

Helping Hand or Grasping Hand? The Bright Side of Political Connections in Crisis

Shu LIU*, Mingguì YU†

ABSTRACT

This paper investigates the valuable but less studied stabilizing role of political connections during severe economic downturns when both cost and benefit dynamics of political connection change dramatically. Exploiting the 2007-2009 financial crisis as a natural experiment, we show that political connections protect firms from adverse shocks, especially when firms are financially more vulnerable, face greater difficulties in raising capital, but have relatively higher financing needs. Instead of increasing competition in the damaged bank credit market, political connections lower firm risk, and shift corporate reliance on bank credit to alternative types of external financing. The liquidity-insurance generates an offsetting positive effect on corporate investment. Political connections also deliver a beneficial multiplier effect. Connected firms act as liquidity intermediaries. They redistribute credit to suppliers which are usually small and relatively credit-constrained through trade credit. Overall, this paper sheds light on the bright side of political connections. Political connections not only benefit firms in their resilience to adverse shocks but also enhance economic stability through credit redistribution. Political connections are critical, at least in economic downturns.

Keywords: Political Connection, Financial Crisis, Firm Value, Beneficial Multiplier Effect.

JEL classification: G32; L14; D72.

*LIU: School of Finance, Zhongnan University of Economics and Law, China. Email: sliu@zuel.edu.cn.

†YU: School of Finance, Zhongnan University of Economics and Law, China. Email: mingyu@zuel.edu.cn.

I. Introduction

Political connection is both prevalent and valuable. In 2022, about half of the S&P500 firms have invested in political connections, representing more than 60 percent of outstanding equity. Its beneficial effects have been widely documented in the literature. Generally, political connections are value-enhancing (Cooper, Gulen, and Ovtchinnikov, 2010; Akey, 2015). It can increase corporate sales (Goldman, Rocholl, and So (2013) and Akey (2015)), improve corporate access to finance (Claessens, Feijen, and Laeven (2008), and Boubakri, Guedhami, Mishra, and Saffar (2012)), and reduce corporate risk (Faccio, Masulis, and McConnell (2006), and Duchin and Sosyura (2012)). Despite the substantial evidence about the beneficial effects of political connection for connected firms, these connections are largely criticized to be detrimental to social welfare (Cingano and Pinotti, 2013; Amore and Benned- sen, 2013; Fisman and Wang, 2015). In this paper, we try to shed some light on the bright side of political connections by examining its stabilizing role during economic downturns where the government plays a more critical role and the dynamics of both costs and benefits of political connections change dramatically.

Using the 2007-2009 financial crisis as a natural experiment, we examine whether the helping hand of political connection widely documented in normal times persist or collapse in the crisis. Specifically, we explore the question from the following perspectives: do political connection help stabilize firms against adverse shocks? how does the value-preserving effect of political connection manifest? could the stabilizing effect of political connections extend along economic networks, yielding any beneficial multiplier effect?

The 2007-2009 financial crisis provides a much clean identification setting. The crisis originates in the banking industry. It is largely unexpected and exogenous to non-financial firms (Garcia-Appendini and Montoriol-Garriga, 2013). It also brings dramatic damage to

banking lending, decreasing credit supply to corporate (Ciccarelli, Maddaloni, and Peydró, 2015; Ivashina and Scharfstein, 2010; Ongena, Smith, and Michalsen, 2003; Brunnermeier, 2009; Shleifer and Vishny, 2010). The limited bank lending are basically unrelated to the firm's fundamentals. Banks changes their lending behaviors even when the fundamental background of borrowers does not change significantly in the short run. The exogenous and unexpected shocks to liquidity supply can help eliminate potential simultaneity problems and overcome homogeneity issues.

The crisis also provides a source of variation in the value of political connections to firms¹. It alters environmental conditions and changes both the cost and benefit dynamics of political connections. Studying political connections in crisis allows us to observe an out-of-equilibrium effect of political connections.

We conjecture that connection with the government may put severe burdens on firms during the crisis. The crisis freezes the market for bank lending, forcing firms to terminate investments due to liquidity constraints, which eventually hurt corporate value (Ivashina and Scharfstein, 2010; Almeida, Kim, and Kim, 2015; Campello, Graham, and Harvey, 2009; Carvalho, Ferreira, and Matos, 2015; Cingano, Manaresi, and Sette, 2016; Duchin, Ozbas, and Sensoy, 2010). On the aggregate level, it leads to significant economic loss and economic instability. To mitigate the losses and maintain social stability, politicians would intervene in corporate operations to pursue social benefits that may be inconsistent with corporate goals in maximizing firm value (Boycko, Shleifer, and Vishny, 1996; Bertrand, Schoar, and Thesmar, 2007). The loss and risk may also incentive politicians and managers to exploit for personal benefits (Sapienza, 2004; Jagolinzer, Larcker, Ormazabal, and Taylor, 2020). All these would significantly increase the cost of political connection and consequently damage

¹Like Lins, Servaes, and Tamayo (2017), we do not exploit shocks to the networks. Therefore, we are unable to identify their direct impact on performance during normal times.

firm value.

However, the adverse effects of the crisis could also be negligible for connected firms. The bank lending effect may only manifest when firms are binding in financing. If firms have no financing needs or are capable of finding alternative sources to offset the damaged bank credit, the crisis can lead to no significant effects (Khwaja and Mian, 2008). As the explicit and implicit guarantees of political connection increase firms' financing abilities (Faccio, 2006; Khwaja and Mian, 2005), we propose connected firms cope better with adverse shocks.

To test these two hypotheses, we rely on variations in corporate political connections before the crisis for identification. Specifically, we measure political connection using corporate campaign contributions in the five years prior to the start of the crisis. Then we freeze corporate political connection throughout the whole sample period. The pre-crisis political connection measure helps to avoid the concern that firms self-select into the politically connected group in crisis. It also alleviates the omitted variable concern that unobserved factors affect both firm performance and political connection-building activities in crisis. While the crisis disrupts the market equilibrium, political connections remain unchanged.²

Consistent with the stabilizing role of political connections in crisis, we find that the considerable impacts of funding shortage are mitigated by political connections. Compared to non-connected firms, firms with connections to the government respond better to adverse funding shocks. They have a higher firm value during the crisis. On average, a one standard deviation increase in political connections could preserve a firm's value by 3.27%. Political connection serves as an insurance mechanism against extreme events.

The results of additional robustness tests further verify the causality effect of political connection on firm valuations during distress. To address the selection bias concern, we

²Given the nature of the crisis, it is impossible for firms to anticipate its start. Thus, it is less likely for firms to store political connections in advance.

exclude firms without any contribution in the five years before the crisis, thus focusing only on politically active firms. To mitigate the impact of capital demand while focusing on the bank supply effect, we limit the sample period to 2006Q3 to 2008Q2. Results are robust to the alternative sample and sample period. Conversely, the value-preserving effect of political connection disappears in the placebo test when we use the 2005Q3-2006Q3 as the fictitious crisis period.

We also explore the variation of the significant value-preserving effect. We find that political connection is more valuable for binding firms. Specifically, firms that are vulnerable to the capital shortage, have difficulties in financing, but are more in need of funding gain more from political connections in crisis. As the crisis imposes severe limits on bank lending, those firms are expected to experience more severe trouble in funding than other firms. They should see their borrowing fall faster in crisis.

Next, we present evidence on how political connections help firms hedge against liquidity shocks. We expect connected firms to substitute the damaged bank debt and seek funding from alternative sources, as the explicit and implicit guarantees of political connection enhance their ability in fund-raising. Indeed, we find that political connections reduce firms' risk and expand firms' funding pools. Connected firms experience lower volatility in distress. They decrease their reliance on bank borrowing and strategically shift their financing attention to other sources of credit. Specifically, they issue more equity and other public debt to offset the bank lending shocks. Political connections power firms up in smoothing the adverse effect.

The financing advantage brought by political connections alter corporate investment strategies. Companies with political connections experience less drop in investments. They spend relatively more on capital expenditure and working capital. The funding insurance

provided by political connection lowers the probability of liquidation in profitable investment projects, which in turn would boost corporate market valuations. The finding corroborates the value-preserving effect of political connection by providing supportive real effects on firms.

Finally, we analyze the spillover effect of political connections and document a beneficial multiplier effect in supply chain networks. We show that firms benefiting from political connections in financing provide financial aids to their suppliers. They act as liquidity intermediaries and redistribute liquidity to suppliers who are usually smaller and have relatively less access to financial markets. Specifically, they extend credit to suppliers by reducing their claim of trade credits, thus easing suppliers' financing conditions. The findings highlight the beneficial multiplier effect of political connections. Political connection does not only stabilize the connected firms, it also stop the transmission of liquidity shocks. Adverse shocks are mitigated when hit the deep pocket, that is politically connected firms in this paper.

This paper contributes to several literature. First, this paper is closely related to the large literature on political connections. Previous studies broadly agreed on the value-enhancing effect of political connections³ However, almost all these studies have attempted to study the value of political connection in normal times⁴. It is not clear whether political connection

³See (Fisman, 2001; Goldman, Rocholl, and So, 2008; Cooper et al., 2010), among others. Specifically, political connections grant firms comparative advantages in financing (Charumilind, Kali, and Wiwattanakantang, 2006; Claessens et al., 2008; Khwaja and Mian, 2005), sales (Schoenherr, 2018; Goldman et al., 2013), performance (Faccio and Lang, 2002; Johnson and Mitton, 2003; Tahoun, 2014), and even regulation treatment (Faccio, 2010; Bunkanwanicha and Wiwattanakantang, 2009; Mian, Sufi, and Trebbi, 2010). Connected firms are more likely to receive government support and less likely to go bankrupt (Faccio et al., 2006; Blau, Brough, and Thomas, 2013).

⁴In exception, Acemoglu, Johnson, Kermani, Kwak, and Mitton (2016) shows that financial firms connected to Geithner experience higher stock market reactions when Geithner is announced to be the Treasury Secretary during the crisis. However, their paper concentrates on financial firms, rather than non-financial firms. Exploiting cross-bank liquidity variation induced by unanticipated nuclear tests in Pakistan, Khwaja and Mian (2008) find that large firms with political ties can offset the declines in liquidity by borrowing from other un-affected banks. Instead of focusing on developing firms, our paper studies the net value of political connection in the most developed and regulated country - the U.S. The operating environments in developed

can have a stronger and more complicated value in times of crisis, when both the benefits and costs of political connection change dramatically. We contribute by studying the net value of political connections in the crisis period when the dynamics of costs and benefits of political connections are interrupted. We find that political connection in crisis insulates firm value from adverse shocks by improving firms' financing conditions and lowering their liquidation of valuable investment projects. The beneficial multiplier effect documented along the trade credit chains correspondingly shows that the helping hand of political connections extends to economic networks and strengthens market stability in crisis, improving social welfare. The results are important and essential to build a complete picture on the value of political connection. It also has important policy implications for the government in regulating political connections.

Second, this paper contributes to the risk management literature. Firms vary in their ability to absorb the impact of adverse shocks. A strand of literature studies corporate risk management behaviors, highlighting the effect of risk management on firm values (Allayannis and Weston, 2001; Adam and Fernando, 2006; Bartram, Brown, and Conrad, 2011; MacKay and Moeller, 2007) and the intermediate channels through which risk management affects firm value (Cornaggia, 2013). Previous researches find that firms with better liquidity, higher cash holding (Duchin et al., 2010), lower leverage (Giroud and Mueller, 2017), more diverse debt financing, better financing structure (Campello, Graham, and Harvey, 2010; Almeida, Campello, Laranjeira, and Weisbenner, 2009) are better positioned to cope with the crisis

and developing countries are largely different. Political ties can have very different effects in these countries. Further, instead of studying the effect of political connection and bank borrowings, our paper examines the general value of political connection by exploring firm value where the effect on bank borrowing could be a channel. And the beneficial multiplier effect documented extends the existing findings. It is also noted that there are a lot of papers studying the effect of political connections on the probability of getting bailouts when in distress. This strand of papers is narrowed down to specific government funding in crisis. Our paper studies the more general net effects of political connections on firm value.

(Duchin et al., 2010; Ivashina and Scharfstein, 2010; Kahle and Stulz, 2013). We add to this strand of literature by identifying political connections as another important tool to help firms hedge against the crisis. Political connections insulate firm value from bank lending shocks by enhancing firms' ability to seek funding from alternative sources. Furthermore, the risk management benefits of political connections can extend along economic networks.

Third, this paper is related to the literature on the determinants of corporate capital structure. Kahle and Stulz (2010) find that firms change their financial policies significantly following the onset of the crisis. Campello, Giambona, Graham, and Harvey (2011) show that firms alternate between credit lines and internal liquidity when facing a severe credit shortage. Becker and Ivashina (2014); Leary (2009) argue that firms substitute bank loans for bonds and equity during periods of bank lending contraction when they have access to both sources of funding. Our paper contributes to the literature by identifying political connection as an important factor in explaining the variance of corporate capital structure in crisis. The explicit and implicit guarantees of political connection increase firms' ability in substituting damaged bank lending with other public external financing.

The remainder of the paper is organized as follows. Section II develops the hypotheses. Section III describes the data and constructs main variables. Section IV analyzes the net effect of political connections in crisis. Section V examines how political connections insulate firm value from the crisis. Section VI discusses the potential multiplier effect of political connections. Section VII concludes.

II. Hypothesis

The 2007-2009 financial crisis leads to tremendous losses in the banking industry and other industry sectors. The crisis is originated in the bank industry. Banks in the crisis suffer huge losses, which in turn lower their ability and willingness to lend (Puri, Rocholl, and Steffen, 2011). The limited bank lending evolves into financing shortages for non-financial firms, affecting these firms' financing, investment, and operations. A large body of research has shown that the crisis leads to liquidity dry-up. Firms exposed experience severe funding shortage (Chava and Purnanandam, 2011; Santos, 2011). They are forced to forgo valuable investments due to the limited financing (Paravisini, 2008; Duchin et al., 2010; Schnabl, 2012; Carvalho et al., 2015). As a result, their firm value is dramatically damaged (Carvalho et al., 2015; Chava and Purnanandam, 2011). They are more likely to fail (Ivashina and Scharfstein, 2010; Lins, Volpin, and Wagner, 2013). There is no doubt that the crisis has done serious damage to firms and the economy.

The crisis may harm politically connected firms further. The corporate and social welfare losses may trigger government interventions, or agent exploitation, imposing burdens on firms. When the whole economy is affected, the government is induced to pull all the resources it controlled to help mitigate the recession and maintain social stability. These policy objectives pursued may be at odds with firms' interests (Boycko et al., 1996; Bertrand et al., 2007). Other special interest groups may also press the government to intervene and pursue their goals inconsistent with firm value maximization, such as employment (Bennedsen, 2000; Boycko et al., 1996; Faccio and HSU, 2017). In addition to the government intervention for social welfare, politicians may also intervene for personal benefits (Shleifer and Vishny, 1994; Tahoun, 2014). Previous studies show that politicians seek benefits from connected firms to help secure voting (Alok and Ayyagari, 2020). For example, Dinç (2005) finds that

government-owned banks increase their lending activity in election years to help incumbents gain voter support. Sapienza (2004) shows that the amount of credit extended and funding cost required by banks are conditional on the manipulating power of the controlling party. Faccio and HSU (2017) shows that connected firms in states with competitive election races, hire more before elections. These rent-seeking behaviors by politicians should be more pronounced in the crisis, when the public place more attention on politicians and their actions, and rewards politicians for catering to their needs.

Meanwhile, connection with the government could motivate managers to pursue personal gains. Connection with the government opens up the possibility for managers to exploit firms, since political connection weaken the disciplining effect of the market and the government. For example, Jagolinzer et al. (2020) document that political connections are associated with higher levels of insider trading. The crisis further increase managers' incentives to expropriate, as expected returns or benefits in the future shrinks (Johnson, La Porta, Lopez-de Silanes, and Shleifer, 2000). Increased incentives combined with enhanced capability naturally result in higher rent-seeking costs by managers.

Thus, we expect connected firms to suffer more in crisis. Their firm value are more dampened. The costs of political connection dominate due to interventions by government, politician, and manager, regardless of their intentions.

Hypothesis A: *Political connection dampens firm value in crisis. The more connected a firm is, the more losses it would suffer.*

However, it is also possible that the adverse impact of the crisis are limited when firms are politically connected. The crisis hurt non-financial firms through restrictions on bank credit mainly. If firms have no external financing needs, or can compensate for bank-specific credit

losses by borrowing from alternative sources, the bank lending effect could be smoothed out. The adverse effect of the crisis is thus negligible.

Ample evidence shows that politically connected firms enjoy favorable treatments in various aspects. First, politically connected firms get more government procurement contracts (Goldman et al., 2013; Schoenherr, 2018). These contracts are valuable for firms as they are usually tremendous and stable (Cohen and Li, 2020; Dhaliwal, Judd, Serfling, and Shaikh, 2016). On the one hand, the tremendous sales increase corporate internal capital, decrease its external financing needs. On the other hand, government contracts increase firms' sales stability and reduce their operating risk (Burke, Convery, and Skaife, 2015; Lee, Jiraporn, and Song, 2020). To the extent that creditors value operational stability, increased sales to the government would improve firms' access to finance. For example, Goldman (2020) shows that having the government as a major customer improves corporate credit worthiness, increases corporate investment, and ultimately enhances firm value.

Second, politically connected firms have better access to financing and lower financing costs. (Faccio et al., 2006; Khwaja and Mian, 2005) find that politically connected firms are favored in banking lending. They borrow more at lower costs with less strict covenants. In addition to bank debt, connected firms are better equipped to raise funds through the equity market. They are more likely to go public (Piotroski and Zhang, 2014) and bear lower costs of equity afterward (Boubakri et al., 2012). Generally, Leuz and Oberholzer-Gee (2006) find that connected firms are comparably favored in the domestic capital market, while non-connected firms have to seek resources overseas. With these funding supports provided by political connections, connected firms should be less binding in liquidity.

Third, in addition to the explicit guarantees discussed above, political connection provides firms with valuable implicit guarantees. Connection with the government can help firms to

cope better with uncertainties (Agrawal and Knoeber, 2001; Ovtchinnikov, Reza, and Wu, 2020). It increases firms' likelihood of being bailed out when they are in distress (Faccio, 2006; Faccio and Parsley, 2007), thus decreasing the probability of going bankrupt. For example, (Blau et al., 2013) show that connected firms are more likely to receive government support funds in crisis, and they receive the rescue funds earlier. These implicit guarantees of bailout minimize corporate risk (Borisova and Megginson, 2011; Borisova, Brockman, Salas, and Zagorchev, 2012), thereby enhancing firms' financing ability in the capital market.

In general, we propose that political connection could hedge firm value against adverse shocks in crisis. The explicit and implicit guarantees provided by political connection increase firm resilience and limit the damage of adverse shocks. This is acute and important in crisis when external financing is restricted (Duchin et al., 2010) and firms are more likely to go bankrupt (Ivashina and Scharfstein, 2010; Lins et al., 2013; Puri et al., 2011).

***Hypothesis B:** Political connection preserves firm value in crisis. The more connected a firm is, the less losses it would incur.*

III. Data

We collect data from several datasets to test these hypotheses: campaign contribution data from the Center for Responsive Politics (CRP), election data from the Federal Election Commission (FEC), and corporate financial performance data from the Compustat. Combining campaign contribution data with the Compustat, we develop a basic measure of corporate political connections. Incorporating election data from FEC, we further explore variation in the power of political connections and build several modified measures for robustness.

The sample starts with all Compustat firms from 2005Q1 through 2009Q4. We date the beginning of the crisis as 2007Q3, and construct a sample by splitting the pre- and post-crisis periods evenly by calendar quarter. This balanced sample has the advantage of averaging out any seasonal patterns in the data⁵. To be included in the sample, we require firms to have non-missing value for sales and firm size. Following the literature, we exclude financial firms (SIC codes 6000-6999) and utilities (SIC codes 4900-4999).

Making campaign contributions is one major way for firms to seek political connections⁶. The CRP provides detailed information on corporate campaign contributions. It includes the date and amount of the contribution, the identities of the contributor and receiver, and the employer (the parent firm) of the contributor. Based on this detailed data, we are able to track campaign contributions directly from firms to politicians. Indirect contributions channeled through other PACs are excluded to create a clean tracking of contributions from original contributors to final receivers⁷. We aggregate corporate contribution data to the firm-politician level on a semi-annual basis. If a firm makes any contribution to a candidate in a semi-year, then we identify the firm to be connected to or has political connections with the candidate in that semi-year.

Similar to Duchin et al. (2010), we focus only on corporate political connections in the

⁵Given that the crisis actually begins in August 2007, our approach to comparing firm performance before and after the 2007Q3 is relatively conservative.

⁶Previous research has validated its usage. See Claessens et al. (2008); Cooper et al. (2010); Ovtchinnikov and Pantaleoni (2012); Akey (2015); Bradley, Pantzalis, and Yuan (2016); Ovtchinnikov et al. (2020) for example.

⁷That is, we only include campaign contributions from firms and their employees to candidates. Firms can not contribute directly to candidates. They must form Political Action Committees (PACs) first, and then contribute through these PACs. Candidates can not receive contributions directly. They must also form PACs and receive contributions through these PACs. There are three types of PACs that candidates can build, including leadership PACs, party PACs, and election PACs. We only focus on contributions to election PACs, since the funds of these PACs are mainly used for their elections. Contributions can be transferred between PACs before they are finally handed to candidates. We exclude these contributions and focus on corporate contributions directly to candidates, to ensure a clear connection between firms and politicians.

five years before the start of the crisis, and then freeze the measure throughout the entire sample period. This methodology is similar to the instrumental variable approach. Given the unexpected nature of the financial crisis, the pre-crisis political positions are not related to unobserved within-firm changes in firm opportunities during the crisis. It can help avoid the self-selection concern of firms self-selecting into the politically connected group in crisis and the omitted variable concern about unobserved factors affecting firm performance and the establishment of political connections in crisis.

After merging campaign contribution data with the Compustat data using fuzzy name matching⁸, we construct a basic measure of political connection. We measure the level of corporate political connection by counting the number of supported candidates. Specifically, we define our basic measure of political connection as the total number of political candidates contributed by a firm in the five years preceding the crisis (2003Q1-2007Q2) following the Cooper et al. (2010)⁹.

$$lncand_i = \ln\left(1 + \sum_{c=1}^C Cand_{i,c,2003Q1-2007Q2}\right) \quad (1)$$

where $Cand_{i,c,2003Q1-2007Q2}$ is an indicator for whether firm i has contributed to candidate c before crisis (from 2003Q1 to 2007Q2). The variable is fixed throughout the whole sample period.

For robustness, we explore the characteristics of politicians to better understand the source of the contribution effect. Political connections are not equally important. Connections with some politicians are more relevant and valuable. They generate more value for firms. We hypothesize that connections with politicians in office, chairing committees, or

⁸All matched names are manually checked.

⁹As suggested by Snyder (1992), a 5-year window is reasonable to capture potential candidate-firm relationships.

sitting on powerful ones are more valuable. They are in a better position to help connected firms, and thus more appealing to contributing firm (Grier and Munger, 1991; Romer and Snyder Jr, 1994; Ansolabehere and Snyder Jr, 1999).

Integrating election-related and committee assignment information with corporate contribution data, we develop some variations on our basic measure of political connection. First, we count the number of contributed politicians in office in 2007. The election result data from FEC helps us determine whether a politician is in office during the crisis year (2007). The measure is thus

$$\ln Inoffice_i = \ln\left(1 + \sum_{c=1}^C Cand_{i,c,2003Q1-2007Q2} * I_{c,2007}\right) \quad (2)$$

where $I_{c,2007}$ is an indicator of whether candidate c is an active congressman in 2007.

Second, we explore the committee assignments of contributed politicians. We count the number of politicians sitting on powerful committees in 2007 to capture their varying power and ability. The measure is thus

$$\ln Power_i = \ln\left(1 + \sum_{c=1}^C Cand_{i,c,2003Q1-2007Q2} * I_{c,2007} * PowerComm_{c,2007}\right) \quad (3)$$

where $PowerComm_{c,2007}$ is an indicator of whether candidate c is sitting on at least one powerful committee in 2007.

Finally, we examine the relative committee rank of politicians as a proxy for their power and ability. Specifically, we weigh politicians by their relative ranking scores in assigned committees, and then scale the variable by the ratio of total votes held by the candidate's party in congress. The idea is that it is much more meaningful and influential to connect with politicians who are highly ranked and belong to the controlling party. The measure is

thus:

$$\ln Rank_i = \ln\left(1 + \sum_{c=1}^C Cand_{i,c,2003Q1-2007Q2} * I_{c,2007} * \left[\sum_{m=1}^M \frac{Rank_{m,2007}}{MedRank_{m,2007}}\right]_c * \frac{NCV_{c,2007}}{NOV_{c,2007}}\right) \quad (4)$$

where $Rank_{m,2007}$ measures rank scores of candidate c on committee m in year 2007. The rank score is calculated as the inverse of the politician's rank in the committee. $MedRank_{m,2007}$ is the median rank score of all politicians on committee m in 2007. $NCV_{c,2007}$ measures the number of votes held by the party of candidate c . $NOV_{c,2007}$ measures the number of votes held by the opposing party of candidate c . Generally, the larger the metric, the more powerfully connected the company is.

We merge the four measures of political connection with quarterly data from Compustat and report summary statistics in table I¹⁰. It shows that on average, a firm would have contributed to about 15 candidates in the five years before the crisis. Among them, 11 politicians are active officers in 2007, and 7 serve on powerful committees. Political connection is not rare. It generates substantial variability across firms. The minimum number of political connections a company has is 0, while the maximum could reach 272¹¹. Thus, we log all the proxies.

Table I also report summary statistics for other firm characteristics. Most importantly, we pay attention to customer composition, that is, whether a firm has the government as a major customer in the four years preceding the crisis. As the literature has documented the importance of supplying the government¹², it is important to control for it when studying the net value of political connections. On average, only 7.5% of firms are government suppliers¹³.

¹⁰All continuous variables are winsorized at the 1% and 99% percentiles.

¹¹This is untabulated but available upon request

¹²See Cohen and Li (2020); Dhaliwal et al. (2016); Burke et al. (2015); Goldman (2020) for example

¹³The supply-chain relationship data is collected from the Compustat segment file. Firms are required to report customers who account for at least 10% of sales. If a firm reports the government as its major

Having the government as a major customer is much less common than building political connections. The perversion of political connection makes it more important to discuss its value and effects on firms. Note that, controlling for the effect of supplying the government makes our findings on the net value of political connection more conservative since increasing government contracts is one of the benefits brought by political connection.

IV. Whether the Helping Hand of Political Connection Always Help

In this section, we primarily address the question of whether the helping hand of political connection always helps, especially during economic downturns. We first examine the out-of-equilibrium valuation effect of political connections during the crisis. Next, we perform several robustness tests. Then, we explore the variation of the valuation effect conditional on corporate financial conditions, including financial vulnerability, financing needs, and the ability to raise funds externally.

A. Baseline Results

To formally test the net effect of political connection in crisis, we implement a Difference in Difference (DiD) framework using the 2007-2009 financial crisis as an exogenous event. We examine changes in firm value around the crisis against pre-crisis political connection stocks. Specifically, we estimate the following regression at the quarterly level:

$$Y_{i,t} = \beta_1(PCstock_i * Crisis_t) + X_{i,t-1} + \alpha_i + \alpha_{j,t} + \varepsilon_{i,t} \quad (5)$$

customer, we classify the firm as a government supplier.

where $Y_{i,t}$ is the firm value of firm i in calendar year-quarter t . The main variable of interest $PCstock_i$ measures corporate political connection in stock before the crisis. It includes the four proxies developed in the Data section. $Crisis_t$ is a dummy variable that equals one for quarters in the crisis period (2007Q3-2009Q4). $X_{i,t-1}$ represents a set of control variables, including firm size, leverage, cash holding, intangibility ratio, profitability, sales growth, R&D expenditure, and importantly an indicator for government suppliers. We also include industry-time and firm fixed effects to control for time-variant industry fluctuation and time-invariant differences between firms. j indexes industries at the 2-digit sic industry level. Standard errors are clustered at the firm level.

Table II reports the regression results. It shows that political connection preserves firm value during the crisis. Political connection exhibits a stabilizing and insurance role against adverse liquidity shocks. The β_1 coefficient before the interaction term is positive and significant at the 1% level, regardless of the measure for political connection being used. It implies that firms experience lower drops in their firm value during the crisis if they are more connected or connected with more powerful politicians. On average, a one standard deviation increase in the level (power) of political connection maintained by the firm would save firm value by 3.27% (3.24%). The effect is both statistically and economically significant. These results are more in support of Hypothesis A, suggesting an important role of political connection in buffering firms against the crisis.

It is important to note that, we control the possibility of firms supplying the government. The positive valuation effect we documented is in addition to the effect of supplying the government. The controlling also makes our findings conservative, as favorable treatment in government contracts is one important channel for political connection to benefit firms.

Controlling for it would partially absorb the benefits of political connection in crisis.¹⁴

We also analyze the dynamic effects of political connection at different points in time around the crisis. Table III reports the coefficient of the interaction term between political connection and calendar year dummies. The crisis year 2007 is omitted as the reference year. It shows that political connection does not lead to any significant difference in firm value before the crisis, while it greatly increases the value of connected firms during the crisis. The value-preserving effect is strongest when the crisis reaches its peak in the year 2008. The pattern persists when we test the dynamics at the quarterly level. Figure 1 plots the coefficients on the interaction terms between political connection and year-quarter dummies. Time 0 marks the onset of the crisis (2007Q3). The reference quarter 2007Q2 is omitted. Still, the difference in firm value caused by political connection appears to be significant following the onset of the crisis.

In general, political connection increases corporate resilience to economic downturns. It is effective in stabilizing and insuring firms against adverse shocks. During the crisis, connected firms fare better. The cost of political connection is outweighed by its benefits.

B. Robustness

So far, we have taken several approaches to mitigate endogeneity issues and ensure causality. We especially exploit the crisis as an exogenous event and focus on corporate political connection before the crisis for identification. The unexpected nature of the crisis mitigates the concern that firms would foresee the economic downturn and thus prepare political capital in advance for precaution. The reliance on pre-crisis political connection addresses concerns that some omitted variables affect corporate investment opportunities and inten-

¹⁴In results untabulated, we show that the coefficient before *GovCus* is significantly positive when we do not include corporate political connection in regressions.

tion to build political connections during the crisis simultaneously. Firm fixed effects and industry-time fixed effects account for the time-invariant difference among firms and time-varying industry fluctuation which may drive the findings. The current setting should be effective in identifying causal relationships between political connections and firm value.

To further validate the causality, we conduct several tests for robustness. First, we show that our main results stand when we reconstruct the sample and include only politically active firms. Firms do not randomly decide to get involved in politics. Their choice introduces a potential self-selection bias into the observed sample. To control for this bias, we exclude politically inactive firms, comparing changes in firm value between connected firms that differ in their degree of connection. Panel A of Table IV reports the results for the main specification estimated on the restricted sample. It shows that even within contributing firms, political connection is significant and positively related to firm value. More political connections and connections with more powerful politicians generate stronger value-preserving effects during the crisis.

Second, we demonstrate that no similar results are obtained for placebo crises. We identify 2005Q3-2006Q3 as the pseudo-crisis period and investigate the role of political connection over the new window from 2004Q1-2006Q3. This new window is outside the crisis period, covering the market boom. Results in this new event window provide a benchmark value of political connection in the absence of adverse economic shocks. Panel B of IV presents the results. It shows political connection has no significant impact on firms during the pseudo-crisis period. The coefficients before the interaction term are even negative. It suggests that the costs of political connection dominate in market booms, while the benefits overwhelm in economic downturns. Political connections are more valuable during market downturns than in market booms. The evidence may provide consolidation for the mixed findings about the

value of political connections in the literature.

Third, we consider some potential confounding effects. So far, the sample period extends to 2009Q1. It includes the period when the government intervenes through TARP to stabilize the economy, as well as the period when the demand-side effect of the crisis emerges. To exclude these potential confounding effects, we limit the sample period to 2006Q4-2008Q2, since both government bailouts and the demand-side effect of the crisis start after 2008Q2. Regression results over this limited window are presented in Panel C of Table IV. Similar to the main findings, we demonstrate that the coefficients before the interaction terms are highly positive and significant. Thus, the main findings above are not driven by government rescue plans and the demand-side effect of the crisis. Results are robust when limiting the confounding effects.

Finally, we show that our findings are insensitive to the clustering method. In addition to clustering at the firm level, we cluster standard errors by firm and time to alleviate the concern that standard errors are correlated within time. According to the results in Panel D of Table IV, our results are qualitatively unchanged.

C. Cross-Sectional Analyses

Keeping in mind the stabilizing value of political connection, we next explore the variance of the effect across firms. The crisis dampens the bank credit market, putting heavy burdens on bank lending. For the crisis to generate an aggregate impact on firms, it must not only that the supply shock occurs, but the shock is binding for borrowing firms. Thus, we explore firm characteristics to test whether political connection is more valuable to these binding firms, as it should be. Specifically, we explore corporate financial vulnerability, external financing needs, and the ability to substitute the damaged credit in detail. We hypothesize

that firms with higher financial vulnerability, greater external financing needs, and weaker ability to access alternative credit markets are more affected by the crisis. They would find the crisis to be more binding and political connection to be more valuable. We investigate these predictions by estimating

$$Y_{i,t} = \beta_1(PCstock_i * Crisis_t * High_i) + \beta_2(PCstock_i * Crisis_t) + \beta_3(Crisis_t * High_i) + X_{i,t-1} + \alpha_i + \alpha_{j,t} + \varepsilon_{i,t} \quad (6)$$

where $High_i$ is a dummy variable that equals one if the continuous (dummy) conditional variable of interest is higher than its median value (0), 0 otherwise. Conditional variables are calculated based on pre-crisis firm characteristics. All other measures are defined the same as in the main specification. For brevity, we report only coefficients for the triple interaction terms.

C.1. Financial Vulnerability

We first investigate corporate financial positions and assume the crisis to be more binding on financially vulnerable firms. Recent studies show that firms in weaker financial positions during the financial crisis are more vulnerable. They are associated with more damage by the crisis (Duchin et al., 2010; Almeida et al., 2009). Particularly, financially constrained firms have less financing ability and resources at hand to cope with the crisis. They would thus hurt more. Small firms tend to be more bank-dependent which makes them more sensitive to the health of financial intermediaries and credit conditions (Iyer, Peydró, da Rocha-Lopes, and Schoar, 2014), unlike large firms which are usually too-big-to-fail. If political connection can help alleviate the impacts of the crisis, we would expect its benefits to be more valuable

for these two types of firms.

Inspired by these studies, we develop two proxies for corporate financial vulnerabilities: financial constraints and firm size. Following (Duchin et al., 2010; Garcia-Appendini and Montoriol-Garriga, 2013), we measure financial constraints by the Whited-Wu index (Whited and Wu, 2006) and the Hadlock-Pierce SA index (Hadlock and Pierce, 2010). Market share is computed based on sales in the TNIC industries in Hoberg and Phillips (2016). All three measures are calculated in the pre-crisis quarter (2007Q2).

Table V presents the results. Different columns report DDD results using different measures of political connection. Panels A, B, and C show the cross-sectional results when we bisect the sample by the median value of the WW index, SA index, and market share, respectively. All coefficients before the triple interaction term are positive and significant at the 1% level in panels A and B, and significantly negative in panel C. To the extent that financially constrained firms and small firms are more vulnerable to the crisis, the findings support the hypothesis that political connections are more valuable for financially vulnerable firms.

C.2. Financing Need

Second, we explore different external funding needs of firms. In addition to financial vulnerabilities, funding needs at the time of crisis are also critical. If a firm does not have any external funding needs, the limited supply of bank credit in the crisis would not have any impact on the firm. Therefore, we expect to see limited impacts of the crisis on firms without strong external financing needs. We use several proxies for corporate external financing needs. We hypothesize firms that are relatively small, highly engaged in payouts, and less capable to generate cash internally to have a greater need for external capital. We sort firms

into two groups based on the median of the three proxies and estimate specification 6.

Table VI shows the regression results. In panels A, B, and C, we examine the conditional effect of political connection on firms based on different proxies for corporate external financing needs. The coefficients before the triple interaction term are significantly positive for firms with larger size and higher payout-ratio, and significantly negative for firms with higher profitability. It suggests that firms with higher funding needs, but insufficient internal capital place more value on political connection. The explicit and implicit guarantees of political connection provide higher protection in the firm value of these capital-demanding firms.

C.3. Capability to Access Alternative Financing Market

Finally, we discuss the effect of a firm's ability to substitute the damaged bank credit on the stabilizing value of political connection during the crisis. The financial crisis can be binding only when firms are unable to seek alternative funds to replace the damaged bank credit. Put differently, if firms are better equipped to access alternative funding sources, the adverse effect of bank lending would be neutralized. We propose three measures for firms' ability to replace impaired bank credit. We believe that rated firms, tangible firms, and firms with less information asymmetry enjoy easier access to alternative types of capital. Rated firms are better positioned to seek funds from the bond market. Becker and Ivashina (2014); Leary (2009) show that firms seek funds from the bond and equity market when bank lending is limited. Tangible firms have more tangible assets on hand, which could be used as collateral to increase corporate financing ability when seeking funds from outsiders. The potential collateral improves corporate creditworthiness. Information asymmetry is another important determinant of corporate financing ability. Information asymmetry leads

to adverse selection problems and moral hazard frictions which limit the ability of even profitable and growing firms to raise external capital or substitute between private sources of capital (Holmstrom and Tirole, 1997).

Referring to some other datasets, we construct some variables for the proxies mentioned above. First, we use the S&P long-term rating (`spltrm`) available on Compustat to identify rated firms. If a firm has a non-missing rating in the pre-crisis period, we classify the firm as a rated firm. Second, we measure corporate tangibility based on the ratio of tangible assets to total assets. Third, we measure firms' information asymmetry by relying on analyst coverage data from the IBES database. A firm is considered to be more information asymmetry if there are few analysts following the firm during the pre-crisis period. Conditional on these measures, we bisect the sample and run regression 6 ¹⁵.

Table VII presents the results. It shows that the coefficients before the triple interaction terms are all significantly negative, no matter which proxy for corporate financing ability is used. The stabilizing effect of political connection is muted for rated firms, tangible firms, and apparent firms with a better ability to substitute for damaged bank credit. However, the benefits of political connection are critical for other firms that struggle to obtain other types of financing. Political connection compensates these firms for their weakness in financing.

Taken together, the results above demonstrate the varying stabilizing value of political connection across firms. Using different proxies for financial vulnerabilities, funding needs, and financing ability, we corroborate the value of political connection in crisis. When the crisis breaks the even of the market, the helping hand of political connection intrudes and protects firm value from adverse shocks. The stabilizing effect of political connection is more

¹⁵As the first proxy (whether a firm is rated) is a dummy variable, we do not split the sample based on medians. Instead, we divide the sample based on whether a firm is rated. Thus, *High*=1 in specification 6 refers to rated firms, unrated firms otherwise.

pronounced for firms that are more hurt by the crisis but lack of ways to efficiently respond to the crisis. The results provide further support for the causal interpretation of political connection for protecting firms from the crisis.

V. How does the Helping Hand of Political Connection Always Help?

Results so far confirm the stabilizing and insurance value of political connection during the crisis. It is intuitive to ask next how the political connection can help increase corporate resilience to the crisis. In this section, we explore specific benefits brought by political connections. With explicit and implicit guarantees from the government, connected firms should be less exposed to risk. They should be better equipped to mitigate the adverse impact of bank-lending shocks by resorting to other credit markets. These benefits should be reflected in corporate investments by saving firms from forgoing profitable opportunities.

A. *Corporate Risk*

We first check the benefits of political connection in risk-reducing, that is, whether political connection can reduce corporate risk in the crisis. If political connection is effective in stabilizing firms and increasing their resilience to adverse shocks, we would expect firms with more political connections to be less volatile. We test this hypothesis using two proxies for corporate risk, including excess return volatility and average 1-month implied volatility. The excess return volatility is calculated as the standard deviation of daily market-adjusted excess return within each quarter, where stock return data is collected from the CRSP. The 1-month implied volatility is measured as the average of daily 1-month implied volatility

in call options. The daily option-implied volatility data comes from OptionMetrics. The database provides implied volatility in at-the-money call options using the Black-Scholes model. To examine firm risk changes for connected and nonconnected firms, we rerun the main specification with dependent variables replaced.

Results are shown in Table VIII. Panel A reports results investigating the effect of political connection on excess return volatility. Panel B reports the results using the average 1-month implied volatility as the dependent variable. In both panels, the coefficients before the interaction term are significantly negative. It suggests that more connected firms face less risk in the crisis. The results provide direct evidence for the stabilizing effect of political connection from the perspective of the capital market.

B. Corporate Financing

We next test the role of political connection in corporate financing. Since the crisis affects firms primarily by suppressing bank lending, it would be effective for firms to cope with the crisis though finding alternative funds to compensate for the supply-demand imbalance. Politically connected firms are tempted to reach alternative credit markets. They are also more capable of doing so. The explicit and implicit guarantees of political connection provide firms the leverage, enhancing their financing flexibility. We thus expect politically connected firms to strategically adjust their financing structures. To provide some evidence on this point, we examine corporate financing structures during the crisis. Specifically, we focus on three major financing markets, including the stock market, the public debt market, and the private bank lending market. We examine whether connected firms issue more equity and public debts, and release their reliance on the bank loans.

Table IX reports the results when we rerun the main specification with characteristics of

corporate financing structures as the dependent variables. In panel A, we examine the general effect of political connection on financing capability. Total leverage is used as the dependent variable. It shows that political connection significantly increases corporate leverage during the crisis. Consistent with (Khawaja and Mian, 2005; Faccio et al., 2006), political connection improve firms' access to finance.

We then decompose corporate financial structure and examine the effect of political connection on different components respectively. In Panel B, we examine the effect on new bank debt received by firms during the crisis¹⁶. In Panel C, we test the effect on the net issuance of other public debt. In Panel D, we test the differential response of firms' equity issuance during the crisis for connected firms and others. The coefficients before the interaction term are all significantly negative in Panel B, while significantly positive in Panel C and Panel D, no matter which proxies for political connection is used. Political connection decreases the amount of bank debt received by firms, but increases their debt and equity issuance.

Overall, the findings indicate that political connections secure corporate financing while altering their financing strategies. Instead of increasing corporate competitiveness in obtaining bank loans, political connections shift the focus of corporate financing to other credit markets. It induces firms to increase public debt and equity issuance. Financial restructuring can add value for firms. As discussed by Titman (2002), financing choices can enhance firm value in imperfect markets by altering the security issued in response to the supply-demand imbalance in the capital market.

¹⁶Detailed bank loan data is retrieved from the DealScan database. The database provides information on lenders, borrowers, loan dates, loan amounts, and covenants. We aggregate new bank loans received by firms at the quarterly level.

C. Corporate Investment

Our final set of tests in this section focuses on corporate investment during the crisis. Investments are critical for corporate operation and growth in the future. However, the crisis leads to sharp drops in corporate investment due to funding shortage (Duchin et al., 2010; Kahle and Stulz, 2013). When political connection secures corporate financing by compensating the bank-lending deficiency with alternative types of funds, we would fully expect the connected firms to suffer less in investments, and eventually firm value. To provide a full picture of political connection on corporate investment, we analyze the effect of political connection on various types of investment, including the typical capital expenditure and other daily operating expenditures.

Table X presents the effect of political connection on various corporate investments. Panel A and B report coefficients before the interaction term when the capital expenditure, net working capital are used as dependent variables. It shows that political connections are positively related to capital expenditure and net working capital expenditure. The relations are all significant at the 1% level. Consistent with the hypothesis, political connection protects corporate investment. The results corroborate the causal valuation effect of political connection, as the effect is supported by real effects on firms.

Taken together, the findings in this section resoundingly support the valuable role of political connection during the crisis. Political connections lower corporate risk, diverting financing from banks to alternative sources, consequently, save firms from forgoing valuable investments. The results corroborate the causal valuation effect of political connection, as the effect is supported by real effects on firms.

VI. Liquidity Intermediary Role of Politically Connected Firms

To the extent that political connections benefit directly connected firms, what effect does it have on indirectly connected firms? What are the potential externalities of political connection in the economy? On the one hand, political connection may hurt suppliers if it increases the bargaining power of connected firms as stable customers are appealing to suppliers. In this case, the costs on suppliers cancel out the benefits for connected firms. The overall effect of political connection on the economy is blurred. On the other hand, the benefits of political connection may spill over to suppliers as stable customers can reduce supplier sales volatility and operational risk (Goldman, 2020; Burke et al., 2015). In this case, political connection increases total social welfare.

We analyze the potential benefits extended by connected firms to their suppliers from the perspective of trade credits. Trade credit is, after bank credit, the second most important type of private debt. It is critical for growth and economic activity (Cunat, 2007; Giannetti, Burkart, and Ellingsen, 2011). However, providing trade credit can be costly for suppliers, especially when in the crisis. As suppliers are usually smaller, they would find it more difficult to get capital from banks when bank lending is limited. If connected firms with better financing conditions redistribute liquidity to constrained suppliers through trade credit, it would offset, at least partially, the adverse liquidity shocks. Suppliers, in turn, benefit greatly from customers' political connections. We test the hypothesis using the main specification with the dependent variable replaced by the change in payable.

Table XI report the results. The results show that political connections are beneficial to indirectly connected firms. The coefficients on the interaction term between political con-

nection and crisis dummy are significantly negative at 1%. Politically connected firms claim less for trade credit during the crisis from suppliers. In other words, connected firms serve as intermediaries, redistributing liquidity obtained from other credit markets to suppliers through trade credit. The finding is consistent with previous research on the redistributive effect of trade credit from firms with better access to financial markets to firms constrained (Meltzer, 1960; Fisman and Love, 2003).

Overall, the benefits of political connection extend along the supply chain network through trade credit. Adverse liquidity shocks are absorbed when hit the deep-pocketed. Political connection benefits both directly and indirectly connected firms, and thus contributes to better social welfare. Our study provides novel evidence for a beneficial multiplier effect of political connection during the crisis.

VII. Conclusions

This paper provides comprehensive evidence on the out-of-equilibrium value of political connections in crises. Using the financial crisis as an unexpected exogenous shock and measuring political connection on the pre-crisis basis, we investigate the net effect of political connection on firm value during the crisis, when both the cost and benefit dynamics of political connection change dramatically.

We show that political connection increases corporate resilience to the crisis. It insulates firm value from adverse shocks. The hedging effect is more pronounced for financially binding firms. During the crisis, political connection reduces corporate risk, and alters corporate financing strategies, shifting their reliance from the damaged bank market to alternative credit markets, such as other public debt and equity markets. Consequently, connected

firms enjoy better protection in corporate investments.

We also document a beneficial multiplier effect of political connection along the supply chains. Connected firms enjoying better financing insurance serve as intermediaries. They redistribute liquidity to suppliers by reducing trade credit requirements from suppliers. Adverse liquidity shock is mitigated when hit the deep-pocketed.

The results in this paper provide a comprehensive picture on the net effect of political connection in economic downturns from financing, investing, operations to firm value. It helps to reconcile mixed findings in the literature about the value of political connection. It also contributes to explaining the pervasiveness of political connection among firms. Political connection provides a valuable buffer against economic distress, and serves as a defensive investment mechanism. Reflecting the non-inclusive nature of political connections, we are also the first to document the externality of political connections deeper in economic networks during recessions. The results are important and essential to fully understand the value of political connections under different conditions.

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Table I: Summary Statistics

This table reports summary statistics for main variables. The sample includes all firms with non-missing values in firm size, sales, and firm value, excluding financial firms and utilities. The sample period is from 2005Q1 to 2009Q4. Political connections are defined based on campaign contribution data before the crisis. Specifically, a firm is defined to be connected to a politician if the firm has contributed to the candidate in the five years before the financial crisis (2003Q1-2007Q2). *Incand* is the natural logarithm of 1 plus the number of connected candidates. *lnInoffice* is the natural logarithm of 1 plus the number of connected candidates who are in office at the start of the crisis. *lnRank* is the natural logarithm of 1 plus the average ranking of connected candidates in their corresponding committees at the start of the crisis. *lnPower* is the natural logarithm of 1 plus the number of connected candidates who are sitting on powerful committees at the start of the crisis. *Tobin'sQ* is the market value of a firm's asset divided by the book value. *Crisis* is a dummy variable that equals one if a quarter is after 2007Q2, and zero otherwise. *GovCus* is a dummy variable that equals one if a firms supply the government in the pre-crisis period, zero otherwise. Detailed definitions for all variables are presented in the appendix. All continuous variables have been winsorized at the 1% and 99% levels.

	Obs.	Mean	St.D.	25 percentile	Median	75 percentile
Tobin's Q	60,794	2.039	1.343	1.201	1.618	2.382
Incand	60,794	1.248	1.420	0.000	0.693	1.946
lnInoffice	60,794	1.035	1.322	0.000	0.693	1.609
lnRank	60,794	0.654	0.979	0.000	0.000	0.910
lnPower	60,794	0.836	1.167	0.000	0.000	1.386
GovCus	60,794	0.075	0.263	0.000	0.000	0.000
Crisis	60,794	0.490	0.500	0.000	0.000	1.000
Size	60,794	6.248	1.928	4.822	6.151	7.552
Leverage	60,324	0.195	0.206	0.004	0.147	0.307
Cashholding	60,759	0.216	0.227	0.038	0.127	0.328
Intangibility	60,761	0.174	0.194	0.009	0.100	0.288
ROA	59,665	0.023	0.049	0.011	0.029	0.047
SalesGrowth	59,898	1.048	0.266	0.945	1.024	1.106
R&D	60,794	0.273	1.294	0.000	0.000	0.091

Table II: Valuation Effect of Political Connections During the Crisis

This table presents regression results for the impact of political connections on firm value during the crisis. The entire sample period ranges from 2005Q1 to 2009Q4. The dependent variable (*Tobin's Q*) is calculated as the market value of total assets divided by the book value. Political connections are defined based on campaign contributions in the five years before the financial crisis. *Incand* is the natural logarithm of 1 plus the number of connections a firm built in the five years before the crisis. *lnInoffice* is the natural logarithm of 1 plus the number of politicians connected with a firm who is in office at the start of the crisis. *lnRank* is the natural logarithm of 1 plus the average ranking scores of connected politicians at the start of the crisis. *lnPower* is the natural logarithm of 1 plus the number of connected politicians sitting in powerful committees at the start of the crisis. The crisis period is defined as 2007Q3-2009Q4. *Crisis* is a dummy variable that equals one for quarters within the crisis period. *GovCus* is a dummy variable that equals one if a firm supplies the government in the previous three years. Standard errors are clustered by firm. The analysis is based on quarterly data. Detailed definitions for all variables are provided in the appendix. All continuous variables are winsorized at the 1% and 99% levels. *t*-values are in parentheses. ***, **, * represent significance at 1%, 5% and 10% level of confidence, respectively.

	<i>Dependent variable: Tobin's Q</i>							
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Incand * Crisis	0.047*** (5.225)	0.024*** (2.735)						
lnInoffice * Crisis			0.050*** (5.378)	0.025*** (2.796)				
lnRank * Crisis					0.064*** (5.070)	0.033*** (2.692)		
lnPower * Crisis							0.060*** (5.896)	0.031*** (3.079)
Size		-0.667*** (-16.305)		-0.667*** (-16.303)		-0.667*** (-16.301)		-0.666*** (-16.281)
Leverage		0.038 (0.356)		0.038 (0.358)		0.039 (0.371)		0.038 (0.359)
Cashholding		0.888*** (7.227)		0.889*** (7.229)		0.891*** (7.242)		0.888*** (7.223)

Intangibility		-0.040 (-0.293)		-0.040 (-0.295)		-0.040 (-0.293)		-0.042 (-0.307)
ROA		3.565*** (8.452)		3.565*** (8.451)		3.566*** (8.452)		3.563*** (8.445)
SalesGrowth		0.046** (2.156)		0.046** (2.156)		0.046** (2.158)		0.046** (2.156)
R&D		0.042** (2.224)		0.042** (2.222)		0.042** (2.222)		0.042** (2.224)
GovCus		0.066 (0.729)		0.066 (0.726)		0.065 (0.718)		0.067 (0.741)
Firm FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Time FE	Yes	-	Yes	-	Yes	-	Yes	-
Ind FE × Time FE	-	Yes	-	Yes	-	Yes	-	Yes
Observations	60,794	59,171	60,794	59,171	60,794	59,171	60,794	59,171
R ²	0.767	0.799	0.767	0.799	0.767	0.799	0.767	0.799

Table III: Dynamic Effect of Political Connections During the Crisis

The table shows regression results for the impact of political connections on firm value in each different year. The entire sample period ranges from 2005Q1 to 2009Q4, and the crisis period is from 2007 to 2009. Year 2007 is the omitted reference year. The dependent variable is Tobin's Q, calculated as the market value divided by the book value of total assets. Columns show the dynamic effect based on different measures of political connections at the start of the crisis. Columns (1)-(2) measure political connections by the number of connections build (*ln cand*). Columns (3)-(4) measure political connections by the number of connections to politicians in office (*ln Inoffice*). Columns (5)-(6) measure political connections by the average ranking scores of politicians connected (*ln Rank*). Columns (7)-(8) measure political connections by the number of connected politicians sitting in powerful committees (*ln Power*). Controls include firm size, leverage, cash holding, profitability (ROA), intangibility, sales growth, R&D expenditure, and a dummy for government contractors. Standard errors are clustered by firm. The analysis is based on quarterly data. Detailed definitions for variables are in the appendix. All continuous variables are winsorized at the 1% and 99% levels. *t*-values are in parentheses. ***, **, * represent significance at 1%, 5% and 10% level of confidence, respectively.

PC:	<i>Dependent variable: Tobin's Q</i>							
	ln cand		ln Inoffice		ln Rank		ln Power	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
PC * Y2005	0.010 (0.962)	0.017* (1.717)	0.008 (0.783)	0.017 (1.618)	0.012 (0.838)	0.025* (1.782)	0.005 (0.452)	0.018 (1.567)
PC * Y2006	-0.008 (-1.126)	-0.001 (-0.097)	-0.010 (-1.302)	-0.002 (-0.230)	-0.016 (-1.605)	-0.004 (-0.421)	-0.014* (-1.677)	-0.004 (-0.484)
PC * Y2008	0.061*** (7.658)	0.040*** (5.204)	0.063*** (7.694)	0.041*** (5.195)	0.077*** (7.121)	0.051*** (4.847)	0.071*** (7.823)	0.046*** (5.320)
PC * Y2009	0.052*** (5.305)	0.029*** (3.216)	0.053*** (5.272)	0.030*** (3.126)	0.065*** (4.824)	0.039*** (3.109)	0.062*** (5.598)	0.035*** (3.329)
Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Firm FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Time FE	Yes	-	Yes	-	Yes	-	Yes	-
Ind FE × Time FE	-	Yes	-	Yes	-	Yes	-	Yes
Observations	60,794	59,171	60,794	59,171	60,794	59,171	60,794	59,171
R ²	0.768	0.799	0.768	0.799	0.767	0.799	0.768	0.799

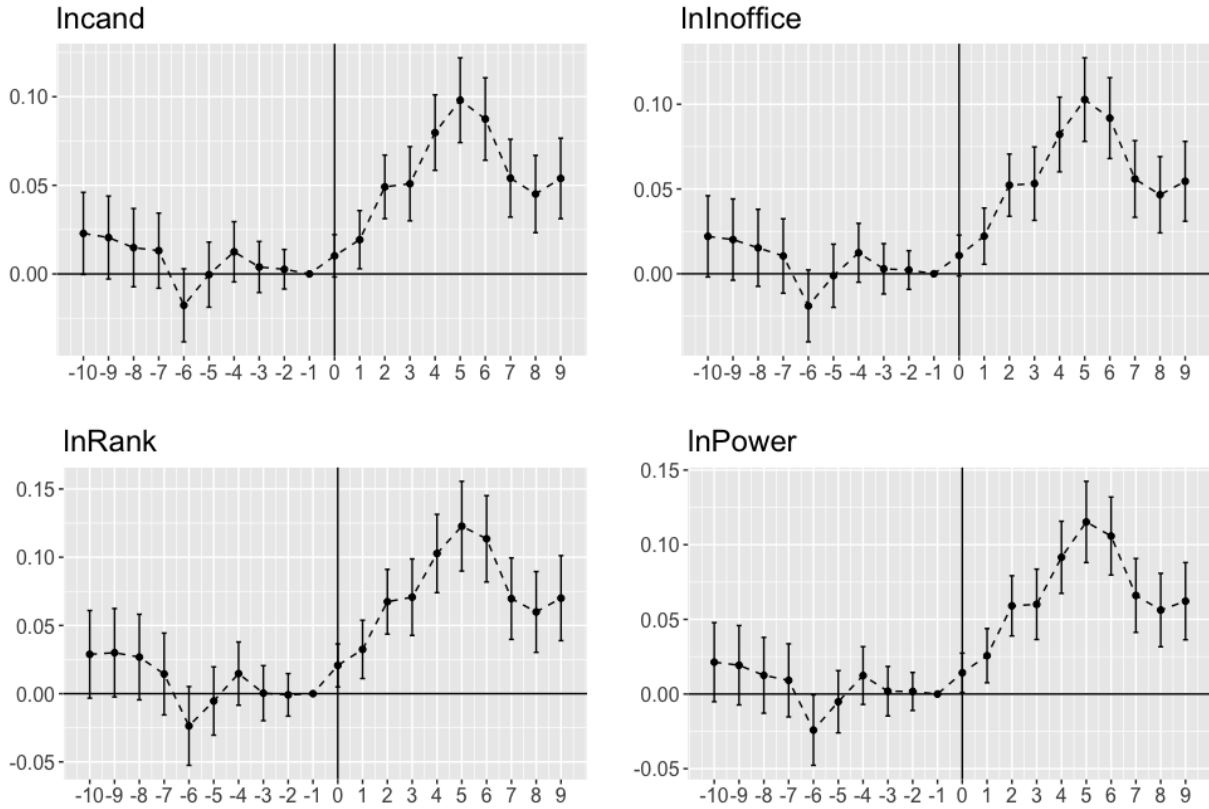


Figure 1. Dynamic Effects of Political Connections on Firm Value

The figure shows the dynamic effects of political connections on firm value at different quarters around the crisis. It prints the coefficients and 95% confidence intervals of the interaction term between political connections and the crisis dummy ($PC \times Crisis$) at the quarterly level. The quarter before the financial crisis (2007Q2) is omitted as the reference quarter. The dependent variable *Tobin'sQ*, is calculated as the market value divided by the book value. Sub-figures show the dynamic effect of political connections using different measures of pre-crisis connections. *Incand* measures the number of political connections established. *lnInoffice* measures the number of connections to politicians in office. *lnRank* measures the average ranking scores of politicians connected. *lnPower* measures the number of connected politicians sitting in powerful committees. Firm and time fixed effects are controlled. Standard errors are clustered by firm. All continuous variables are winsorized at the 1% and 99% levels.

Table IV: Value Effect of Political Connections During the Crisis: Robustness

This table presents the results of several robustness tests. The sample period is from 2005Q1 to 2009Q4. The dependent variable (*Tobin's Q*) is calculated as the market value of total assets divided by the book value. Political connections are defined based on campaign contributions in the five years before the financial crisis. *Incand* measures the number of political connections build. *lnInoffice* measures the number of connections to politicians in office. *lnRank* measures the average ranking scores of politicians connected. *lnPower* measures the number of connected politicians sitting in powerful committees. *Crisis* is a dummy variable that equals one for quarters within the crisis period (2007Q3-2009Q4). Controls include firm size, leverage, cash holding, profitability (ROA), intangibility, sales growth, R&D expenditure, and a dummy for government contractors. Panel A shows the results when we restrict the sample to politically active firms only (*Incand* > 0). Panel B shows the results of a placebo test, where we take the 2005Q3-2006Q3 as the fictitious crisis period and the period 2004Q1-2005Q2 as the fictitious pre-crisis period. Panel C shows the results when we restrict the sample period to 2006Q4-2008Q2. In panel D, we cluster the standard error by firm and time. Standard errors at other panels are clustered by firm. The analysis is based on quarterly data. Detailed definitions for all variables are presented in the appendix. All continuous variables are winsorized at the 1% and 99% levels. *t*-values are in parentheses. ***, **, * represent significance at 1%, 5% and 10% level of confidence, respectively.

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	<i>Dependent variable: Tobin's Q</i>							
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Panel A: Politically Active Firms Only								
Incand * Crisis	0.054*** (4.381)	0.030** (2.424)						
lnInoffice * Crisis			0.052*** (4.391)	0.028** (2.376)				
lnRank * Crisis					0.059*** (3.953)	0.031** (2.067)		
lnPower * Crisis							0.060*** (4.967)	0.032*** (2.632)
Observations	36,690	35,959	36,690	35,959	36,690	35,959	36,690	35,959
R ²	0.778	0.814	0.778	0.814	0.778	0.814	0.778	0.814

Panel B: Placebo Test: 2005Q3-2006Q3 as the Fictitious Crisis Period

lncand * Crisis	-0.003 (-0.342)	-0.011 (-1.364)						
lnInoffice * Crisis			-0.002 (-0.245)	-0.013 (-1.511)				
lnRank * Crisis					-0.008 (-0.710)	-0.021* (-1.859)		
lnPower * Crisis							-0.003 (-0.259)	-0.016* (-1.665)
Observations	37,537	36,473	37,537	36,473	37,537	36,473	37,537	36,473
R ²	0.835	0.856	0.835	0.856	0.835	0.856	0.835	0.856

Panel C: Alternative Sample Period: Restricting to 2006Q4-2008Q2

lncand * Crisis	0.037*** (4.668)	0.024*** (3.018)						
lnInoffice * Crisis			0.039*** (4.818)	0.026*** (3.128)				
lnRank * Crisis					0.055*** (5.088)	0.037*** (3.431)		
lnPower * Crisis							0.046*** (5.207)	0.031*** (3.461)
Observations	24,357	23,656	24,357	23,656	24,357	23,656	24,357	23,656
R ²	0.862	0.875	0.862	0.875	0.862	0.875	0.862	0.875

Panel D: Alternative Clustering Method: Clustering by Firm and Time

lnCand * Crisis	0.047*** (4.160)	0.024** (2.393)						
lnInoffice * Crisis			0.050*** (4.252)	0.025** (2.442)				
lnRank * Crisis					0.064*** (4.249)	0.033** (2.393)		
lnPower * Crisis							0.060*** (4.642)	0.031*** (2.676)
Observations	60,794	59,171	60,794	59,171	60,794	59,171	60,794	59,171
R ²	0.767	0.799	0.767	0.799	0.767	0.799	0.767	0.799
Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Firm FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Time FE	Yes	-	Yes	-	Yes	-	Yes	-
Ind FE × Time FE	-	Yes	-	Yes	-	Yes	-	Yes

Table V: Financial Vulnerability and the Value of Political Connections During the Crisis

This table shows the regression results for the effect of political connections on firm value conditional on firms' financial vulnerability. For simplicity, the table only reports coefficients of triple interaction terms. We use three measures for financial vulnerability. Panel A reports the results when we bisect the sample based on the median of the WW index from White-Wu (2006). Panel B reports the results when we bisect the sample based on the median of the SA index following Hadlock and Pierce (2010). Panel C reports the results when we bisect the sample based on the median of firms' market share within the TNIC industries from Hoberg et al. (2014). All three conditional variables are measured with the pre-crisis accounting data (2007Q2). *High* is a dummy variable that equals 1 if the conditional variable is higher than the median in each quarter, 0 otherwise. The dependent variable (*Tobin's Q*) is calculated as the market value of total assets divided by the book value. *Incand* measures the number of political connections build. *lnInoffice* measures the number of connections to politicians in office. *lnRank* measures the average ranking scores of politicians connected. *lnPower* measures the number of connected politicians sitting in powerful committees. *Crisis* is a dummy variable that equals one for quarters within the crisis period (2007Q3-2009Q4). Controls include firm size, leverage, cash holding, profitability (ROA), intangibility, sales growth, R&D expenditure, and a dummy for government contractors. Standard errors are clustered by firm. The analysis is based on quarterly data covering the period from 2005Q1 to 2009Q4. Detailed definitions for the variables are presented in the appendix. All continuous variables are winsorized at the 1% and 99% levels. *t*-values are in parentheses. ***, **, * represent significance at 1%, 5% and 10% level of confidence, respectively.

	<i>Dependent Variable: Tobin's Q</i>			
	(1)	(2)	(3)	(4)
Panel A: WW Index				
Incand * Crisis * High	0.071*** (2.938)			
lnInoffice * Crisis * High		0.080*** (3.016)		
lnRank * Crisis * High			0.116*** (3.121)	
lnPower * Crisis * High				0.103*** (3.395)
Observations	51,936	51,936	51,936	51,936
R ²	0.797	0.797	0.797	0.797

Panel B: SA Index				
lnCand * Crisis * High	0.059** (2.260)			
lnInoffice * Crisis * High		0.066** (2.284)		
lnRank * Crisis * High			0.110*** (2.780)	
lnPower * Crisis * High				0.076** (2.355)
Observations	55,242	55,242	55,242	55,242
R ²	0.795	0.795	0.795	0.795
Panel C: Market Share				
lnCand * Crisis * High	-0.063*** (-2.621)			
lnInoffice * Crisis * High		-0.065** (-2.499)		
lnRank * Crisis * High			-0.102*** (-2.967)	
lnPower * Crisis * High				-0.070** (-2.415)
Observations	49,031	49,031	49,031	49,031
R ²	0.791	0.791	0.791	0.791
Controls	Yes	Yes	Yes	Yes
Firm FE	Yes	Yes	Yes	Yes
Time FE	Yes	-	Yes	-
Ind FE × Time FE	-	Yes	-	Yes

Table VI: External Financing Needs and the Value of Political Connections During the Crisis

This table shows the regression results for the effect of political connections on firm value during the financial crisis conditional on corporate external financing needs. For simplicity, the table only prints coefficients of triple interaction terms. We use three measures for external funding needs. Panel A reports the results when we bisect the sample based on the median of firm size. Panel B reports the results when we bisect the sample based on the median of corporate payout ratio. Panel C reports the results when we bisect the sample based on the median of firms' profitability (ROA). All three conditional variables are measured with the pre-crisis accounting data (2007Q2). *High* is a dummy variable that equals 1 if conditional variables are higher than medians in each quarter, 0 otherwise. The dependent variable (*Tobin's Q*) is calculated as the market value of total assets divided by the book value. *Incand* measures the number of political connections build. *lnInoffice* measures the number of connections to politicians in office. *lnRank* measures the average ranking scores of politicians connected. *lnPower* measures the number of connected politicians sitting in powerful committees. *Crisis* is a dummy variable that equals one for quarters within the crisis period (2007Q3-2009Q4). Controls include firm size, leverage, cash holding, profitability (ROA), intangibility, sales growth, R&D expenditure, and a dummy for government contractors. Standard errors are clustered by firm. The analysis is based on quarterly data covering the period from 2005Q1 to 2009Q4. Detailed definitions for all variables are presented in the appendix. All continuous variables are winsorized at the 1% and 99% levels. *t*-values are in parentheses. ***, **, * represent significance at 1%, 5% and 10% level of confidence, respectively.

	<i>Dependent Variable: Tobin's Q</i>			
	(1)	(2)	(3)	(4)
Panel A: Firm Size				
Incand * Crisis * High	-0.058** (-2.030)			
lnInoffice * Crisis * High		-0.065** (-2.012)		
lnRank * Crisis * High			-0.103** (-2.298)	
lnPower * Crisis * High				-0.077*** (-2.100)
Observations	55,262	55,262	55,262	55,262
R ²	0.796	0.796	0.796	0.796

Panel B: Payout Ratio				
lnCand * Crisis * High	-0.064*** (-3.468)			
lnInoffice * Crisis * High		-0.069*** (-3.528)		
lnRank * Crisis * High			-0.098*** (-3.754)	
lnPower * Crisis * High				-0.075*** (-3.483)
Observations	55,242	55,242	55,242	55,242
R ²	0.795	0.795	0.795	0.795
Panel C: Firms' Profitability				
lnCand * Crisis * High	-0.045*** (-2.596)			
lnInoffice * Crisis * High		-0.045** (-2.493)		
lnRank * Crisis * High			-0.084*** (-3.497)	
lnPower * Crisis * High				-0.052*** (-2.648)
Observations	54,465	54,465	54,465	54,465
R ²	0.796	0.796	0.796	0.796
Controls	Yes	Yes	Yes	Yes
Firm FE	Yes	Yes	Yes	Yes
Time FE	Yes	-	Yes	-
Ind FE × Time FE	-	Yes	-	Yes

Table VII: Ability to Substitute Bank Debt and the Value Effect of Political Connections During the Crisis

This table shows the regression results for the effect of political connections on firm value during the financial crisis conditional on corporate capabilities to access alternative funds. For simplicity, the table only prints coefficients of triple interaction terms. We use three measures for firms' access to external finance. Panel A reports the results when we bisect the sample based on whether a firm has a S&P long-term debt rating in the pre-crisis period. Panel B reports the results when we bisect the sample based on the median of asset tangibility. Asset tangibility is measured with the pre-crisis accounting data (2007Q2). Panel C reports the results when we bisect the sample based on the average degree of analyst coverage in the pre-crisis period. In Panel A, *High* equals 1 if a firm has a non-missing rating in the pre-crisis period, 0 otherwise. In Panel B and Panel C, *High* equals one if corresponding conditional variables are higher than medians in each quarter, 0 otherwise. The dependent variable (*Tobin's Q*) is calculated as the market value of total assets divided by the book value. *Incand* measures the number of political connections build. *lnInoffice* measures the number of connections to politicians in office. *lnRank* measures the average ranking scores of politicians connected. *lnPower* measures the number of connected politicians sitting in powerful committees. *Crisis* is a dummy variable that equals one for quarters during the crisis period (2007Q3-2009Q4). Controls include firm size, leverage, cash holding, profitability (ROA), intangibility, sales growth, R&D expenditure, and a dummy for government contractors. Standard errors are clustered by firm. The analysis is based on quarterly data covering the period from 2005Q1 to 2009Q4. Detailed definitions for all variables are presented in the appendix. All continuous variables are winsorized at the 1% and 99% levels. *t*-values are in parentheses. ***, **, * represent significance at 1%, 5% and 10% level of confidence, respectively.

	<i>Dependent Variable: Tobin's Q</i>			
	low (1)	high (2)	low (3)	high (4)
Panel A: Whether A Firm Has Rated Bonds in the Pre-Crisis Period				
Incand * Crisis * High	-0.041** (-2.021)			
lnInoffice * Crisis * High		-0.045** (-2.070)		
lnRank * Crisis * High			-0.063** (-2.076)	
lnPower * Crisis * High				-0.061** (-2.457)
Observations	59,171	59,171	59,171	59,171
R ²	0.800	0.800	0.800	0.800

Panel B: Tangibility of A Firm's Asset				
lnCand * Crisis * High	-0.057*** (-3.226)			
lnInoffice * Crisis * High		-0.058*** (-3.119)		
lnRank * Crisis * High			-0.092*** (-3.692)	
lnPower * Crisis * High				-0.063*** (-3.121)
Observations	55,152	55,152	55,152	55,152
R ²	0.795	0.795	0.795	0.795
Panel C: Analyst Coverage				
lnCand * Crisis * High	-0.046** (-2.026)			
lnInoffice * Crisis * High		-0.064*** (-2.706)		
lnRank * Crisis * High			-0.087*** (-2.616)	
lnPower * Crisis * High				-0.073*** (-2.696)
Observations	51,364	51,364	51,364	51,364
R ²	0.798	0.798	0.798	0.798
Controls	Yes	Yes	Yes	Yes
Firm FE	Yes	Yes	Yes	Yes
Time FE	Yes	-	Yes	-
Ind FE × Time FE	-	Yes	-	Yes

Table VIII: Political Connections and Corporate Risk During the Crisis

This table presents regression results for the impact of political connections on firm risk during the crisis. We use two measures for corporate risk: excess return volatility and the average 1-month implied volatility. Panel A shows the result when excess return volatility is used as the dependent variable. The excess return volatility is calculated as the standard deviation of daily market-adjusted excess return within each quarter. Panel B shows the result when average daily 1-month implied volatility is used as the dependent variable. The 1-month implied volatility is calculated as the average daily 1-month implied volatility in call options. Political connections are defined based on campaign contributions in the five years before the crisis. *ln cand* measures the number of political connections build. *ln Inoffice* measures the number of connections to politicians in office. *ln Rank* measures the average ranking scores of politicians connected. *ln Power* measures the number of connected politicians sitting in powerful committees. *Crisis* is a dummy variable that equals one for quarters within the crisis period (2007Q3-2009Q4). Controls include firm size, leverage, cash holding, profitability (ROA), intangibility, sales growth, R&D expenditure, and a dummy for government contractors. The analysis is based on quarterly data covering the period from 2005Q1 to 2009Q4. Standard errors are clustered by firm. Detailed definitions for all variables are presented in the appendix. All continuous variables are winsorized at the 1% and 99% levels. *t*-values are in parentheses. ***, **, * represent significance at 1%, 5% and 10% level of confidence, respectively.

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	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Panel A: Excess Return Volatility								
ln cand * Crisis	-0.037*** (-4.334)	-0.055*** (-6.919)						
ln Inoffice * Crisis			-0.039*** (-4.389)	-0.058*** (-6.870)				
ln Rank * Crisis					-0.055*** (-4.665)	-0.076*** (-6.913)		
ln Power * Crisis							-0.043*** (-4.313)	-0.063*** (-6.779)
Observations	59,104	57,516	59,104	57,516	59,104	57,516	59,104	57,516
R ²	0.742	0.778	0.742	0.778	0.742	0.778	0.742	0.778

Panel B: Average 1-month Implied Volatility

lnCand * Crisis	-0.017*** (-5.365)	-0.021*** (-6.853)						
lnInoffice * Crisis			-0.017*** (-5.252)	-0.021*** (-6.605)				
lnRank * Crisis					-0.026*** (-5.979)	-0.029*** (-7.023)		
lnPower * Crisis							-0.019*** (-5.438)	-0.023*** (-6.600)
Observations	36,349	35,625	36,349	35,625	36,349	35,625	36,349	35,625
R ²	0.799	0.836	0.798	0.835	0.799	0.836	0.798	0.835
Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Firm FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Time FE	Yes	-	Yes	-	Yes	-	Yes	-
Ind FE × Time FE	-	Yes	-	Yes	-	Yes	-	Yes

Table IX: Political Connections and Financing Structure During the Crisis

This table presents regression results for the impact of political connections on corporate financing structure during the crisis. In panel A, we examine the effect of political connections on total leverage. In panel B, we examine the effect of political connections on the amount of new bank loans received by firms. In panel C, we examine the effect of political connections on net debt issuance. In panel D, we examine the effect of political connections on net equity issuance. *Incand* measures the number of political connections build. *lnInoffice* measures the number of connections to politicians in office. *lnRank* measures the average ranking scores of politicians connected. *lnPower* measures the number of connected politicians sitting in powerful committees. *Crisis* is a dummy variable that equals one for quarters within the crisis period (2007Q3-2009Q4). Controls include firm size, leverage, cash holding, profitability (ROA), intangibility, sales growth, R&D expenditure, and a dummy for government contractors. The analysis is based on quarterly data covering the period from 2005Q1 to 2009Q4. Standard errors are clustered by firm. Detailed definitions for all variables are presented in the appendix. All continuous variables are winsorized at the 1% and 99% levels. *t*-values are in parentheses. ***, **, * represent significance at 1%, 5% and 10% level of confidence, respectively.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Panel A: Total Leverage								
Incand * Crisis	0.004*** (2.919)	0.001** (2.550)						
lnInoffice * Crisis			0.004*** (3.006)	0.001*** (2.744)				
lnRank * Crisis					0.005*** (2.666)	0.001*** (2.740)		
lnPower * Crisis							0.004*** (2.818)	0.001*** (2.758)
Observations	60,316	59,026	60,316	59,026	60,316	59,026	60,316	59,026
R ²	0.864	0.954	0.864	0.954	0.864	0.954	0.864	0.954

Panel B: Amount of New Bank Loans Received								
lncand * Crisis	-0.241*** (-6.798)	-0.193*** (-5.248)						
lnInoffice * Crisis			-0.261*** (-6.800)	-0.208*** (-5.207)				
lnRank * Crisis					-0.331*** (-6.410)	-0.276*** (-5.085)		
lnPower * Crisis							-0.285*** (-6.522)	-0.228*** (-4.982)
Observations	60,794	59,171	60,794	59,171	60,794	59,171	60,794	59,171
R ²	0.132	0.159	0.132	0.159	0.132	0.159	0.132	0.159
Panel C: Amount of Net Debt Issuance								
lncand * Crisis	0.0004* (1.813)	0.001*** (2.903)						
lnInoffice * Crisis			0.0005** (2.031)	0.001*** (3.053)				
lnRank * Crisis					0.001*** (2.716)	0.001*** (3.239)		
lnPower * Crisis							0.001** (2.567)	0.001*** (3.282)
Observations	55,140	53,731	55,140	53,731	55,140	53,731	55,140	53,731
R ²	0.089	0.158	0.089	0.158	0.089	0.158	0.089	0.158

Panel D: Amount of Net Equity Issuance

lnCand * Crisis	0.001*** (7.010)	0.001*** (4.595)						
lnInoffice * Crisis			0.001*** (7.104)	0.001*** (4.573)				
lnRank * Crisis					0.002*** (6.906)	0.001*** (4.363)		
lnPower * Crisis							0.002*** (7.273)	0.001*** (4.537)
Observations	53,725	52,400	53,725	52,400	53,725	52,400	53,725	52,400
R ²	0.247	0.298	0.247	0.298	0.247	0.298	0.247	0.298
Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Firm FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Time FE	Yes	-	Yes	-	Yes	-	Yes	-
Ind FE × Time FE	-	Yes	-	Yes	-	Yes	-	Yes

Table X: Political Connections and Corporate Investments During the Crisis

This table presents regression results for the impact of political connections on corporate investments during the crisis. In panel A, we examine the effect of political connections on capital expenditure. In panel B, we examine the effect of political connections on working capital expenditure. *Incand* measures the number of political connections build. *lnInoffice* measures the number of connections to politicians in office. *lnRank* measures the average ranking scores of politicians connected. *lnPower* measures the number of connected politicians sitting in powerful committees. *Crisis* is a dummy variable that equals one for quarters within the crisis period (2007Q3-2009Q4). Controls include firm size, leverage, cash holding, profitability (ROA), intangibility, sales growth, R&D expenditure, and a dummy for government contractors. The analysis is based on quarterly data covering the period from 2005Q1 to 2009Q4. Standard errors are clustered by firm. Detailed definitions for all of the variables are presented in the appendix. All of the continuous variables are winsorized at the 1% and 99% levels. *t*-values are in parentheses. ***, **, * represent significance at 1%, 5% and 10% level of confidence, respectively.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Panel A: Capital Expenditure								
Incand * Crisis	0.0002** (2.162)	0.0002** (2.212)						
lnInoffice * Crisis			0.0003** (2.341)	0.0002** (2.190)				
lnRank * Crisis					0.0004*** (2.586)	0.0003** (2.189)		
lnPower * Crisis							0.0004*** (2.918)	0.0003** (2.448)
Observations	59,518	58,003	59,518	58,003	59,518	58,003	59,518	58,003
R ²	0.640	0.666	0.640	0.666	0.640	0.666	0.640	0.666

Panel B: Working Capital Expenditure

lnCand * Crisis	0.002** (2.121)	0.003*** (3.142)						
lnInoffice * Crisis			0.002** (2.059)	0.003*** (3.140)				
lnRank * Crisis					0.002** (2.148)	0.003*** (2.969)		
lnPower * Crisis							0.002* (1.948)	0.003*** (2.975)
Observations	59,508	57,928	59,508	57,928	59,508	57,928	59,508	57,928
R ²	0.870	0.879	0.870	0.879	0.870	0.879	0.870	0.879
Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Firm FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Time FE	Yes	-	Yes	-	Yes	-	Yes	-
Ind FE × Time FE	-	Yes	-	Yes	-	Yes	-	Yes

Table XI: The Liquidity Intermediary Role of Connected Firms in the Supply Chain

This table presents regression results for the impact of political connections on trade credit from suppliers during the crisis. The dependent variable is account payable divided by total cost of goods. *Incand* measures the number of political connections build. *lnInoffice* measures the number of connections to politicians in office. *lnRank* measures the average ranking scores of politicians connected. *lnPower* measures the number of connected politicians sitting in powerful committees. *Crisis* is a dummy variable that equals one for quarters within the crisis period (2007Q3-2009Q4). Controls include firm size, leverage, cash holding, profitability (ROA), intangibility, sales growth, R&D expenditure, and a dummy for government contractors. The analysis is based on quarterly data covering the period from 2005Q1 to 2009Q4. Standard errors are clustered by firm. Detailed definitions for all variables are presented in the appendix. All continuous variables are winsorized at the 1% and 99% levels. *t*-values are in parentheses. ***, **, * represent significance at 1%, 5% and 10% level of confidence, respectively.

		<i>Dependent Variable: Payable</i>							
		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
60	Incand * Crisis	-0.016*** (-2.811)	-0.017*** (-2.860)						
	lnInoffice * Crisis			-0.017*** (-2.768)	-0.018*** (-2.846)				
	lnRank * Crisis					-0.022*** (-2.730)	-0.024*** (-2.955)		
	lnPower * Crisis							-0.018*** (-2.678)	-0.020*** (-2.798)
	Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	Firm FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	Time FE	Yes	-	Yes	-	Yes	-	Yes	-
	Ind FE × Time FE	-	Yes	-	Yes	-	Yes	-	Yes
	Observations	60,359	58,784	60,359	58,784	60,359	58,784	60,359	58,784
	R ²	0.738	0.747	0.738	0.747	0.738	0.747	0.738	0.747

Appendix A. Variable Description

Variable	Definition
Tobin's Q	(Book value of total assets - book value of equity + market value of equity)/ book value of total assets.
ln cand	The natural logarithm of 1 plus the number of political connections a firm build through campaign contributions in the five years before the crisis. A firm is defined to be connected to or has a connection to a politician if the firm has contributed to the politician in the five years before the crisis. See equation (1).
ln Inoffice	The natural logarithm of 1 plus the number of politicians connected who is in office at the start of the crisis. See equation (2).
ln Rank	The natural logarithm of 1 plus the average ranking scores of connected politicians at the start of the crisis. A politician's ranking score is the inverse of the politician's rank in his/her sitting committees. See equation (3).
ln Power	The natural logarithm of 1 plus the number of powerful politicians connected to a firm. A politician is powerful if he is sitting on at least one powerful committee at the start of the crisis.
Size	The natural logarithm of 1 plus the book value of total assets.
Leverage	Total debt divided by the book value of total assets.
Cashholding	Cash holdings divided by the book value of total assets.
Intangibility	Intangible assets by the book value of total assets.
ROA	Operating income before depreciation divided by the book value of total assets.
SaleGrowth	Sales divided by sales in the previous year.
R&D	R&D expenditure divided by sales. Missing values are set to 0.
GovCus	A dummy variable which equals one if a firm has the government as a major customer in the previous three years, 0 otherwise.
Y200*	A dummy variable which equals 1 for year 200*.
WW Index	Whited and Wu (2006) index= $-0.091*\text{Cash flow}+0.062*\text{Dividend dummy}+0.021*\text{Long-term debt}-0.044*\text{Size}+0.102*\text{Industry sales growth}-0.035*\text{Sales growth}$.

SA Index	Following Hadlock and Pierce (2010), the SA index is defined as $[-0.737 \cdot \log(\text{Total Assets}) + [0.043 \cdot \log(\text{Total Assets})^2] - (0.040 \cdot \text{Age})$.
Market Share	The percentage of a firm's sales to total sales within the text-based network industry classification from (Hoberg et al., 2014).
Short-term Debt Ratio	Debt in current liabilities divided by the book value of total debt.
Rated	A dummy variable which equals 1 if a firm have a S&P long-term credit rating, 0 otherwise.
Tangibility	Total Net Property, Plant and Equipment divided by the book value of total assets
Information Asymmetry	The average number of analyst following a firm in the pre-crisis period.
Excess Return Volatility	Volatility of daily excess return within each quarter. Excess return is a firm's daily return deducted by the corresponding market return.
Average 1-month Implied Volatility	Average 1-month implied volatility of call options in each quarter. The data is collected from OptionMetrics.
Net Debt Issuance	Quarterly amount of net long-term debt issuance (dltis-dltr) divided by the book value of total asset.
Amount of New Bank Debt	The natural logarithm of 1 plus the quarterly amount of new bank loans received by a firm. Bank loan data is collected from DealScan.
Net Equity Issuance	Quarterly equity issuance minus aggregate equity repurchase (sstk-prstk) divided by the book value of total assets.
Capital Expenditure	Capital expenditure divided by the book value of total assets.
Working Capital Expenditure	Net working capital excluding cash divided by the book value of total assets.
Administrative Expenditure	net working capital excluding cash divided by the book value of total assets.
Payable	The firm's account payable divided by total cost of good sold.
