No. 13-19
October 2013

WORKING PAPER

CENTRAL BANK INTERVENTION AND THE ROLE OF POLITICAL CONNECTIONS

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Acknowledgements

The author acknowledges helpful comments from Tyler Brough, Frank Caliendo, Scott Findley, and Diana Thomas. This study has greatly benefited from helpful research assistance by Kenneth Christiansen and Steven Gould.

Abstract

This paper analyzes the characteristics of banks that received emergency loans from the Federal Reserve during the recent financial crisis. Using unique data consisting of emergency loan transactions, I provide evidence that larger banks, in terms of assets and market capitalization, were more likely to receive emergency support. I also show that banks that held more loans, deposits, and investment securities as assets, as well as banks with higher share prices, greater stock trading activity, and more market risk, were more likely to receive support. After controlling for balance sheet characteristics and other measures of bank riskiness, I provide strong evidence that banks that were politically connected—either through lobbying efforts or employment of politically connected individuals—were substantially more likely to receive emergency support from the Federal Reserve. In economic terms, the Federal Reserve was 10–17 percent more likely to give emergency loans to banks that were politically connected than to banks that were not politically connected.

***JEL* codes:** G21, G28

Keywords: emergency loans, Federal Reserve policy, financial crisis, crony capitalism, corporate lobbying, rent seeking

Central Bank Intervention and the Role of Political Connections

Benjamin M. Blau

I. Introduction

In July 2011, the Government Accountability Office (GAO) conducted a full-scale audit of the Federal Reserve (Fed) and its actions during the recent financial crisis. This was the first known audit of the Fed since its inception in 1913. The audit showed that, during the financial crisis, the Fed provided $16 trillion in short-term emergency assistance to both foreign and domestic firms. Toward the end of 2008, outstanding loans made by the Fed peaked at $1 trillion. Given this magnitude of assistance through the Fed's emergency loan program, a question naturally arises: What firm-specific characteristics determined whether or not a bank received assistance? This study attempts to answer this question by analyzing a unique dataset of emergency loan transactions that have recently been made public. Understanding the characteristics of banks that received emergency loans is important in light of the financial instability during the recent crisis. Additionally, identifying the characteristics of banks that received emergency loans can inform regulators and policymakers about what types of banks might have had a greater contribution in, or exposure to, the recent financial crisis.

Several bank-specific characteristics might help explain the receipt of Fed support. For instance, O'Hara and Shaw (1990), among others, discuss the implications of banks that are "too big to fail" (TBTF), indicating that larger banks are more likely to receive emergency support during periods of financial crises. Freixas, Parigi, and Rochet (2000) provide a framework for central bank coordination and show that intervention is not only more likely to occur in larger banks, but also in banks with more deposits. In related research, studies demonstrate a link between the balance sheet structure of banks and the risk-taking behavior of banks (Herring and

Vankudre, 1987; Hellmann, Murdock, and Stiglitz, 2000; Demsetz, Saidenberg, and Strahan, 1996; Suarez, 1994). Therefore, the composition of assets and liabilities on a bank's balance sheet might explain the receipt of emergency support. In addition to the riskiness of banks' balance sheets, other risk factors, such as a bank's exposure to market and idiosyncratic risk, might also determine which banks the Fed supported.

In this study, I also examine whether banks with political connections were more likely to receive emergency loans during the financial crisis. The motivation to do so is based on a recent stream of literature that demonstrates the benefits of political connections. Chiu and Joh (2004), Cull and Xu (2005), Johnson and Mitton (2003), and Khwaja and Mian (2005) show that firms with political connections have better access to debt capital than firms without connections.[1] In another line of research, Roberts (1990), Fisman (2001), and Faccio (2006) show that the value of a politically connected firm is markedly affected by political events, suggesting that political connections are associated with firm value. Using lobbying expenditures to approximate political connections, Richter, Samphantharak, and Timmons (2009) and Hochberg, Sapienza, and Vissing-Jorgensen (2009) show that firms that lobbied had lower corporate tax liabilities and lower operating expenses. Yu and Yu (2010) find that a firm's level of lobbying expenditures decreases the likelihood of being detected for fraud by regulators and increases the time to detection.

Using data from 35 countries, Faccio, Masulis, and McConnell (2006) show that politically connected firms are more likely to receive government bailouts than nonconnected firms. Similar results are found in Blau, Brough, and Thomas (2013), Duchin and Sosyura (2012), and Igan, Mishra, and Tressel (2011) when examining the 2008 Troubled Asset Relief

[1] In another study relating to the benefits of political connections, Morck, Stangeland, and Yeung (2000) provide international evidence that billionaires with political influence successfully create government-enforced barriers to entry, thereby restricting competition and extracting economic rents.

Program (TARP). This string of research suggests that political connections provide firms with benefits they might not otherwise receive. In the framework of this study, examining the political connections of banks that received emergency loans from the Fed is important for at least two reasons. First, the Fed is considered to operate in a manner that is politically independent and therefore, support from the Fed should in theory be independent of the bank's political connections. Second, because of the Fed's political independence, its decision-making should be motivated by what the Fed perceives as being in the best interest of the credit markets and the economy in general.

In a broad stream of research, I estimate political connections by examining lobbying expenditures (Richter, Samphantharak, and Timmons, 2009; Hochberg, Sapienza, and Vissing-Jorgensen, 2009; Yu and Yu, 2010; Igan, Mishra, and Tressel, 2011; Duchin and Sosyura, 2012; Blau, Brough, and Thomas, 2013) as well as the political connections of bank employees (Roberts, 1990; Fisman, 2001; Faccio, 2006; Faccio, Masulis, and McConnell, 2006; Kostovetsky, 2009). This study shows that during the 10 years before the financial crisis, banks that received emergency loans from the Fed had lobbying expenditures that were 72 times larger than banks that did not receive emergency loans from the Fed. Furthermore, 10 percent of banks that received emergency support had lobbied, compared to only 2 percent of banks that did not receive emergency support. This difference is both statistically and economically significant. Similarly, 15 percent of banks that received emergency loans had politically connected employees, compared to 1.5 percent of banks that did not receive emergency loans.

In addition, my results show that the likelihood of emergency support from the Fed is directly related to the bank's market capitalization, the amount of foreclosed real estate assets, the amount of deposits, the amount of investment securities, and the volume of trading. I also

find evidence that banks that received emergency loans held more nonperforming loans than banks that did not receive emergency loans. My multivariate tests suggest that when holding the variables constant, banks with a larger number of deposits, more investment securities, higher loan-to-assets ratios, and larger market capitalization had a higher probability of receiving emergency loans.

The multivariate tests still show a relationship between a bank's political connectedness and the probability of receiving emergency aid. In economic terms, my tests suggest that banks that lobbied were 10–17 percent more likely to receive emergency support than banks that did not lobby. Similarly, banks that employed politically connected individuals were 10.2–16.5 percent more likely to receive emergency loans. Further tests show that politically connected banks that lobbied were in debt to the Fed for more days during the financial crisis than nonconnected banks. I also find that connected banks borrowed substantially more than nonconnected banks.

My results showing that politically connected banks were more likely to receive emergency loans from the Fed than nonconnected banks warrant an explanation in light of the Fed's political independence. Several possible explanations exist. For instance, prior research seems to indicate that policymakers simply conduct policy that favors politically connected individuals or groups (Faccio, 2006; Faccio, Masulis, and McConnell, 2009; Igan, Mishra, and Tressel, 2011; Duchin and Sosyura, 2012). After reviewing the lobbying reports of banks used in the sample, I only find that five banks directed their lobbying efforts toward the Fed during the 10 years before the financial crisis, and only two banks lobbied the Fed during the three years before the financial crisis. In unreported tests, I eliminate these banks from the sample and still find a strong relationship between lobbying expenditures and the likelihood of receiving emergency loans.

The banks that were TBTF also could have been the most politically connected, and therefore the direct relationship between political connections and the likelihood of receiving emergency support is related to some other size characteristic that is not accounted for in assets or market capitalization.[2] After eliminating banks from the sample that are listed on the Financial Stability Board's list of banks that are TBTF, I still find a direct relationship between the level of political connections and the likelihood of receiving emergency support. These results seem to suggest that my findings are not entirely driven by banks that are considered TBTF.

Three other explanations seem more reasonable. First, policymakers might be able to reduce the information asymmetries that usually exist between borrower and lender and be more willing to provide loans to politically connected banks than to nonconnected banks (Berger and Udell, 1995; Degryse and Van Cayseele, 2000; Boot, 2000; Elsas, 2005).[3]

Second, the majority of the emergency lending facilities during the financial crisis were used voluntarily by banks. Observing a direct relationship between the level of political connections and lending at these facilities might be explained by the notion that politically connected banks are more inclined to use governmental support than nonconnected banks.

Third, a possible explanation for the direct relationship between political connections and emergency support is based on the idea of moral hazard. While prior research discusses the moral hazard associated with bailouts of financial institutions and suggests that bailouts might increase the level of ex post risk-taking (Mailath and Mester, 1994; Aghion, Bolton, and Fries, 1999; Goodhart and Huang, 1999; Freixas, 1999; Adams, 2012), another potential moral hazard

[2] As mentioned above, O'Hara and Shaw (1990), among others, suggest that too-big-to-fail banks are likely the largest banks. However, I recognize the possibility that market capitalization and assets might not fully capture banks that are TBTF.

[3] Several studies (including Berger and Udell, 1995; Degryse and Van Cayseele, 2000; Boot, 2000; Elsas, 2005) find evidence that lenders are more likely to provide loans to firms or individuals with whom they have a relationship.

exists. One stream of research examines the moral hazard of insurance and indicates that the insured are more likely to engage in risky activity (Pauly, 1968; Pauly 1974; Shavell, 1979; Rubinstein and Yaari, 1983; Alger and Ma, 2003; Saito, 2006).

If political connections provide some form of synthetic or regulatory insurance during periods of economic distress, the results from this study suggest that the most politically connected banks engaged in risky activity and subsequently incurred the most risk, which required the Fed's intervention (La Porta, Lopez-de-Silanes, and Zamarippa, 2003).[4] Prior research has examined the risk-taking behavior of firms after government intervention. Perhaps a fruitful avenue for future research might be to determine the moral hazard associated with political connections by examining the ex ante risk-taking behavior of politically connected firms, which might lead to government intervention.

The rest of this paper follows. Section II provides institutional details about the emergency loan programs of the Fed. Section III describes the data used throughout the analysis. Section IV discusses the empirical tests and reports the results from those tests. Section V offers conclusions.

II. The Federal Reserve's Emergency Loan Program

The Dodd-Frank Wall Street Reform and Consumer Protection Act authorized the GAO to conduct a one-time audit of the emergency loan and assistance programs authorized by the Fed's board of governors.[5] The GAO report revealed several broad-based emergency lending

[4] La Porta, Lopez-de-Silanes, and Zamarippa (2003) show that before the 1995 credit crisis in Mexico "well-connected" Mexican banks engaged in riskier lending that presumably contributed to the severity of the crisis.
[5] The full report of the GAO audit is located at http://www.gao.gov/new.items/d11696.pdf.

programs. The report highlighted the following seven active broad-based programs between December 2007 and June 2010:

- *Term Auction Facility.* Using information from the Federal Reserve Board Statistical Release H.4.1 and other Federal Reserve Board documents, the GAO report showed that a peak amount of nearly $500 billion in one-month and three-month discount window loans was auctioned to eligible depository institutions.
- *Dollar Swap Lines.* The Fed exchanged a peak amount of nearly $600 billion for foreign currency from foreign central banks to stabilize dollar-funding markets globally.
- *Term Securities Lending Facility.* This program permitted the auctioning of collateralized loans of US Treasury securities to primary dealers and consisted of a peak amount of $236 billion.
- *Primary Dealer Credit Facility.* This provided collateralized overnight cash loans to primary dealers. The peak amount was $130 billion.
- *Asset-Backed Commercial Paper Money Market Mutual Fund Liquidity Facility.* This provided loans to depository institutions to purchase asset-backed commercial paper from various money market mutual funds and had a peak amount of $152 billion.
- *Commercial Paper Funding Facility.* The program provided loans to finance the purchase of asset-backed and unsecured commercial paper and had a peak amount of $345 billion.
- *Term Asset-Backed Securities Loan Facility.* The program's purpose was to provide loans to eligible investors to finance the purchase of asset-backed securities. Its peak amount of lending was $48 billion.

In addition to these seven lending programs, the GAO audit also reported the details of the assistance the Fed offered to JP Morgan Chase & Co. to acquire Bear Stearns. The GAO audit also provides a summary of assistance to American Insurance Group.

The report does not provide specifics on the emergency loan application process, but given that many of the emergency loans were obtained through the auction process, I can assume that banks that received emergency loans initiated the request for loans. This subtlety is important and might lead to different conclusions than those drawn by Duchin and Sosyura (2012) and Igan, Mishra, and Tressel (2011). These two studies examine the role political connections played in the dissemination of bailout support from TARP starting in 2008. Many bank executives argued that TARP funds were forced on companies and that some banks were willing and able to work through the financial crisis without government support. In the framework of this study, the GAO audit suggests that banks willingly participated in the application or auctioning process in order to receive emergency support.

The main objective of this study is to determine the effect of political connections on the emergency loan program of the Fed. Since the Fed operates under the shield of political independence, it is highly unlikely that the Fed was simply offering political favors in the form of emergency support to banks. However, other explanations provide sufficient motivation for the tests of the relationship between political connections and emergency loans.

Downs (1957) describes the possibility that information asymmetries exist between firms and government officials. When federal capital is injected into firms, these informational asymmetries might be mitigated through political connections. Therefore, it is possible that the Fed would have been better informed to provide emergency support to politically connected banks than to nonconnected banks.

La Porta, Lopez-de-Silanes, and Zamarippa (2003) find that while earlier research suggests that relations between banks and borrowers can increase credit efficiency, much higher default rates exist in related lending than in unrelated lending. They argue for the existence of a new type of moral hazard, such that loans between borrowers and lenders that have strong relationships might be riskier, ceteris paribus, because borrowers engage in riskier activity.

In my framework, banks with political connections might have engaged in riskier activities that led to the need for emergency support from the Fed. Another stream of research discusses the moral hazard of insurance, where the insured engage in risky activity (Pauly, 1968; Pauly 1974; Shavell, 1979; Rubinstein and Yaari, 1983; Alger and Ma, 2003; Saito, 2006). If political connections provided banks with some perception of synthetic insurance and led to riskier activities, then a direct relationship between political connections and the level of the Fed's emergency support is expected. I present my empirical tests below.

III. Data Description

The data used for this analysis comes from several sources. In December 2011, Bloomberg News released data providing information about the Fed's emergency loans to numerous domestic and foreign firms during the recent financial crisis. The data provides day-by-day loan transactions to various banks and provides cumulative borrowing totals, along with the number of days during the crisis that a particular bank was in debt to the Fed. The Bloomberg data reports the peak amount of borrowing as well as the date of the peak amount of borrowing.

I next gather annual 2007 balance sheet and income statement data for all the banks available on Bank Compustat. I merge the financial statement data to the Fed's lending data for each stock based on the end-of-the-year figures in 2007. Using this data allows the balance sheet

characteristics to predate the receipt of emergency loans.[6] After merging the data, I exclude six banks that had not reported assets or liabilities. Of the 754 banks left in the sample, I gather information from the 2007 Federal Reserve Call Reports and merge the information from these reports with the data from Bloomberg and Compustat. I am able to obtain call report information for 677 of the 754 banks, and exclude the others from my sample.

Because I want to control for other factors that are not reported in financial statements, I gather data from the Center for Research on Securities Prices (CRSP). In particular, I obtain monthly share prices, monthly market capitalization, and volume. Share prices and volume allow me to control for market or trading liquidity, while market capitalization allows me to use another control for the size of banks. I also gather daily returns and estimate a Capital Asset Pricing Model (CAPM) to obtain an estimate of systematic or market risk (beta). Using the residual returns from the CAPM regressions, I calculate a measure of idiosyncratic volatility by estimating the standard deviation of residual returns. I then merge the CRSP data to the Bank Compustat data. Several of the 677 banks in my initial sample do not have available CRSP data due to listings on Pink Sheets, among other reasons. The number of observations with both Bank Compustat data and CRSP data is 586.

From the Center for Responsive Politics (CPR), I gather lobbying expenditures for each bank in the sample. I use this data to approximate the level of political connections for each bank following Richter, Samphantharak, and Timmons (2009), Hochberg, Sapienza, and Vissing-Jorgensen (2009), and Yu and Yu (2010). The lobbying data is obtained from disclosure reports that are filed with the Secretary of the Senate's Office of Public Records. Lobbying expenditures are estimated to the nearest $20,000 of all lobbying-related income. Firms that lobbied close to

[6] As a measure of robustness, I use balance sheet and income statement information from the quarter before the loan was received. Results from these unreported tests are qualitatively similar to those reported in this study.

$10,000 were not required to disclose the amount of lobbying and the CPR generally treats these cases as zero.

I also approximate a bank's political connections using additional data from the CPR. The CPR provides a comprehensive database of individuals with careers on Capitol Hill, the White House, or in the Cabinet, as well is in the private sector. In particular, the CPR provides information about a firm's current or former employees who are either currently or formerly employed in the government. I use this information as another approximation for the level of political connections.

Table 1 (page 36) reports statistics that summarize the sample. Panel A reports summary statistics about balance sheet information for the entire 677 banks used in the sample. *Assets* are the total assets reported by Bank Compustat in millions of dollars. Similarly, *Liabilities* are the total liabilities and *Equity* is the total owners' equity reported by Compustat in millions of dollars. I also report the amount of *Loans* in millions of dollars, the amount of *Deposits* in millions of dollars, and the amount of investment securities (*InvSec*) in millions of dollars held in panel A. From the Federal Reserve Call Reports, I gather information on the amount of nonperforming loans (*NPLoans*) as well as foreclosed loans (*Foreclosed*) in millions of dollars. The average bank has $46.9 billion in assets, $44.1 billion in liabilities, and approximately $2.74 billion in equity. Furthermore, the average bank has $22.7 billion in loans, $224.5 million in nonperforming loans, $9.6 million in foreclosed loans, $23.9 billion in deposits, and $5.1 billion in investment securities. I also calculate two ratios that might measure the riskiness of the balance sheet. *D/E* is the bank's debt-to-equity ratio. Banks with higher debt-to-equity ratios have higher default risk (Modigliani and Miller, 1958; Baron, 1974). Banks with higher loan-to-assets ratios also more subject to default risk (Evanoff and

Fortier, 1988). The average bank has a debt-to-equity ratio of 10.0166 and a loan-to-assets ratio of 0.7071.

Panel B reports the summary statistics for the variables for the 586 banks for which CRSP data was available. *Price* is the average monthly share price. *Size* is the average monthly market capitalization. *Turn* is the average monthly share turnover (the percentage of trading volume relative to shares outstanding). *Beta* is the estimate of systematic risk obtained from estimating the daily CAPM regression for each stock. *IdioVolt* is the idiosyncratic volatility or the standard deviation of the daily residual returns from the daily CAPM regressions. The average bank has a share price of $19.53, an average market capitalization of $2.49 billion, a share turnover of 65.14 percent, an average beta of 0.5693, and an average idiosyncratic volatility of 5.63 percent.

Panel C reports statistics that describe the data on the Fed's emergency loans for the entire sample of 677 banks. *BORROW* is an indicator variable that equals one if the bank received emergency support—zero otherwise. The variable *Days* is the number of days a particular bank was in debt to the Fed during the financial crisis. *Amt* is the peak amount in millions of dollars that a particular bank was in debt to the Fed during the crisis. The mean of *BORROW* is 0.1152, indicating that 11.52 percent of 677 banks (or a total of 78 banks) received emergency support. The mean number of days a bank was in debt, across all 677 banks, is 45.07. The mean peak amount of borrowing, across the entire sample of banks, is $701 million.

Panel D reports the summary statistics for measures of political connections for the entire sample of 677 banks. *LobbyAmt* is the average amount of lobbying expenditures during the 10 years before the financial crisis. *LOBBY* is an indicator variable equal to unity if a particular bank has positive lobbying expenditures during any of the 10 years before the financial crisis.

EMPLOY is another indicator variable that equals one if a bank had employed or was currently employing an individual who had been employed or was currently employed in government. The mean amount of lobbying expenditures, across all banks in the sample, is $201,216. The mean of the variable *LOBBY* is 0.0384, indicating that 3.84 percent of banks in the sample had lobbying expenditures. Further, the mean of the variable *EMPLOY* is 0.0327, suggesting that 3.27 percent of the sample of banks employed an individual associated with the government.

IV. Empirical Tests and Results

A. Univariate Tests—Difference-in-Means Tests

I begin by performing a univariate comparison of firm-specific characteristics for banks that received emergency support and banks that did not receive support. Table 2 (page 37) reports the results of this comparison. Columns 1 through 3 provide the tests for the entire sample of 677 banks while columns 4 through 6 present the results for the sample of 586 banks with data available on CRSP. Column 1 shows that the average bank that received emergency support had a *D/E* ratio of 9.95, a loan-to-assets ratio (*L/A*) of 0.6939, *Assets* of $86.9 billion, *Loans* of $43.9 billion, *NPLoans* of $421.8 million, *Foreclosed* loans of $47.9 million, *Liabilities* of $79.0 billion, *Deposits* of $47.7 billion, and *InvSec* of $12.2 billion. I also find that the average bank that received emergency support had an average lobbying amount of $1.44 million, a mean value for the indicator variable *LOBBY* of 0.105, and a mean value of the indicator variable *EMPLOY* of 0.154.

Column 2 reports the results for banks that did not receive emergency support. The average bank in column 2 had a *D/E* ratio of 10.02, an *L/A* ratio of 0.7091, *Assets* of $41.0 billion, *Loans* of $19.6 billion, *NPLoans* of $195.9 million, *Foreclosed* loans of $3.98 million,

Liabilities of $39.0 billion, *Deposits* of $20.5 billion, *InvSec* of $4.12 billion, an average lobbying amount of $19,952, a mean value for the indicator variable *LOBBY* of 0.0206, and a mean value of the indicator variable *EMPLOY* of 0.0150.

Column 3 reports the difference-in-means between columns 1 and 2. I find that the differences in the *D/E* and *L/A* ratios are statistically close to zero (differences = −0.08, −0.0152; *p*-values = 0.879, 0.347). The difference in assets is $45.9 billion and is not statistically different from zero at the 0.10 level (*p*-value = 0.178). Similarly, the differences in *Loans* and *NPLoans* are positive but only marginally significantly (differences = 24,325.02, 224.90; *p*-value = 0.119, 0.115). However, the difference between foreclosed loans is statistically different from zero (difference = 43.91, *p*-value = 0.000). Between *Liabilities* I do not find a difference that is statistically significant. However, *Deposits* and *InvSec* were markedly larger for the borrowing sample when compared to the banks that did not receive emergency loans from the Fed (differences = 27,230.77, 8,100.41; *p*-values = 0.085; 0.022).

These univariate tests seem to indicate that banks that received emergency support from the Fed had more loans on their books, and in particular more nonperforming loans, foreclosed loans, deposits, and investment securities. I also find that banks that received support had a greater amount of deposits than banks that did not receive support. Banks that received support had 2.24 times more in loans, 2.14 times more in nonperforming loans, 12 times more in foreclosed assets, 2.33 times more in deposits, and 2.97 times more in investment securities than banks that did not receive support. These comparisons, and those that follow in this section, suggest that there are differences between banks that received support and those that did not. Therefore, I recognize the need to control for the balance sheet composition in my multivariate analysis.

When examining the measures of political connections, I find that the difference between *LobbyAmt* for the subsamples is $1,422,222 and statistically different from zero (*p*-value = 0.000). I also find that the differences in *LOBBY* and *EMPLOY* are positive and significant (differences = 0.0843, 0.1389; *p*-values = 0.000, 0.000). In economic terms, these results are striking. First, banks that received emergency support had 72.28 times more in lobbying expenditures than banks that did not receive support. Second, the percentage of banks that received support and had lobbied during the 10 years before the financial crisis is 5.09 times higher than the percentage of banks that did not receive support and had lobbied. Finally, the percentage of banks that received support and had politically connected employees is 10.26 times higher than the percentage of banks that did not receive support and had politically connected employees.

Columns 4 through 6, which report the results for those stocks with data available in CRSP, provide results that are qualitatively similar to those in columns 1 through 3. However, I also find that the sample of banks that received support had a higher share price (difference = $7.31, *p*-value = 0.003), more market capitalization (difference = $10.2 million, *p*-value = 0.017), more share turnover (difference = 0.6542, *p*-value = 0.000), and higher betas (difference = 0.1211, *p*-value = 0.078). I do not find, however, that the difference in idiosyncratic volatility between the two samples is statistically significant (difference = −0.0021, *p*-value = 0.280).

Share prices were 40 percent higher, on average, for banks that received support than for banks that did not receive support. Banks that received support also had market capitalization that was 1,000 percent higher than the market capitalization of banks that did not receive support. Share turnover, for banks that received support, was more than twice as high as for banks that did not receive support. Banks that received support also had betas that were approximately 22 percent higher than those of banks that did not receive support. When examining these trading

characteristics, the results seem to suggest that larger firms (in terms of market capitalization), more liquid firms (in terms of prices and turnover), and firms with more systematic or market risk (in terms of betas) were more likely to receive emergency loans from the Fed.

Columns 4 through 6 again show that my measures of political connections are both statistically and economically larger for banks that received emergency support from the Fed. I note, however, that the comparison of *LobbyAmt* should be interpreted with caution due to the possibility of severe rounding errors in the CRP data. Therefore, I focus on the two indicator variables *LOBBY* and *EMPLOY* throughout the rest of the analysis.

B. Univariate Tests—Correlation

I continue my univariate tests by estimating Pearson correlation coefficients for the variables used in the analysis. Table 3 (page 38) reports the correlation matrix for the entire sample of 677 banks and includes the emergency loan measures, the balance sheet information, and the two indicator variables that measure political connections. In the first row of table 3, I show that *BORROW* is positively correlated with both *Days* and *Amt* (correlation = 0.86, 0.29; *p*-values = 0.000, 0.000). This positive correlation is to be expected given that nearly 90 percent of banks in the sample did not receive emergency support. I also find that *BORROW* is unrelated to *D/E*, *L/A*, *Loans*, *NPLoans*, *Assets*, and *Liabilities* as the correlation coefficients for these variables are statistically close to zero. *Foreclosed* loans, *Deposits*, and *InvSec* do, however, produce coefficients that are positive and significant—at the 0.10 level or higher. When examining the correlation between *BORROW* and the two indicator variables capturing the level of a particular bank's political connections, I find positive correlation coefficients for both *LOBBY* and *EMPLOY* that are statistically significant at the 0.01 levels.

The second and third rows of table 3 also show the correlation coefficients for *Days* and *Amt*. The results in the second row suggest that *Days* is positively related to *Loans*, *NPLoans*, *Foreclosed* loans, *Assets*, *Liabilities*, *Deposits*, and *InvSec*. *Amt* is inversely related to *L/A*, and directly related to *Loans*, *NPLoans*, *Foreclosed Loans*, *Assets*, *Liabilities*, *Deposits*, and *InvSec*. Again, I find that *Days* and *Amt* are positively correlated with *LOBBY* and *EMPLOY*. Combined with the results in the first row, the positive correlation between *Days* and *Amt* and the two measures of political connections supports the findings in the previous table and suggests that banks that received emergency support had also lobbied and employed politically connected individuals.

Table 4 (page 39) reports the Pearson correlation coefficients for the sample of 586 banks with available CRSP data and includes the emergency loan measures, trading/market measures, and the two indicator variables that measure political connections. In the first row of table 4, I find that *BORROW* is directly correlated with the share price (*Price*), market capitalization (*Size*), and share turnover (*Turn*). I do not find that *BORROW* is related to market risk (*Beta*) or the idiosyncratic volatility (*IdioVolt*). Further, I find that, for the sample of banks with CRSP data, *BORROW* is still positively correlated with both *LOBBY* and *EMPLOY,* indicating that banks that received emergency support had lobbied and employed politically connected individuals. The second and third rows of table 4, which examine the correlation between *Days* and *Amt* and the other variables used in the analysis, produce results similar to those in the first row of the table.

I must exercise caution when making inferences about the correlation in tables 3 and 4, because *LOBBY* and *EMPLOY* are also correlated with other factors related to the variables *BORROW*, *Days*, and *Amt*. For instance, columns 13 and 14 of table 3 shows that *LOBBY* and

EMPLOY are directly related to all the other balance sheet characteristics in the data. In column 9 of table 4, *LOBBY* is positively correlated with *Price*, *Size*, and *Turn*. Each of these variables is directly related to *BORROW*, *Days*, and *Amt*. Therefore, I recognize the need to hold variables constant when making inferences regarding the relationship between banks' political connections and receipt of emergency support.

C. Multivariate Tests

In this subsection, I examine the effect of political connections, along with other firm-specific characteristics, on the likelihood that a particular bank received emergency support using a variety of multivariate tests. I begin by estimating the following equation using a probit regression.

$$BORROW_i = \beta_0 + \beta_1 CONNECTIONS_i + \beta_2 ln(Assets_i) + \beta_3 D/E_i + \beta_4 L/A_i + \beta_5 NPLoans\%_i + \beta_6 Foreclosed\%_i + \beta_7 ln(InvSec_i) + \beta_8 ln(Deposits_i) + \beta_9 DIV_i + \beta_{10} Price_i + \beta_{11} ln(Size_i) + \beta_{12} Turn_i + \beta_{13} Beta_i + \beta_{14} IdioVolt_i + \varepsilon_i \quad (1)$$

The dependent variable is the indicator variable *BORROW*, which is equal to one if a bank received emergency loans during the financial crisis—zero otherwise. The independent variables include an indicator variable *CONNECTIONS*, which equals *LOBBY* (the indicator variable capturing whether a bank had lobbied during the 10 years before the financial crisis) in panel A or *EMPLOY* (the indicator variable capturing whether a bank had employed an individual with political connections) in panel B. I also include the natural log of Assets (*Ln(Assets)*), the debt-to-equity ratio (*D/E*), the loan-to-assets ratio (*L/A*), the percentage of loans that Fed call reports have considered nonperforming (*NPLoans%*), the percentage of foreclosed assets

(*Foreclosed%*), the natural log of investment securities held by the bank (*Ln(InvSec)*), and the natural log of deposits (*Ln(Deposits)*). Additional independent variables include the indicator variable *DIV*, which is equal to unity if the firm pays a dividend, the share price (*Price*), the natural log of market capitalization (*Ln(Size)*), the share turnover (*Turn*), an estimate of systematic risk (*Beta*), and an estimate of idiosyncratic risk (*IdioVolt*).

Table 5 (page 40) reports the results from estimating equation 1. In unreported results, I estimate equation 1 using a linear probability model and find the results to be qualitatively similar to those I report in table 5. I also estimate variance inflation factors in the unreported linear probability tests and find that each of the variance inflation factors for the indicator variables *LOBBY* and *EMPLOY* is less than 2.[7] I do find that the inflation factors are above 10 for some of the balance sheet variables, so I estimate equation 1 and include different combinations of the independent variables to show that the conclusions I draw are robust to different specifications of the full model.[8]

Column 1 shows the results when including both *LOBBY* and the natural log of assets. Both *LOBBY* and *Ln(Assets)* produce positive and significant estimates (estimate = 0.8492, 0.2036; *p*-value = 0.002, 0.000). Column 2 shows qualitatively similar results even after I include the *D/E*. Interestingly, *D/E* produces an estimate that is statistically negative (estimate = −0.0526, *p*-value = 0.005), indicating that banks with low debt-to-equity ratios were more likely to receive emergency support than banks with high debt-to-equity ratios. Column 3 extends column 2 by including the *L/A* ratio. Here, I find positive and significant estimates for *LOBBY*

[7] I do not include both *LOBBY* and *EMPLOY* in the same regression because of severe multicollinearity issues. Said differently, both of these indicator variables are highly correlated, thus affecting my ability to infer the significance of the coefficients. The variance inflation factors for *LOBBY* and *EMPLOY*, when including both indicator variables in the same regression, are well above 10.

[8] While there is not a specific test-statistic determining a critical value for variance inflation factors, the idea is that standard errors might be inflated by the square root of the variance inflation factor. Therefore, for a variance inflation factor of 10, standard errors might be 3.16 times the given standard error.

(estimate = 0.8738, *p*-value = 0.002), *Ln(Assets)* (estimate = 0.2883, *p*-value = 0.000), and *L/A* (estimate = 1.4211, *p*-value = 0.027). These results suggest that the Fed was more likely to give emergency support to banks with higher loan-to-assets ratios. Given that prior research (Molyneux and Forbes, 1995; Evanoff and Fortier, 1988) suggests that *L/A* ratios measure the riskiness of banks, this result is intuitive. Column 4 includes both *NPLoan%* and *Foreclosed%*. I do not find that either of these variables directly affect the likelihood of receiving emergency loans. However, the other independent variables produce estimates that are similar in sign and magnitude to the previous column. Column 5 reports the results including each of the financial statement variables for all 677 banks in the sample.

When I include *InvSec*, *Deposits*, and the dividend indicator variable (*DIV*), I find that the positive estimate for *Ln(Assets)* that was apparent in columns 1 through 4 becomes negative. I do, however, find that the positive estimate for *L/A* holds in column 4 (estimate = 4.1254, *p*-value = 0.000). I also find that *Ln(InvSec)*, *Ln(Deposits)*, and *DIV* produce positive estimates (estimates = 0.3117, 1.2110, and 0.6030; *p*-values = 0.043, 0.054, 0.029), suggesting that banks that held more investment securities as assets, had more deposits, and paid dividends were more likely to receive emergency support. As before, the estimate for *LOBBY* is again positive and significant (estimate 1.0241, *p*-value = 0.000). The positive estimate for *LOBBY* indicates that, after controlling for the structure of a bank's balance sheet, banks that lobbied during the 10 years before the financial crisis were more likely to receive emergency support than banks that did not lobby.

Column 6 reports the results for the full model for the 586 banks with available CRSP data in the regression. I again find that the estimate for *L/A* is positive and significant (estimate = 3.4520, *p*-value = 0.001). I find that the estimate for *Ln(InvSec)* is positive and marginally

significant (estimate = 0.2845, *p*-value = 0.078). I also find that *Size* and *Turn* produce estimates that are positive and statistically different from zero (estimates = 0.6023, 0.2592; *p*-values = 0.000, 0.068).[9] The variable of interest is *LOBBY*, and its estimate is both positive and significant (estimate = 0.6255, *p*-value = 0.036).

At the bottom of table 5, I report the marginal probabilities obtained from the probit estimates for the variable *LOBBY*. As seen in column 1, the marginal probability of received emergency support is 0.1503, indicating that banks that had lobbied during the 10 years before the financial crisis had a 15.03 percent greater chance of receiving support than banks that had not lobbied. The marginal probability for the variable *LOBBY* ranges from 0.1002 (in column 6) to 0.1693 (in column 5). These results suggest that not only are the estimates produced by the variable *LOBBY* statistically significant, but the estimates are also economically meaningful.[10]

Panel B of table 5 replicates panel A, except I include the indicator variable *EMPLOY* instead of the indicator variable *LOBBY*. The results in panel B are qualitatively similar to those in panel A so I only discuss the findings in columns 5 and 6 for brevity. Similar to the previous panel, column 5 shows that *L/A* and *Ln(InvSec)* both produce estimates that are positive and significant (estimates = 2.7909, 0.3121; *p*-values = 0.003, 0.041). *Ln(Deposits)* also produces a positive and significant estimate (estimate = 1.2463, *p*-value = 0.048). Further, after controlling

[9] The positive estimates for both *Size* and *Assets* suggest that larger banks are more likely to receive emergency support. This result supports the idea that larger banks are those that are "too big to fail" and hold systemic value to the overall economy.

[10] A natural extension to these tests is to determine whether lobbying is a more important determinant in the receipt of emergency loans than the assets to market capitalization. In unreported tests, I scale the amount of lobbying (as reported by the CPR) by the total assets of the bank. I repeat that the CPR data about the amount of lobbying is a crude measure. That is, some banks that may have lobbied slightly less than $10,000 in a particular year would have not been included in the dataset. Further, the lobbying amounts reported by the CPR are in $10,000 increments so the lobbying amount variable does not contain the exact amount of lobbying expenditures. Therefore, I exercise caution when making inferences regarding these unreported tests. Nevertheless, the results show that the estimate for the ratio of lobbying expenditures relative to the total assets produces a coefficient that is statistically close to zero, suggesting that the amount of lobbying expenditures and the total assets are equally important factors in explaining the likelihood of receiving emergency support.

for the information on banks' financial statements, the indicator variable *EMPLOY* produces a positive and significant estimate (estimate = 0.9897, *p*-value = 0.003).

In column 6, I estimate equation 1 for the sample of stocks with available CRSP data and find that, as before, *EMPLOY* produces a positive and significant estimate (estimate = 0.6358, *p*-value = 0.057). To make inferences regarding the economic magnitude of the estimate for *EMPLOY*, I again estimate the marginal probabilities associated with the probit estimates for *EMPLOY*. The marginal probabilities range from 0.1021 in column 6 to 0.1646 in column 5. These results suggest that the Fed was 10.2–16.5 percent more likely to give emergency support to banks that had employed politically connected individuals than banks that had not employed politically connected individuals.[11] Results in table 5 support the conclusions I draw in previous tables and suggest that, after controlling for the banks' balance sheet structure and other measures of riskiness, market liquidity, and size, the political connectedness of banks increased the Fed's likelihood of giving emergency support.[12]

On November 4, 2011, the Financial Stability Board released a list of financial institutions that are considered "systemically important" and TBTF. Given that these institutions were likely among those receiving emergency loans and those that have political connections, it is possible that TBTF banks are driving my results even though I control for size and other balance sheet information. As a measure of robustness, I eliminate any banks in the sample that

[11] I recognize an important limitation when using the *EMPLOY* to measure political connections. It is possible that politically connected individuals choose to work for banks that are most likely to receive emergency support. To provide some controls for this possibility, I estimate a two-stage-least squares regression, where the first stage is a linear probability model where the dependent variable is *EMPLOY* and the second stage is a linear probability model where the dependent variable is *BORROW*. I define as an instrument variable the natural log of Size. In these unreported tests, my results from these robustness tests show that *EMPLOY* (after controlling for this endogeneity) still directly affects the likelihood that a bank received emergency support.

[12] I recognize an important limitation in this study. The decision to provide emergency support to banks is not observed and a number of factors for which I cannot control might influence this decision. Therefore, it is possible that the results suffer from omitted variable bias. However, in this table and the tables below, I have attempted to provide a rigorous analysis of the emergency loan program of the Fed.

are also on the Financial Stability Board's list of TBTF banks. The unreported results are qualitatively similar to the results I report in table 5.[13] I find that both lobbying expenditures and politically connected employees directly influence the likelihood of receiving emergency support. For instance, after replicating column 5 of table 5, panel A, using this sample of banks without TBTF banks, I find that the estimate for *LOBBY* is 0.8690 (*p*-value = 0.004). The marginal probability obtained from this estimate is 0.1436. I note that the marginal probability decreases from 0.1693 (in column 5 of table 5, panel A) to 0.1436 using this restricted sample. However, my unreported findings are still statistically and economically significant: I find qualitatively similar results when I replicate column 5 of table 5, panel B, using my sample of stocks that do not include TBTF banks (estimate for *EMPLOY* = 0.7827, *p*-value = 0.021).

In additional robustness tests, I carefully examine hand-collected lobbying reports to determine the general recipients of lobbying by banks. I find that only five banks (Bank of America, BB&T, JP Morgan, National City Corp, and Wachovia) had spent money lobbying the Fed directly. Further, only Bank of America and Wachovia had lobbying expenditures targeting the Fed during the three years before the financial crisis. I therefore exclude these banks in a variety of the robustness tests and still find that both lobbying expenditures and politically connected employees directly affect the Fed's likelihood of giving emergency loans. These unreported results indicate that banks that lobbied government entities other than the Fed were still more likely to receive emergency loans.

Next, I examine the effect of political connections on the number of days during the financial crisis that banks were in debt to the Fed. To do so, I estimate the following equation using a variety of different econometric specifications.

[13] Of the banks included in this analysis, five banks are on the Financial Stability Board's list of TBTF banks. These banks are Bank of America, Deutsche Bank, JP Morgan, State Street, and Wells Fargo.

$$DAYS_i = \beta_0 + \beta_1 CONNECTIONS_i + \beta_2 ln(Assets_i) + \beta_3 D/E_i + \beta_4 L/A_i + \beta_5 NPLoans\%_i + \beta_6 Foreclosed\%_i + \beta_7 ln(InvSec_i) + \beta_8 ln(Deposits_i) + \beta_9 DIV_i + \beta_{10} Price_i + \beta_{11} ln(Size_i) + \beta_{12} Turn_i + \beta_{13} Beta_i + \beta_{14} IdioVolt_i + \varepsilon_i \quad (2)$$

The dependent variable is the number of days for which a bank held outstanding loans from the Fed during the financial crisis (*DAYS*). The independent variables include an indicator variable *CONNECTIONS*—which equals *LOBBY* in panel A or *EMPLOY* in panel B—the natural log of assets (*Ln(Assets)*), the debt-to-equity ratio (*D/E*), the loan-to-assets ratio (*L/A*), the percentage of loans that Fed call reports have considered nonperforming (*NPLoans%*), the percentage of foreclosed assets (*Foreclosed%*), the natural log of investment securities held by the bank (*Ln(InvSec)*), and the natural log of deposits (*Ln(Deposits)*). Additional independent variables include the indicator variable *DIV*, which is equal to unity if the firm pays a dividend—zero otherwise—the share price (*Price*), the natural log of market capitalization (*Ln(Size)*), the share turnover (*Turn*), an estimate of market risk (*Beta*), and an estimate of idiosyncratic risk (*IdioVolt*). Table 6 (page 42) reports the results from estimating equation 2.

For robustness, I estimate a variety of different econometric specifications. In columns 1 and 2 I start with OLS while controlling for conditional heteroskedasticity using White's (1980) method for robust standard errors.[14] Because the dependent variable is truncated at zero (banks that did not receive emergency support had a value of zero for the variable *Days*), I estimate a one-tailed Tobit Model in columns 3 and 4. The one-tailed Tobit Model accounts for truncation of the dependent variable at zero. I also recognize that the dependent variable is not continuous and is instead a count variable. Therefore, I must control for the discreteness in the error term in

[14] Chi-squared statistics are large enough to reject the null hypothesis that there is no heteroskedasticity. Therefore, I use White's (1980) method for robust standard errors.

equation 2. Columns 5 and 6 of table 6 present the results from estimating equation 2 using a Poisson regression. A Poisson regression assumes that the mean of the error term is Poisson distributed and equal to the variance of the error term.

It is possible, however, that the error term suffers from overdispersion, or a variance that is larger than the mean. In fact, table 1 shows that the mean of the dependent variable *Days* is 36.79, while the variance is 15,550.25 (124.50 squared). Due to the possibility of overdispersion, I estimate equation 2 using a negative binomial regression in columns 7 and 8. A negative binomial regression also allows for discreteness in the error term, but makes less restrictive assumptions regarding the distribution of the errors.

Panel A shows the results when *CONNECTIONS* is defined as the indicator variable *LOBBY*. The control variables generally show that *L/A* produces an estimate that is positive and significant. Columns 2 and 4 also provide evidence that *Price* produces a negative estimate while *Size* and *Turn* produce positive and significant estimates. Similar results are found in columns 6 and 8, although the positive estimate is not statistically different from zero in column 8 (p-value = 0.156). After controlling for all these factors, the estimate for *LOBBY* is positive and significant across each column. The only exception is in columns 7 and 8 when using the negative binomial regression.[15] In economic terms, the estimates in columns 1 through 4 represent the number of days banks that had lobbied were in debt to the Fed versus banks that did not lobby. For instance, column 1 suggests that banks that had lobbied during the 10 years before the financial crisis were in debt 130.38 days more than banks that had not lobbied. These findings indicate that the results in table 6, panel A, are both economically and statistically significant.

[15] The lack of significance in the negative binomial regressions, suggests that bias caused by overdispersion (in the Poisson regressions) may indeed be affecting the results in table 6. Therefore, I exercise caution when drawing inferences from the results and concluded that the evidence that political connections influenced the number of days that banks were in debt to the Fed is weak at best.

Panel B reports the results when *CONNECTIONS* is defined as *EMPLOY*. The estimates for the control variables are relatively similar in both sign and magnitude to those in panel A. Further, the variable *EMPLOY* again produces estimates that are both positive and significant in each of the columns except in columns 6, 7, and 8, indicating that banks that had employed politically connected individuals were generally in debt to the Fed a greater number of days than banks that had not employed politically connected individuals. The estimate for *EMPLOY* in column 1 suggests that banks that had employed politically connected individuals were in debt to the Fed 136.20 days more than banks that had not employed politically connected individuals.

In the final set of tests, I examine the effect of political connections on the amount of emergency support received by banks. In particular, I estimate the following equation using standard OLS regressions and one-tailed Tobit regressions to account for the truncation in the dependent variable.

$$AMT_i = \beta_0 + \beta_1 CONNECTIONS_i + \beta_2 ln(Assets_i) + \beta_3 D/E_i + \beta_4 L/A_i + \beta_5 NPLoans\%_i + \beta_6 Foreclosed\%_i + \beta_7 ln(InvSec_i) + \beta_8 ln(Deposits_i) + \beta_9 DIV_i + \beta_{10} Price_i + \beta_{11} ln(Size_i) + \beta_{12} Turn_i + \beta_{13} Beta_i + \beta_{14} IdioVolt_i + \varepsilon_i \quad (3)$$

In equation 3, the dependent variable is the peak amount (in billions of dollars) of emergency loans that a particular bank received during the financial crisis (*AMT*).[16] As before, the independent variables include an indicator variable *CONNECTIONS*, which equals *LOBBY* or *EMPLOY*, the natural log of Assets (*Ln(Assets)*), the debt-to-equity ratio (*D/E*), the loan-to-assets

[16] Recall that all bank observations are included in the analysis. Therefore, many of the banks did not receive emergency loans from the Fed and therefore, they have a dependent variable that is equal to zero.

ratio (*L/A*), the percentage of loans that Fed call reports have considered nonperforming (*NPLoans%*), the percentage of foreclosed assets (*Foreclosed%*), the natural log of investment securities held by the bank (*Ln(InvSec)*), the natural log of deposits (*Ln(Deposits)*), the indicator variable *DIV*, which is equal to unity if the firm pays a dividend, the share price (*Price*), the natural log of market capitalization (*Ln(Size)*), the share turnover (*Turn*), an estimate of market risk (*Beta*), and an estimate of idiosyncratic risk (*IdioVolt*). Table 7 (page 45) reports the results from the estimation of equation 3. Columns 1 through 4 present the results from OLS regressions while controlling for conditional heteroskedasticity using White's (1980) standard errors, while columns 5 through 8 report the Tobit regression results.[17]

The OLS regressions and the truncated regressions produce very similar results. So for brevity, I only discuss the OLS results. Column 1 shows that, of all the control variables, only *D/E* and *L/A* produce estimates that are statistically different from zero. However, after controlling for these other factors, the variable *LOBBY* produces an estimate that is both positive and significant (estimate = 10.6424, *p*-value = 0.000). Similar results are found in column 2 when only using the 586 stocks that have available CRSP data. The coefficient in column 1 suggests that banks that had lobbied during the 10 years before the financial crisis had a peak amount of outstanding emergency loans of $12 billion more than banks that had not lobbied.

Columns 3 and 4 show that, after controlling for the other factors that influence the peak amount of borrowing by banks, the estimates produced by the indicator variable *EMPLOY* are both positive and significant (estimates = 14.8716, 16.3951; *p*-values = 0.000, 0.000). In economic terms, the results suggest that banks that employed politically connected individuals had peak borrowing between $14.87 and $16.40 billion more than banks that had not employed

[17] As before, Chi-squared tests show the presence of heteroskedasticity. Therefore, I report *p*-values that are obtained from White's (1980) robust standard errors.

politically connected individuals. Similar results are found in columns 7 and 8 when I control for the truncation of the dependent variable using a one-tailed Tobit regression. Combined with earlier multivariate tests, the findings in table 7 suggest that not only was the Fed more likely to give emergency support to banks with political connections than banks without political connections, but banks with connections were also in debt to the Fed for a greater number of days and for a greater amount than banks without connections.

V. Conclusions

This paper examines firm-specific factors that potentially influenced whether the Fed gave banks emergency loans during recent financial crisis. Using unique data that consists of the Fed's emergency loan transactions, univariate tests show evidence that larger banks, in terms of assets and market capitalization, were more likely to receive emergency support than smaller banks. Univariate tests also show that banks with more loans, more deposits, and more investment securities on their books were more likely to receive emergency loans. Further, I find evidence that banks with higher share prices, more stock trading activity, and higher exposure to systematic or market risk were also more likely to receive support.

The main objective of this paper, however, is to explore the possibility that the political connectedness of banks also explains their likelihood of receiving support. Because the Fed operates independently of political influence, it is difficult to imagine how and why political connections might be important. However, univariate tests show that banks that participated in the Fed's emergency loan programs had lobbying expenditures (during the 10 years before the financial crisis) that were more than 72 times greater than the lobbying expenditures of banks that did not participate in the programs. I also find that banks that had employed politically

connected individuals were more likely to receive emergency loans than banks that had not employed politically connected individuals.

I use robust econometric specifications to determine whether the univariate results hold after controlling for banks' balance sheet structure and other measures of bank riskiness. Multivariate tests show that banks that had lobbied during the 10 years before the financial crisis were 10.02–16.93 percent more likely to receive emergency loans than banks that had not lobbied. Further, the tests show that banks that had employed politically connected individuals were 10.21–16.46 percent more likely to receive loans than banks that had not employed politically connected individuals. In other tests, I show that banks with political connections were in debt to the Fed a greater number of days as well as by a greater amount than banks without political connections.

The results in this paper are striking and warrant some explanation. It is unlikely that the Fed's motive to provide support to banks was to provide political favors to banks with the most political connections. In fact, in unreported tests, I eliminate those banks with lobbying expenditures targeting the Fed and I still find a direct relationship between a bank's political connections and the likelihood of receiving emergency support. Another possible explanation might be that banks that are politically connected are considered those that are TBTF, and multivariate tests that control for the size of banks' assets and market capitalization do not capture the TBTF characteristic. However, unreported tests show that when I eliminate banks on the Financial Stability Board's TBTF list, my results still hold.

Three other explanations might have more merit. First, the level of a bank's political connections might mitigate some of the potential informational asymmetries that exist between the borrowing bank and the Fed. Therefore, the Fed may be more likely to provide support to

politically connected banks because of more symmetric information in the lending process. Second, because participation in the emergency lending facilities was voluntary, politically connected banks might be more inclined to receive government support than nonconnected banks. A third possible explanation is related to the concept of moral hazard. While prior research discusses the moral hazard of an increase in risk-taking behavior after the receipt of bailouts generally (i.e., bailouts lead to greater risk-taking), another stream of research focuses on the moral hazard of insurance (i.e., the insured engage in riskier activities). Under the assumption that firms become politically connected to provide some sort of insurance during periods of economic or firm-specific distress (Richter, Samphantharak, and Timmons, 2009; Hochberg, Sapienza, and Vissing-Jorgensen, 2009; Faccio, Masulis, and McConnell, 2006; Yu and Yu, 2010), my results indicate that politically connected banks engaged in risky activity which led to central bank intervention.

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Table 1. Summary Statistics

The table reports statistics that describe the sample. Panel A reports the statistics for the sample of 677 banks obtained from Bank Compustat. *Assets* is the bank's assets in $millions and *Liabilities* is the bank's liabilities in $millions. *Equity* is the difference between *Assets* and *Liabilities*. From the Assets side of the balance sheet, I gather the amount (in $millions) of *Loans*, *Deposits*, and investment securities (*InvSec*) held by the bank. From Call Reports, I gather the amount of nonperforming loans (*NPLoans*) and the amount of foreclosed assets (*Foreclosed*). *D/E* is the debt-to-equity ratio and *L/A* is the loan-to-assets ratio. Panel B reports the trading/market statistics obtained from CRSP. Of the 677 banks in the sample, CRSP only contains data for 586 banks. *Price* is the average monthly stock price. *Size* is the average monthly market capitalization. *Turn* is the share turnover, which is the ratio of average monthly trading volume to shares outstanding. *Beta* is the systematic risk obtained by estimating a daily CAPM for each stock in each year. *IdioVolt* is a measure of idiosyncratic volatility and is obtained by calculated the standard deviation of daily residual returns from the CAPM estimation. Panel C reports the Fed emergency lending information obtained from Bloomberg. *BORROW* is an indicator variable equal to one if a bank received emergency loans during the financial crisis—zero otherwise. *DAYS* is the number of days that a particular bank was in debt to the Fed. *AMT* is the peak amount of a bank's outstanding loans from the Fed. Panel D reports the information from the Center for Responsive Politics. *LobbyAmt* is the amount of lobbying expenditures for the 10 years before the financial crisis. *LOBBY* is an indicator variable equal to one if a bank lobbied during the 10 years before the financial crisis—zero otherwise. *EMPLOY* is equal to one if a bank employs or has employed someone who currently works for or has worked for the government—zero otherwise.

Panel A. Firm characteristics (N = 677)					
	Mean	*Median*	*Std. deviation*	*Min*	*Max*
	[1]	[2]	[3]	[4]	[5]
Assets	46,856.86	1,063.34	277,648.06	4.67	3,771,199.85
Liabilities	44,111.06	939.82	264,585.28	5.85	3,589,783.24
Equity	2,745.81	101.46	14,404.62	−1.18	181,416.61
Loans	22,665.37	798.81	128,506.90	0.00	2,093,736.13
NPLoans	224.53	6.40	1,509.56	0.00	23,314.00
Foreclosed	9.58	0.43	61.68	0.00	1,184.00
Deposits	23,952.49	811.33	130,606.20	0.00	1,974,374.53
InvSec	5,148.84	167.34	29,228.63	0.00	420,073.50
D/E	10.0166	9.6045	4.3424	−4.95	56.9962
L/A	0.7071	0.7266	0.1325	0.00	0.9514
Panel B. Trading characteristics (N = 586)					
Price	19.53	15.20	14.42	2.20	129.41
Size	2,491,825,210	134,316,000	13,306,379,670	8,755,090	183,125,001,000
Turn	0.6514	0.3195	0.7088	0.0188	4.0207
Beta	0.5693	0.5481	0.6506	−1.6349	3.2123
IdioVolt	0.0563	0.0537	0.0253	0.0000	0.1900
Panel C. Emergency loan characteristics (N = 677)					
BORROW	0.1152	0.0000	0.4084	0.0000	1.0000
Days	45.07	0.00	136.81	0.00	784.00
Amt	701.08	0.00	6,268.52	0.00	91,400.00
Panel D. Political connection characteristics (N = 677)					
LobbyAmt	201,216.03	0.0000	2,501,458.69	0.00	50,879,721.00
LOBBY	0.0384	0.0000	0.1923	0.0000	1.0000
EMPLOY	0.0327	0.0000	0.1779	0.0000	1.0000

Table 2. Determinants of Emergency Borrowing—Univariate Tests

The table reports the different firm characteristics for two separate subsamples. The first sample contains those banks that received emergency loans from the Federal Reserve while the second sample consists of those firms that did not receive emergency loans. Columns 1 through 3 report the results when including all the 677 banks from Bank Compustat, while columns 4 through 6 present the results for the 586 banks that had available CRSP data. *D/E* is the bank's debt-to-equity ratio while *L/A* is the portion of a banks' assets that are made up from loans on the balance sheet. *Loans*, *Assets*, *Liabilities*, *Deposits*, and the amount of investment securities (*InvSec*) held by the bank are obtained from Compustat. From Call Reports, I gather the amount of nonperforming loans (*NPLoans*) and the amount of foreclosed assets (*Foreclosed*). *LobbyAmt* is the amount of lobbying expenditures for the 10 years before the financial crisis. *LOBBY* is an indicator variable equal to one if a bank lobbied during the 10 years before the financial crisis—zero otherwise. *EMPLOY* is equal to one if a bank employs or has employed someone who currently works for or has worked for the government—zero otherwise. *Price* is the average monthly stock price. *Size* is the average monthly market capitalization. *Turn* is the share turnover, which is the ratio of average monthly trading volume to shares outstanding. *Beta* is the systematic risk obtained by estimating a daily CAPM for each stock in each year. *IdioVolt* is a measure of idiosyncratic volatility and is obtained by calculated the standard deviation of daily residual returns from the CAPM estimation. Columns 3 and 6 report the difference-in-means between the subsample with a corresponding *p*-value testing for statistical significance. ***, **, * denote statistical significance at the 0.01, 0.05, and 0.10 levels, respectively.

	All banks			*Banks with CRSP data*		
	Borrowing sample (N = 78)	*Nonborrowing sample (N = 599)*	*Difference [1] – [2]*	*Borrowing sample (N = 74)*	*Nonborrowing sample (N = 512)*	*Difference [5] – [6]*
	[1]	[2]	[3]	[4]	[5]	[6]
D/E	9.9468	10.0268	−0.0800	9.8629	10.0116	−0.1487
			(0.879)			(0.764)
L/A	0.6939	0.7091	−0.0152	0.6954	0.7111	−0.0157
			(0.347)			(0.339)
Assets	86,899.44	41,007.95	45,891.49	91,541.66	43,089.35	48,452.31
			(0.178)			(0.193)
Loans	43,890.14	19,565.12	24,325.02	46,228.12	19,661.76	26,566.36
			(0.119)			(0.109)
NPLoans	420.77	195.87	224.90	443.33	184.51	258.82*
			(0.115)			(0.090)
Foreclosed	47.89	3.98	43.91***	50.47	3.8642	46.61***
			(0.000)			(0.000)
Liabilities	79,008.10	39,013.74	39,994.36	83,228.59	41,039.97	42,188.62
			(0.213)			(0.234)
Deposits	47,712.67	20,481.90	27,230.77*	50,249.63	20,781.99	29,467.64*
			(0.085)			(0.087)
InvSec	12,216.85	4,116.44	8,100.41**	12,862.16	4,088.92	8,773.24**
			(0.022)			(0.022)
Price	-	-	-	25.80	18.49	7.31***
						(0.000)
Size	-	-	-	11,265,639,830	1,039,336,890	10,226,301,940***
						(0.000)
Turn	-	-	-	1.2127	0.5585	0.6542***
						(0.000)
Beta	-	-	-	0.6732	0.5521	0.1211*
						(0.078)
IdioVolt	-	-	-	0.0555	0.0564	−0.0009
						(0.774)
LobbyAmt	1,442,175	19,952	1,422,223***	1,520,131	23,556	1,496,575***
			(0.000)			(0.000)
LOBBY	0.1049	0.0206	0.0843***	0.1079	0.0201	0.0878***
			(0.000)			(0.000)
EMPLOY	0.1539	0.0150	0.1389***	0.1622	0.0134	0.1488***
			(0.000)			(0.000)

Table 3. Correlation Matrix—Balance Sheet Information

The table reports the Pearson correlation coefficients along with corresponding *p*-values for the emergency loan characteristics, the balance sheet characteristics, and the political CONNECTIONS characteristics. The sample includes the 677 banks with data available on Bank Compustat. *BORROW* is an indicator variable equal to one if a bank received emergency loans during the financial crisis—zero otherwise. *DAYS* is the number of days that a particular bank was in debt to the Fed. *AMT* is the peak amount of a bank's outstanding loans from the Fed. *D/E* is the bank's debt-to-equity ratio while *L/A* is the portion of a banks' assets that are made up from loans on the balance sheet. *Loans*, *Assets*, *Liabilities*, *Deposits*, and the amount of investment securities (*InvSec*) held by the bank are obtained from Compustat. From Call Reports, I gather the amount of nonperforming loans (*NPLoans*) and the amount of foreclosed assets (*Foreclosed*). *LOBBY* is an indicator variable equal to one if a bank lobbied during the 10 years before the financial crisis—zero otherwise. *EMPLOY* is equal to one if a bank employs or has employed someone who currently works for or has worked for the government—zero otherwise. The correlation coefficients that are bolded are significant, at least at the 0.05 level.

	BORROW	*Days*	*Amt*	*D/E*	*L/A*	*Loans*	*NPLoans*	*Foreclosed*	*Assets*	*Liabilities*	*Deposits*	*InvSec*	*LOBBY*	*EMPLOY*
	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]	[12]	[13]	[14]
BORROW	1.00	**0.86**	**0.29**	−0.01	−0.04	0.06	0.05	**0.24**	0.06	0.05	0.07	**0.09**	**0.18**	**0.26**
		(0.00)	(0.00)	(0.88)	(0.35)	(0.12)	(0.22)	(0.00)	(0.17)	(0.21)	(0.08)	(0.02)	(0.00)	(0.00)
Days		1.00	**0.38**	−0.00	−0.06	**0.09**	0.07	**0.26**	**0.08**	0.08	**0.10**	**0.12**	**0.28**	**0.27**
			(0.00)	(0.92)	(0.11)	(0.03)	(0.10)	(0.00)	(0.04)	(0.06)	(0.01)	(0.00)	(0.00)	(0.00)
Amt			1.00	0.01	**−0.22**	**0.30**	**0.21**	**0.46**	**0.31**	**0.30**	**0.33**	**0.41**	**0.47**	**0.51**
				(0.75)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
D/E				1.00	**−0.12**	**0.32**	**0.32**	0.03	**0.44**	**0.45**	**0.36**	**0.25**	**0.07**	0.07
					(0.00)	(0.00)	(0.00)	(0.46)	(0.00)	(0.00)	(0.00)	(0.00)	(0.08)	(0.08)
Loan/Assets					1.00	**−0.21**	**−0.20**	−0.06	**−0.29**	**−0.29**	**−0.26**	**−0.24**	**−0.17**	**−0.22**
						(0.00)	(0.00)	(0.12)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Loans						1.00	**0.82**	**0.29**	**0.92**	**0.91**	**0.98**	**0.85**	**0.17**	**0.19**
							(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
NPLoans							1.00	**0.26**	**0.82**	**0.82**	**0.80**	**0.67**	**0.14**	**0.15**
								(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Foreclosed								1.00	**0.22**	**0.21**	**0.24**	**0.23**	**0.38**	**0.37**
									(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Assets									1.00	**0.99**	**0.95**	**0.79**	**0.23**	**0.26**
										(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Liabilities										1.00	**0.95**	**0.78**	**0.22**	**0.26**
											(0.00)	(0.00)	(0.00)	(0.00)
Deposits											1.00	**0.89**	**0.21**	**0.23**
												(0.00)	(0.00)	(0.00)
InvSec												1.00	**0.22**	**0.24**
													(0.00)	(0.00)
LOBBY													1.00	**0.74**
														(0.00)
EMPLOY														1.00

Table 4. Correlation Matrix—Trading/Market Characteristics

The table reports the Pearson correlation coefficients along with corresponding *p*-values for the emergency loan characteristics, the trading/market characteristics, and the political connections characteristics. The sample includes the 586 banks with data available on both Bank Compustat and CRSP. *BORROW* is an indicator variable equal to one if a bank received emergency loans during the financial crisis—zero otherwise. *DAYS* is the number of days that a particular bank was in debt to the Fed. *AMT* is the peak amount of a bank's outstanding loans from the Fed. *Price* is the average monthly stock price. *Size* is the average monthly market capitalization (in $billions). *Turn* is the share turnover, which is the ratio of average monthly trading volume to shares outstanding. *Beta* is the systematic risk obtained by estimating a daily CAPM for each stock in each year. *IdioVolt* is a measure of idiosyncratic volatility and is obtained by calculating the standard deviation of daily residual returns from the CAPM estimation. *LOBBY* is an indicator variable equal to one if a bank lobbied during the 10 years before the financial crisis—zero otherwise. *EMPLOY* is equal to one if a bank employs or has employed someone who currently works for or has worked for the government—zero otherwise. The correlation coefficients that are bolded are significant, at least at the 0.05 level.

	BORROW	*Days*	*Amt*	*Price*	*Size*	*Turn*	*Beta*	*IdioVolt*	*LOBBY*	*EMPLOY*
	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]
BORROW	1.000	**0.868**	**0.298**	**0.177**	**0.269**	**0.322**	0.065	−0.012	**0.188**	**0.284**
		(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.138)	(0.789)	(0.000)	(0.000)
Days		1.000	**0.375**	**0.163**	**0.314**	**0.317**	0.066	−0.006	**0.296**	**0.286**
			(0.000)	(0.000)	(0.000)	(0.000)	(0.131)	(0.882)	(0.000)	(0.000)
Amt			1.000	**0.216**	**0.811**	**0.161**	0.049	−0.057	**0.489**	**0.532**
				(0.000)	(0.000)	(0.000)	(0.266)	(0.194)	(0.000)	(0.000)
Price				1.000	**0.361**	**0.324**	0.029	−0.040	**0.288**	**0.332**
					(0.000)	(0.000)	(0.499)	(0.357)	(0.000)	(0.000)
Size					1.000	**0.129**	**0.100**	**−0.099**	**0.517**	**0.567**
						(0.003)	(0.022)	(0.023)	(0.000)	(0.000)
Turn						1.000	**0.156**	**0.217**	**0.238**	**0.246**
							(0.000)	(0.000)	(0.000)	(0.000)
Beta							1.000	**0.122**	0.068	**0.088**
								(0.005)	(0.119)	(0.043)
IdioVolt								1.000	−0.028	−0.068
									(0.519)	(0.121)
LOBBY									1.000	**0.761**
										(0.000)
EMPLOY										1.000

Table 5. Probit Regression—Determinants of Emergency Borrowing

The table reports the results from estimating the following limited dependent variable equation using cross-sectional data.

$$BORROW_i = \beta_0 + \beta_1 CONNECTIONS_i + \beta_2 ln(Assets_i) + \beta_3 D/E_i + \beta_4 L/A_i + \beta_5 ln(InvSec_i) + \beta_6 ln(Deposits_i) + \beta_7 DIV_i + \beta_8 Price_i + \beta_9 ln(Size_i) + \beta_{10} Turn_i + \beta_{11} Beta_i + \beta_{12} IdioVolt_i + \varepsilon_i$$

The dependent variable is the indicator variable *BORROW*, which is equal to one if a bank received emergency loans during the financial crisis—zero otherwise. The independent variables include an indicator variable *CONNECTIONS*, which equals *LOBBY* in panel A or *EMPLOY* in panel B, the natural log of assets (*Ln(Assets)*), the debt-to-equity ratio (*D/E*), the loan-to-assets ratio (*L/A*), the natural log of investment securities held by the bank (*Ln(InvSec)*), and the natural log of deposits (*Ln(Deposits)*). *NPLoans%* is the percentage of loans that Fed call reports have considered nonperforming. *Foreclosed%* is the percentage of foreclosed assets. Additional independent variables include the indicator variable *DIV*, which is equal to unity if the firm pays a dividend, the share price (*Price*), the natural log of market capitalization (*Ln(Size)*), the share turnover (*Turn*), an estimate of systematic risk (*Beta*), and an estimate of idiosyncratic risk (*IdioVolt*). At the bottom of the table, I report the marginal probability obtained from the probit estimate for the variable *CONNECTIONS*. *P*-values are reported in parentheses. ***, **, * denote statistical significance at the 0.01, 0.05, and 0.10 levels, respectively.

Panel A. *CONNECTIONS = LOBBY*

	[1]	[2]	[3]	[4]	[5]	[6]
Intercept	−2.8046***	−2.6878***	−3.9877***	−3.9763***	−4.8123***	−9.5492***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
LOBBY	0.8492***	0.8055***	0.8738***	0.8836**	1.0241***	0.6255**
	(0.002)	(0.004)	(0.002)	(0.002)	(0.000)	(0.036)
Ln(Assets)	0.2036***	0.2564***	0.2883***	0.2886***	−1.1816*	−1.5566**
	(0.000)	(0.000)	(0.000)	(0.000)	(0.063)	(0.035)
D/E		−0.0526***	−0.0491**	−0.0470**	−0.0526**	0.0086
		(0.005)	(0.012)	(0.016)	(0.032)	(0.783)
L/A			1.4211**	1.4735**	2.7227***	3.4520***
			(0.027)	(0.023)	(0.004)	(0.001)
NPLoans%				−0.0944	−0.1036	−0.0534
				(0.259)	(0.246)	(0.615)
Foreclosed%				0.2062	0.1629	0.1926
				(0.542)	(0.652)	(0.634)
Ln(InvSec)					0.3117**	0.2845*
					(0.043)	(0.078)
Ln(Deposits)					1.2210	1.1498
					(0.054)	(0.112)
DIV					0.6030**	0.4137
					(0.029)	(0.178)
Price						−0.0118
						(0.129)
Ln(Size)						0.6023***
						(0.000)
Turn						0.2592*
						(0.068)
Beta						0.0656
						(0.649)
IdioVolt						−3.4486
						(0.341)
Marg-*LOBBY*	0.1503	0.1403	0.1503	0.1516	0.1693	0.1002
McFadden R^2	0.1390	0.1591	0.1703	0.1732	0.2078	0.2882
N	677	677	677	677	677	586

Panel B. *CONNECTIONS = EMPLOY*						
	[1]	[2]	[3]	[4]	[5]	[6]
Intercept	−2.8415***	−2.7244***	−4.0526***	−4.0461***	−4.8686***	−9.6992***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
EMPLOY	0.7499**	0.6944**	0.8164***	0.8394**	0.9897***	0.6358*
	(0.011)	(0.020)	(0.009)	(0.016)	(0.003)	(0.057)
Ln(Assets)	0.2102***	0.2637***	0.2946***	0.2947***	−1.1993*	−1.5589**
	(0.000)	(0.000)	(0.000)	(0.000)	(0.058)	(0.035)
D/E		−0.0533***	−0.0494**	−0.0473**	−0.0530**	0.0102
		(0.004)	(0.011)	(0.015)	(0.029)	(0.744)
L/A			1.4647**	1.5247**	2.7909***	3.4510***
			(0.023)	(0.019)	(0.003)	(0.001)
NPLoans%				−0.0964	−0.1034	−0.0548
				(0.246)	(0.241)	(0.603)
Foreclosed%				0.2269	0.1826	0.2034
				(0.496)	(0.606)	(0.612)
Ln(InvSec)					0.3121**	0.2795*
					(0.041)	(0.081)
Ln(Deposits)					1.2463**	1.1660
					(0.048)	(0.107)
DIV					0.5691	0.3987
					(0.038)	(0.195)
Price						−0.0132*
						(0.092)
Ln(Size)						0.6111***
						(0.000)
Turn						0.2450*
						(0.085)
Beta						0.0500
						(0.727)
IdioVolt						−3.1110
						(0.388)
Marg-*EMPLOY*	0.1336	0.1217	0.1413	0.1448	0.1646	0.1021
McFadden R^2	0.1324	0.1533	0.1650	0.1680	0.2019	0.2866
N	677	677	677	677	677	586

Table 6. Cross-Sectional Regression—Determinants of Emergency Borrowing

The table reports the results from estimating the following limited dependent variable equation using cross-sectional data.

$$DAYS_i = \beta_0 + \beta_1 CONNECTIONS_i + \beta_2 ln(Assets_i) + \beta_3 D/E_i + \beta_4 L/A_i + \beta_5 ln(InvSec_i) + \beta_6 ln(Deposits_i) + \beta_7 DIV_i + \beta_8 Price_i + \beta_9 ln(Size_i) + \beta_{10} Turn_i + \beta_{11} Beta_i + \beta_{12} IdioVolt_i + \varepsilon_i$$

The dependent variable is the number of days during the financial crisis in which a bank was in debt to the Fed due to emergency borrowing (*DAYS*). The independent variables include an indicator variable *CONNECTIONS*, which equals *LOBBY* in panel A or *EMPLOY* in panel B, the natural log of assets (*Ln(Assets)*), the debt-to-equity ratio (*D/E*), the loan-to-assets ratio (*L/A*), the natural log of investment securities held by the bank (*Ln(InvSec)*), and the natural log of deposits (*Ln(Deposits)*). *NPLoans%* is the percentage of loans that Fed call reports have considered nonperforming. *Foreclosed%* is the percentage of foreclosed assets. Additional independent variables include the indicator variable *DIV*, which is equal to unity if the firm pays a dividend, the share price (*Price*), the natural log of market capitalization (*Ln(Size)*), the share turnover (*Turn*), an estimate of systematic risk (*Beta*), and an estimate of idiosyncratic risk (*IdioVolt*). Columns 1 and 2 present the results from OLS regressions while columns 3 and 4 show the results from a Tobit regression to account for the truncation of the dependent variable. Columns 5 and 6 report the results using a Poisson regression to account for the discreteness of the independent variable while columns 7 and 8 show the results using a Negative Binomial Regression. *P*-values are reported in parentheses. ***, **, * denote statistical significance at the 0.01, 0.05, and 0.10 levels, respectively.

(*See next page.*)

Panel A. *CONNECTIONS = LOBBY*								
	OLS Regression		*Truncated Regression*		*Poisson Regression*		*Negative Binomial Regression*	
	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]
Intercept	−175.92***	−442.03***	−175.92***	−442.03***	−1.0597***	−6.1168***	−12.0214***	−27.7645***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.007)	(0.002)
LOBBY	130.38***	100.23***	130.38***	100.23***	0.6688***	0.0364*	0.9995	0.6188
	(0.000)	(0.001)	(0.000)	(0.001)	(0.000)	(0.069)	(0.558)	(0.726)
Ln(Assets)	−12.15	−47.75	−12.15	−47.75	−0.7640***	−1.6307***	−5.2015*	−5.5827*
	(0.728)	(0.245)	(0.726)	(0.237)	(0.000)	(0.000)	(0.071)	(0.068)
D/E	−3.95***	0.7607	−3.95***	0.7607	−0.0908***	0.0180***	0.1160	0.2302
	(0.003)	(0.695)	(0.002)	(0.691)	(0.000)	(0.000)	(0.421)	(0.186)
L/A	115.20**	125.08*	115.20**	125.08*	3.0269***	2.6714***	11.0282**	12.8951***
	(0.043)	(0.057)	(0.040)	(0.053)	(0.000)	(0.000)	(0.011)	(0.003)
NPLoans%	−2.13	−0.0287	−2.13	−0.0287	−0.1103***	−0.0214***	−0.9523*	−0.6276
	(0.558)	(0.996)	(0.555)	(0.996)	(0.000)	(0.009)	(0.096)	(0.289)
Foreclosed%	19.47	22.51	19.47	22.51	0.5478***	0.4645***	3.1196	0.2447
	(0.313)	(0.344)	(0.309)	(0.336)	(0.000)	(0.000)	(0.188)	(0.899)
Ln(InvSec)	14.35	12.96	14.35	12.96	0.4363***	0.3452***	1.0828	1.6221**
	(0.108)	(0.204)	(0.105)	(0.197)	(0.000)	(0.000)	(0.121)	(0.024)
Ln(Deposits)	23.78	25.32	23.78	25.32	0.7903***	1.0228***	5.3000*	2.7980
	(0.49)	(0.534)	(0.50)	(0.528)	(0.000)	(0.000)	(0.082)	(0.374)
DIV	19.14	7.18	19.14	7.18	1.0264***	0.6848***	1.9371**	1.5006
	(0.170)	(0.674)	(0.170)	(0.669)	(0.000)	(0.000)	(0.020)	(0.132)
Price		−1.19**		−1.19**		−0.0113***		−0.0517
		(0.030)		(0.028)		(0.000)		(0.193)
Size		42.08***		42.08***		0.7870***		2.5450**
		(0.000)		(0.000)		(0.000)		(0.015)
Turn		30.98***		30.98***		0.5217***		0.3038
		(0.009)		(0.008)		(0.000)		(0.707)
Beta		−2.84		−2.84		0.0937***		0.9705
		(0.762)		(0.758)		(0.000)		(0.198)
IdioVolt		−352.88		−352.88		−1.3618***		8.6243
		(0.157)		(0.151)		(0.000)		(0.605)
Adj. R^2	0.1581	0.2067						
Sigma			124.68	128.53				
(*p*-value)			(0.000)	(0.000)				
Pearson χ^2					337.69	339.73	325.31	367.45
N	677	586	677	586	677	586	677	586

Panel B. *CONNECTIONS = EMPLOY*

	OLS Regression		*Truncated Regression*		*Poisson Regression*		*Negative Binomial Regression*	
	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]
Intercept	−182.38***	−451.98***	−182.38***	−451.98***	−1.1578***	−6.2006***	−12.2747***	−27.8287***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.007)	(0.002)
EMPLOY	136.20***	112.01***	136.20***	112.01***	0.5966***	−0.0275	1.3385	0.9909
	(0.000)	(0.002)	(0.000)	(0.002)	(0.000)	(0.177)	(0.476)	(0.607)
Ln(Assets)	−15.67	−49.93	−15.67	−49.93	−0.7769***	−1.6182***	−5.2766*	−5.5688*
	(0.656)	(0.225)	(0.653)	(0.217)	(0.000)	(0.000)	(0.067)	(0.070)
D/E	−3.92***	0.84	−3.92***	0.84	−0.0956***	0.0175***	0.1240	0.2340
	(0.003)	(0.665)	(0.003)	(0.661)	(0.000)	(0.000)	(0.394)	(0.178)
L/A	124.51**	128.59*	124.51**	128.59**	3.0710**	2.6634***	11.3180**	13.0585***
	(0.029)	(0.051)	(0.028)	(0.047)	(0.000)	(0.000)	(0.010)	(0.003)
NPLoans%	−2.42	−0.6920	−2.42	−0.69	−0.1050***	−0.0189**	−0.9647*	−0.6302
	(0.508)	(0.913)	(0.504)	(0.911)	(0.000)	(0.022)	(0.099)	(0.292)
Foreclosed%	21.29	24.33	21.29	24.33	0.5571***	0.4654***	3.1665	0.2350
	(0.272)	(0.307)	(0.268)	(0.299)	(0.000)	(0.000)	(0.189)	(0.903)
Ln(InvSec)	15.05*	12.89	15.05*	12.90	0.4322***	0.3434***	1.0936	1.6362**
	(0.094)	(0.207)	(0.091)	(0.199)	(0.000)	(0.000)	(0.117)	(0.022)
Ln(Deposits)	27.27	28.80	27.26	28.80	0.8235***	1.0141***	5.3610*	2.7808
	(0.439)	(0.480)	(0.436)	(0.474)	(0.000)	(0.000)	(0.078)	(0.379)
DIV	17.12	6.59	17.12	6.59	1.0188***	0.6820***	1.9719**	1.5705
	(0.223)	(0.699)	(0.219)	(0.695)	(0.000)	(0.000)	(0.018)	(0.111)
Price		−1.32**		−1.32**		−0.0114***		−0.0540
		(0.017)		(0.015)		(0.000)		(0.184)
Size		42.25***		42.25***		0.7931***		2.5316**
		(0.000)		(0.000)		(0.000)		(0.016)
Turn		29.76		29.76**		0.5196***		0.2930
		(0.012)		(0.011)		(0.000)		(0.719)
Beta		−3.94		−3.94		0.0924***		0.9503
		(0.675)		(0.670)		(0.000)		(0.202)
IdioVolt		−316.76		−316.76		−1.3613***		8.8146
		(0.206)		(0.199)		(0.000)		(0.594)
Adj. R^2	0.1526	0.2056						
Sigma			125.09	128.62				
(*p*-value)			(0.000)	(0.000)				
Pearson χ^2					337.13	341.23	329.63	369.29
N	677	586	677	586	677	586	677	586

Table 7. Cross-Sectional Regression—Determinants of Emergency Borrowing

The table reports the results from estimating the following limited dependent variable equation using cross-sectional data.

$$AMT_i = \beta_0 + \beta_1 CONNECTIONS_i + \beta_2 ln(Assets_i) + \beta_3 D/E_i + \beta_4 L/A_i + \beta_5 ln(InvSec_i) + \beta_6 ln(Deposits_i) + \beta_7 DIV_i + \beta_8 Price_i + \beta_9 ln(Size_i) + \beta_{10} Turn_i + \beta_{11} Beta_i + \beta_{12} IdioVolt_i + \varepsilon_i$$

The dependent variable is the peak amount of emergency loans that a particular bank received during the financial crisis (*AMT*). The independent variables include an indicator variable *CONNECTIONS*, which equals *LOBBY* or *EMPLOY*, the natural log of assets (*Ln(Assets)*), the debt-to-equity ratio (*D/E*), the loan-to-assets ratio (*L/A*), the natural log of investment securities held by the bank (*Ln(InvSec)*), and the natural log of deposits (*Ln(Deposits)*). *NPLoans%* is the percentage of loans that Fed call reports have considered nonperforming. *Foreclosed%* is the percentage of foreclosed assets. Additional independent variables include the indicator variable *DIV*, which is equal to unity if the firm pays a dividend, the share price (*Price*), the natural log of market capitalization (*Ln(Size)*), the share turnover (*Turn*), an estimate of systematic risk (*Beta*), and an estimate of idiosyncratic risk (*IdioVolt*). Columns 1 through 4 present the results from OLS regressions while controlling for conditional heteroskedasticity using White's (1980) standard errors while columns 5 through 8 report the results from a Tobit regression to account for the truncation of the dependent variable. *P*-values are reported in parentheses. ***, **, * denote statistical significance at the 0.01, 0.05, and 0.10 levels, respectively.

(*See next page.*)

	OLS Regressions				*Truncated Regression*			
	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]
Intercept	1.1496	−3.3199	0.6134	−3.2124	1.1496	−3.3199	0.6134	−3.2124
	(0.577)	(0.408)	(0.762)	(0.408)	(0.573)	(0.401)	(0.760)	(0.401)
LOBBY	12.0029***	12.2529***			12.0029***	12.2529***		
	(0.000)	(0.000)			(0.000)	(0.000)		
EMPLOY			14.8716***	16.3951***			14.8716***	16.3951***
			(0.000)	(0.000)			(0.000)	(0.000)
Ln(Assets)	0.8059	1.8418	0.3068	1.3796	0.8059	1.8418	0.3068	1.3796
	(0.591)	(0.307)	(0.836)	(0.432)	(0.588)	(0.299)	(0.834)	(0.424)
D/E	−0.1602***	−0.2226***	−0.1478***	−0.2147**	−0.1602***	−0.2226***	−0.1478	−0.2147***
	(0.004)	(0.009)	(0.008)	(0.010)	(0.004)	(0.008)	(0.007)	(0.009)
L/A	−7.2216***	−7.8996***	−5.7591**	−7.1501**	−7.2216***	−7.8996***	−5.7591**	−7.1501**
	(0.003)	(0.006)	(0.017)	(0.011)	(0.003)	(0.005)	(0.016)	(0.010)
NPLoans%	−0.0429	0.0084	−0.0733	−0.1240	−0.0429	0.0084	−0.0733	−0.1240
	(0.784)	(0.976)	(0.634)	(0.646)	(0.782)	(0.975)	(0.631)	(0.641)
Foreclosed%	0.2224	0.0964	0.3961	0.3916	0.2224	0.0964	0.3961	0.3916
	(0.788)	(0.926)	(0.627)	(0.699)	(0.786)	(0.925)	(0.624)	(0.695)
Ln(InvSec)	−0.5252	−0.6168	−0.40001	−0.5643	−0.5252	−0.6168	−0.40001	−0.5643
	(0.170)	(0.168)	(0.289)	(0.195)	(0.166)	(0.151)	(0.285)	(0.188)
Ln(Deposits)	0.3418	−0.4074	0.6992	0.2001	0.3418	−0.4074	0.6992	0.2001
	(0.821)	(0.819)	(0.638)	(0.909)	(0.819)	(0.817)	(0.635)	(0.907)
DIV	0.2759	−0.2912	0.1546	−0.2197	0.2759	−0.2912	0.1546	−0.2197
	(0.646)	(0.698)	(0.794)	(0.763)	(0.643)	(0.693)	(0.792)	(0.759)
Price		−0.0314		−0.0500		−0.0314		−0.0500
		(0.192)		(0.034)		(0.185)		(0.031)
Size		0.4760		0.3394		0.4760		0.3394
		(0.269)		(0.419)		(0.262)		(0.411)
Turn		−1.3193**		−1.4694***		−1.3193***		−1.4694***
		(0.011)		(0.004)		(0.009)		(0.003)
Beta		0.2843		−0.4083		0.2843		−0.4083
		(0.491)		(0.308)		(0.484)		(0.301)
IdioVolt		−0.7881		5.3310		−0.7881		5.3310
		(0.943)		(0.618)		(0.942)		(0.612)
Adj. R^2	0.2627	0.2901	0.2842	0.3281				
Sigma					5.3470***	5.6409***	5.2682***	5.4881***
(*p*-value)					(0.000)	(0.000)	(0.000)	(0.000)
N	677	586	677	586	677	586	677	586