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Abstract

It has been argued that the Chinese state sector is advancing at the cost of the private sector. Focusing on publicly listed firms which are divided into state- and private-controlled firms, we investigate preferential access to debt and effects on firm performance. Focusing on the large stimulus program launched in the fall of 2008, we show that state-owned enterprises (SOEs) were better able to maintain their leverage levels and had better access to debt of both short and long maturities compared to privately controlled firms. Furthermore, we show that political connections obtained through political participation help mitigate the discrimination private firms faces in a transition economy where the state controls capital allocation. We also find that preferential access to debt financing does not help SOEs improve firm performance relative to that of private firms. Political participation does however help improve private firms' performance. These results lend support to the argument that the state is indeed advancing at the cost of the private sector and that SOEs still face a broader set of goals than just profit maximization and/or are less efficient than private firms.

JEL Classification: G30; G32; L33; P20; P26

Keywords: State-owned enterprises; private enterprises; fiscal and monetary stimulus; firm performance; capital structure; debt financing; political participation; political connections; China

1! Introduction

One of the key ingredients in China's economic reforms since 1978 has been the gradual decrease of state control while the private sector has evolved in what has become an increasingly market-driven economy (Naugthon, 2007). During the last decades, the private sector has been growing much faster than the state sector, and it has constituted the main growth engine in the Chinese economy (Allen et al., 2005). Nevertheless, it is undeniable that the Chinese state is still very active in a range of businesses and sectors. As market-driven economies in the West recently have encountered difficult challenges, China's form of state capitalism has drawn increasing interest, not the least from developing countries looking for alternative models of economic development.

In the fall of 2008, China launched an ambitious stimulus program involving RMB4 trillion and a range of policies aimed at increasing domestic economic activity to fend off the sharp drop in external demand following the financial crisis that engulfed the US and Europe. Since then, the approach taken by the Chinese government and the effects of the stimulus program have been debated. Did the stimulus program allow for the private sector to sustain and even increase its role in the Chinese economy, or did it enhance the role of the state and undermine the development of the private sector that had taken place during the previous three decades? Most observers tend to favor the latter. For example, Walter and Howie (2011) argue that Chinese banks primarily lend to state-owned enterprises (SOEs) and

that the stimulus program did not change this policy.[2] In a case study on the lending behavior of a large state-controlled bank, Ho et al. (2012) find that loans to SOEs increased relatively more than loans to private firms. Huang (2011) claims that it has been estimated that as much as 90 percent of the stimulus funds went to SOEs. The view that the state is taking an increasingly active role in the economy and thus at least to some extent reversing the market-driven economic reforms during the first decades after 1978 is captured by the phrase *guojin mintui* (the state advances, the private sector retreats), which has become increasingly common in recent years. One important component in the concept of *guojin mintui* is that SOEs have preferential access to debt financing from the state-controlled banking sector and thus have more resources to make large investments, undertake M&A projects, and crowd out private firms.

Lardy (2012), on the other hand, argues that these views are "outdated and wholly inaccurate". By using statistics on lending to firms of different sizes and using lending to small firms as a proxy for lending to private firms, he argues that lending to the private sector actually increased much faster than lending to the state-controlled sector. Lardy claims that "2009-10 was marked by a substantial continuity in the long-term decline in the role of state-owned firms in China's economy".

This study attempts to take this debated issue to the data. We identify the ultimate shareholders of listed Chinese companies as the state or a private individual. Inspired by the recent debate on the advancing state in China, we then perform an event study in which we focus on the effects of the 2008 stimulus program on capital structure

[2] Similar arguments have been made by a range of commentators. For example, Wolfe and Aarsnes (2011) support Walter and Howie, claiming that the main reason for why banks in China exist is to provide SOEs with capital.

and debt financing. If the argument that the state is advancing at the expense of the private sector holds, we should be able to find significant differences in capital structure and debt financing effects after the introduction of the stimulus program. Our results are in favor of the state advancement hypothesis. We find that SOEs were better able to sustain their level of leverage and had better access to both short- and long-term debt after the introduction of the stimulus program. To shed further light on these effects, we use a unique and manually collected data set on political participation by private entrepreneurs who are identified as the ultimate owner of a listed company. We argue that participation in high-level politics allows entrepreneurs to develop strong political relationships, which in turn enable them to obtain preferential treatment similar to that of state-controlled firms. When comparing normal privately controlled firms with those controlled by entrepreneurs who participate in politics, we find that the latter are better able to sustain their leverage and have better access to both short- and long-term capital after the introduction of the stimulus program. Political participation thus serves as a way for private entrepreneurs to gain access to benefits similar to those of SOEs. We then look at the firm effects of this discriminatory practice by Chinese banks. We find that listed SOEs perform worse than private firms even though they have better access to debt financing. Private firms controlled by entrepreneurs who participate in politics outperform both state-controlled and normal private firms. The poor performance of SOEs supports the findings in Fan et al. (2007). One plausible explanation to these results is the grabbing hand phenomenon, that is, the government exploits firms for the benefits of selected politicians and bureaucrats (Shleifer and Vishny, 1998). It may also be a result of the state having both political and economic objectives, often resulting in inferior performance by state-controlled firms. The superior performance

of firms controlled by entrepreneurs who participate in politics supports the findings in Feng et al. (2011, 2013), indicating that the incentives of the ultimate owner and management as well as additional goals besides firm value maximization are important in the analysis of how preferential treatment affects firms.

Our paper relates to several strands of literature. First, the paper adds to the literature on transition economics and the performance of public and private enterprises. Research has shown that private firms tend to outperform public firms (e.g. Estrin and Pérotin, 1991; D'Souza and Megginson, 1999; Megginson and Netter, 2001). Tian and Estrin (2008), on the other hand, find that government ownership does not always reduce corporate value and that the relationship between the two is tied to the size of government ownership. Indeed, it seems that government ownership can actually help corporate performance in a country such as China. Furthermore, a subset of this literature that focuses on Chinese public firms highlights the challenges that such firms face due to the so-called policy burden they bear, i.e. the fact that many government-owned firms in China face several objectives, including not only maximizing firm value but also certain state objectives (e.g. Lin et al., 1998; Lin and Li, 2008; Lin and Tan, 1999). We thus add to the literature on firm performance by public and private firms in countries such as China by providing an analysis of the performance of SOEs and private firms after the announcement of the stimulus program in 2008.

Second, the study relates to the literature on the developmental state and financial policy used to facilitate interventionist industrial policies.[3] Starting with Johnson's (1982) early study of Japan's economic development, a large literature has emerged

[3] For a detailed analysis of the developmental state, see Woo-Cumings (1999).

within the field of international political economy that focuses on the East Asian state. This state is typically characterized by a higher degree of autonomy, stronger political power, and a firmer control of the economy. Amsden's (1989) work on South Korea and Wade's (1990) treatise on Taiwan helped establish East Asian developmental state capitalism as an alternative approach to development as compared to that taken by the World Bank at the time, which focused more on market-oriented principles. A common theme heard from proponents of the developmental state is that markets often fail and that governments need to not only provide public goods and regulate the economy, but also encourage businesses to invest in appropriate industry sectors and protect domestic business from foreign competition (Kennedy, 2010). To adequately carry out active industrial policies, a firm control of the economy is needed. One policy that has often been used to enable an interventionist state is that of financial repression. While early research on financial systems advocated financial liberalization in order promote economic growth (e.g. McKinnon, 1973; Shaw, 1973), it has also been argued that repressive financial policies can actually promote growth through, e.g., macroeconomic and financial stability (Stiglitz, 1994; Hellman, et al., 1997, 2000; Huang and Wang, 2011). China constitutes an important case study in the use of interventionist industrial policies enabled by financial repression (Johansson, 2012).[4] Repressive financial policies allow the state to channel capital to what it sees as appropriate industries and firms. This study adds to these previous studies, as it

[4] There is also a closely related literature on the so-called Beijing Consensus (e.g. Ramo, 2004; Kennedy, 2010; Halper, 2011; Huang, 2011), which has by some been touted as an alternative model of development to that of the so-called Washington Consensus that focuses on free markets. In this alternative model, the developmental state plays an important role

sheds light on the argument that the Chinese state is taking an increasingly active role by directing investment capital to preferred sectors of the economy.

Third, our study relates to studies on political connections and their effects on firm performance and access to finance. Previous studies such as Fisman (2001), Johnson and Mitton (2003), Faccio (2006), and Claessens et al. (2008) find that political connections increase firm value. There are also a series of studies that analyze how political connections facilitate preferential access to financing (e.g. Charumilind, 2006; Dinc, 2005; Faccio et al., 2006; Johnson and Mitton, 2003; and Khwaja and Mian, 2005). Similarly, we find that political connections are positively associated with firm performance and access to debt financing. However, our results also show that the form of ownership and the related incentive mechanism is important for firm performance. While both firms controlled by the state and firms controlled by entrepreneurs who participate in politics have preferential access to finance, it is only the latter that exhibit superior performance. State-controlled firms are apparently not able to leverage this preferential treatment to increase firm value. These findings are also closely related to those of Feng et al. (2011, 2013), who show that political participation enables private entrepreneurs to obtain preferential treatment and thereby increase firm value in a transition economy characterized by an interventionist state.

The rest of the paper is organized as follows. Section 2 outlines the institutional setting in China and introduces the 2008 stimulus program. Section 3 describes the data and methodology. Section 4 then presents the main empirical results, and Section 5 concludes.

2! Access to Debt Financing: Institutional Environment

2.1! Market Reforms and Increased Government Activity

China began its economic reforms in 1978. As opposed to the speedy transition carried out in many Eastern European countries, the Chinese transition process has always been gradual in nature. During the first period of reforms, lasting up to the early 1990s, the main focus was on creating a dual-track economy, in which the old plan co-existed with the newly developed market (McMillan and Naughton, 1992; Naughton, 2007). Institutions primarily remained the same as during the command economy era, and markets were introduced and allowed to expand while the planned economy was still in place. During this early period, an important feature of the transition was "reform without losers" (Lau et al., 2000), as the planned part of the economy was allowed to continue operating as before. During the second phase of the transition, which lasted throughout the 1990s, marketization ensued and the planned economy was abolished. Institutions were changed to better match the transforming economy and a recentralization with clear roles for the central and local governments resulted in improved tools for policy and increased fiscal revenues. During the second phase, a majority of the SOEs were restructured and downsized. Privatization ensued, with management buy-outs and transformations into township-village enterprises (TVEs) as common ways for the state to let go of control. As opposed to the early reform period, this period was marked by reforms with losers. In particular, employees at the many SOEs that underwent restructuring lost out as *tie fanwan,* (the "iron rice bowl"), i.e. guaranteed job security and a steady income and benefits, was shattered.

During the last decade, China's economy has continued to undergo substantial changes. In 2001, China became a member of the World Trade Organization (WTO), an event that resulted in continued integration into the global economy. Reforms have continued in the financial sector, with substantial stock market reforms and a strengthening of the banking sector as well as recent signs of an increased international role of the Chinese currency. However, while reforms and institutional changes have continued, the debate of the role of the state in the economy has heated up. It is often said that the period under President Hu Jintao and Premier Wen Jiabao has been marked by a slowdown in overall reform and an increasingly active state. Reformists inside the government see the increasing power of SOEs as a primary threat to the Chinese economy and during his opening speech to the Communist Party congress in November 2012, Hu Jintao said that "we should steadily enhance the vitality of the state-owned sector of the economy and its capacity to leverage and influence the economy" (Financial Times, 11 November 2012). Many China observers have been arguing that the state indeed has come to intervene more aggressively, and especially so since the onset of the global financial crisis. For example, Huang (2011) argues that "China is now in the midst of one of the most statist periods in its reform era with the massive stimulus package that has poured a huge portion of the country's GDP in financial resources into the state sector." Naughton (2011) identifies three important areas in which state involvement has intensified during the global financial crisis: social policy, SOEs, and industrial and technology policy. The trend of an increasingly interventionist Chinese state is captured by the commonly used phrase *guojin mintui*, or "the state advances, the private sector retreats" (Caixin Online, 24 December 2009; The Economist, 10 March 2011; Wall Street Journal, 16 November 2010). It is now evident that a clear change

in direction for the state's involvement in the economy has taken place during the last decade, not the least since the onset of the global financial crisis. As Naughton (2011) notes: "decisions already taken should be enough to show that the current Chinese policy orientation already represents a significant departure from the past, and it is one that must be taken very seriously."

2.2! The 2008 Stimulus Program

In the second half of 2008, global economic activity slowed down significantly.[5] As a result, the Chinese economy was affected through its international economic ties, with a slowdown in trade and decreasing levels of inward foreign direct investment. As the financial crisis that originated in the U.S. turned into a global financial crisis, the Chinese government launched a quick and comprehensive stimulus program that involved both monetary and fiscal elements. In September 2008, People's Bank of China (PBC) initiated monetary easing. It began to cut the reserve ratio for the banking sector and also eased up on restrictions to lending by cancelling lending quotas. This increased the supply of capital in the financial sector. At the same time, PBC lowered the policy interest rates numerous times during the fourth quarter of 2008. It also cut the rates for mortgage loans. This created a strong effect for those with mortgage loans. For example, the monthly payment on a 20-year mortgage was reduced by 18.6 percent as a result of these rate cuts (Lardy, 2012). Overall, monetary easing resulted in a drastic increase in bank lending. This was particularly apparent

[5] Fardoust et al. (2012) report that global industrial production decreased by around 20 percent in the fourth quarter of 2008, with a 23 percent drop in advanced economies and a 15 percent drop in developing countries.

during the first half of 2009, when outstanding loans increased three times as much as compared to the first half of 2008 (Lardy, 2012).

The large fiscal stimulus package was presented soon after the beginning of the monetary stimulus efforts. In November 2008, the government announced that RMB4 trillion was to be spent over the following two to three years. Most of the funding in the fiscal stimulus packaged was directed towards construction and infrastructure. In a press conference on 27 November 2008, the head of National Development and Reform Commission Mr. Ping Zhang said that RMB1.8 trillion would go to transportation and power grids, RMB1 trillion would be targeting post-earthquake reconstruction in Sichuan province, and RMB370 billion would go to developing rural infrastructure (He et al., 2009). A majority of these investments would be financed with bank lending.

The monetary and fiscal stimuli produced fast results with a significant increase in economic activity following in the immediate quarters after the introduction of the program. For example, Cova et al. (2010) estimate that the stimulus program resulted in a 2.6 increase in GDP growth during 2009. A direct result of the fiscal stimulus package's focus on heavy spending on infrastructure and construction was that capital formation shot through the roof. Deng et al. (2011) point out that gross capital formation contributed to over 90 percent of China's GDP growth in 2009, an unprecedented number, and the real growth rate in fixed capital assets investment increased from 20.3 percent in the fourth quarter of 2008 to 38.0 percent in the second quarter of 2009.

To sum up, most observers agree that the stimulus program had a positive effect on the Chinese economy during a period of sharp global economic slowdown. There are mainly two areas for which concerns have been raised. First, the stimulus program

has fuelled local debt levels in China. Second, as has been discussed in the introduction, it has been argued that the stimulus program accelerated the advancement of the state's role in the economy. While both of these concerns are of considerable importance, the main focus of this study is on the latter.

3! Data and Methodology

3.1! Data

We use two sets of data. The first is a unique and manually collected data set that we use to analyze the effects of political participation introduced in the following section. We define listed private firms as firms with a private individual as the ultimate shareholder. To distinguish between SOEs and private firms, we thus collect ultimate ownership from annual reports. It turns out that for most privately controlled listed firms, the ultimate owner is also the chairman of the board. Furthermore, as these firms are typically very young, the chairman of the board often also acts as the CEO of the firm. This data set thus enables us to analyze the potential preferential treatment that private entrepreneurs obtains when developing relationships with leading politicians through political participation (see the following section for more details on political participation).

The second data set comes from the China Security Market and Accounting Research (CSMAR) database. It has detailed information for all listed firms at the time of the event. It also has daily share prices for all firms, which we use for our firm performance analysis. In the empirical analysis, we include all firms that are listed

with A-shares on the Shenzhen and Shanghai stock exchanges.[6] For the analysis on debt capital as well as firm performance effects, we only include firms that have been listed for at least three years prior to the stimulus program was launched. This way, we limit the potential effects of IPO financing on the capital structure and long-term firm performance. Following the literature on capital structure, we delete all financial firms. We also delete firms that have more debt than assets to alleviate the potential effect of a high probability for bankruptcy. Finally, we delete all firms with missing financial and share price data.

Table 1 presents the industry distribution for the sample. Panel A shows the full sample and the distribution of state- and privately controlled firms. In total, we identify 1268 firms that fulfill the criteria listed above. Of these, 800 have the state and 468 have a private entrepreneur as the ultimate shareholder. The state is especially prevalent in some of the industries, most of which are classified as regulated industries. Industries with an overwhelming presence of state-controlled firms include mining, utilities, transportation, and transmission and culture. Privately controlled firms are active in all sectors. Sectors with a large representation of privately controlled firms include textiles and apparel, timber and furnishings, and pharmaceuticals.

[6] Firms have been listing A- and B-shares since the opening of the two Chinese stock exchanges. The two share classes differ based on investor brackets. Domestic investors are allowed to trade A-shares, while B-shares have traditionally been traded by foreign investors. A share reform in 2001 allowed domestic investors to trade in B-shares. The Chinese government has initiated reforms that aim to gradually open up the A-share market to foreign investors. Currently, foreign investors are allowed to invest in A-shares if they are part of the Qualified Foreign Institutional Investor (QFII) scheme. Only a minority of the listed firms in Shanghai and Shenzhen have issued B-shares. For more information on different share classes and share class reforms, see Chan et al. (2007, 2008).

Panel B presents the distribution of privately controlled firms across industries, separated by whether or not the controlling entrepreneur participates in politics. Out of the total sample of 468 privately controlled firms, 172 are controlled by entrepreneurs who participate in politics, while the remaining 296 are controlled by normal private entrepreneurs. Firms controlled by private entrepreneurs who participate in politics are prevalent in certain industries. Mining is a prominent case, most likely because natural resources are tightly controlled by government. This supports the findings in Feng et al. (2013), who show that political relationships gained through high-level political participation enable private entrepreneurs to gain access to regulated industries in China. Firms controlled by normal private entrepreneurs are prevalent in the electronics, social services, and transmission and culture sectors.

[Table 1 about here]

3.2! Identifying Political Ties Using Political Participation

To analyze the potential effects of entrepreneurs' ties to politicians, we identify if the ultimate controlling shareholder is participating in high-level politics. Political participation is identified for the private entrepreneur and his or her close family members. Following the literature on ownership and control (e.g. La Porta et al., 1999), we first define shareholders who control more than 10% of the outstanding shares as controlling shareholders. As a proxy for political participation, we use representation at one of the three major political bodies: the National People's Congress (NPC), the Chinese People's Political Consultative Conference (CPPCC), and the Congress of the Chinese Communist Party (CCCP). We limit the analysis to political participation at the highest levels, by focusing on participation in these three

political bodies at the national and provincial level, respectively. We believe that a position in any of the three major political bodies represent a clear signal of political participation in China. Wright (2010) argues that private entrepreneurs have shown considerable interest in joining these political bodies and our analysis show that a significant amount of private entrepreneurs controlling listed companies in China indeed do participate in politics at the very highest levels.

The CCCP is held in October or November every five years. While government leaders for the following five year term are formally elected the following spring, leadership inside the party during the CCCP signals changes not only inside the party but also in government. The NPC and the CPPCC are usually referred to as *liang hui,* or the "Two Sessions". The two constitute China's largest political events: the NPC is the country's legislative body and formally the highest organ of the state, while the CPPCC is a political advisory body consisting of members from different parties and organizations, and independent individuals. The CPPCC has been used by the Chinese Communist Party (CCP) to attract non-Party members to the political arena and to increase the support of the Party. Shambaugh (2009) has argued that the CPPCC is increasingly systematically involved in the policymaking process of the Chinese Communist Party (CCP). It is clear that the CCP has a strong influence over both the NPC and the CPPC, as all members of the two political bodies are approved by the Party. By including private entrepreneurs as members of the NPC and the CPPCC can thus be seen as a way for the Party to co-opt a very important socioeconomic class. From the entrepreneurs' perspective, membership in one these high political bodies is most likely sought after at least partly because the entrepreneur gets direct access to a powerful political network. Political participation is thus very likely a potential

instrument through which private entrepreneurs can obtain benefits for the firms that they own and control.

3.3! Methodology

The institutional setting described in Section 2 suggests that private firms are discriminated against through preferential treatment of state-controlled firms in the form of superior access to debt financing through the banking sector. It also suggests that firms controlled by private entrepreneurs who participate in politics may have preferential access to debt capital as compared to normal privately controlled firms. We examine these potential discriminatory practices by focusing on the 2008 stimulus program and firms' capital structure and debt financing in the event window immediately after the initiation of the program. Following the literature (e.g. Harris and Raviv, 1991; Rajan and Zingales, 1995), we use leverage as a proxy for capital structure. We define leverage as total debt (including both short-term debt and long-term debt) over total assets. To analyze the impact of the stimulus program on capital structure, we focus on the change in leverage, which we define as the difference of the post-event twelve-quarterly average and the pre-event twelve-quarterly average of leverage. By using this difference-in-difference approach, we address some of the potential endogeneity issues found in many other cross-sectional studies (Fan et al., 2008, Feng et al., 2013).

Our basic empirical specification to test for state-controlled firm preference uses cross-sectional data. For firm *i*, we use ordinary least squares (OLS) to estimate

$$leverage\_change_i = \alpha_i + \beta_i \cdot private_i + \gamma_i \cdot \mathbf{X}_i + \varepsilon_i, \qquad (1)$$

where $leverage\_change_i$ is the change in capital structure as defined above, $private_i$ is an indicator variable for whether a firm has a private entrepreneur as the ultimate

shareholder. $\mathbf{X}_i$ are firm-level control variables, including largest ownership (in percentage), Tobin's Q, leverage level, size, profitability, collateral. More information on these control variables is available in Appendix 1. Appendix 2 presents a correlation matrix including all dependent and independent variables. We also include fixed effects for industry (based on the industry classification seen in Table 1). β_i is our coefficient of interest as it captures the discriminatory effect of a firm being controlled by a private entrepreneur. If the state advancement hypothesis holds, we expect this coefficient to be significantly negative.

To shed light on the potential treatment effects due to political participation by the controlling private entrepreneur, we run additional OLS regressions. This time, we only include firms controlled by private entrepreneurs in the sample. The estimated model is now:

$$leverage\_change_i = \alpha_i + \beta_i \cdot political_i + \gamma_i \cdot \mathbf{X}_i + \varepsilon_i, \quad (2)$$

where $political_i$ is an indicator variable for whether a firm is controlled by a private entrepreneur who also participates in politics and the remaining variables are the same as in Equation (1) above.

To analyze the effects of the stimulus program on different debt maturities, we look at two new variables: short-term debt over total assets and long-term debt over total assets. Similar to the analysis on capital structure, we focus on the change in the debt levels of different maturity by calculating the average debt level during twelve quarters before the event and the average debt level during twelve quarters after the event for each measure. For firm *i*, we then use OLS to estimate

$$debt\_maturity_i = \alpha_i + \beta_i \cdot private_i + \gamma_i \cdot \mathbf{X}_i + \varepsilon_i, \quad (3)$$

Where $debt\_maturity_i$ is the change in short- or long-term debt mentioned above and the remaining control variables are the same as in previous regression models. Similar

to the analysis on capital structure, we also run additional regressions focusing only on firms controlled by private entrepreneurs in order to analyze the potential impact of preferential treatment as a result of political relationships after the great stimulus program was initiated. The following model is thus estimated using OLS:

$$debt\_maturity_i = \alpha_i + \beta_i \cdot political_i + \gamma_i \cdot \mathbf{X}_i + \varepsilon_i. \quad (4)$$

Finally, we want to analyze whether discriminatory practices in the banking sector can be linked to firm performance. It has been argued that cumulative abnormal returns (CARs) are not suitable for firm performance analysis over longer time horizons. We therefore calculate buy-and-hold abnormal returns (BHARs) for each firm in the event window following the launch of the stimulus program as Barber and Lyon (1997) and Lyon et al. (1999) suggest that this approach yields well-specified test statistics for the long-run behavior of stock returns. Fama and French (1992, 1993) find that size and the book-to-market ratio are influential determinants of the cross-section stock returns. We thus form 25 (5×5) value-weighted portfolios based on the two factors and match each sample firm along these two dimensions for comparison. We then use OLS to estimate:

$$BHAR_i = \alpha_i + \beta_i \cdot private_i + \gamma_i \cdot \mathbf{X}_i + \varepsilon_i. \quad (5)$$

$$BHAR_i = \alpha_i + \beta_i \cdot political_i + \gamma_i \cdot \mathbf{X}_i + \varepsilon_i, \quad (6)$$

where $BHAR_i$ is the buy-and-hold abnormal return for firm *i* over a set period after the introduction of the stimulus program and the remaining variables are the same as in previous estimations. Model (5) is estimated using the full firms sample, while model (6) is estimated using the sub sample of privately controlled firms.

4! Empirical Results

4.1! Capital Structure

We begin the empirical analysis with an inspection of changes to capital structure after the announcement of the stimulus program. We first look at univariate statistics to see if there is a significant difference in the change of capital structure for SOEs and privately controlled firms. Panel A in Table 2 shows that both types of firms exhibit a lower capital structure during twelve quarters after the announcement compared to twelve quarters before the announcement. However, the decrease in leverage was much smaller for SOEs, a mere 0.9 percent compared to 3 percent for private firms. The difference in the change in leverage is significant at the 1 percent level in both mean and median, showing that private firms deleveraged significantly more after the announcement of the stimulus program.

To control for other influential factors, we run regressions using change in leverage as the dependent variable. We first run a regression with a dummy variable for private control as the independent variable and then add typical variables that are known to influence leverage, with the results presented in Panel B in Table 2. Column 1 show that, when using only private control as an independent variable, control of private entrepreneurs result in a significantly larger decrease in leverage. Column 2 presents the results for the full regression. Again, the private firm variable is negative and significant, albeit only at the 10% level.

[Table 2 about here]

The results so far indicate that SOEs were better able to maintain their leverage levels during the first three years after the initiation of the stimulus program compared to their privately controlled counterparts. But does this mean that privately controlled

firms were forced to deleverage? Not necessarily so. Privately controlled firms may have chosen to decrease their leverage because they believed that revenues would be limited in the near and medium term due to the slowdown in the global economy. To shed light on this, we focus on privately controlled firms and separate them into two groups, one with normal firms and one with firms controlled by entrepreneurs who participate in politics. Previous studies have shown that firms controlled by such entrepreneurs have superior access to debt capital. Thus, if such firms deleverage less than other private firms, it will serve as an indication that private firms had limited access to the capital allocated as a result of the stimulus program.

Panel 2 in Table 3 presents the univariate results for the two types of private firms. Again, leverage in both types of firms decreased during the period after the announcement. However, firms controlled by private entrepreneurs who participate in politics exhibit a significantly smaller decrease in leverage. This holds for both the mean and median change in leverage, even though the difference in the mean is only significant at the 10 percent level.

To control for other firm-specific effects on change in leverage, we again run regression with leverage as the dependent variable. Panel B in Table 3 presents the regression results. Column 1 shows that when using political participation as the only independent variable, the effect on leverage is positive and significant at the 5 percent level. When including a set of control variables, the effect remains significant and positive, as shown in Column 2, where the results show that political participation is associated with a 1.6 percent lower decrease in leverage during the twelve quarters after the announcement of the stimulus program. These results indicate that privately controlled firms were facing credit constraints during this period and that political relationships represented an important way to solve this problem.

[Table 3 about here]

4.2! Debt Maturity

Having shown that the stimulus program affected leverage differently for SOEs and privately controlled firms, we now turn to the issue of debt maturity. More specifically, we want to know whether firms experienced a change in debt maturity and whether this change differed across firms depending on ownership. Following the procedure in the previous section, we first separate the sample into SOEs and private firms. We then perform univariate tests on two debt maturity variables: change in short-term debt over total assets and change in long-term debt over total assets. Panel A in Table 4 present the univariate statistics and results. Here, a few things are worthy of attention. First, both types of firms exhibit a decrease in short-term debt. Second, both types of firms exhibit an increase in long-term debt. Third, SOEs exhibit a significantly smaller decrease in short-term debt and a significantly larger increase in long-term debt. We can thus conclude that there is a shift from short- to long-term debt and that SOEs seem to have better access to both types of debt financing.

To control for other typical factors that may influence short- and long-term debt levels, we run regressions with changes in short- and long-term debt over total assets as dependent variables. Columns 1 and 2 of Panel B in Table 4 present the results with change in short-term debt over total assets as the dependent variable. Column 1 only includes the dummy variable private firm as an independent variable. The coefficient for private firms is significant and negative, which means that private firms experienced a larger decrease in short-term debt financing during this period. Column 2 shows the regression results when adding a set of control variables. Again, the effect of private ownership is significant and negative at the 10 percent level.

Columns 3 and 4 present the results for similar regressions, this time with long-term debt over total assets as the dependent variable. Similar to the findings on short-term debt, the results in Column 3 shows that private ownership has a significant negative effect on long-term debt financing. As seen in Column 4, when controlling for other factors that may explain changes in long-term debt, the results remain the same. When controlling for other factors, the effect of private ownership is negative and significant at the 5 percent level. We can thus conclude that ownership affects changes in both short- and long-term debt financing.

[Table 4 about here]

Similar to the analysis on capital structure in the previous section, we want to understand how credit constraints affect debt maturity private firms differently depending on their political relationships. We thus divide the subsample of private firms into two samples again, one for typical private firms and one for firms controlled by private entrepreneurs who participate in politics. Panel A in Table 5 reports the univariate statistics and tests for the same measures of debt maturity as above. Supporting the results in Table 4, we find that private firms, regardless of type of controlling entrepreneur, exhibit a decrease in short-term debt financing and an increase in long-term debt financing. Firms controlled by private entrepreneurs who participate in politics exhibit a smaller decrease in short-term debt and a larger increase in long-term debt. These results show that private firms used political relationships to obtain better access to both short- and long-term debt financing. To control for other potential factors that may influence changes in debt maturity, we once more run regressions with the two measures of changes in debt maturity as independent variables. Panel B present the results, which support the findings in the

univariate tests. Political participation by entrepreneurs has a significant positive effect on changes in both short- and long-term debt.

[Table 5 about here]

The results in this section have shown that the changes in debt maturities were similar to both SOEs and private firms: a decrease in short-term debt and an increase in long-term debt. The decrease in short-term debt was larger and the increase in long-term debt was smaller for private firms, supporting the results in the previous section on capital structure. Furthermore, the empirical results in this section confirm that private firm did not primarily attempt to deleverage more than SOEs, as changes in debt maturity for firms controlled by entrepreneurs who participate in politics mirrored those of SOEs.

4.3! Firm Performance

To investigate how preferential access to debt financing affects firm performance, we focus on BHARs as introduced in Section 3.3. Similar to the previous sections, we first divide the sample into two groups of firms: SOEs and private firms. We then calculate BHARs for each of the firms in the respective sample to see how the two types of firms perform after the onset of the stimulus program. Figure 1 presents the BHARs for the two groups of firms from the announcement of the stimulus program up to 36 months after the announcement. Looking at the figure, private firms clearly outperformed SOEs during the three years after the announcement, with relatively large positive mean monthly BHARs for private firms compared to a series of negative mean monthly BHARs for SOEs.

[Figure 1 about here]

To analyze the effect of ownership on firm performance, we focus on BHARs over one, two, and three years respectively. Panel A in Table 6 present univariate statistics and tests for differences in mean and median of the BHARs for the two firm groups. As seen in Figure 1, the mean of the BHARs is negative for SOEs and positive for all three time horizons and this is supported by the univariate statistics in the table. The tests for differences in the mean and median show that the difference between the BHARs of SOEs and private firms is significant over all three time horizons.

To control for other potential firm-specific variables that may influence firm performance, we run regressions with BHARs as dependent variables. We first run initial regressions with the dummy variable private firm as the independent variable. Columns 1, 3, and 5 in Panel B present the results, which show that private control of firms has a significant and positive effect on BHARs across all three time horizons. Furthermore, the effect is increasing over time. Columns 2, 4, and 6 present the multivariate regressions which also include a set of commonly used control variables when analyzing firm performance. Even when controlling for other factors, the effect of private control is large and significant at the 1 percent level. Private control results in a 26.9 percent abnormal return over one year, 38.3 percent over two years, and 54.3 percent over three years. We can thus conclude that preferential access to debt financing after the announcement of the great stimulus program in November 2008 did not result in better but actually much worse performance by SOEs. Previous research has shown that state-controlled firm usually exhibit lower efficiency levels, which may partly explain the poor performance by SOEs in this analysis. However, it is more likely that the poor performance of SOEs is a direct effect of political control by the government over both financial institutions and firms. As the government

wanted to achieve a quick and strong effect on economic activity with the stimulus program, it is easy to assume that the greater access to debt financing and poor performance by SOEs are signs of what has been labeled the "policy burden" they bear (Lin et al., 1998; Lin and Li, 2008; Lin and Tan, 1999).[7] To quickly increase economic activity, the Chinese government ordered its banks to lend and the SOEs to borrow and spend. While they did have preferential access to finance, it is likely that the SOEs did not have enough new projects with high expected payoffs. They thus had to find other ways to invest the borrowed capital. For example, Deng et al. (2011) argue that SOEs poured a large amount of the borrowed capital into real estate.

[Table 6 about here]

The results above indicate that preferential access to debt financing after the announcement did not translate into superior firm performance by SOEs. But what about private firms that obtained similar preferential access to debt capital? As such firms do not face the same pressure in the form of a policy burden as SOEs, were they able to outperform other private firms? To analyze this, we again divide the sample of private firms into two groups: normal private firms and firms controlled by entrepreneurs who participate in politics. Since we have shown that the latter group had preferential access to debt financing after the announcement, we are able to analyze the potential effect of preferential access to debt capital without an attached policy burden. We again calculate the BHARs for the two groups and present them in Figure 2. A couple of findings in the figure are noteworthy. First, both groups of firms outperform the matching portfolio, which means that private firms on average

[7] This phenomenon has also been called "multitasking" by Chinese SOEs (Bai et al., 2000; Bai et al., 2005; Bai et al., 2006). For a detailed discussion on this phenomenon and the short-term effects of the fiscal stimulus program, see Deng et al. (2011).

performed relatively well during the period after the announcement. Second, firms controlled by entrepreneurs who participate in politics clearly outperform normal private firms.

[Figure 2 about here]

To analyze whether the difference in BHARs is driven by type of private control, we again focus on BHARs over one, two, and three years, respectively. Panel A in Table 7 present the univariate statistics and tests for differences in mean and median for the BHARs of the two groups of private firms. As discussed above, the mean and median of the BHARs are positive for both firms. However, the BHARs are significantly larger for firms controlled by entrepreneurs who participate in politics compared to those of normal private firms.

We once more run regressions to control for potential firm-specific factors that may drive the BHARs. The estimations with BHARs over one, two, and three years as dependent variables are presented in Panel B. Columns 1, 3, and 5 present the results of regressions in which only the dummy variable political participation is included as an independent variable. The coefficient for political participation is positive and significant for all three time horizons. In Columns 2, 4, and 6, we control for other factors that may influence firm performance. The effect of political participation remains positive and significant for all BHARs. Political participation by the controlling entrepreneur results in 15.4, 54.5, and 41.8 percent higher BHARs over one, two, and three years, respectively. These results show that private firms are limited by their access to finance and that private entrepreneurs can use close relationships to leading politicians to make their firms outperform other private firms in China.

[Table 7 about here]

5! Concluding Remarks

This paper has attempted to elaborate on the access to finance for SOEs and private firms in a transition economy characterized by an interventionist state that allocates capital through the financial system in a discriminatory manner. We find that, after the great stimulus program was initiated during the fall of 2008, state-controlled firms were better able to access debt financing and maintain their leverage levels. Our results thus provide support to the argument that the stimulus program resulted in greater lending to firms controlled by the state. This pattern also supports the argument that the Chinese state seems to be advancing at the cost of the private sector. Furthermore, private firms exhibit better firm performance after the event, indicating that access to debt financing per se does not automatically result in superior performance. Instead, SOEs are likely driven by motives besides profit maximization, their so-called policy burden, and/or are less efficient in their operations. Overall, these results indicate that the stimulus program most likely amplified the misallocation of capital in the Chinese economy. They also lend support to the argument that the Chinese economy to a significant extent is controlled by the central government, even though economic reforms have taken place since the late 1970s.

By identifying firms controlled by entrepreneurs who participate in high-level politics, we are able to show how such firms are able to circumvent discriminatory practice in the Chinese financial system. Firms controlled by entrepreneurs who participate in politics has better access to debt financing and are better able to maintain their leverage level. They also exhibit superior firm performance as compared to normal privately controlled firms. Our results indicate that access to scarce capital through political connections is valuable during periods when the state tries to increase economic activity domestically through a major stimulus program.

Our results are closely related to those of Johnson and Mitton (2003), who find that firms with connections to Malaysian Prime Minister Mahathir benefitted greatly from subsidies after the introduction of capital controls in 1998. Similar to their study, we conduct an event study in which we identify how capital is allocated to preferred firms. The main difference between the two studies is the channel through which preferential treatment is given. The fact that we identify such significant differences in access to debt finance indicates that political connections gained through political participation by entrepreneurs are of great importance in China. Political participation by successful entrepreneurs can thus be seen as an alternative to *dai hongmaozi*, or wearing a red hat, a strategy in which privately controlled firms simply registered a publicly-owned firms as a way to disguise their true ownership during the early stages of reform (e.g. Tsai, 2007). If economic reforms were to continue in China, the value of such political connections is likely to decrease. In the meantime, however, participation in the different political bodies by entrepreneurs can be expected to continue playing an important role for private entrepreneurs.

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Table 1. The sample

Panel A: Industry distribution of SOEs and private firms

This panel presents the industry distribution of SOEs and Private Firms. SOEs are firms which are ultimate owned and controlled by the central or local governments in China. Private firms are firms which are ultimately owned and controlled by private entrepreneurs.

Industry	Total Sample		SOEs		Private Firms	
	Number	Industry Percentage	Number	As Percentage of Total Sample	Number	As Percentage of Total Sample
Agriculture, Forestry, Farming & Fishery	28	2.21%	17	60.71%	11	39.29%
Mining	25	1.97%	23	92.00%	2	8.00%
Manufacturing	710	55.99%	430	60.56%	280	39.44%
Food & Beverage	52	4.10%	33	63.46%	19	36.54%
Textiles & Apparel	53	4.18%	19	35.85%	34	64.15%
Timber & Furnishings	5	0.39%	0	0.00%	5	100.00%
Paper & Printing	21	1.66%	15	71.43%	6	28.57%
Petrochemicals	137	10.80%	85	62.04%	52	37.96%
Electronics	46	3.63%	27	58.70%	19	41.30%
Metals & Non –metals	106	8.36%	74	69.81%	32	30.19%
Machinery	196	15.46%	132	67.35%	64	32.65%
Pharmaceuticals	85	6.70%	40	47.06%	45	52.94%
Other Manufacturing	9	0.71%	5	55.56%	4	44.44%
Utilities	63	4.97%	58	92.06%	5	7.94%
Construction	24	1.89%	15	62.50%	9	37.50%
Transportation	54	4.26%	49	90.74%	5	9.26%
Information Technology	71	5.60%	37	52.11%	34	47.89%
Wholesale and Retail Trade	88	6.94%	59	67.05%	29	32.95%
Real estate	93	7.33%	49	52.69%	44	47.31%
Social Services	39	3.08%	25	64.10%	14	35.90%
Transmission & Culture	11	0.87%	9	81.82%	2	18.18%
Conglomerate	62	4.89%	29	46.77%	33	53.23%
Total	1268	100.00%	800	63.09%	468	36.91%

Table 1. The sample (continued)

Panel B: Industry distribution of private firms, distinguished by political participation

This panel presents the industry distribution of private firms, distinguished by political participation. Political participation is defined as the controlling entrepreneur (or his or her family members) being a member of the National People's Congress (NPC), the Chinese People's Political Consultative Conference (CPPCC), or the Congress of Chinese Communist Party (CCCP) at the announcement of the stimulus program in November 2008.

Industry	Private Firms		Private Firms with Political Participation		Private Firms without Political Participation	
	Number	Industry Percentage	Number	As Percentage of Private Firms	Number	As Percentage of Private Firms
Agriculture, Forestry, Farming & Fishery	11	2.35%	6	54.55%	5	45.45%
Mining	2	0.43%	2	100.00%	0	0.00%
Manufacturing	280	59.83%	113	40.36%	167	59.64%
Food & Beverage	19	4.06%	9	47.37%	10	52.63%
Textiles & Apparel	34	7.26%	15	44.12%	19	55.88%
Timber & Furnishings	5	1.07%	4	80.00%	1	20.00%
Paper & Printing	6	1.28%	4	66.67%	2	33.33%
Petrochemicals	52	11.11%	16	30.77%	36	69.23%
Electronics	19	4.06%	5	26.32%	14	73.68%
Metals & Non –metals	32	6.84%	10	31.25%	22	68.75%
Machinery	64	13.68%	23	35.94%	41	64.06%
Pharmaceuticals	45	9.62%	24	53.33%	21	46.67%
Other Manufacturing	4	0.85%	3	75.00%	1	25.00%
Utilities	5	1.07%	2	40.00%	3	60.00%
Construction	9	1.92%	3	33.33%	6	66.67%
Transportation	5	1.07%	3	60.00%	2	40.00%
Information Technology	34	7.26%	12	35.29%	22	64.71%
Wholesale and Retail Trade	29	6.20%	11	37.93%	18	62.07%
Real estate	44	9.40%	10	22.73%	34	77.27%
Social Services	14	2.99%	2	14.29%	12	85.71%
Transmission & Culture	2	0.43%	0	0.00%	2	100.00%
Conglomerate	33	7.05%	8	24.24%	25	75.76%
Total	468	100.00%	172	35.39%	296	60.91%

Table 2. Change in capital structure for SOEs and private firms

Panel A: Descriptive statistics

This table presents the descriptive statistics of changes in the capital structure change for the SOEs sample and private firms sample. The SOEs sample is composed of SOE firms controlled by governments in China. The private firm sample is composed of private firms controlled by private entrepreneurs. The change in capital structure is the difference between the average quarterly capital structure during 12 quarters before and after the announcement of the stimulus program in November 2008. Capital structure is measured as total debt divided by total assets. All variables are winsorized at top and bottom 1%. ***, ** and * denote significance for the difference between the two samples at 1%, 5%, and 10%, respectively.

	SOEs				Private firms			
	N	Mean	Median	Std.dev.	N	Mean	Median	Std. dev.
Change in total debt / total assets	800	-0.009***	-0.007***	0.114	468	-0.030	-0.028	0.101

Table 2. Change in capital structure for SOEs and private firms (continued)

Panel B: Regression analysis

This table presents the regression results of the effect of ultimate owner on changes in capital structure. The dependent variable is the change in capital structure. The independent variables are: private firm, which equals one for the firms controlled by entrepreneurs and zero otherwise; largest ownership, measured as the percentage ownership by the largest owner; Tobin's Q, measured as the sum of total market value and total net liabilities divided by total assets; leverage, measured as the ratio of total liabilities to total assets; size, measured as the natural logarithm of total assets; profitably, measured as the ratio of earnings to total assets; and collateral, measured as the ratio of total net fixed assets to total assets. Industry and year dummies are included but not reported. All continuous variables are winsorized at the top and bottom 1%. Robust t-statistics are given in parentheses. ***, **, and * denote significance at the 1%, 5%, and 10% level, respectively.

	Change in total debt / total assets	
	Model (1)	Model (2)
Private firm	-0.014**	-0.006*
	(-2.20)	(-1.92)
Largest ownership		0.062***
		(2.89)
Tobin's Q		0.001
		(0.26)
Leverage		-0.015*
		(-1.80)
Size		0.007**
		(2.32)
Profitability		-0.044
		(-1.26)
Collateral		0.010**
		(2.51)
Intercept	-0.027**	-0.206***
	(-2.13)	(-2.88)
Industry dummies	Yes	Yes
Observations	1268	1268
Adjusted R^2	0.121	0.140

Table 3. Change in capital structure for private firms, distinguished by political participation

Panel A: Descriptive statistics

This table presents the descriptive statistics of capital structure change for private firms, distinguished by whether or not the controlling entrepreneurs participate in politics at the announcement of the stimulus program in November 2008. The political participation sample is composed of private firms controlled by private entrepreneurs who participate in politics when the economic stimulus plan is announced. The no political participation sample is composed of private firms controlled by private entrepreneurs who do not participate in politics at the same time. The change in capital structure is the difference between the average quarterly capital structure during 12 quarters before and after the announcement of the stimulus program in November 2008. Capital structure is measured as total debt divided by total assets. All variables are winsorized at top and bottom 1%. *** ,** and * denote significance for the difference between the two samples at 1%, 5%, and 10%, respectively.

	Private firms with political participation				Private firms without political participation			
	N	Mean	Median	Std. dev.	N	Mean	Median	Std. dev.
Change in total debt / total assets	172	-0.019*	-0.021**	0.095	296	-0.036	-0.031	0.113

Table 3. Change in capital structure for private firms, distinguished by political participation (continued)

Panel B: Regression analysis

This table presents the regression results of the effect of political participation on capital structure change for private firms. The dependent variable is capital structure change. The independent variables are: political participation, which equals one if the controlling entrepreneur participated in politics at the announcement of the stimulus program in November 2008 and zero otherwise; largest ownership, measured as the percentage ownership by the largest owner; Tobin's Q, measured as the sum of total market value and total net liabilities divided by total assets; leverage, measured as the ratio of total liabilities to total assets; size, measured as the natural logarithm of total assets; profitably, measured as the ratio of earnings to total assets; and collateral, measured as the ratio of total net fixed assets to total assets. Industry and year dummies are included but not reported. All continuous variables are winsorized at the top and bottom 1%. Robust t-statistics are given in parentheses. ***, **, and * denote significance at the 1%, 5%, and 10% level, respectively.

	Change in total debt / total assets	
	Model (1)	Model (2)
Political participation	0.012**	0.016**
	(2.12)	(2.07)
Largest ownership		0.135***
		(3.56)
Tobin's Q		-0.008
		(-0.31)
Leverage		-0.023**
		(-2.45)
Size		-0.009
		(-1.43)
Profitability		-0.052
		(-0.90)
Collateral		0.047
		(1.35)
Intercept	-0.048**	0.133
	(-2.46)	(0.85)
Industry dummies	Yes	Yes
Observations	468	468
Adjusted R^2	0.090	0.109

Table 4. Change in debt maturity, distinguished by SOEs and private firms

Panel A: Descriptive statistics

This table presents the descriptive statistics of changes in debt maturity for the SOEs sample and private firms sample. The SOEs sample is composed of SOE firms controlled by governments in China. The private firm sample is composed of private firms controlled by private entrepreneurs. The debt maturity changes are the difference between the average quarterly debt maturity variables during 12 quarters before and after the announcement of the stimulus program in November 2008. Debt maturities are measured as short-term debt or long-term debt, divided by total assets. All variables are winsorized at top and bottom 1%. ***, ** and * denote significance for the difference between the two samples at 1%, 5%, and 10%, respectively.

	SOEs				Private firms			
	N	Mean	Median	Std. dev.	N	Mean	Median	Std. dev.
Change in Short-term debt / total assets	800	-0.026***	-0.014***	0.097	468	-0.042	-0.037	0.092
Change in Long-term debt / total assets	800	0.017**	0.000	0.076	468	0.009	0.000	0.043

Table 4. Changes in debt maturity, distinguished by SOEs and private firms (continued)

Panel B: Regression analysis

This table presents the regression results of the effect of type of ultimate owner on changes in debt maturity. The dependent variables are debt maturity changes. The independent variables are: private firm, which equals one for firms controlled by entrepreneurs and zero otherwise; largest ownership, measured as the percentage ownership by the largest owner; Tobin's Q, measured as the sum of total market value and total net liabilities divided by total assets; leverage, measured as the ratio of total liabilities to total assets; size, measured as the natural logarithm of total assets; profitably, measured as the ratio of earnings to total assets; and collateral, measured as the ratio of total net fixed assets to total assets. Industry and year dummies are included but not reported. All continuous variables are winsorized at the top and bottom 1%. Robust t-statistics are given in parentheses. ***, **, and * denote significance at the 1%, 5%, and 10% level, respectively.

	Change in short-term debt / total assets		Change in long-term debt / total assets	
	(1)	(2)	(3)	(4)
Private firm	-0.009*	-0.004*	-0.004***	-0.003**
	(-1.78)	(-1.74)	(-2.88)	(-2.10)
Largest ownership		0.019		0.046***
		(1.00)		(3.29)
Tobin's Q		0.003		0.006
		(0.90)		(0.68)
Leverage		0.007		-0.014**
		(0.53)		(-2.46)
Size		0.008***		0.001
		(2.94)		(0.24)
Profitability		-0.033		-0.030
		(-1.10)		(-1.23)
Collateral		0.033*		0.041***
		(1.90)		(3.15)
Intercept	-0.043***	-0.234***	0.0174**	0.004
	(-3.86)	(-3.80)	(2.03)	(0.09)
Industry dummies	Yes	Yes	Yes	Yes
Observations	1268	1268	1268	1268
Adjusted R^2	0.122	0.131	0.126	0.143

Table 5. Changes in debt maturity for private firms, distinguished by political participation

Panel A: Descriptive statistics

This table presents the descriptive statistics of changes in debt maturity for private firms, distinguished by whether or not the entrepreneurs participated in politics when the stimulus program was announced in November 2008. The political participation sample is composed of private firms controlled by private entrepreneurs who participated in politics at the announcement of the stimulus program. The no political participation sample is composed of private firms controlled by private entrepreneurs who do not participate in politics at the time. The change in debt maturity is the difference between the average quarterly debt maturity during 12 quarters before and after the announcement of the stimulus program. Debt maturity is measured as short-term debt or long-term debt, divided by total assets. All variables are winsorized at top and bottom 1%. *** ,** and * denote significance for the difference between the two samples at 1%, 5%, and 10%, respectively.

	Private firms with political participation				Private firms without political participation			
	N	Mean	Median	Std. dev.	N	Mean	Median	Std. dev.
Change in Short-term debt/ total assets	172	-0.032*	-0.036*	0.094	296	-0.047	-0.040	0.085
change in long-term debt/ total assets	172	0.013**	0.009**	0.039	296	0.006	0	0.025

Table 5. Changes in debt maturity for private firms, distinguished by political participation (continued)

Panel B: Regression analysis

This table presents the regression results of the effect of political participation on changes in debt maturity. The dependent variables are the changes in debt maturity. The independent variables are: political participation, which equals one for the firms controlled by entrepreneurs who participates in politics when the stimulus program is announced and zero otherwise; largest ownership, measured as the percentage ownership by the largest owner; Tobin's Q, measured as the sum of total market value and total net liabilities divided by total assets; leverage, measured as the ratio of total liabilities to total assets; size, measured as the natural logarithm of total assets; profitably, measured as the ratio of earnings to total assets; and collateral, measured as the ratio of total net fixed assets to total assets. Industry and year dummies are included but not reported. All continuous variables are winsorized at the top and bottom 1%. Robust t-statistics are given in parentheses. ***, **, and * denote significance at the 1%, 5%, and 10% level, respectively.

	Change in short-term debt / total assets		Change in long-term debt / total assets	
	(1)	(2)	(3)	(4)
Political participation	0.007**	0.010**	0.004***	0.006***
	(2.39)	(1.99)	(3.62)	(3.18)
Largest ownership		0.056*		0.078***
		(1.67)		(3.28)
Tobin's Q		-0.002		-0.003
		(-0.11)		(-0.23)
Leverage		-0.004		-0.014**
		(-0.51)		(-2.30)
Size		-0.007		-0.002
		(-1.17)		(-0.39)
Profitability		-0.050		-0.005
		(-0.97)		(-0.13)
Collateral		0.067**		-0.025
		(2.19)		(-1.18)
Intercept	-0.051***	0.068	0.007	0.044
	(-2.94)	(0.49)	(0.64)	(0.45)
Industry dummies	Yes	Yes	Yes	Yes
Observations	468	468	468	468
Adjusted R^2	0.095	0.104	0.099	0.120

Table 6. Firm performance for SOEs and private firms

Panel A: Descriptive statistics

This table presents long-run stock performance, alternatively measured as the one-, two-, and three-year buy-and-hold abnormal returns (BHARs), starting from announcement of the stimulus program in November 2008, with the sample separated into SOEs and private firms. The SOEs sample is composed of SOE firms controlled by the central or local governments in China. The private firm sample is composed of firms controlled by private entrepreneurs. We form 25(5×5) value-weighted portfolios of all Chinese A shares stocks on the basis of size and the ratio of book equity to market equity as benchmark. We then match each sample along these two dimensions, and use their market returns to calculate BHARs. All variables are winsorized at top and bottom 1%. *** ,** and * denote significance for the difference between the two samples at 1%, 5%, and 10%, respectively.

	SOEs				Private firms			
	N	Mean	Median	Std. dev.	N	Mean	Median	Std. dev.
BHARs 1 year	800	-0.030***	-0.041***	1.128	468	0.345	0.386	1.054
BHARs 2 years	800	-0.035***	-0.076***	1.810	468	0.609	0.753	1.038
BHARs 3 years	800	-0.070***	-0.085***	1.502	468	0.638	0.935	1.498

Table 6. Firm performance for SOEs and private firms (continued)

Panel B: Regression analysis

This table presents the regression results of the effect of ultimate owner on firm performance. The dependent variables are long run stock performance, alternatively measured as the one-, two-, and three-year buy-and-hold abnormal returns (BHARs), starting from announcement of the stimulus program in November 2008. The independent variables are: private firm, which equals one for firms controlled by entrepreneurs and zero otherwise; largest ownership, measured as the percentage ownership by the largest owner; Tobin's Q, measured as the sum of total market value and total net liabilities divided by total assets; leverage, measured as the ratio of total liabilities to total assets; size, measured as the natural logarithm of total assets; profitably, measured as the ratio of earnings to total assets. Industry and year dummies are included but not reported. All continuous variables are winsorized at the top and bottom 1%. Robust t-statistics are given in parentheses. ***, **, and * denote significance at the 1%, 5%, and 10% level, respectively.

	BHARs one year after stimulus program announcement		BHARs two years after stimulus program announcement		BHARs three years after stimulus program announcement	
	(1)	(2)	(3)	(4)	(5)	(6)
Private Firm	0.350***	0.269***	0.604***	0.383***	0.786***	0.543***
	(4.39)	(3.15)	(4.29)	(2.70)	(5.28)	(3.60)
Largest ownership		0.588**		0.922**		0.699
		(2.18)		(2.06)		(1.48)
Tobin's Q		-1.083***		-0.902***		-0.661**
		(-6.26)		(-3.15)		(-2.17)
Leverage		1.612***		1.168**		0.831**
		(13.81)		(2.41)		(1.82)
Size		-0.330***		-0.595***		-0.555***
		(-7.84)		(-8.48)		(-7.47)
Profitability		1.916***		0.790		1.496
		(3.51)		(0.86)		(1.57)
Industry Dummies	Yes	Yes	Yes	Yes	Yes	Yes
Intercept	0.769***	6.312***	1.210***	14.130***	0.872***	13.007***
	(4.12)	(5.95)	(4.27)	(7.91)	(2.84)	(6.92)
Observations	1268	1268	1268	1268	1268	1268
Adjusted R^2	0.056	0.283	0.091	0.155	0.068	0.124

Table 7. Firm Performance for private firms, distinguished by political participation

Panel A: Descriptive statistics

This table presents long run stock performance, alternatively measured as the one-, two-, and three-year buy-and-hold abnormal returns (BHARs) for private firms, starting from announcement of stimulus program in November 2008. The sample is separated into two groups based on whether or not the controlling entrepreneur participated in politics at the announcement. The SOEs sample is composed of SOE firms controlled by the central or local governments in China. The private firm sample is composed of firms controlled by private entrepreneurs. All variables are winsorized at top and bottom 1%. *** ,** and * denote significance for the difference between the two samples at 1%, 5%, and 10%, respectively.

	Private Firms with political participation				Private firms without political participation			
	N	Mean	Median	Std. dev.	N	Mean	Median	Std. dev.
BHARs 1 year	172	0.588***	0.685***	1.312	296	0.204	0.186	0.873
BHARs 2 year	172	1.021***	1.138***	1.595	296	0.372	0.253	1.303
BHARs 3 year	172	0.994***	0.8475***	1.761	296	0.433	0.397	1.141

Table 7. Firm performance for private firms, distinguished by political participation (continued)

Panel B: Regression analysis

This table presents the regression results of the effect of political participation on firm performance. The dependent variables are long-run stock performance, alternatively measured as the one-, two-, and three-year buy-and-hold abnormal returns (BHARs), starting from announcement of the stimulus program in November 2008. The independent variables are: political participation, which equals one for the firms controlled by entrepreneurs who participated in politics when the stimulus program was announced and zero otherwise; largest ownership, measured as the percentage ownership by the largest owner; Tobin's Q, measured as the sum of total market value and total net liabilities divided by total assets; leverage, measured as the ratio of total liabilities to total assets; size, measured as the natural logarithm of total assets; profitably, measured as the ratio of earnings to total assets. Industry and year dummies are included but not reported. All continuous variables are winsorized at the top and bottom 1%. Robust t-statistics are given in parentheses. ***, **, and * denote significance at the 1%, 5%, and 10% level, respectively.

	BHARs one year after stimulus program announcement		BHARs two years after stimulus program announcement		BHARs three years after stimulus program announcement	
	(1)	(2)	(3)	(4)	(5)	(6)
Political participation	0.207***	0.154**	0.612***	0.545***	0.579***	0.418***
	(3.04)	(2.30)	(4.39)	(3.18)	(3.78)	(3.32)
Largest ownership		0.936**		1.052*		1.472**
		(2.51)		(1.92)		(2.27)
Tobin's Q		-0.3710		-0.476		-0.041
		(-0.48)		(-0.70)		(-0.05)
Leverage		1.501***		1.219*		0.764
		(9.24)		(1.72)		(1.03)
Size		-0.295***		-0.428**		-0.486**
		(-2.77)		(-2.33)		(-2.31)
Profitability		2.802**		0.368		1.653
		(2.43)		(0.19)		(0.75)
Industry dummies	Yes	Yes	Yes	Yes	Yes	Yes
Intercept	1.412***	6.458**	2.276***	10.319**	2.051***	11.250**
	(3.70)	(2.52)	(4.09)	(2.32)	(3.09)	(2.22)
Observations	468	468	468	468	468	468
Adjusted R^2	0.036	0.194	0.047	0.120	0.029	0.115

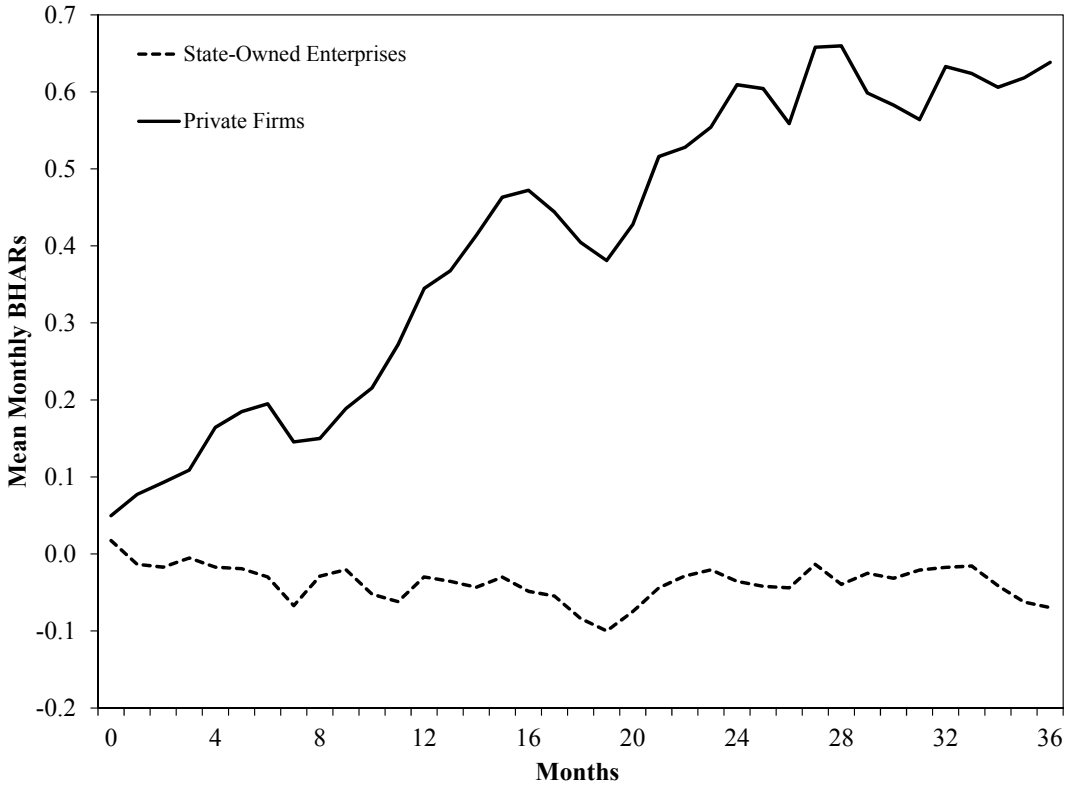

Figure 1. Mean monthly buy-and-hold abnormal returns for SOEs and private firms
This figure presents 36 months buy-and-hold abnormal returns (BHARs), starting from the announcement of the stimulus program in November 2008. Firms are divided into state-owned enterprises (SOEs) and private firms.

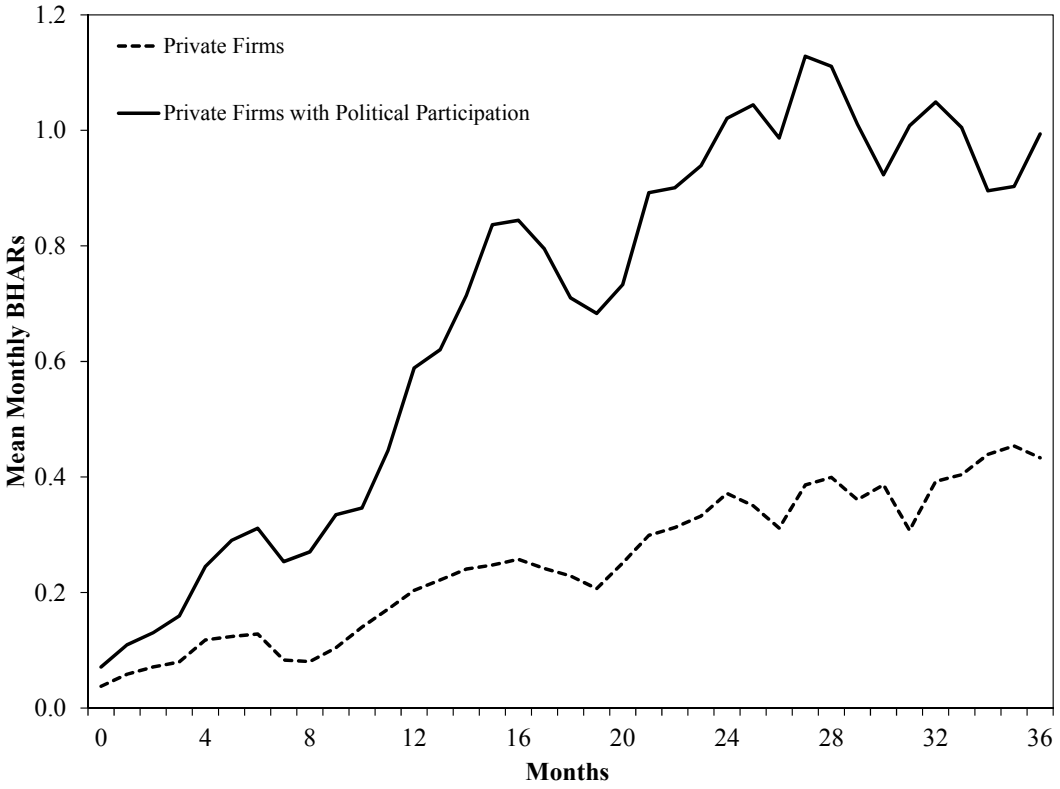

Figure 2. Mean monthly buy-and-hold abnormal returns for private firms, distinguished by political participation

This figure presents 36 months buy-and-hold abnormal returns (BHARs), starting from the announcement of the stimulus program in November 2008. The firms are divided into two groups: the first group is composed of firms with a private individual as the ultimate shareholder. The second group is composed of firms that are ultimately controlled by private individuals who also participate in politics at the time of the announcement.

Appendix 1: Main Control Variables

This appendix presents the summary statistics for the main control variables in this study. Largest ownership is the percentage ownership of the largest owner at the announcement quarter of the stimulus program in November 2008. Tobin's Q is measured as the sum of total market valuation of equities and total net liabilities divided by total assets in the same quarter. Leverage is measured as the ratio of total liabilities over total assets in the same quarter. Firm size is measured as the natural logarithm of total assets in the same quarter. Profitably is measured as the ratio of earnings to total assets in the same quarter. Collateral is measured as the ratio of total net fixed assets to total assets at the same quarter.

	N	Mean	Median	STD	Min	Q1	Q3	Max
Largest ownership	1268	35.63%	33.57%	15.13%	10.23%	23.18%	47.25%	73.97%
Tobin's Q	1268	1.75	1.58	0.97	0.60	1.12	1.94	4.62
Leverage	1268	56.57%	52.79%	37.74%	8.79%	38.79%	66.79%	87.17%
Size	1268	21.59	21.49	1.18	18.76	20.81	22.29	25.14
Profitability	1268	2.57%	2.80%	9.16%	-4.46%	0.49%	5.39%	34.88%
Collateral	1268	28.42%	25.50%	19.02%	0.00%	13.83%	41.09%	91.60%

Appendix 2: Correlation matrix

This table presents the correlation matrix of variables in the analysis. The upper triangle presents the Pearson correlation coefficient. The lower triangle presents the Spearman correlation coefficient. ***, **, and * denote significance at the 1%, 5% and 10% level, respectively.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
(1)Change in Total Debt/ Total Assets	1.000***	0.729***	0.553***	0.093**	0.032**	0.032**	-0.059**	0.030**	0.125***	-0.035	-0.244***	0.057**	-0.135***	0.101***
(2)Change in Short-Term Debt/ Total Assets	0.717***	1.000***	-0.157***	0.126***	0.052**	0.052**	-0.030	-0.010	0.053***	-0.040	-0.248***	0.040***	-0.130***	0.133***
(3)Change in Long-Term Debt/ Total Assets	0.523***	0.101***	1.000***	-0.065**	-0.029	-0.029	-0.061**	-0.047*	0.128***	-0.011	-0.024	0.057**	0.007	0.034***
(4)BHARs one year	0.049**	0.067**	0.020**	1.000***	0.454***	0.454***	0.181***	0.175***	0.041***	-0.131**	0.576***	-0.247***	0.422***	0.068
(5)BHARs two years	0.051**	0.023***	0.039*	0.610***	1.000***	0.982***	0.175***	0.137***	0.046***	-0.116***	0.125***	-0.211***	0.093	0.022
(6)BHARs three years	0.073**	0.035**	0.047*	0.562***	0.979***	1.000***	0.183***	0.165	0.0489***	-0.224**	0.147***	-0.432***	0.174	0.078
(7)Family Firms	-0.084***	-0.060***	-0.051***	0.137***	0.193***	0.193***	1.000***	0.915***	-0.248***	0.143***	0.110***	-0.313***	-0.049**	-0.088***
(8)Political Participation	0.071***	0.053**	0.042**	0.133***	0.190***	0.190***	0.976***	1.000***	-0.202***	0.132***	0.164***	0.253*	0.051*	-0.059**
(9)Largest ownership	0.149***	0.101*	0.141***	0.029***	0.065***	0.076***	-0.254***	-0.234***	1.000***	-0.072*	-0.044	0.292	0.156	0.018
(10)Tobin's Q	-0.031	-0.045	-0.013	-0.079***	-0.064***	-0.097***	0.152***	0.150***	-0.074*	1.000***	0.097	-0.482	0.078	-0.095
(11)Leverage	-0.039***	0.025	-0.010***	0.048***	0.046***	0.063***	-0.001	0.015**	-0.052	0.064	1.000***	-0.192	-0.507	0.233
(12)Size	0.088**	0.059***	0.058	-0.207***	-0.399***	-0.471***	-0.307***	0.276***	0.266	-0.504	-0.060	1.000***	0.231	0.030
(13)Profitability	-0.017	-0.004	0.022	0.228**	0.159	0.159	0.011	0.023***	0.145	0.254	-0.265	0.167	1.000***	-0.207
(14)Collateral	0.076***	0.119***	0.085***	-0.072	0.032	0.032	-0.091***	-0.079	0.016	-0.106	0.034	0.021	-0.153	1.000***