Capital structure and political connections: Evidence from GCC Banks and the Financial Crisis

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March 2020
Revised August 2020
Second Revision January 2021
This Version May 2021

Abstract

Purpose
This paper investigates the effect of political connections on the capital structure of banks before and after the financial crisis in Gulf Cooperation Council (GCC) countries.

Design/methodology/approach
This paper employs the natural experiment that the financial crisis offers and uses a difference-in-differences model to investigate the effect of political connections on capital structure. Capital structure is measured by the total debt to total assets ratio. Control variables include bank size, growth, profitability, coverage ratio and volatility. The research sample includes all the banks in the GCC from 2005 to 2016.

Findings
We find that political connections negatively affect banks capital structure decisions. Our results contradict the claim that politically connected firms tend to sustain higher debt due to government privilege and a lower chance of bankruptcy. Additionally, the results show that after the financial crisis, politically connected banks de-lever more compared to non-connected counterparts. This could suggest that the degree of support received by connected banks changes or that they exploit their retained earnings for financing (individual country results, however, suggest that leverage increases in Qatar).

Originality/value
This paper provides several contributions. First, GCC countries present an interesting and important area in which to study the relation between political connections and capital structure as it represents a mix of newer markets that seek to attract investors and foreign capital. Second, to the best of our knowledge, the present study is the first to examine the effect of the political connection and capital structure in GCC region where royal families play a significant role, especially for banks. Third, our paper is the first to link connections with leverage after the financial crisis in the banking sector. Moreover, our paper is the first to investigate this phenomenon in the GCC countries using manually collected primary data.

Keywords- GCC banks, political connection, Capital structure.
JEL: C33, G32

1. Introduction.

While the global financial crisis resulted in criticism for banks and their regulators, it also presents an opportunity to examine questions on the interaction of banks with different agents. In this paper, we consider the connection between political influence and bank behaviour using the financial crisis as a natural break that will allow us to consider whether banks benefit from such a connection. To do this, we examine the influence of political connections on bank capital structure in Gulf Cooperation Council (GCC) countries, where over 50% of banks possess such a relation. One of the benefits that political connections are argued to convey to a bank is preferential access to resources (Pfeffer and Salancik, 1978). Moreover, given the extent to which banks are affected by external contingencies and uncertainties, Hillman (2005) argues that to mitigate such uncertainty, they are likely to build external ties (e.g., political connections through the board of directors). Such ties could provide protection against major events, such as a crisis, through enhanced government financial support.

The value of political connections is well documented across a range of firm behaviour. Within the literature, one strand investigates the influence of political connections on corporate value e.g., Faccio (2006), Goldman et al. (2008) and Amore and Bennedsen (2013). Further, that directors of connected firm can bring benefits to their companies. Boubakri et al. (2012a) find that connected firms have a lower cost of equity and enjoy preferential support from their government. Brown and Dinc (2005) find that, during election years, government owned banks have greater lending portfolios compared to their non-connected counterparts. Claessens et al. (2008) and Faccio et al. (2006) document that political connections provide access to financial markets and reduce the budget constraints of connected banks. Moreover, Faccio et al. (2006) and Blau et al. (2013) document a lower cost of borrowing for connected firms. Goldman et al. (2009) suggest that connections add value to the connected firms stock following the political appointment of a connected director in the US.

While there is a growing and extensive literature on the determinants of capital structure in emerging markets, the literature on the effect of political connections on capital structure is scant. A series of papers find that politically connected firms may have a higher level of debt. Notably, several papers examine the behaviour of Malaysian firms, including Johnson and Mitton (2003) who show that Malaysian politically connected firms sustain more debt and are riskier than the non-connected firms. Fraser et al. (2006) suggest that there is a significantly positive relation between leverage and political connection, while Bliss and Gul (2012) equally show that politically connected firms are riskier with higher debt. This latter study also notes that politically connected firms are more likely to report a loss, to have negative equity or to be audited by a big audit firm compared to non-politically connected firms. In contrast, Khwaja and Mian (2005) and Faccio (2006) argue that the result of political connections is to make the firm be perceived as less risky as it is expected to be rescued by the appropriate government or through IMF or World Bank financial assistance.

This paper aims to study the relation between political connections and the capital structure of Gulf Cooperation Council (GCC) banks for the period from 2005 to 2016. Specifically, we use the financial crisis to investigate the difference between connected and non-connected banks through a difference-in-differences approach, which examines how different groups respond to an event. The difference-in-differences technique models whether the trend behaviour in the variable of interest between two groups diverges following an identified event, while accounting for issues of endogeneity. The financial crisis acts as a natural event around which banks risk-taking behaviour might change. Therefore, we can examine whether political connections affect the capital structure of GCC banks and track changes in leverage after the crisis. The results will shed light on whether political connections benefit a bank during a crisis, where they may receive favourable treatment from the

government or whether the crisis, which impacts government finances, will result in support being withdrawn.

This paper provides several novel contributions. First, GCC countries present an interesting and important area to study the relation between political connections and capital structure as it represents a mix of newer markets, such as Dubai and Abu Dhabi, against more established markets, such as Saudi Arabia, Kuwait and Oman. Moreover, such new markets attract investors and foreign capital into the region (Naceur et al., 2008). Second, within the GCC countries, a large role is played by the respective royal families, who control major aspects of each country's economy. With respect to banks, over 50% exhibit political connections, with over 80% in Qatar and Oman. This provides a comparatively unique setting in which to examine this question and is, to the best of our knowledge, the first to examine political connections and capital structure in GCC banks. Third, our paper is the first to link political connections with behaviour after the financial crisis in the banking sector.

In consideration of our results, we note that politically connected banks have higher debt levels but are also larger with higher coverage ratios; however, they are less profitable than non-connected banks. Our estimation results report some evidence that political connections reduce leverage in GCC banks. More specifically, in the parallel trends model and after controlling for country and year characteristics, we find political connections have a negative and significant impact on capital structure (although some model specifications report a negative but insignificant result). Of further interest, we also find a negative and significant association between political connection and leverage during the crisis period. This suggests that politically connected banks may receive more direct support and be expected to use retained earnings and run-down assets built up during pre-crisis periods.

2. Theoretical Background and Literature Review.

Theoretical Background

Political connections can have a crucial impact on firms and the growth of economies. In one approach, resource dependence theory states that the need for connections is a function of the dependence with which a firm is faced. Political connection is one mechanism by which companies can survive financial, social and global pressures. To reduce this uncertainty, firms appoint politicians to the board of directors. Resource dependence theory then identifies the board of directors as affecting the provision and allocation of resources, risk behaviour and performance. Hillman and Dalziel (2003) argue that the board of directors play an integrating role between the monitoring and securing of resources and work to identify possible threats and opportunities in shaping long-term plans. Additionally, they build external relations to strengthen the company. Firms trying to increase capital can invite important customers and/or suppliers, and politician to their board to increase profitability and decrease risk.

Moral hazard also partly explains the behaviour of large firms in general, and financial institutions in particular, in terms of their risk behaviour. Notably, believing that, under the 'too-big-to-fail' principle, large financial firms will be rescued in times of crisis to avoid systemic failure of the financial system. One of the most famous examples of this, is Bear Stearns, the first too-big-to-fail bank, which was rescued by the US Federal Reserve. Such bailout decisions by policy authorities or governments, could be influenced by political factors. Equally, they may not necessarily provide support to all firms that are too big to fail (e.g., comparing with Lehman Brothers in 2008). Thus, firms and banks may look to hedge against crises by growing their political ties to capitalise on moral hazards, which can motivate them to take even greater risks (Dam and Koetter, 2012; Mariathasan et al., 2014; Kostovetsky, 2015). Hence, according to the resource dependency and moral hazard arguments, hiring politicians to boards could reduce uncertainty and strengthen ties between banks and royal

families especially in the crisis time. This, in turn, s expected to have a positive influence on the level of bank capital structure.

In a different tact, Scharfstein and Stein (2000) present an alternative explanation for political connections, which they described as rent-seeking behaviour. Here, managers extract additional compensation through cash wages or other means, such as capital budget allocation. Akhigbe et al. (2017) argue that political connection and the separation of ownership increase the agency problems that affect the value of publicly traded firms (Jensen and Meckling, 1976). Boubakri et al. (2012b) argue that there is anecdotal evidence that some investors prefer companies with minimal political connections. For example, Mediaset SpA's shares dropped sharply after the resignation announcement of the Italian Prime Minister Silvio Berlusconi in 2011. According to agency theory, having politicians on the board of directors does not help to add value to connected banks, due to the expropriation of minority investors via more related-party transactions and more severe over-investment problems. Therefore, according to the agency theory, having politicians on the board of directors could limit the quality of capital structure decisions.

Performance and Political Connections

It is believed that politically connected firms receive a variety of economic benefits across a range of markets and especially in emerging countries. While our focus is on capital structure, we briefly note other aspects of the general research area. To this end, Table 1 presents a non-exhaustive list of work that examines political connections across a range of countries and methodologies with varying results. In considering common themes from this literature, a sequence of papers examines the effects of political connections on firm value. Faccio (2006) examines 20,000 firms across 47 countries and argues that the benefits depend upon the level of corruption within the country and the political power of the connected politician. Cooper et

al. (2010) argue that subsequent stock returns are affected by links and financial contributions to political campaigns in the US. Amore and Bennedsen (2013) examine political connections and note a positive link between an elected politician and firm profitability in Denmark.

In contrast, Bertrand et al. (2018) argue that politically connected firms are less profitable in France. Baslandze (2018) examine a link between political connections and innovation in Italy, noting that more connected firms are likely to be less innovative. Faccio and Parsley (2006) report that the death of a politician leads to a decline in stock market values for connected firms. Diwan and Chekir (2012) and Acemoglu et al. (2017) consider Egypt at the time of the 2011 revolution. The former study finds that, in general, connected firms are less efficient and have higher debt, while the latter study finds that different public demonstrations affect the valuation of companies linked to different political factions. Work explores the effect of political connections on strategic issues, such as preferential access to finance from government (e.g., Claessens et al., 2008; Khwaia and Mian, 2005), the link between political connections and firm value (Fisman, 2001; Johnson and Mitton, 2003; Goldman et al., 2009) and on political connection and performance (e.g., Fan et al., 2007; Fisman, 2001). However, there is little research on the impact of political links to the banking sector (exceptions include, Abdelsalam and Tortosa-Ausina, 2017; Hung et al., 2017; Carretta et al., 2012; Pan and Tian, 2018). Khwaja and Mian (2005) argue that politically connected firms could obtain loans from banks by threatening and bribing bank officers.

The above research identifies that the effect of political connections is ambiguous. Carretta et al. (2012) argue that political connections could have a negative impact on performance, loan quality, general bank risk and efficiency. They find that politically connected banks perform poorly compared to other banks. Abdelsalam and Tortosa-Ausina (2017) in a study across eleven countries suggest that politically connected banks are less efficient than non-politically connected banks. In contrast, Faccio et al. (2006) argue that

politically connected banks are more likely to be bailed out during times of crisis and may have superior access to the resources. As noted, according to resource dependency theory, hiring politicians on boards could reduce uncertainty and strengthen ties between the bank and government that can have a positive influence on bank value and performance.[1]

Capital Structure and Political Connections

As an overarching issue, Rajan and Zingales (1995) argue that an important area of research is the effect of institutions on capital structure decisions. Equally, Stearns and Mizruchi (1993) and Johnson and Mitton (2003) argue that the board of directors in banks and other financial institutions have a significant impact on capital structure decisions. Likewise, Smith (2016) argues that firms may alter capital structure in response to political pressure. Political connections can influence those decisions such that connected firm may gain privilege that allows them to sustain more debt. Following this, a range of work provides supportive evidence for this view (see, for example, López-Iturriaga, 2005; Johnson and Mitton, 2003; Fraser et al., 2006; Bliss and Gul, 2012; Diwan and Schiffbauer, 2016). Diwan and Schiffbauer (2016) find that politically connected firms receive larger loans than non-connected firms. López-Iturriaga (2005) investigates the determinants of debt from an institutional perspective for several developed countries and using fixed panel analysis finds that the capital structure decision is affected by both firm characteristics and institutional factors.[2] The study notes the importance of understanding the institutional context of each country. In a similar vein, Borisova et al. (2015) use a cross-country analysis of listed firms in 43 countries and find that government ownership has a significantly positive effect on firm debt. Likewise, the results of both Bliss

[1] Acemoglu et al. (2016) report that a favourable Treasury secretary announcement leads to higher abnormal returns for US banks. Blau et al. (2013) show that politically connected firms have a higher probability of receiving state aid after the financial crisis. Abdelsalam et al. (2017) show that higher government ownership of banks in the MENA region leads to lower efficiency. Carretta et al. (2012) argue that political connections for Italian banks has a negative effect on revenue and loan portfolio quality but a positive effect on efficiency.
[2] Austria, Germany, Japan, Belgium, France, Italy, Holland, Spain, Portugal, Finland, Sweden and the USA.

and Gul (2012) and Boubakri et al (2008) confirm the view that politically connected firms have a higher leverage ratio. Khwaja and Mian (2005) study the lending behaviour of banks in Pakistan, compiling a sample of 90,000 loan items that covers two elections, and indicate that politically connected firms have greater access to credit from state-owned banks. Brown and Dinc (2005) investigate interventions in failing banks. The result show that politicians use banking regulation to favour preferred banks and discipline others.

As noted above, intrinsic to this, is the idea of the riskiness of connected firms. Faccio (2010), examining 47 countries, documents that leverage is higher in connected firms. Such firms also enjoy lower taxation and greater market power. Connected firms also exhibit lower profitability and market valuation. Several researchers argue that evidence of such causality is more prominent in crisis times. Acemoglu et al. (2016) explore the effect of political connections on banks value following the announcement of Timothy Geithner as nominee for Treasury Secretary in November 2008, a period associated with the financial crisis. The study, consisting of all financial firms trading on the NYSE or Nasdaq, finds that the announcement produces abnormal returns. Chekir and Diwan (2012) exploring crony capitalism in Egypt and its effect on firm performance, consider politically connected and non-connected firms before and after the 2011 revolution. The study finds that connected firms are less efficient than unconnected firms. Capital is misallocated, and politically connected firms borrow more than non-politically connected firms. Equally, Belghitar et al. (2019) note that political connections allow firms to enjoy higher leverage, although investors receive less protection. Political connections can also confer preferential treatment for banks. In Ukraine, Baumat et al. (2008) find politically connected investment banks have a higher chance to obtain contracts to advise the government. Moreover, connected banks have a significantly lower interest rate margin and higher capitalization compared with non-connected banks.

However, set against this, several researchers argue that politically connected banks are less levered compared to non-connected counterparts. Braun and Raddatz (2010) exploit a dataset of the names of politicians, cabinet members, financial sector supervisors and central bank governors from the Country Reports of the Economist Intelligence Unit and Central Bank Publications in 154 countries over 10 years. They highlight the critical role of banks in allocating credit. The study finds evidence that when former high-ranking politicians become bank directors, connected firms tend to be less levered and have less risk. Moreover, at a country level, political connections are strongly negatively correlated with economic development. Recently, Khaki and Akin (2020) investigate the effect of government ownership on the capital structure in 329 non-financial firms for the period between 2009 and 2017 in the GCC and find a negative effect of state ownership on capital structure.

Despite the above research, there remains little understanding on the effect of political connection on lenders (Hung et al., 2017). To the best of our knowledge, this study is the first to investigate the effect of political connections on the capital structure of banks in GCC countries. Therefore, conducting this research will present additional insight in the behaviour of emerging countries and notably whether such connections result in higher or lower leverage, for which an ongoing debate remains. By manually collected primary data from annual reports, official and other websites, we seek to investigate the effect of political connection on the GCC banks' capital structure before and after the financial crisis.

3. Econometric Methodology: Difference-in-Differences.

To investigate the effect of political connections on firms' leverage, we use the difference-in-differences (DID) approach, which compares a control and treatment group following an event. Obenauer and von der Nienburg (1915) first use the DID approach to investigate the effects of a minimum wage in the USA. The DID approach attempts to mimic a natural experiment,

which in the realm of economics and finance are hard to design. The empirical strategy of the DID approach is to examine the behaviour (referred to as trends in the DID methodology) of two groups. One group acts as the control, while the second (treatment) group is exposed to a specific factor. The behaviour of these groups (parallel trends) is compared before and after an exogenous event. In our context, the control group in non-politically connected firm, the treatment group is politically connected firms, and the event is the financial crisis, which provides a unique point to consider the changing nature of the relation between leverage and political connections. Thus, we examine whether there is a change in behaviour when comparing politically connected and unconnected firms before and after the crisis.

Using DID allows examination of the causal effect of political connection on capital structure. This is because it is difficult to examine observable firm characteristics when considering the role of political connections that can be personal (Gomez and Jomo, 1997) and often predate any connections with the specific firm, i.e., the connection does not arise through the firm but personal relationships (Johnson and Mitton, 2003). The DID approach provides an empirical way to consider the differences between connected and non-connected firms by allowing examination of the mean difference (parallel trends) of the two groups of banks. Specifically, we can use the event (financial crisis) to examine whether path taken by each group changes after the event. Thus, by utilising the DID parallel trend model, we can examine the effect of political connection before and after the financial crisis.

The general form of the DID approach is based on the following equation where we investigate if both groups (politically and non-politically connected firms) have the same trend before and after the treatment (crisis). The general parallel trends regression is:

$$Y_t = \beta_0 + \beta_1 * [Time] + \beta_2 * [Intervention] + \beta_3 * [Time * Intervention] + \beta_4 * [Covariates] + \varepsilon_t \quad (1)$$

The study applies a difference-in-differences model using panel data for six countries to examine the effect of the political connection on banks' capital structure, while controlling for bank, country and time characteristics to ensure robust results. Thus, we estimate:

$$Y_{it} = \alpha_t + \beta_1 D_i * before + \beta_2 D_i * after + \sum_{j=q}^{q} \beta_3 x_{it} * D_i + \eta_{it} \quad (2)$$

where Y_{it} is bank leverage *i* at time *t*, D_i is a political connection indicator that is equal to one if bank i is connected and zero otherwise, x_i is a vector of bank characteristics, α_t is a time fixed effect and η_{it} an error term. We consider short- and long-run analysis by utilising a three-year window for before and after the financial crisis (excluding the financial crisis years of 2007, 2008 and 2009). These are denoted as *before* and *after* in the above regression (we only show one dummy here for simplicity). Thus, we have six dummies that correspond to the first, second and third years before and after the crisis. These time dummies interact with the treatment dummy (political connection). To consider whether there is a causal relation between political connection and banks leverage, we can note whether the interaction between the after-crisis years and the treatment dummy are significant.

Additionally, we interact the bank covariates with year and country dummies to estimate the effect of political connections and the financial crisis on the determinants of capital structure. Thus, our regression model becomes:

$$Y_{it} = \alpha_t + \beta_1 D_i + \beta_2 A_t + \beta_3 D_i A_t + \sum_{j=q}^{q} \beta_4 x_{it} * D_i + \sum_{j=q}^{q} \beta_5 x_{it} * D_i * A_t + \eta_{it} \quad (3)$$

The terms are as defined under equation (2), while in addition A_t is a dummy variable for the financial crisis that is equal to one for 2007 to 2009 and zero otherwise. The coefficient β_1 measures the difference in the leverage of politically connected and non-connected banks, β_2 captures the banks' leverage response to the crisis relative to pre-crisis, while β_3 is the interaction between the crisis and political connection dummies. The coefficients associated with β_4 show how politically connected banks' leverage responds to capital structure related variables relative to the non-connected banks. To investigate the effects of political connections

and the financial crisis, the coefficients associated with β_5 measure the effect of banks-specific factors on capital structure over the financial crisis period.

Additionally, as a robustness check we estimate the two-way fixed effects regression model:

$$Y_{it} = \alpha_t + C_i + \beta_2 A_t + \beta_3 D_i A_t + \sum_{j=q}^{q} \beta_4 x_{it} * D_i + \sum_{j=q}^{q} \beta_5 x_{it} * D_i * A_t + \eta_{it} \qquad (4)$$

Where α_t and C_i are time and bank fixed effects. We do not include the individual political connection dummy variable as the two ways fixed effects account for unobserved cross-sectional heterogeneity across banks. Other terms remain as defined under equation (3).

4. Data.

This paper seeks to examine the impact of political connection on the capital structure in GCC banks. Our definition of connections follows Faccio (2006), among others, where a company is connected with a politician if one of the company's large shareholders or top officers is: (a) a member of parliament (MP); (b) a minister or the head of state; (c) closely related to a top official. Political connection information and affiliation concerning royal families and parliament members is collected from government and media websites, while the Orbis database is used to obtain information about board of directors in GCC banks. Additionally, political connections are traced by examining whether a given board of the director is a member of the royal family or currently a parliament member or if a director's family member is a current parliament member. The political connections (PC) series is then constructed as a dummy variable equal to one if a bank is politically connected and zero otherwise.

Our initial data set, which includes both politically connected and non-connected banks is 177 banks over the period from 2005 to 2016. The banks are then matched with financial information on earnings per share, asset growth and monthly stock prices. Banks that did not

have any financial information are dropped, which gives an unbalanced final sample of 117 banks and 1404 bank-year observations.

In Qatar, where royal family members have been in control of the banking sector since the late 1980s, approximately 84% of the banking sector is politically connected. In Oman, from the mid-2000s, royal family members and parliament members entered the business sector. Mustahil al Ma'aahani (Sultan Qaboos's maternal uncle) has chaired Dhofar International Development and Muscat bank (Kamrava et al., 2016). In the banking sector, 86% of the banks are politically connected. In the case of Bahrain, 65% of banks are politically connected. Regarding the Kuwaiti banking sector, the children of the current ruler are involved in the banking sector. Among the most prominent royal members is the former emir's daughter Hussa bint Saad (chair of the Arab Businesswomen's Council and a board member of Ithmaar Bank) (Kamrava et al., 2016). For the banking sector in Saudi Arabia and the United Arab of Emirates, the numbers of politically connected firms are relatively low compared with the other countries, at 59% and 65%, respectively.

The dependent variable, leverage, is given by the total debt to total assets ratio. The literature has established a range of explanatory variables in determining capital structure, including profitability, risk, coverage ratio and market to book ratio (Rajan and Zingales, 1995; Frank and Goyal, 2009; Harris and Raviv, 1991; Zeitun et al., 2017; Antoniou et al., 2008; Ebrahim et al., 2014). Here, we consider size as measured by the natural logarithm of the market capitalization (see, for example, Fama and French, 2002; Fama and Jensen, 1983), growth as given by the stock price to book value ratio, profitability as measured by the return on assets (ROA), the coverage ratio as a measure of a company's ability to cover debt obligations with its assets after all liabilities have been satisfied and volatility is a measure of market risk and calculated from the standard deviation of day-to-day logarithmic historical price changes (Frank and Goyal, 2009). These definitions are restated in Appendix 1 for clarity.

Descriptive statistics

Table 2 reports summary statistics for the variables used in our empirical analysis. Table 2.a presents statistics for the pooled sample and shows that 70% of our sampled banks exhibit political connections. The numbers represent time-series averages of the annual cross-sectional mean, standard deviation, minimum and maximum value for each variable. The table shows that mean of the capital structure measure is 6.08% and ranges from 1% to 23.39%. The mean of ROA, as a measure of profitability, is 2.7% with a standard deviation of 5.8% and a range between 35.60% to -46.31%. The mean market capitalization (size, $m's) is 9,655 with a maximum of 243,450 and a minimum of only 1.96. The average of volatility is 37.1 with a maximum of 311.5 and a minimum of 0. The volatility factor has the largest standard deviation in the sample at 26.05. The mean of market to book ratio is 1.816% with a maximum of 21.12 % and a minimum of 0.03 %. The mean of the asset coverage ratio is 141.7%.

Table 2.b separates the summary statistics between politically connected and non-connected banks. On average politically connected firms are slightly larger than non-politically connected banks. The average level of leverage in connected banks (6.26) is higher than for non-connected banks (5.63). This could be indicative evidence for higher leverage in politically connected banks (Ebrahim et al., 2014; Diwan and Chekir, 2012). Equally, connected banks have a substantially higher coverage ratio (177.3) compared to non-connected banks (53.87) in order to support the higher debt. Similarly, the growth ratio is higher in politically connected banks. Conversely, profitability is higher in non-politically connected banks (3.83 compared to 2.26 for connected banks), which is in line with Faccio (2010).[3]

Table 3 presents the correlation coefficients between leverage and bank-specific variables. The correlations between leverage and size, growth and political connection

[3] We conduct tests of equality for the means of the series when separated according to political connections. These tests indicate a significant difference for the leverage, profit and volatility series.

variables are positive and significant, while the correlation with volatility and profit are negative and significant (the correlation with coverage is negative but not significant). Again, this supports the view that leverage is higher in connected banks. Between the explanatory variables, we see a significant positive correlation between size and growth and growth and profit and a significant negative correlation between profit and volatility and profit and political connection.

5. Empirical Results.

To examine the difference-in-differences (DID) results, we first run the parallel trends regression, equation (2), including interaction effects between the factors and the political connection variable. Table 4 presents the results that compares the trend in leverage for politically connected and non-connected banks in the short- and long-run, controlling for year and country effects. The first column shows the interaction between the treatment and the time dummy one year before and one year after the financial crisis. The results show that the coefficient before the financial crisis is insignificant, while it becomes significant after the crisis. Using the parallel trends model for the long-run by taking three years before and after the crisis, the results show that the interaction between the year dummies and the treatment is significant only in the furthest (first) year before the crisis and insignificant in the closer (second and third) years. However, the results show the interaction between the treatment and the year dummies are significant for the three years after the financial crisis. Thus, we can say that the leverage ratios of the political and non-political banks were moving in the same direction prior to the financial crisis but significantly differ after. Notably, after the crisis, politically connected banks reduce their leverage in comparison to non-connected banks.

Table 5 presents the results of equation (3), which is based on a pooled regression where we consider three models to allow for time and country effects. In all the models, standard

errors are robust and clustered at the bank level to control for serial correlation in the residuals. The first model (Model 1) reports the results of a basic version of equation (3), Model 2 augments this by including time dummies, while Model 3 additionally includes country dummies. In Model 1, the results reject the view that politically connected banks hold significantly higher levels of debt. Indeed, the political connection dummy (β_1) is negative, indicating lower debt levels but is statistically insignificant. However, the results do show that politically connected banks significantly reduce gearing during the crisis period compared to non-connected banks. The results for Model 2, which introduces controls for time effects, remain similar to those for Model 1, with an insignificant political connections dummy and a significantly negative interaction between political connections and the crisis. In Model 3, we control for both time and country characteristics, the results now do show that political connections lead to a significantly lower level of leverage once controlling for other factors. Again, in the crisis period, the results support the view that politically connected banks de-lever compared to non-connected banks.

In the estimated models, the evidence for the other variables shows that larger politically connected banks hold more debt. For politically connected banks, debt is negatively associated with coverage ratio, profitability and volatility relative to non-connected banks. However, we find no evidence of differences in the relations between growth opportunities and leverage. The results emphasise the importance of the profitability and debt association in a crisis time. The results show profitable politically connected banks depend less on debt compared to non-politically connected banks during the crisis.

Robustness check

Table 6 shows the results of equation (4), estimated using both a one-way and two-way fixed effects model. The first column reports the results based on one-way (firm) fixed effects, which

clusters the standard errors at the firm-level. The key (difference-in-differences) variable is, again, strongly significant and negative suggesting that politically connected firms exhibit less debt in the crisis period relative to the non-politically connected banks. Of the other variables, only the coverage ratio exhibits a significant effect on the capital structure decision comparing connected and non-connected banks. The second model augments the first through the inclusion of year dummies. Again, the difference-in-differences variable that consider the effect of political connections remains both significant and negative. This confirms that politically connected banks reduce gearing compared to non-connected banks during the financial crisis.[4]

The summary statistics and estimated results above suggest that politically connected banks exhibit a higher level of debt than non-connected firms. This is consistent with the literature such as Bliss and Gul (2012), Boubakri et al (2008) and Fraser et al (2006) among others. But equally, politically connected banks have a noticeably larger coverage ratio, suggesting that, in general, they can sustain this higher debt. It can also be observed that non-connected banks are, on average, more profitable (as also noted by Bertrand et al., 2018). This supports the view that connected banks benefit from such connections, see for example, Boubakri et al. (2012a). Of particular importance, our results reveal that while the general trend in leverage for connected and non-connected banks was the same prior to the crisis, following the crisis, there is evidence that connected banks de-levered compared to non-connected banks. Moreover, during the crisis period, there is strong evidence to suggest that connected banks significant reduced debt. This indicates a change in the support for politically connected banks, perhaps with direct capital injections and a reduction is their access to debt.[5] Our results are

[4] As a further robustness check, we consider the DID analysis for each individual country. For all the GCC countries, except Qatar, there is strong evidence of a negative relation between political connections and capital structure as reported above. Equally, in the crisis period there is further evidence of de-levering, especially in Saudi Arabia and the UAE. Again, we see Qatar standing in contrast with an increase in debt. There is some evidence, in general, that leverage in non-politically connected firms increases during the crisis.

[5] An overview of GCC banks and the financial crisis is given by Khamis et al (2010).

also consistent with the resource dependency view whereby political connections lead to higher debt levels as such connections reduce firm uncertainty. But during the crisis, agency considerations might dominate, and firms seek to de-lever.

6. Summary and Conclusion.

The effect of political connections on a range of firm behaviour is an important and ongoing topic. This paper contributes to this literature by examining the relation between political connections and capital structure in GCC banks. Existing evidence suggests that connected banks typically have higher debt ratios, while there is debate on whether such connections make banks safer (due to likely bailouts) or riskier (due to higher debt levels). We examine this by collecting political connection and financial data for the period from 2005 to 2016.

We use difference-in-differences analysis and reveal that prior to the financial crisis connected and non-connected banks exhibit a similar trend in leverage (there is evidence of a negative relation between political connections and bank leverage although it is typically not statistically significant). We also note that connected banks are larger, with a higher level of debt but with lower average profitability. This is consistent with resource dependency view of political connections, which reduce the riskiness of a firm. However, as a key result, we see that leverage for politically connected banks falls during the financial crisis. We consider a range of model specifications, including one-way and two-way fixed effects to confirm the robustness of this result. Individual country results support this result across all GCC countries (although individual country regressions indicate that leverage increases in Qatar). This de-levering is consistent with an agency view of political connections and suggests that the financial crisis changed the nature of political connections.

In sum, the results of our quasi-experiment show that the presence of political connections in GCC banks result in leverage reduction during the financial crisis. This is

contrary to the view that politically connected firms are more likely to sustain debt. Johnson and Mitton (2003) and Boubakri et al. (2008) both argue that political connections in banks and financial institutions have a significant impact on capital structure decisions, with such connections giving privileges that allow for greater debt. Ebrahim et al. (2014) point out that firms consider political connections as an insurance policy against major risks. The result that banks de-lever during the crisis may suggest that GCC countries, as cash-rich countries, engage in risk reduction during this period. This result is consistent with Ebrahim et al. (2014) who find politically connected firms in Malaysia depend less on the debt in periods of financial distress. Equally, it could be consistent with Johnson and Mitton (2003) who argue that politically connected banks suffer more in distress periods as the exogenous shock restricts government's ability to provide privileges and subsidies.

Our findings are relevant for other studies analysing the implications of political connections to firms. We contribute to understanding the impact of exogenous shocks on financing and how political connections influence strategic decision-making. Our findings provide several important implications for policymakers, investors and regulators in the GCC countries. Notably, suggesting a degree of caution with respect to governments in regard of the amount of support that they provide to avoid sending an erroneous signal to both investors and markets, which may affect economic growth negatively in the long run. Indeed, as the Covid-19 pandemic continues (at the time of writing), the results here suggest that bank may receive a different level of support as other calls as made of each country’s finances.

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Table 1. Overview of Political Connection studies

Studies	Years	Firms	Country	PC measure	Methodology	Model &Sign
Abdelsalam, Mollah, and Tortosa-Ausina (2017)	Yearly 2008-2013	851 bank-year observations.	MENA(Egypt, Jordon, Kuwait, Lebanon, Morocco, Oman, Qatar, Saudi Arabia, Syria, Tunisia and the United Arab Emirates)	Four political connections proxies,(direct, indirect, extended, and total)	Data Envelopment Analysis (DEA) Quantile regression analysis	Efficiency (-)
Acemoglu, et al (2017)	Daily 2005-2013	177 firms	Egypt	1 if connected to the BOD 0 otherwise	Event study Pooled regression OLS Risk +	Stock market valuation (+) and driven by the street power (demonstrations)
Acemoglu, Johnson, Kermani, Kwak, and Mitton (2016)	Daily 2008 (Relevant dates)	678 firms	USA	1- Schedule connections; times that Geithner interacted with executives 2- Personal connections; personal links that Geithner has with firms 3- Firm location	Univariate Tests OLS Regression Synthetic Matching	Stock market return (+)
Al-Hadi et al (2017)	2005–2013	165 Non financial firm-year obs	GCC (Bahrain, Oman, Kuwait, Qatar, Kingdom of Saudi Arabia (KSA) and United Arab Emirates (UAE))	Royal family ownership (ROWN) Royal family directorship (RDIR_D)	Panal regression (OLS)	Joint audit and cost of debt (-) moderated by PC
Amore and Bennedsen (2013)	Yearly 2002–2008	1964 connected	Denmark	CEO or a BOD or both Connected by family to CEO or BOD.	DID	Profitability +
Baslandze (2018)	Yearly 1993 to 2014	1 million firms	Italy	1 if connected to the Network 0 otherwise	Regression discontinuity design	Innovation (+) Productivity growth (-)
Baum, Caglayan, Schäfer and Talavera (2008)	Quarterly 2003Q3–2005Q2	1,300 bank-quarter observations	Ukraine	1 if connected to the Parliament 0 otherwise	Pooled Fixed effects Cluster-robust standard OLS Dynamic panel data (DPD)	Interest rate margins (-) Capitalization (+)

Bertrand, Kramarz, Schoar and Thesmar (2018)	1987 to 2002	237958 firm-year observations	France	1 if Connected CEO 0 otherwise	Fixed effects	Tax (-) Profitability (+)
Blau, Brough and Thomas (2013)	2004-2008	237 financial firms	USA	1 if Connected to government, congressional or presidential entity 0 otherwise	Univariate analysis Probit regression	TARP support (+) Greater amount of support
Bliss and Gul (2012)	2001–2004	500 non-financial firm	Malaysia	1 if politically connected 0 otherwise	Multiple regression	leverage (+) Reporting a loss (+) Equity (-) Interest rates (+)
Bliss and Gul (2012)	2001–2004	500 non-financial firm	Malaysia	(1) % government ownership (2) % institutional investors (3) Informal ties with the three most powerful politicians in Malaysia in the 1990s	Univariate analysis OLS regression	Leverage(-)
Boubakri, Cosset and Saffar (2008)	1980 to 2002	245 privatized firms	27 developing and 14 developed countries	1 if politically connected 0 otherwise	Logit regressions Tobit regressions Panel regressions Fixed effects panel logit regression	Big cities (+) Leverage (+) Government ownership (+) Foreign ownership (-) Accounting performance (-)
Boubakri, Guedhami, Mishra and Saffar (2012b)	1997 to 2001	1248 firm–year observations	26 countries	1 if politically connected 0 otherwise	Propensity score matching models	Cost of equity capital (-) Valuable (+) Risk (-)
Borisova, Fotak, Holland and Megginson (2015)	1991–2010	2,318 bonds and 249 firms	43 countries	Government ownership	Cluster two ways regression Heckman treatment effect two stage model 2SLS	Cost of debt (+)
Braun, M., & Raddatz, (2010).	1996-2005	4,618 banks	154 countries	1 if at least one of the bank's directors has been a politician or bank regulator, and 0 otherwise	DID Heckman two-step estimator	Size (+) Profit (+) More connection less performance Corruption (+) Government accountability (-) Country financial development (-) Risk (-)
Brown & Dinc (2005).	1994–2000	164 private banks	21 major emerging markets	Electoral cycle	Case studies Panel regressions	Government interventions delaying the banks failure due to political concerns
Carretta, Farina, Gon, and Parisi (2012)	2006	123 banks	Italy	% BOD from government	OLS	Net interest revenues(-) Loan portfolio quality (-)

				(executive or non-executive) % BOD from government (executive		Efficiency (overhead costs) (+)
Cooper, Gulen and Ovtchinnikov (2010)	1979 to 2004	1,930 firms	USA	Firm support for PC candidates	Panel regression	Future returns (+)
De Nicoló and Loukoianova (2007)	1993-2004	10000 bank	133 countries	Bank ownership	Z-score regression	Risk (+) Failure (+)
Diwan and Schiffbauer (2018)	1996 and 2006	469 politically connected firms	Egypt	Entry of connected firms	OLS	Employment Growth (-) Productivity (-)
Ebrahim et al (2014)	1988 to 2009	751 firms	Malaysia	1 if connected to the Network 0 otherwise	DID GMM	Subsidies (crisis times) (-) Leverage (No relationship)
Faccio (2006)	1997-2002	450 firms	35 Countries	1 if connected to the Network 0 otherwise	Panel regressions	Bail out (+) Performance (-)
Faccio (2010)	1997	16,191 firm	47 countries	1 if connected to the Parliament or politician 0 otherwise	Panel regressions DID	Market share (+) Leverage (+)

Table 2.a Descriptive Statistics

VARIABLES	(2) Mean	(3) SD	(4) Min	(5) Max	(6) Variance	(7) Skewness	(8) Kurtosis
CS	6.080	3.350	1.000	23.39	11.22	. 43	3.09
Size	9,655	20,782	1.960	243,450	4.3	4.62	33.15
Growth	1.816	1.647	0.0345	21.12	2.71	4.70	39.12
PC	0.707	0.455	0	1	.207	-.90	1.827
ROA	2.714	5.844	-46.31	35.60	34.14	-.23	18.81
COV	141.7	1,373	0.754	21,185	1883939	13.04	179.11
VOL	37.08	26.05	0	311.5	678.5	2.46	18.84

This table provides descriptive information on the variables: ***CS*****:** denoted for capital structure measures by Total debt to total assets ratio, *Total Debt\Total Assets,* of bank *i* in year *t*. ***Size****:* Total current market value of all of a company's outstanding shares stated in the pricing currency. ***Growth:*** Ratio of the stock price to the book value per share. Calculated as: Price to Book Ratio = Last Price / Book Value per Share. ***PC:*** As defined, the variable PC is a dummy variable 1 if the bank is politically connected, 0 otherwise. ***ROA:*** Indicator of how profitable a company is relative to its total assets, in percentage. Return on assets gives an idea as to how efficient management is at using its assets to generate earnings. Calculated as: (Trailing 12M Net Income / Average Total Assets) * 100. ***COV****:* is a coverage ratio, which is a measure of a company's ability to cover debt obligations with its assets after all liabilities have been satisfied. Calculated as: [(Book Value of Total Assets - Total Intangible Assets) - (Current Liabilities - Short Term Borrowings)] / Total Debt Outstanding. ***VOL:*** Measure of the risk of price moves for a security calculated from the standard deviation of day-to-day logarithmic historical price changes

Table 2.b Descriptive Statistics for Politically and Non-Politically Connected Banks

VARIABLES	(1) N	(2) Mean	(3) SD	(4) Min	(5) Max
Politically connected firms					
CS	703	6.262	3.149	1.031	23.39
Size	709	9,905	22,187	1.960	243,450
Growth	705	1.850	1.652	0.137	21.12
ROA	674	2.261	5.364	-46.31	27.27
COV	692	177.3	1,621	0.754	21,185
VOL	593	35.00	23.94	0	298.1
Non-politically connected firms					
CS	284	5.628	3.771	1.000	18.47
Size	290	9,043	16,881	3.263	116,700
Growth	285	1.733	1.633	0.0345	17.72
ROA	273	3.832	6.769	-18.20	35.60
COV	280	53.87	202.8	1.309	2,030
VOL	252	40.14	22.76	2.966	127.5

This table provides descriptive information on the variables: ***CS*****:** denoted for capital structure measures by Total debt to total assets ratio, *Total Debt/Total Assets,* of bank *i* in year *t*. ***Size****:* Total current market value of all of a company's outstanding shares stated in the pricing currency. ***Growth:*** Ratio of the stock price to the book value per share. Calculated as: Price to Book Ratio = Last Price / Book Value per Share. ***PC:*** As defined, the variable PC is a dummy variable 1 if the bank is politically connected, 0 otherwise. ***ROA:*** Indicator of how profitable a company is relative to its total assets, in percentage. Return on assets gives an idea as to how efficient management is at using its assets to generate earnings. Calculated as: (Trailing 12M Net Income / Average Total Assets) * 100. ***COV****:* is a coverage ratio, which is a measure of a company's ability to cover debt obligations with its assets after all liabilities have been satisfied. Calculated as: [(Book Value of Total Assets - Total Intangible Assets) - (Current Liabilities - Short Term Borrowings)] / Total Debt Outstanding. ***VOL:*** Measure of the risk of price moves for a security calculated from the standard deviation of day-to-day logarithmic historical price changes

Table 3. Correlation Matrix: Capital Structure Determinants

	CS	*VOL*	*Size*	*Growth*	*ROA*	*COV*	*PC*
CS	1						
VOL	-0.114**	1					
Size	0.175***	-0.0605	1				
Growth	0.103**	-0.0641	0.446***	1			
ROA	-0.276***	-0.0915*	0.0335	0.199***	1		
COV	-0.0522	-0.0257	-0.0135	0.0195	0.0128	1	
PC	0.102**	-0.0441	0.0186	0.0333	-0.124***	0.0328	1

**** p<0.05*** *** p<0.01* ****p<0.001*

CS*:** denoted for capital structure measures by Total debt to total assets ratio, *Total Debt\Total Assets,* of bank *i* in year *t*. ***Size**:* is the natural logarithm of the market capitalization (total current market value of all a company's outstanding shares stated in the pricing currency). ***Growth: Ratio of the stock price to the book value per share. Calculated as: Price to Book Ratio = Last Price / Book Value per Share. ***PC:*** As defined, the variable PC is a dummy variable 1 if the bank is politically connected, 0 otherwise. ***ROA:*** Indicator of how profitable a company is relative to its total assets, in percentage. Return on assets gives an idea as to how efficient management is at using its assets to generate earnings. Calculated as: (Trailing 12M Net Income / Average Total Assets) * 100. ***COV**:* is a coverage ratio, which is a measure of a company's ability to cover debt obligations with its assets after all liabilities have been satisfied. Calculated as: [(Book Value of Total Assets - Total Intangible Assets) - (Current Liabilities - Short Term Borrowings)] / Total Debt Outstanding. ***VOL:*** Measure of the risk of price moves for a security calculated from the standard deviation of day-to-day logarithmic historical price changes.

Table 4. The Parallel Trends Regression for GCC Banks in Short and Long Run

VARIABLES	(1) PTA_Short	(2) PTA_Long
PC*2005		-2.013*
		(1.032)
PC*2006		-1.056
		(0.955)
PC*2007	-1.485	-1.782
	(0.911)	(1.303)
PC*2011	-2.232***	-2.658***
	(0.588)	(0.625)
PC*2012		-1.222**
		(0.591)
PC*2013		-2.343***
		(0.668)
Size*PC	0.507***	0.545***
	(0.0969)	(0.0974)
COV*PC	-0.000196***	-0.000201***
	(6.89e-05)	(6.90e-05)
ROA*PC	-0.175***	-0.169***
	(0.0491)	(0.0493)
VOL*PC	-0.0479***	-0.0470***
	(0.00917)	(0.00910)
Growth*PC	0.0402	0.106
	(0.134)	(0.162)
2005	-	-
2006	-0.390	-0.663
	(0.468)	(0.618)
2007	0.743	0.0978
	(0.944)	(1.042)
2008	1.522**	0.550
	(0.663)	(0.901)
2009	1.102	0.479
	(0.830)	(1.037)
2010	-0.885	-0.957
	(0.680)	(1.035)
2011	-0.631	0.197
	(0.718)	(1.067)
2012	-0.592	-1.498
	(0.665)	(0.920)
2013	-0.681	-1.615*
	(0.668)	(0.970)
2014	0.467	-0.472
	(0.663)	(0.926)
2015	0.193	-0.720
	(0.716)	(0.939)
2016	-0.0895	-0.993
	(0.690)	(0.899)
Bahrain	-	-
Kuwait	-0.532	-0.532
	(1.070)	(1.059)
Oman	-1.425	-1.329
	(1.103)	(1.103)
Qatar	-2.935***	-3.073***
	(1.101)	(1.100)
Saudi Arabia	-1.893	-2.034*
	(1.187)	(1.186)
UAE	-1.700	-1.771

	(1.120)	(1.117)
Constant	6.783***	7.471***
	(1.240)	(1.373)
Observations	777	777
R-squared	0.213	0.223

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Table 5. Effect of Crisis and the Relations between Capital Structure and Political Connection in GCC Banks

VARIABLES	(1)	(2) Year control	(3) Country and year control
PC	-1.356	-1.040	-4.608**
	(1.259)	(1.298)	(1.765)
Crisis	0.664		
	(0.489)		
Pc*Crisis	-0.543**	-1.198*	-1.137*
	(0.222)	(0.616)	(0.594)
COV*PC	-0.000203***	-0.000210***	-0.000185***
	(4.10e-05)	(4.79e-05)	(6.96e-05)
Size*PC	0.441***	0.425***	0.920***
	(0.110)	(0.112)	(0.190)
ROA*PC	-0.137***	-0.136***	-0.140***
	(0.0455)	(0.0480)	(0.0428)
VOL*PC	-0.0269***	-0.0306***	-0.0280***
	(0.00864)	(0.00900)	(0.00887)
Growth*PC	0.0990	0.138	0.0348
	(0.112)	(0.151)	(0.145)
Size*PC*Crisis	-0.0331	-0.0222	0.0218
	(0.153)	(0.152)	(0.137)
Cov*PC*Crisis	-0.00318	-0.00312	-0.000281
	(0.00464)	(0.00465)	(0.00443)
ROA* PC*Crisis	-0.159**	-0.162*	-0.133*
	(0.0795)	(0.0820)	(0.0675)
VOL* PC*Crisis	0.0215	0.0236	0.0197
	(0.0132)	(0.0144)	(0.0131)
Growth* PC*Crisis	0.661	0.591	0.360
	(0.417)	(0.429)	(0.414)
2005		-	-
2006		-0.00632	-0.205
		(0.469)	(0.476)
2007		1.028	0.696
		(0.800)	(0.781)
2008		0.965	0.862
		(0.802)	(0.740)
2009		0.784	0.708
		(0.858)	(0.857)
2010		-0.283	-0.407
		(0.725)	(0.724)
2011		0.0113	-0.0330
		(0.748)	(0.752)
2012		0.0176	-0.0159
		(0.717)	(0.701)
2013		-0.0140	-0.221
		(0.718)	(0.716)
2014		0.893	0.640
		(0.718)	(0.708)
2015		0.787	0.600
		(0.783)	(0.760)
2016		0.491	0.325
		(0.762)	(0.738)
Bahrain			-
Kuwait			-0.386
			(1.007)

Oman			-0.429
			(1.120)
Qatar			-3.924***
			(1.224)
Saudi Arabia			-2.940**
			(1.360)
UAE			-2.506**
			(1.202)
Constant	5.889***	5.484***	7.365***
	(0.723)	(0.959)	(1.361)
Observations	777	777	777
R-squared	0.154	0.167	0.257

Robust and clustered at bank level standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Table 6. Effect of Crisis and the Relation between Capital Structure and Political Connection in GCC Banks using Fixed Effect Modelling

VARIABLES	(1) FIXED	(2) Two-ways FIXED
o.PC	-	-
Pc*Crisis	-0.611***	-0.978**
	(0.187)	(0.487)
COV*PC	-6.43e-05*	-5.75e-05
	(3.66e-05)	(3.60e-05)
Size*PC	0.592**	0.249
	(0.246)	(0.247)
ROA*PC	-0.0511*	-0.0355
	(0.0263)	(0.0232)
VOL*PC	0.00422	0.00119
	(0.00467)	(0.00456)
Growth*PC	-0.00660	0.104
	(0.0507)	(0.0761)
Size* PC*Crisis	-0.00871	-0.00619
	(0.107)	(0.107)
Cov* PC*Crisis	-0.00407***	-0.00386***
	(0.000928)	(0.000983)
ROA* PC*Crisis	0.0292	0.0251
	(0.0401)	(0.0418)
VOL* PC*Crisis	-0.000632	0.000777
	(0.00722)	(0.00778)
Growth* PC*Crisis	0.279	0.302
	(0.318)	(0.331)
2006		-0.459
		(0.286)
2007		0.618
		(0.508)
2008		0.532
		(0.359)
2009		0.600
		(0.454)
2010		-0.137
		(0.381)
2011		-0.0106
		(0.404)
2012		0.295
		(0.398)
2013		0.478
		(0.422)
2014		0.676
		(0.417)
2015		0.809*
		(0.420)
2016		0.594
		(0.423)
Constant	3.459***	4.814***
	(1.238)	(1.240)
Observations	777	777
R-squared	0.047	0.099
Number of IDC	106	106

Robust and clustered at bank level standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Appendix 1

Variable	Variable Definition
CS	Denoted for capital structure measures by Total debt to total assets ratio.
Size	The natural logarithm of the market capitalization (total current market value of all a company's outstanding shares stated in the pricing currency).
Growth	Ratio of the stock price to the book value per share. Calculated as: Price to Book Ratio = Last Price / Book Value per Share.
PC	PC refer to political connection and it is a dummy variable 1 if the bank is politically connected, 0 otherwise.
ROA	Indicator of how profitable a company is relative to its total assets, in percentage. Return on assets gives an idea as to how efficient management is at using its assets to generate earnings. Calculated as: (Trailing 12M Net Income / Average Total Assets) * 100.
COV	is a coverage ratio, which is a measure of a company's ability to cover debt obligations with its assets after all liabilities have been satisfied. Calculated as: [(Book Value of Total Assets - Total Intangible Assets) - (Current Liabilities - Short Term Borrowings)] / Total Debt Outstanding
VOL	Measure of the risk of price moves for a security calculated from the standard deviation of day-to-day logarithmic historical price changes