POLITICAL CONNECTION AND CAPITAL STRUCTURE DEVIATION: THE INTERACTION ROLE OF CORPORATE GOVERNANCE MECHANISMS ON THE CHINA'S LISTED CONSTRUCTION FIRMS

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TABLE OF CONTENTS

LIST OF TABLES

Page

LIST OF FIGURES

Page

HUBUNGAN POLITIK DAN PENYIMPANGAN STRUKTUR MODAL: PERANAN TATA URUS SYARIKAT PEMBINAAN TERSENARAI DI CHINA

ABSTRAK

Sistem politik-ekonomi China membolehkan kerajaan mempunyai kedudukan dominan dalam ekonomi dan kawalan mutlak dalam kebanyakan sumber asli dan ekonomi. Oleh itu, firma-firma di China berharap dapat mewujudkan hubungan politik dengan kerajaan untuk menikmati faedah seperti kemudahan pembiayaan, insentif cukai, dan akses pasaran. Pengaruh hubungan politik terhadap sisihan struktur modal hampir tidak dikaji. Industri pembinaan China mempunyai nisbah hutang purata tertinggi di kalangan semua sektor di China, dan sebagai wakil firma pembinaan China, firma pembinaan tersenarai di China juga mempunyai nisbah hutang purata tertinggi berbanding dengan semua firma tersenarai lain. Di samping itu, lebih 70% daripada firma pembinaan tersenarai di China mempunyai hubungan politik. Oleh itu, objektif pertama kajian adalah untuk menyiasat sama ada struktur modal sebenar firma pembinaan tersenarai di China tersisih daripada tahap optimumnya. Objektif kedua adalah untuk mengkaji hubungan antara hubungan politik dan sisihan struktur modal dengan menggunakan data firma pembinaan tersenarai di China dari 2010 sehingga 2019. Objektif ketiga adalah untuk menerokai kesan mekanisme penyerdahanaan tadbir urus korporat terhadap hubungan antara hubungan politik dan sisihan struktur modal. Penyelidikan ini menggunakan model kesan tetap untuk menjalankan analisis. Penemuan pertama menunjukkan bahawa hampir semua firma pembinaan tersenarai di China mempunyai sisihan positif dalam struktur modal. Kebanyakan firma pembinaan tersenarai di China mempunyai hutang yang berlebihan. Sisihan struktur modal positif menunjukkan kos modal yang lebih tinggi dan menurunkan nilai firma.

Penemuan kedua ialah hubungan positif yang kuat di antara hubungan politik dan sisihan struktur modal. Bagaimanapun, penemuan ketiga menunjukkan bahawa mekanisme tadbir urus korporat - nisbah pengarah bebas dan kekerapan mesyuarat lembaga penyeliaan - secara berkesan dapat mengimbangi kesan yang tidak diingini hubungan politik ke atas sisihan struktur modal firma pembinaan tersenarai di China. Berdasarkan penemuan penyelidikan yang disenaraikan di atas, cadangan dasar berikut disyorkan. Pertama, tingkatkan pentadbiran dan penyeliaan hubungan politik, kawalan risiko hutang dan pendapatan dalam firma pembinaan yang mempunyai hubungan politik di China. Kedua, mengukuhkan tadbir urus korporat firma pembinaan yang mempunyai hubungan politik di China, terutamanya mekanisme penyeliaan dalam tadbir urus korporat. Ketiga, mempercepatkan proses liberalisasi kewangan China. Selain itu, kajian ini juga menyumbangkan penemuan yang baharu kepada teori paternalisme.

POLITICAL CONNECTION AND CAPITAL STRUCTURE DEVIATION: THE INTERACTION ROLE OF CORPORATE GOVERNANCE MECHANISMS ON THE CHINA'S LISTED CONSTRUCTION FIRMS

ABSTRACT

China's political-economic system allows the government to have a dominant position in the economy and absolute control over a significant number of natural and economic resources. Chinese firms are thus eager to establish a political connection with the government to obtain superiorities in the market. The influence of political connection on capital structure deviation has been scarcely studied. The Chinese construction industry has the highest average debt ratio among all Chinese sectors, and as the representatives of China's construction firms, China's listed construction firms also have the highest average debt ratio compared with all other listed firms. In addition, over 70% of China's listed construction firms have a political connection. Thus, the study's first objective is to investigate whether the actual capital structures of China's listed construction firms deviate from their optimal levels. The second objective is to examine the relationship between political connection and capital structure deviation by using the data of China's listed construction firms from 2010 to 2019. The third objective is to explore the interaction effect of corporate governance mechanisms on the relationship between political connection and capital structure deviation. This research uses fixed-effect model to analyze the data. The first finding shows that almost all of China's listed construction firms have a positive deviation in capital structure. That is, most of China's listed construction firms are over-indebted. The positive capital structure deviation represents a higher capital cost and a lower firm value. The second finding is a significant positive relationship between political connection and capital structure deviation. However, the third finding shows that corporate governance

mechanisms - independent director ratio and meeting frequency of supervisory board - can effectively offset the undesired impact of political connection on capital structure deviation of China's listed construction firms. Based on the research findings listed above, the following policy recommendations are suggested. The first is to improve the administration and supervision of political connection, debt risk, and earnings in China's politically connected construction firms. The second is to strengthen the China's politically connected construction firms' corporate governance, especially the supervisory mechanisms in corporate governance mechanism. The third is to accelerate the process of China's financial liberalization. Moreover, the research findings of this study also provide a newfound addition to the paternalism theory.

1. Introduction

This chapter introduces the research background, research motivations, problem statement, research questions, research objectives, research significances, scope of the study, organization, and key terms of this thesis.

1.1 Research Background

The connection between a government and a firm is known as the political connection. Political connections are familiar in firms in all countries (Faccio, 2006). Generally, a firm seeks to establish a political connection with a government to obtain more advantages in the market, such as added economic resources, favorable tax rates, and effortless market access. A government is also willing to strengthen control over a firm through a political connection to pursue its political and economic goals (Wang and Wu, 2008). However, the political connection may come with sweeping impacts on a firm except for the favors. The role of political connection can be a “grabbing hand” (Frye and Shleifer, 1997) or a “helping hand” (Walder, 1995) to a firm, the impact of political connection has been discussed extensively (Li and Zhou, 2005; Boubakri et al., 2012; Luo et al., 2020; Wang et al., 2020). This study intends to extend existing knowledge of a political connection’s impact on a firm.

Capital structure refers to a specific mixture of debt and equity used by a firm to finance its assets and operations. In general, the debt ratio of a firm is used to represent the firm’s capital structure. The optimal capital structure is the combination of debt and equity that minimizes a firm’s WACC (weighted average cost of capital) and helps the firm reach its maximum value (Brealey and Myers, 2000). Thus, the optimal capital structure is always a firm’s target when adjusting its capital structure (Graham and Harvey, 2001; López-Gracia and Sogorb-Mira,

2008). Capital structure deviation indicates the difference between actual capital structure and optimal capital structure. Capital structure deviation can result in an increase in WACC and a decline in firm value. Awareness of the detriment of capital structure deviation makes many researchers investigate the factors that cause the actual capital structure to deviate from the optimal level. In this study, we aim to examine the impact of political connection on capital structure deviation.

1.1.1 The Economic Status of China's Construction Industry and The Overall Financial Condition of China's Construction Firms

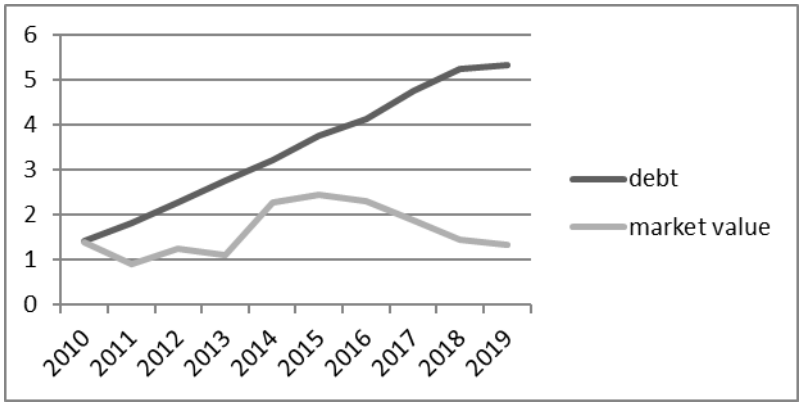
As one of the pillar industries in China, the construction industry has been the driving force of China's economic growth, providing impetus to other sectors' growth and creating employment. Since 1984, the total output value and added value of China's construction industry have risen steadily. The data of the National Bureau of Statistics of China (2020) show that in 2019, the total output value of China's construction industry was USD 3.48 trillion, 3.2 times higher than ten years earlier. The added value of China's construction industry in 2019 was USD 1.106 trillion, a 5.6% increase over the previous year. The total output value of China's construction industry in 2019 accounted for 7.16% of China's GDP in the same year. The construction industry's contribution to China's GDP was constantly growing in the past decade from 3.2% in 2010 to 7.16% in 2019 (National Bureau of Statistics of China, 2020).

Although China's construction industry's total output value and GDP contribution are growing, its gross profit margin has long remained low. According to the China Stock Market and Accounting Research Database, the annual gross profit margin of China's construction industry from 2010 to 2019 was between 3.2%-3.6% and on a slowly declining trend. The gross profit margin of China's construction industry in 2019 was 3.16% which decreased by 2.2% from the

previous year. It only achieved half of the gross profit margin of the manufacturing industry (5.9%) --- the largest pillar industry in China. From the firm perspective, the average EBIT (earnings before interest and taxes) of China's construction firms in 2019 was only 5.1%, and the average net profit rate was lower than 2.5% (S&P Global, 2021). Between 2010 and 2019, construction firms' annual average net profit rate was only in the range of 2%-3% and on a downward trend year by year. In addition, the overall loss rate of China's construction industry has been consistently high. The average loss rate from 2010 to 2019 was about 20%. The overall loss rate of China's construction industry was 26% in 2009 and 15.7% in 2019 (S&P Global, 2021).

In general, the market value of a firm can be representative of investor expectations of the firm's future earnings (Fisher, 1906; Copeland et al., 1990). Low-profit margins and high loss rates can reduce investor expectations and negatively affect the market value of China's construction firms. Therefore, although the total output value of China's construction firms is increasing, the average market value of the firms has dropped from USD 2.4 billion in 2010 to USD 2.2 billion in 2019 (S&P Global, 2021).

Though the average market value is declining, the data show that the average debt ratio of China's construction firms has always been at a fairly high level and continuing on an upward trend. The average debt level of China's construction firms in 2019 was 7.4% higher than ten years ago and reached 72.92%. The construction industry was the industry with the highest average debt level in China in 2019 [excluding the finance industry (76.46%)] (S&P Global, 2021). The high debt level of China's construction firms is in sharp contrast to their market value. Figure 1.1 shows China's construction firms' average annual debt volume and average annual market value from 2010 to 2019.



Source: S&P Global (2021).

Figure 1.1 The average annual debt volume and average annual market value of China's construction firms in 2010-2019 (Magnitude: ten billion)

Figure 1.1 shows that the average annual market value of China's construction firms was changing levelly before 2013. And there was a significant increase in 2014, which may be caused by the announcement of The Belt and Road Initiative in 2013. The Belt and Road Initiative is a worldwide infrastructure development strategy adopted by the Chinese government to invest in approximately 70 countries and international organizations (World Bank, 2019). The announcement of The Belt and Road Initiative might stimulate the market value of China's construction firms. However, China's construction firms' average annual market value began to fall after 2015. Meanwhile, China's construction firms' average annual debt volume grew substantially from 2010 to 2019. Suppose a firm's market value of equity fluctuates within a stable range between 1 and 2 while its debt gradually increases 5 folds, this may signal that the optimal capital structure (the best proportion of debt and equity a firm holds) cannot be maintained. And in the case of a declining market value and increasing leverage, it may be a dangerous signal for China's construction firms to become insolvent because the market value can usually reflect the growth potential and profitability of a firm (Rahman et al., 2016; Saad, 2021; Seth, 2021) if the firms have a substantially increasing leverage means their income may not be able to stand their debts persistently. The swelling insolvent risk in China's construction firms may raise the risk of a financial crisis in China since the

construction industry is an important driving force of China's economy. Such context thus motivates this study to look into the rationality of the capital structures of China's construction firms.

1.1.2 The Role of Corporate Governance in Chinese Firms

Corporate governance is a set of rules instituted by a firm for controlling and managing its operations. The goal of corporate governance is to avoid principal-agent problems interfering with a firm's decision-making to maximize firm value and shareholder interest (Berle and Means, 1932). Good corporate governance can help to reduce agency costs (Baysinger and Butler, 1985), improve administration efficiency (Baysinger and Butler, 1985), strengthen internal control, and enhance the timeliness of material weaknesses remediation in internal control (Goh, 2009), moreover, help a firm better to achieve its goals (Ansoff, 1965).

Corporate governance is a firm's management and control system to deliver long-term success (Shailer, 2018). Good corporate governance implies an efficient governance structure. The executive power is curbed and obliged to protect the interests of all shareholders and maximize the firm value in a firm with good corporate governance (Zhan, 2014). Numerous studies have also confirmed the significant positive relationship between corporate governance and firm value (Bai et al., 2004; Beiner et al., 2006; Black et al., 2006). Since corporate governance can help increase firm value (Bai et al., 2004; Beiner et al., 2006; Black et al., 2006), capital structure deviation can reduce the firm value (Brealey and Myers, 2000; Caskey et al., 2012; Zhou et al., 2016). It is helpful to examine whether corporate governance can help increase firm value by mitigating the behaviors that magnify the deviation of the capital structure.

The Chinese Company Law promulgated in 1993 laid the foundation of China's

corporate governance system. The Company Law of China was enacted to regulate the behavior of firms, protect the legitimate rights and interests of firms' shareholders and creditors, maintain market order, and promote economic development (Company Law of the People's Republic of China, 2020). The corporate governance regulations in Chinese Company Law include the procedure rules, competencies, and responsibilities of the director board, the supervisory board, and the shareholder board. The regulations of corporate governance in Chinese Company Law aim to coordinate the relationship between various stakeholders in a firm, improve a firm's risk resistance, and ensure the return on investment for investors (Company Law of the People's Republic of China, 2020). Meanwhile, the Construction Company Governance Book (China Construction Industry Association, 2014) also stipulates that corporate governance in China's construction firms serves the best interest of all stakeholders and helps the firms to reach sustainable development.

Since the role of corporate governance is obligated in Chinese firms to help the firms to achieve sufficient management and obtain better operation, this further motivates the investigation of the interaction role of corporate governance on the relationship between political connection and capital structure deviation. In other words, this study intends to attest whether corporate governance can weaken the adverse impact of political connection on capital structure deviation, if there is any.

1.2 Issues of the Actual Capital Structures of China's Listed Construction Firms

To better understand the issues of the actual capital structures of China's listed construction firms, this section analyses some major debt-related indicators (total debt ratio, financing / non-financing debt ratio, current ratio, and interest coverage

ratio) and the financing preferences of China's listed construction firms.

Capital structure describes a firm's mix of capitals, including various equities and debts. However, the measurement of capital structure may differ in different researches and respectively depends on the research purpose. This research chooses the financing debt ratio as a proxy for the capital structure of China's listed construction firms. The total debt can generally be divided into financing debt and non-financing debt. Financing debt is commonly used in firm operations, for example, short-term and long-term borrowings. In comparison, non-financing debt refers to the written debt on an accounting book that reflects a firm's accounting behavior, for example, deferred income and accrued expense. Therefore, this study employs the financing debt ratio as a proxy for capital structure due to its better reflection of the external debt financing amount of a firm.

1.2.1 Financing Preference

Table 1.1 The financing preferences of China's listed construction firms in 2010-2019

Year		2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2010-2019
Internal Financing		0.9%	18.4%	17.9%	18.9%	19.9%	18.9%	18.2%	18.4%	17.6%	16.5%	16.6%
External Financing	Debt	59.9%	63.4%	63.9%	64.2%	62.0%	60.7%	62.3%	64.4%	66.0%	65.9%	63.3%
	Equity	39.2%	18.2%	16.9%	18.1%	18.1%	19.5%	17.2%	18.3%	16.4%	16.1%	20.0%

Source: S&P Global (2021).

According to Table 1.1, from 2010 to 2019, China's listed construction firms externally financed at an average of 83.3% of their total financing, which was about five times higher than the average level of their internal financing (16.6%). Moreover, 63.3% of the external funding was in the form of debt, and only 20.0% of external funding came from equity. Clearly, China's construction firms had a strong external financing preference, especially debt. According to the Pecking Order Theory, popularized by Myers and Majluf (1984) and proven by many

researchers (Shyam-Sunder and Myers, 1999; Zeidan et al., 2018), firms prioritize their financing sources on the order of internal funds, debt, and equity. However, the preference order of financing sources of China's listed construction firms contradicted the Pecking Order Theory and showed an apparent debt preference followed by new equity and internal funds. The following reasons may form the debt preferences of China's listed construction firms: First, China's listed construction firms need to pay a large amount of start-up funding for the construction projects (Zhu and Shi, 2020). To win projects in the fierce bidding competitions, providing advance funds for construction projects has become a regular practice in China's construction firms. A construction firm needs to pay approximately 30%-50% of the total construction cost for a construction project as advance funds and expects to be repaid only after the completion of the project (Zhang, 2010). The requirement of substantial initial funding makes China's construction firms prefer debt financing to equity financing because equity financing may not allow the vast initial funding to be placed on time (Chen, 2020). Second, the less developed stock market in China has led firms that demand stable cash flow, for example, construction firms, to choose debt financing over equity financing because the equity financing sources may not be stable enough to support a construction project (Wang, 2013). Third, construction projects such as infrastructure construction with sluggish investment returns (Wang, 2013) may not be attractive to private and foreign investors. This thus narrows the financing channels for construction firms. Combining the three reasons above, borrowing from domestic banks or other financial institutions, therefore, become the major financing method for China's construction firms.

1.2.2 Debt Indicators

1.2.2 (a) Total Debt Ratio

The debt ratio is the ratio of total debt to total assets. It evaluates whether a firm

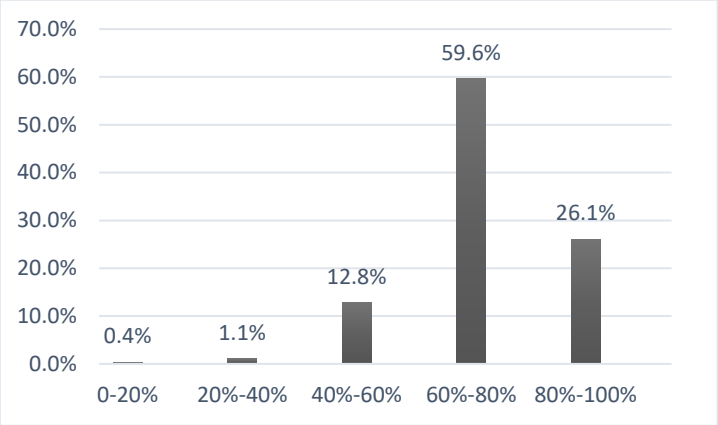
has enough funds to meet its debt obligations, the higher the debt ratio. The greater the probability for a firm to be at risk of default on its loans.

Table 1.2 The average annual debt ratios of China's listed construction firms in 2010-2019

Year	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2010-2019
Average debt ratio	71.9%	70.2%	74.4%	75.1%	75.4%	70.1%	69.6%	70.4%	71.3%	71.5%	72.0%

Source: S&P Global (2021).

According to Table 1.2, the sample firms' average annual debt ratio remained high and stable from 2010 to 2019. The average debt ratio of the sample firms over the past ten years is 72%.



Source: S&P Global (2021).

Figure 1.2 Distribution of the annual debt ratios of China's listed construction firms in 2010-2019

A total of 470 debt ratio observations from 47 sample firms from 2010 to 2019 are distributed in several intervals in Figure 1.2. According to Figure 1.2, most sample firms have maintained a debt ratio in the high-level range of 60%-80% (59.6% of observations in this range), followed by 80%-100% (26.1% of observations), 40%-60% (12.8% of observations) and less than 40% (1.5% of observations).

1.2.2 (b) Financing Debt and Non-financing Debt Ratio

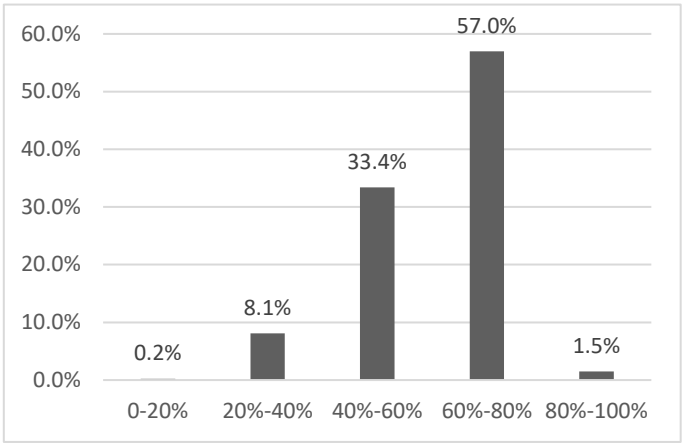
Financing debt ratio equals to financing debts (short-term borrowings + long-term borrowings + current portion of non-current liabilities + advances from customers + accounts payable + debentures payable + notes payable) divided by total assets. Non-financing debt ratio equals to asset-liability ratio minus the financing debt ratio. The average annual financing debt ratio and non-financing debt ratio of all sample firms in 2010-2019 are shown below:

Table 1.3 shows that the average financing debt ratio of China's listed construction firms for the ten years from 2010 to 2019 was 60.2%, and the average non-financing debt ratio was 12.9%, more than 80% of the total debt of sample firms was financing debt.

Table 1.3 The average annual financing debt ratios and non-financing debt ratios of China's listed construction firms in 2010-2019

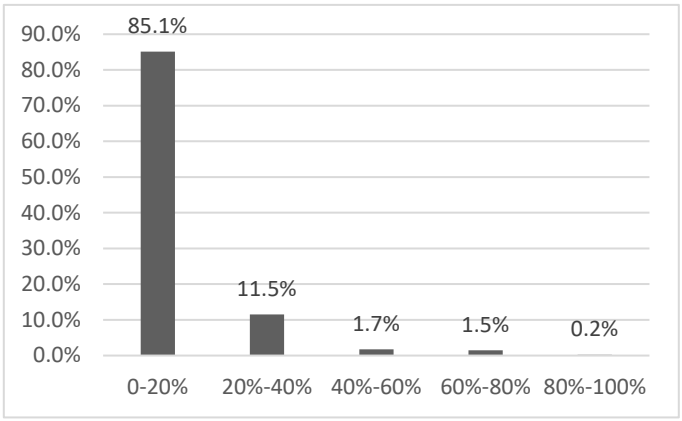
Year	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2010-2019
Financing Debt Ratio	56.2%	57.8%	61.5%	63.0%	62.2%	59.8%	61.0%	61.4%	59.2%	59.6%	60.2%
Non-financing Debt Ratio	15.7%	14.4%	14.8%	12.4%	13.4%	12.3%	10.2%	10.8%	12.9%	12.5%	12.9%

Source: S&P Global (2021).



Source: S&P Global (2021).

Figure 1.3 Distribution of the annual financing debt ratios of China's listed construction firms in 2010-2019



Source: S&P Global (2021).

Figure 1.4 Distribution of the annual non-financing ratios of China's listed construction firms in 2010-2019

Figure 1.3 and Figure 1.4 show that most firms have maintained their financing debt ratios in the range of 60%-80% (57% of observations), and most firms have maintained their non-financing debt ratios in the range of 0%-20% (85.1% of observations).

1.2.2 (c) Current Ratio

The current ratio compares a firm's current assets to its current liabilities and measures its ability to pay short-term obligations. A lower current ratio represents a firm's lower ability to pay its short-term obligations and vice versa. It is generally considered that the current ratio of a firm should be above 2 to ensure that all current liabilities can be repaid.

Table 1.4 The average annual current ratios of China's listed construction firms in 2010-2019

Year	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2010-2019
Average current ratio	1.30	1.29	1.22	1.22	1.13	1.26	1.28	1.26	1.24	1.20	1.24

Source: S&P Global (2021).

According to Table 1.4, the average current ratio of China's listed construction

firms remained at an average of 1.24 from 2010 to 2019, which indicates that China's listed construction firms have a relatively high level of current debt, and their pressure on short-term debt repayment is high.

1.2.2 (d) Interest Coverage Ratio

The interest coverage ratio is calculated by dividing a firm's EBIT (earnings before interest and taxes) for a certain period by the firm's interest expense for the same period. The interest coverage ratio measures a firm's ability to meet its interest payments. The mainstream view of financial analysts is that the interest coverage ratio should be at least 3. The higher, the better, because a higher interest coverage ratio indicates the firm has more buffer funds to resist financial risks. The lower the interest coverage ratio, the more the debt expense burdened by the firm and the higher the financial risk faced by the firm.

Table 1.5 The average annual interest coverage ratios of China's listed construction firms in 2010-2019

Year	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2010-2019
Interest coverage ratio	9.21	7.74	2.66	4.75	5.22	3.68	5.27	5.49	4.27	5.12	5.33

Source: S&P Global (2021).

Table 1.5 shows that the average interest coverage ratio of all China's listed construction firms in the period 2010-2019 was about 5.33. Although the pressure of interest repayment on China's listed construction firms was not very heavy, the firms' income levels may not be high enough to prevent the default risk when income fluctuates downward.

In summary, China's listed construction firms prefer debt financing due to their financing characteristics and external financing conditions. The overall debt ratio of China's listed construction firms is high, and their repayment pressure of short-term debt is also high. Moreover, although the overall income level of China's listed

construction firms can satisfactorily repay their interest expenses now [the average interest coverage rate of construction firms was 5.33 in 2010-2019, which was higher than 3, the minimum value that is commonly acceptable for the interest repayment. However, Graham (1949) believed 5 is the acceptable minimum, and 7 is the safe level to better avert the financial risk], it is not high enough to tolerate large downward fluctuations because the incomes may be insufficient to support the repayments of interests and debt principal continuously. So, the overall capital structure condition of China's listed construction firms is seemingly far from optimistic.

1.3 The Benefits Brought by Political Connections to the Government and Construction Firms in China

This section states the benefits that can be brought by the political connections to the Chinese government and China's listed construction firms. In 2019, only 15 out of the total of 47 China's listed construction firms had no political connections. That is, more than 70% percent of China's listed construction firms have a political connection. This section unfolds why are China's listed construction firms inclined to establish a political connection with the Chinese government and why is the Chinese government willing to provide help to these listed construction firms.

In China, the government has a dominant position in the market. The Chinese government plays a vital role in both macroeconomic control and microeconomic regulation formulation, which means that the Chinese government can affect all entities in the market through its supremacy in market resource allocation and policy formulation (Lawrence and Martin, 2013). The Chinese government has a strong authority of distribution over land, energy, and loanable funds, which are the resources highly involved in the production processes of construction firms

(Deshmukh, 2021).

The products and stable capital flow are essential for a construction firm's survival (Chen, 2019). China's construction firms hope for a political connection with the government to acquire more construction projects and stable capital flow for better development. Because the government is the owner of many large construction projects, such as infrastructures and energy facilities (Anomaly, 2015), a political connection with the government can increase the possibility for a construction firm to obtain these projects. In addition, the government has complete control over the land and approval authority on all commercial activities, so establishing a political connection with the government can help a construction firm acquire construction permits easier and run business smoothly, that is to say, political connection can help increase the firm's efficiency in production and reduce the firm's risk. Moreover, the distinctive operating model of construction firms --- long production cycle and long payback period lead construction firms to require a large amount of long-term debt (Zhu, 2016). Therefore, construction firms want to gain more stable and long-term debts by setting up ties with the government because the government controls many critical economic resources in China (Jing, 2010; Ning, 2019). For example, the four largest commercial banks in China are state-owned, so establishing a political connection is more conducive to obtaining the funds the construction firm needs with lower interest rates (Jing, 2010; Ning, 2019).

Based on the above facts, we can find a more explicit clue to the cravings of China's listed construction firms to establish political connections with the government because political connections can help them seize more opportunities and resources. Political connections can also provide them with more conveniences in running their businesses.

Conversely, the Chinese government is also willing to build political connections with construction firms to exercise its purpose of boosting the economy. As the

central political and economic mechanism of a country, a government not only needs to maintain national security and stability but also takes on the goals such as promoting economic development, increasing the employment rate, and establishing a sound social welfare system. Those concerns can be attributed to the political, economic, and social goals of the government (Bornstein, 1965). The government is responsible for achieving these goals by using its authority within the country, taking the economic development goal as an example. Most governments in developed countries only take helping actions in entities in the market when there is a market failure because their highly mature market operation mechanisms rely on strong self-regulation (Arrow, 1969). In developing countries, governments are more compliant in building connections with entities in the market with the intentions of better regulating economic affairs and promoting economic development (Wang and Johansson, 2013). That is, if a market cannot rely on self-regulation to achieve the economic growth goals of the government, the government will seek opportunities to promote and help the market with economic growth (Lin and Li, 2004). Building political connection is one of the means for the government to join market economic affairs, which allows the government to help a certain group of firms achieve great economic potentials and critical economic missions. Government can give more resources to cultivate those firms and help the government itself to achieve its economic goals (Tan et al., 2009).

The construction industry --- one of the pillar industries in China with rapid industrial growth, it accounts for a large proportion (7.16% in 2019 with a growing trend) of China's total gross domestic product (GDP). Suppose China's construction firms develop and perform well. In that case, it can help the government obtain more fiscal revenues from taxes and achieve the government’s other economic, social, and political goals (Shleifer and Vishny, 1994; Bai et al., 2004). Thus, we can assume that the Chinese government is willing to assist China’s construction firms and build relationships with them. The most prominent way for the Chinese government to establish connections with Chinese firms is by placing government

agents in the firms as board members or managers (Zhang, 1999). The board members or managers with political backgrounds can thus use their political rights to help and guide the firms (Keim and Baysinger, 1988; Fan et al., 2007).

From the above discussion, we can see that there can be a collaborative relationship between the government and the construction firms in China. The Chinese government did not build abundant connections (70% of China's listed construction firms are politically connected) with China's listed construction firms casually but purposefully.

1.4 Problem Statement

Capital structure is the composition of a firm's liability and equity and reflects the proportional relationship of a firm's various capitals (Kennon, 2021). Optimal capital structure can minimize capital cost and maximize firm value. A large capital structure deviation may bring unbearable capital costs to a firm and threaten the firm's operational stability (Li et al., 2021). According to the financial condition facts of China's listed construction firms shown in Chapters 1 and 3, we argue that the capital structures of most of China's construction firms are improper and highly likely to be overleveraged. That is, their capital structures deviate from the optimal levels and their firm values remain at a lower level because a firm's value will decrease as the capital structure deviation increases (Brealey and Myers, 2000).

In any industry, an overleveraged firm is at risk of becoming bankrupt if its business does poorly or if the market enters a downturn period because the firm may lack the cash to repay interests, repay debt principal, and maintain operations. According to Section 1.1.1, the average debt ratio of firms in the Chinese construction industry was the highest among all sectors and has gradually increased.

Rising leverage leads to a higher capital cost and a higher bankruptcy risk, resulting in lower firm market value (Solomon, 1963; Baxter, 1967; Sagala, 2003). Figure 1 also reflects that the average market value of equity of China's construction firms has been decreasing while the average debt ratio has been increasing. Therefore, we suspect that the capital structures of China's construction firms may have deviated from their optimal levels.

On account of the harm of capital structure deviation, the influencing factors of capital structure deviation were frequently investigated, for example, the impact of manager characteristics (Yu et al., 2006; Shen, 2013; Jiang and Huang, 2013; Sun and Shi, 2015; Huang and Xu, 2016), cost of capital structure adjustment (Mitani, 2007), product market competition (Jiang et al., 2008), market timing (Guney and Iqbal-Hussain, 2009), marketization process (Jiang and Huang, 2013), soft budget constraints (Sheng et al., 2012), working capital efficiency (Zalaghi and Amareh, 2019), loan rollover restrictions (Liu et al., 2020) on capital structure deviation. Even though a wide range of influencing factors of capital structure deviation were examined, the effect of political connection on capital structure deviation has not been comprehensively explored.

According to the statistics (S&P Global, 2021), a high proportion of China's listed construction firms have political connections. The Chinese government can significantly influence the financial affairs of China's listed construction firms through political connections. So, after obtaining the first research result of this study --- the calculation results of capital structure deviations of China's listed construction firms, this study further probes the possible impact of political connections on the capital structure deviations of China's listed construction firms.

Suppose the political connections are proven to be the causes of capital structure deviations of China's listed construction firms. In that case, China's politically connected construction firms may need to be alert to the adverse impact of political

connections on their efficiency of financial management. A significant and chronic capital structure deviation usually represents a less optimistic financial condition (Jia, 2017). If the political connection can cause capital structure deviation in a firm, the firm should be wary of whether the political connection pulled down its financial management level as the construction firm may appoint an incompetent financial superior due to the superior's political background (Li and Qiu, 2010). Additionally, since the political connection can provide an implicit guarantee to a politically connected construction firm to avoid bankruptcy in times of financial trouble and economic crisis, even if the firm has low profitability, this may also reduce the focus of the politically connected construction firm on improving its management ability and make it to be imprudent in making financial decisions, consequently result in deviation from the optimal capital structure.

If the political connection can result in capital structure deviation, government assistance may not be conducive to the financial health of firms and the market at some point. Firms with high production efficiency but without political connections may be sidelined in the resource-allocation system (Zhang et al., 2010). In this context, politically connected firms may be provided with more financial resources even if they have lower production efficiency and higher loan default rate (Khwaja and Mian, 2005), such preferential financial aid to politically connected firms can cause the considerable cost of investment distortion and negatively affect social welfare (Claessens et al. 2008). Consequently, the macroeconomic performance can be reduced.

Numerous researchers have investigated the impact of political connection on capital structure (Alabass et al., 2019; Belghitar et al., 2019) and adjustment speed of capital structure (Limnararat, 2012; Kuang et al., 2017; Le and Zhang, 2018). However, the relationship between political connection and capital structure deviation has not yet been clarified, and there is a need for more research on the impact of political connection on capital structure deviation. In an economy,

especially a developing economy or a transitional economy like China [a transitional economy is an economy that is changing from a centrally planned economy to a market economy (Feige, 1994)], the government has a dominant position in the economic market and controls a large number of social resources (Galbraith, 1973), for example, the economic resources of state-owned banks. So, even politically connected firms have higher default rates, they can obtain more loans from state-owned banks than firms without political connections (Khwaja and Mian, 2005).

State-owned banks are the major components of China's banking system. State-owned banks are more likely to provide loanable funds to politically connected firms for political purposes than profitable ones (Brandt and Li, 2003). In this manner, state-owned banks may lower their credit rating requirements for politically connected firms when lending to them and give less future supervision to politically connected firms. Conversely, state-owned banks may set higher lending standards for politically non-connected firms when the non-connected firms want to borrow debt (Khwaja and Mian, 2005). As a result, politically connected firms may make more aggressive financing decisions based on their needs rather than capabilities and cause lofty debt levels.

1.5 Research Questions

1) Do the actual capital structures of China's listed construction firms deviate from their optimal levels?
2) Do political connections affect capital structure deviations of China's listed construction firms?
3) Do corporate governance mechanisms have an interaction effect on the relationship between political connections and capital structure deviations of China's listed construction firms?

1.6 Research Objectives

The general objective of this study is to investigate the impact of political connections on capital structure deviations of China's listed construction firms and investigate the interaction role of corporate governance in the relationship between political connections and capital structure deviations of China's listed construction firms.

The specific objectives are:

1) To investigate whether China's listed construction firms' actual capital structures deviate from their optimal levels.
2) To investigate whether political connections affect the capital structure deviations of China's listed construction firms.
3) To investigate whether corporate governance mechanisms have an interaction effect on the relationship between political connections and the capital structure deviations of China's listed construction firms.

1.7 Significances of the Study

This study has three main significances. The first significance of this research is it establishes an optimal capital structure model for China's construction firms based on their financing characteristics. Most of the existing investigations on optimal capital structure did not distinguish industry categories and considered that all firms have the same financing characteristics. Only a few researchers have investigated the optimal capital structures for firms in one particular industry. However, different industries have different methods of production and process resulting in different financing characteristics. Therefore, the calculation of a firm's optimal capital structure cannot be accurate without considering its industry

classification. Compared with firms in other industries, the firms in the construction industry usually have a more extended period of production, require a large amount of advanced funds, have a higher level of interest-free debt, and have a longer period of payback. These characteristics make construction firms have different financing circumstances compared with other firms, and these characteristics also make construction firms more prone to solvency risks.

Unlike other studies that only consider interest-bearing debt when constructing an optimal capital structure model, this research quantifies both interest-bearing and interest-free debt in the optimal capital structure model, which makes the research results more in line with the actual financial condition of construction firms. This research also considers the maturities and interest levels of various debts to make the results closer to reality.

In summary, one of the practical significances of this research is to help China's construction firms better understand their actual capital structure conditions. This research also contributes to future research on the optimal capital structures of construction firms.

The second significance of this research is it fills the gap in research on how political connection affects the capital structure deviates from its optimal level. The existing studies on influencing factors of capital structure deviation are mainly focusing on the factors in the corporate governance and the external market, for example, the impact of cash holding (Li, 2012), agency cost (Titman and Tsyprakov, 2007), firm ownership (Lu et al., 2015), market competition (Jiang et al., 2008) and financial market development (Jiang and Huang, 2011) on capital structure deviation. There is limited related research on how political connection affects capital structure deviation. To our knowledge, only a few researchers (Hu, 2019; Fu and Liu, 2021) have investigated how political connection might affect capital structure deviation and they are focusing on China's listed companies as a whole.

Compared with other countries, China's political and economic system engenders more politically connected firms in the market. Therefore, considering the influence of political connections on firms' optimum capital structures in China is very relevant. However, the issue of optimum debt structure in China is more prevalent in the construction sector as the sector is highly leveraged and has low profitability. Moreover, the working procedure in the construction sector is highly exposed to the government's legislations and regulations, hence, a politically connected firm in the industry might be overconfident in getting debt financing and tends to over its optimum capital structure. Given that the construction sector is one of the largest sectors in China's GDP, it is hence very important for us to specifically examine how political connections are affecting the optimum capital structures of firms in this sector.

The third significance of this study is it provides empirical evidence for whether corporate governance has an interaction effect on the relationship between political connection and capital structure deviation. Existing studies examining the impact of political connection on capital structure deviation do not consider the interaction effect of corporate governance at all. In virtue of the monitoring and managing nature of corporate governance, suitable corporate governance mechanisms should be able to diminish the bad behavior that increases the capital structure deviation. In the case of capital structure deviation, a politically connected construction firm may be ambitious to expand its business and prefer ignoring capital structure deviation (Hu, 2019). Suppose corporate governance is proven to help politically connected construction firms mitigate the adverse effect of political connection on capital structure deviation, the politically connected construction firms in China should ensure they have set good corporate governance which can deliver effective supervision and control to the firms to go against the capital structure deviation while receiving the benefits of political connection.

1.8 Scope of the Study

This study investigates the impact of political connection on capital structure deviations of China's listed construction firms. The scope of this study is restricted to China A-share listed construction firms that have been in continuous operation from 2010 to 2019. In addition, this study only selects the construction firms that focus on running building, infrastructure, and construction engineering businesses. Construction firms in the business categories of decoration, landscaping, geotechnical engineering, and metallurgical engineering were excluded from the samples.

1.9 Organization of the Thesis

This thesis has five chapters in total. Chapter one introduces the study's background, problems, questions, objectives, significances, and contributions. Chapter two provides a review of the existing literature on the topic of political connection, capital structure deviation, and corporate governance. This study's research hypotheses are also provided at the end of chapter two. Chapter three introduces the research methodology of this study. Chapter four provides the regression results and their discussions. Chapter five summarizes the highlights of this study and concludes the whole research.

1.10 Definitions of Key Terms

Table 1.6 Definitions of key terms

Term	Definition
Political Connection	A relationship was built between the government and the firm.
Capital Structure	The capital formation of debt and equity which a firm uses to finance its overall operations and growth.
Optimal Capital Structure	The best capital formation of debt and equity maximizes a firm's market value while minimizing its cost of capital.
Capital Structure Deviation	The difference between actual capital structure and optimal capital structure.
Corporate Governance	A system of disciplines, practices, and processes which is used to direct and control a firm.
Firm Market Value	Firm worth based on its total value of outstanding shares.
Weighted Average Cost of Capital	The average cost of all capital resources includes common stock, preferred stock, bonds, and other forms of debt.
Total Output Value	The sum value of goods and services produced by a firm or an industry in a given period.
Added Value	The new value of goods and services produced by a firm or an industry in a given period.