0043)	(0.0081)	(0.0049)	(0.0203)	(0.0064)	(0.0123)
dq	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
hydm	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
year	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
_cons	2.5588***	1.5112***	1.5880***	1.2355***	2.9240***	0.830	2.0470***	1.0026**
	(0.1698)	(0.3056)	(0.1213)	(0.2215)	(0.2415)	(0.5585)	(0.2455)	(0.4624)
N	8581	1914	6290	2275	3964	978	2879	1168
r2	0.800	0.899	0.789	0.873	0.816	0.924	0.808	0.893
r2_a	0.716	0.646	0.683	0.613	0.703	0.657	0.677	0.619
F	61.87	4.143	38.63	5.197	40.06	3.051	25.25	4.489

*** represents 1% significance level, ** represents 5% significance level, * represents 10% significance level.

4.3. Stability Test

4.3.1. Dealing with Endogenous Problems

There are many factors influencing the financial flexibility, which will inevitably lead to the omission of variables and lead to endogenous problems in the model. With reference to the method of Cai L.'s [66] document, this article selects the annual average of CSR (yCSR) of listed companies in the same province and the annual average of CSR (hCSR) of all listed companies belonging to the same industry as instrumental variables. For companies with close geographic locations and the same industry, the external environment they face is relatively similar. CSR decisions affect each other and their behaviors are similar. From the perspective of a single company, the annual average (yCSR) and industry average of CSR (hCSR) meet exogenous and relevant conditions.

After using two-stage regression analysis, it was found that hCSR and yCSR are significantly positively correlated with CSR, and the regression coefficients are 0.9825 ($p < 1\%$) and 0.7931 ($p < 1\%$). Subsequently, we performed a weak instrumental variable test and obtained Shea's partial R^2 as 6.15% and F statistic as 397.57, which is much larger than the empirical value of 10, which means that the null hypothesis that the instrumental variable is a weak instrumental variable is rejected, that is, the instrumental variable we selected was valid.

We also tested the problem of over-identification in the selection of instrumental variables, and obtained a p-value of 0.8421 for the hypothesis test, accepting the null hypothesis that "all variables are exogenous." The regression results obtained by the instrumental variable method are shown in m17 and m20 in Table 6. The regression results support the conclusions obtained in the analysis above.

4.3.2. Other Robustness Tests

In order to exclude the causal relationship between the dependent variable and the independent variable, we replaced the independent variable with a lagging period of the independent variable, and performed the regression again. The return results are shown in m19 and m22 in Table 6. The regression results still support the assumptions above. Finally, we also used CSR (hCSR) and financial flexibility (hcwrx) adjusted by the industry average to replace CSR and financial flexibility without industry adjustment. After the return, the results are shown in m18 and m21 in Table 6. The conclusion has not changed.

Table 6. Robustness test results.

Variable	Total Sample			Get Rid of State-Owned and Politically Connected Companies		
	m17	m18	m19	m20	m21	m22
pCSR	−0.1218***			−0.1828**		
	(0.0397)			(0.0821)		
hCSR		−0.0042***			−0.0092***	
		(0.0013)			(0.0019)	
L.CSR			−0.0692***			−0.1045***
			(0.0120)			(0.0232)
roa	0.0890***	−0.0001	0.0328***	0.0758***	−0.0001	0.0280***
	(0.0039)	(0.0001)	(0.0028)	(0.0074)	(0.0002)	(0.0049)
age	−0.0038***	−0.0008***	−0.0495***	−0.0047***	−0.0006***	−0.0463***
	(0.0002)	(0.0001)	(0.0034)	(0.0004)	(0.0002)	(0.0065)
zczj	−0.0530***	−0.0010***	0.0075***	−0.0727***	−0.0014***	0.00110
	(0.0012)	(0.0000)	(0.0008)	(0.0025)	(0.0001)	(0.0017)
grow	0.0931***	0.0002**	0.0079**	0.0905***	0.0002	−0.0041
	(0.0041)	(0.0001)	(0.0039)	(0.0047)	(0.0001)	(0.0060)
dq	yes	no	yes	yes	no	yes
year	yes	no	yes	yes	no	yes
hydm	yes	no	yes	yes	no	yes
_cons	1.3131***	0.1021***	1.0594***	1.8279***	0.0989***	1.0891***
	(0.0294)	(0.0032)	(0.0775)	(0.0520)	(0.0047)	(0.1525)
N	19060	19060	14509	8989	8989	6179
r2	0.298	0.580	0.733	0.310	0.660	0.744
r2 a	0.296	0.490	0.667	0.308	0.550	0.651
F	/	486.0	30.75	/	380.7	21.40

*** represents 1% significance level, ** represents 5% significance level.

5. Conclusions

Enterprises are often affected by financing and environmental uncertainty, so they need to actively fulfill their social responsibilities. Previous studies focused on the impact of CSR on corporate cash holdings and financing capacity from the perspectives of environmental uncertainty, financing costs, and corporate performance. Our work researches the impact of CSR on financial flexibility reserve from the perspective of flexibility.

In this paper, we propose for the first time that CSR has a substitution effect on financial flexible reserve. We empirically test and confirm this relationship. That is, enterprises can fulfill part of the role of financial flexibility by fulfilling CSR. Furthermore, after excluding the samples of state-owned enterprises and politically connected enterprises, we find that for private enterprises without government connections, the substitution effect between CSR and financial flexible reserve is more significant. Moreover, for enterprises with high environmental uncertainty and high financing constraints, such a substitution effect is also more salient. In other words, there is more need for enterprises with higher environmental uncertainty and financing constraints to perform CSR measures.

We can obtain the following policy insights based on the results of this paper. First, from the perspective of enterprises, this substitution effect shows that they can implement more CSR to reduce the need for reserve financial flexibility. This may improve their investment efficiency and financial performance. Second, enterprises with highly uncertain environment and financing constraints can improve their operating environment by fulfilling their social responsibilities. Third, the government can strive to reduce the incentive for private enterprises to pursue political connections, and establish a more fair market environment. This can improve enterprises' social responsibility behavior.

This study has potential limitations that can be addressed in future research. First, the measurement methods of corporate social responsibility, financial flexibility, environmental uncertainty, and financing constraints in the literature have been inconsistent. The problem of selection bias also exists in this research. In future studies, more accurate measurement methods should be sought. Secondly, this study lacks a focus on politically-connected enterprises. It will be interesting to separately conduct empirical analysis for politically-connected enterprises and private enterprises without political connections and compare the corresponding empirical results, based on which we may draw richer conclusions.

Thirdly, although we found that CSR has different substitution effects on cash flexibility and liability flexibility, it has not carried out in-depth empirical research on its mechanism of action, and further research is also the next step.

Author Contributions: Conceptualization, methodology, writing-original draft, H.Z., funding acquisition, supervision, editing, and approved the final manuscript, Z.Z., language processing, witting-review editing, E.S. All authors have read and agreed to the published version of the manuscript.

Conflicts of Interest: The authors declare no conflict of interest.

References

1. Opler, T.; Pinkowitz, L.; Stulz, R.; Williamson, R. The determinants and implications of corporate cash holdings. *J. Financ. Econ.* **1999**, *52*, 3–46. [CrossRef]
2. DeAngelo, H.; DeAngelo, L. Capital structure, payout policy, and financial flexibility. *Marshall Sch. Bus. Work. Pap. FBE* **2007**, 2–6. [CrossRef]
3. Moon, J. The contribution of corporate social responsibility to sustainable development. *Sustain. Dev.* **2007**, *15*, 296–306. [CrossRef]
4. Wang, H.; Qian, C. Corporate philanthropy and corporate financial performance: The roles of stakeholder response and political access. *Acad. Manag. J.* **2011**, *54*, 1159–1181. [CrossRef]
5. Gilson, S.C.; Warner, J.B. *Junk bonds, Bank debt, and financial flexibility*; Social Science Electronic Publishing: Waltham, MA, USA, 1997.
6. Mensah, Y.M.; Werner, R. Cost efficiency and financial flexibility in institutions of higher education. *J. Account. Public Policy* **2003**, *22*, 293–323. [CrossRef]
7. Byoun, S. *Financial Flexibility and Capital Structure Decision*; Social Science Electronic Publishing: Waltham, MA, USA, 2011.
8. Denis, D.J.; McKeon, S.B. Debt financing and financial flexibility evidence from proactive leverage increases. *Rev. Financ. Stud.* **2012**, *25*, 1897–1929. [CrossRef]
9. Myers, S.C.; Majluf, N.S. Corporate financing and investment decisions when firms have information that investors do not have. *J. Financ. Econ.* **1984**, *13*, 187–221. [CrossRef]
10. Jensen, M.C. Agency costs of free cash flow, corporate finance, and takeovers. *Am. Econ. Rev.* **1986**, *76*, 323–329.
11. Agha, M.; Faff, R. An investigation of the asymmetric link between credit re-ratings and corporate financial decisions: "Flicking the switch" with financial flexibility. *J. Corp. Financ.* **2014**, *29*, 37–57. [CrossRef]
12. Gamba, A.; Triantis, A. The Value of Financial Flexibility. *J. Financ.* **2008**, *63*, 2263–2296. [CrossRef]
13. Rapp, M.S.; Schmid, T.; Urban, D. The value of financial flexibility and corporate financial policy. *J. Corp. Financ.* **2014**, *29*, 288–302. [CrossRef]
14. Arslan-Ayaydin, Ö.; Florackis, C.; Ozkan, A. Financial flexibility, corporate investment and performance: Evidence from financial crises. *Rev. Quant. Financ. Account.* **2014**, *42*, 211–250. [CrossRef]
15. Hayward, M.; Caldwell, A.; Steen, J.; Gow, D.; Liesch, P. Entrepreneurs' capital budgeting orientations and innovation outputs: Evidence from Australian biotechnology firms. *Long Range Plan.* **2017**, *50*, 121–133. [CrossRef]
16. Cheung, A. Corporate social responsibility and corporate cash holdings. *J. Corp. Financ.* **2016**, *37*, 412–430. [CrossRef]
17. Habib, A.; Hasan, M.M. Social capital and corporate cash holdings. *Int. Rev. Econ. Financ.* **2017**, *52*, 1–20. [CrossRef]
18. Harper, J.; Sun, L. Environmental performance and corporate cash holdings. *Appl. Econ. Lett.* **2019**, 1–4. [CrossRef]
19. Attig, N.; El Ghoul, S.; Guedhami, O.; Suh, J. Corporate social responsibility and credit ratings. *J. Bus. Ethics* **2013**, *117*, 679–694. [CrossRef]

20. Do, T.K.; Huang, H.H.; Lo, T.C. Corporate Social Responsibility and Leverage Speed of Adjustment. *SSRN Electron. J.* **2018**. [CrossRef]

21. Degli Antoni, G.; Sacconi, L. Does a Virtuous Circle Between Social Capital and CSR Exist? A "Network of Games" Model and Some Empirical Evidence. *Econometica* **2011**, *3*, 1–42.

22. Luo, X.; Bhattacharya, C.B. The debate over doing good: Corporate social performance, strategic marketing levers, and firm-idiosyncratic risk. *J. Mark.* **2009**, *73*, 198–213. [CrossRef]

23. Bates, T.W.; Kahle, K.M.; Stulz, R.M. Why do US firms hold so much more cash than they used to? *J. Financ.* **2009**, *64*, 1985–2021. [CrossRef]

24. Cheng, B.; Ioannou, I.; Serafeim, G. Corporate social responsibility and access to finance. *Strateg. Manag. J.* **2014**, *35*, 1–23. [CrossRef]

25. Goss, A.; Roberts, G.S. The impact of corporate social responsibility on the cost of bank loans. *J. Bank. Financ.* **2011**, *35*, 1794–1810. [CrossRef]

26. Dhaliwal, D.S.; Li, O.Z.; Tsang, A.; Yang, Y.G. Voluntary nonfinancial disclosure and the cost of equity capital: The initiation of corporate social responsibility reporting. *Account. Rev.* **2011**, *86*, 59–100. [CrossRef]

27. El Ghoul, S.; Guedhami, O.; Kwok, C.C.Y.; Mishra, D.R. Does corporate social responsibility affect the cost of capital? *J. Bank. Financ.* **2011**, *35*, 2388–2406. [CrossRef]

28. Martínez-Ferrero, J.; Banerjee, S.; García-Sánchez, I.M. Corporate social responsibility as a strategic shield against costs of earnings management practices. *J. Bus. Ethics* **2016**, *133*, 305–324. [CrossRef]

29. Deng, X.; Kang, J.; Low, B.S. Corporate social responsibility and stakeholder value maximization: Evidence from mergers. *J. Financ. Econ.* **2013**, *110*, 87–109. [CrossRef]

30. Turban, D.B.; Greening, D.W. Corporate social performance and organizational attractiveness to prospective employees. *Acad. Manag. J.* **1997**, *40*, 658–672.

31. Fombrun, C.; Shanley, M. What's in a name? Reputation building and corporate strategy. *Acad. Manag. J.* **1990**, *33*, 233–258.

32. Hillman, A.J.; Keim, G.D. Shareholder value, stakeholder management, and social issues: What's the bottom line? *Strateg. Manag. J.* **2001**, *22*, 125–139. [CrossRef]

33. Hawn, O.; Chatterji, A.; Mitchell, W. *How Operational Legitimacy Conditions the Impact of Changes in Social Legitimacy on Firm's Economic Value: The Dow Jones Sustainability Index Addition and Deletion'*; Duke University: Durham, NC, USA, 2011.

34. Kapstein, E.B. The corporate ethics crusade. *Foreign Aff.* **2001**, *80*, 105–119. [CrossRef]

35. Boubaker, S.; Chourou, L.; Himick, D.; Saddi, S. It's about time! The influence of institutional investment horizon on corporate social responsibility. *Thunderbird Int. Bus. Rev.* **2017**, *59*, 571–594. [CrossRef]

36. Boubaker, S.; Nguyen, D.K. *Corporate Governance and CSR: A Focus on Emerging Markets*; World Scientific Press: Hackensack, NJ, USA, 2014.

37. Huang, C.J. Corporate governance, corporate social responsibility and corporate performance. *J. Manag. Organ.* **2010**, *16*, 641–655. [CrossRef]

38. Jamali, D.; Safieddine, A.M.; Rabbath, M. Corporate governance and corporate social responsibility synergies and interrelationships. *Corp. Gov. Int. Rev.* **2008**, *16*, 443–459. [CrossRef]

39. Sharma, J.P.; Khanna, S. Corporate social responsibility, corporate governance and sustainability: Synergies and inter-relationships. *Indian J. Corp. Gov.* **2014**, *7*, 14–38. [CrossRef]

40. Bénabou, R.; Tirole, J. Individual and corporate social responsibility. *Economica* **2010**, *77*, 1–19. [CrossRef]

41. Ioannou, I.; Serafeim, G. What drives corporate social performance? The role of nation-level institutions. *J. Int. Bus. Stud.* **2012**, *43*, 834–864. [CrossRef]

42. Choi, J.; Wang, H. Stakeholder relations and the persistence of corporate financial performance. *Strateg. Manag. J.* **2009**, *30*, 895–907. [CrossRef]

43. Lopatta, K.; Buchholz, F.; Kaspereit, T. Asymmetric information and corporate social responsibility. *Bus. Soc.* **2016**, *55*, 458–488. [CrossRef]

44. Lambert, R.; Leuz, C.; Verrecchia, R.E. Accounting information, disclosure, and the cost of capital. *J. Account. Res.* **2007**, *45*, 385–420. [CrossRef]

45. Semenescu, A.; Curmei, C.V. Using CSR to mitigate information asymmetry in the banking sector. *Manag. Mark.* **2015**, *10*, 316–329. [CrossRef]

46. Sun, W.; Price, J.M. The impact of environmental uncertainty on increasing customer satisfaction through corporate social responsibility. *Eur. J. Mark.* **2016**, *50*, 1209–1238. [CrossRef]

47. Luo, X.; Bhattacharya, C.B. Corporate social responsibility, customer satisfaction, and market value. *J. Mark.* **2006**, *70*, 1–18. [CrossRef]

48. Stiglitz, J.E.; Weiss, A. Credit rationing in markets with imperfect information. *Am. Econ. Rev.* **1981**, *71*, 393–410.

49. Lu, C.W.; Chueh, T.S. Corporate social responsibility and information asymmetry. *J. Appl. Financ. Bank.* **2015**, *5*, 105.

50. Russo, A.; Perrini, F. Investigating stakeholder theory and social capital: CSR in large firms and SMEs. *J. Bus. Ethics* **2010**, *91*, 207–221. [CrossRef]

51. Pinegar, J.M.; Wilbricht, L. What managers think of capital structure theory: A survey. *Financ. Manag.* **1989**, *18*, 82–91. [CrossRef]

52. Graham, J.R.; Harvey, C.R. The theory and practice of corporate finance: Evidence from the field. *J. Financ. Econ.* **2001**, *60*, 187–243. [CrossRef]

53. Bancel, F.; Mittoo, U.R. Cross-country determinants of capital structure choice: A survey of European firms. *Financ. Manag.* **2004**, *33*, 103–132.

54. Lie, E. Financial flexibility, performance, and the corporate payout choice. *J. Bus.* **2005**, *78*, 2179–2202. [CrossRef]

55. Marchica, M.T.; Mura, R. Financial flexibility, investment ability, and firm value: Evidence from firms with spare debt capacity. *Financ. Manag.* **2010**, *39*, 1339–1365. [CrossRef]

56. Doidge, C.; Karolyi, G.A.; Lins, K.V.; Miller, D.P.; Stulz, R.M. Private benefits of control, ownership, and the cross-listing decision. *J. Financ.* **2009**, *64*, 425–466. [CrossRef]

57. Carroll, A.B. The pyramid of corporate social responsibility: Toward the moral management of organizational stakeholders. *Bus. Horiz.* **1991**, *34*, 39–48. [CrossRef]

58. Gulen, H.; Ion, M. Policy uncertainty and corporate investment. *Rev. Financ. Stud.* **2015**, *29*, 523–564. [CrossRef]

59. Baker, S.R.; Bloom, N.; Davis, S.J. Measuring economic policy uncertainty. *Q. J. Econ.* **2016**, *131*, 1593–1636. [CrossRef]

60. Fazzari, S.M.; Athey, M.J. Asymmetric information, financing constraints, and investment. *Rev. Econ. Stat.* **1987**, *69*, 481–487. [CrossRef]

61. Fazzari, S.M.; Hubbard, R.G.; Petersen, B.P. Financing Constraints and Investment. *Brook. Pap. Econ. Act.* **1988**, *1*, 141–195. [CrossRef]

62. Lamont, O.; Polk, C.; Saaá-Requejo, J. Financial constraints and stock returns. *Rev. Financ. Stud.* **2001**, *14*, 529–554. [CrossRef]

63. Kaplan, S.N.; Zingales, L. Do investment-cash flow sensitivities provide useful measures of financing constraints? *Q. J. Econ.* **1997**, *112*, 169–215. [CrossRef]

64. Berle, A.A. For whom corporate managers are trustees: A note. *Harv. Law Rev.* **1932**, *45*, 1365–1372. [CrossRef]

65. Ferrell, A.; Liang, H.; Renneboog, L. Socially responsible firms. *J. Financ. Econ.* **2016**, *122*, 585–606. [CrossRef]

66. Li, W.; Zhang, R. Corporate social responsibility, ownership structure, and political interference: Evidence from China. *J. Bus. Ethics* **2010**, *96*, 631–645. [CrossRef]