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The Politics of Government Investment

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THE POLITICS OF GOVERNMENT INVESTMENT [*]

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Abstract

This paper investigates whether political influence of firms affects government investment decisions. We study the efficacy of the various forms of political influence, ranging from the relatively passive connections between firms and politicians, such as those based on politicians' voting districts to the more active forms of influence, such as lobbying, campaign contributions, and connections to regulators via directorships. Using hand-collected data on firm applications for government investment funds in the United States, we find that firms with political connections are significantly more likely to be funded, controlling for other firm characteristics. Investments in politically-connected firms underperform those in unconnected firms. Overall, we demonstrate one mechanism through which political influence affects investment and show that connections between firms and regulators appear to distort rather than improve investment efficiency.

The fabric of corporate political connections is at the heart of research on political economy. A number of studies show that political connections increase firm value (Fisman 2001; Faccio 2006) and that firms actively establish political connections via hiring politically-connected directors and financing election campaigns (Goldman, Rocholl, and So 2009; Cooper, Gulen, and Ovtchinnikov 2010). While the link between political connections and firm value is reasonably well-established, we know less about the mechanisms through which such connections create firm value. This article investigates one such mechanism – namely, the access of politically connected firms to government investment funds.

Our study focuses on the financial crisis of 2008-2009, thus exploiting an economy-wide shock, which simultaneously affected a large cross-section of firms and resulted in the largest federal investment program in U.S. history. We study a broad array of political connections, ranging from the relatively passive ties between firms and politicians, such as those based on politicians' voting districts, to the more active forms of influence, such as lobbying, political contributions, and recruitment of politically-connected directors. Using a novel, hand-collected dataset on firms' applications for federal investment under the Troubled Asset Relief Program, we test the role of political influence across three dimensions: (1) firm decisions to apply for government investment; (2) government decisions to allocate investment funds; and (3) ex-post performance of investments in politically-connected firms.

We motivate our analysis with several hypotheses. One hypothesis is that firms with political connections receive favorable treatment in the allocation of government funds. This view would be consistent with theories of the politics of government ownership and investment (e.g., Shleifer and Vishny 1994), which suggest that federal capital is used to accommodate private interests of politicians, such as securing electorate votes, funding election campaigns, and extracting personal benefits from corporate lobbying. Under this scenario, firms' incentives to use their political influence to obtain government investment are likely to be stronger for underperforming firms, where government funds are more critical for their survival. For example, the financial press reports cases when politicians went as far as changing the text of the legislation to save ailing firms in their home state in response to petitions by firms that were too weak to qualify for government investments (Paletta and Enrich 2009). The external audits of government investments in 2008-2009 disclose

documented outside inquiries on investment applications from 56 firms, whose identities are not disclosed.[1] The alleged attempts of external influence on regulators were sufficiently significant that on January 27, 2009 the Treasury established a formal restriction on contacts with lobbyists regarding applications for federal investment to "limit lobbyist influence in federal investment decisions".[2] This hypothesis predicts that politically-connected firms are more likely to receive government funds and that subsequent returns on these investments are likely to trail those on their unconnected peers , as predicted in Stigler (1971), Shleifer and Vishny (1994), and Banerjee (1997).

An alternative hypothesis posits that firms were capital rationed during the financial crisis because of the spike in the cost of financing and the information asymmetries between firms and investors (e.g., Myers and Majluf 1984; Greenwald, Stiglitz, and Weiss 1984). In this case, firms may use their lobbying efforts and connections to politicians and regulators to provide government officials with valuable information about firms' financial condition and future outlook. Under this hypothesis, first modeled in the seminal work by Downs (1957), political connections can mitigate the information asymmetry between government officials and the firm and result in more informed federal investment decisions. This hypothesis predicts that politically-connected firms are more likely to receive government investment funds and that these investments are likely to outperform those in unconnected firms.

A third possibility is that firms' political connections do not play a significant role in the allocation of government investments. For example, public scrutiny of political influence via campaign contributions, lobbying efforts, and directorship ties to regulators (all publicly observable in the U.S.), as well as the audit of federal investment programs, may negate any attempts to influence government decisions. In particular, career concerns of federal officials under close monitoring (Fama 1980) represent one mechanism limiting the efficacy of corporate political connections. In fact, government officials may treat investments in connected firms with extra caution to defend themselves against future accusations. This hypothesis predicts no difference in government capital allocation and investment returns between politically connected and unconnected firms.

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[1] Quarterly Report to Congress by the Special Inspector General of the Troubled Asset Relief Program, October 21, 2009.
[2] "Treasury Secretary Opens Term With New Rules To Bolster Transparency, Limit Lobbyist Influence in Federal investment Decisions", Press Release of the U.S. Department of Treasury, January 27, 2009.

Our empirical analysis focuses on the Capital Purchase Program (CPP), the largest government assistance program by the number of participants and amount of capital ever administrated in the U.S. Initiated in October 2008 and closed in December 2009, CPP invested $205 billion in government funds. To determine the application status of firms eligible for CPP (application submissions are not disclosed by regulators), we hand-collect these data from press releases, annual and quarterly reports, proxy statements, and other filings. We are able to ascertain the application status of 538 public firms eligible to participate in the program (89.7 percent of all eligible public firms), which account for 92.7 percent of the program's investment funds.

We introduce four variables of political influence. Our first measure captures firm ties to the main decision makers in the CPP investment process: banking regulators and the Treasury. We consider a firm to be connected via this measure if it employed a director in 2008-2009 with simultaneous or former work experience at a banking regulator or the Treasury. Our second proxy is a firm's connection to a member of the House Financial Services Committee, which played a key role in the development of federal investment programs. We consider a firm to be connected to a congressman if it is headquartered in his or her district. Our third measure of political influence is firms' size-adjusted expenditures on lobbying Congress and banking regulators on the issues of banking, finance, or bankruptcy in 2008-2009. Our fourth measure is firms' size-adjusted campaign contributions to the House Financial Services Committee in the 2008 election cycle. Overall, these variables proxy for the various mechanisms of a firm's influence on government officials involved in developing and implementing CPP.

Our first set of empirical results concerns the determinants of a firm's decision to apply for CPP. We find that the overwhelming majority (80.2 percent) of public firms eligible to participate in CPP submitted applications for investment, a finding consistent with the attractive financial conditions of the program, a simple application procedure, and an option to refuse CPP funds after application approval. As expected, the firms that chose not to apply for CPP were the best-capitalized financial institutions, which had a lower need for additional capital. We do not find reliable evidence that firms' political connections influenced their decision to apply for CPP, a result consistent with the wide awareness of the program and the low cost of applying. This evidence

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speaks against the possibility that firms' connections to regulators and politicians proxy for firms' familiarity with the terms of the program or firms' comfort with government involvement in corporate affairs.

Next, we study the determinants of application approvals by regulators. We find that firm's political connections are positively associated with the likelihood of application approval, controlling for other financial and fundamental factors reported by regulators as decision criteria in the selection process. The strong positive effect of political connections appears for both connections to legislators – Congressional committees charged with developing TARP – and connections to agencies tasked with program implementation – banking regulators and the Treasury. We also evaluate the relative efficacy of various forms of political influence. Firms employing a director who worked at the Treasury or one of the banking regulators were 9.3 percentage points more likely to be approved for government funds, controlling for other factors. Firms headquartered in the election districts of House members on key finance committees were 6.6 percentage points more likely to be approved. An increase of one standard deviation in size-adjusted lobbying expenditure (campaign contributions) corresponds to an increase of 7.6 (5.2) percentage points in the likelihood of being approved.

While we explicitly control for firm size, financial condition, and other factors declared by regulators as CPP decision criteria, it is possible that firm's political connections are correlated with other dimensions of systemic importance unaccounted for by our controls. To accommodate this possibility, all of our tests exclude the largest CPP investments announced at program initiation, which were made in institutions of nationwide importance. To control for systemic importance at the state level, we repeat our tests in samples matched on firm size and on firm size within the same home state, and obtain similar results. We also estimate firms' systemic importance using ΔCoVaR, a measure proposed in Adrian and Brunnermeier (2009), and find that our conclusions persist under alternative measures of systemic risk. Our results are also robust to excluding other large firms, firms headquartered in New York, and firms with the best or worst financial condition.

It is possible that a firm's political connections are correlated with some unaccounted for or unobserved characteristics that increase a firm's likelihood of receiving government funds but are unrelated to political influence. To address this possibility, we construct placebo measures for each of our variables of political connections. For connections to regulators via directorships, we select firms that had such a connection in 2006-

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2007, but not in 2008-2009. For connections to Congress, we select firms headquartered in the districts of House members who served on the House Financial Services Committee in the 109th Congress (2005-2007), but not during the administration of CPP. As a placebo measure for lobbying expenditures, we use size-adjusted amount of corporate lobbying expenditures during the administration of CPP (2008-2009) spent on government agencies unrelated to CPP, i.e. government agencies excluding Congress, Treasury, and banking regulators. As a placebo measure for campaign contributions, we use the amount of size-adjusted campaign contributions to candidates that ran as challengers in the 2008 congressional election and lost. We find that these placebo measures have no effect on application approvals. Collectively, these results indicate that our evidence is unlikely to be explained by omitted firm characteristics correlated with measures of political influence.

Our final set of analyses investigates the ex-post performance of investments in politically-connected and unconnected firms. In difference-in-difference tests, we find that politically connected recipients of government funds reliably underperform unconnected recipients according to both stock-based and accounting-based performance measures. Following the administration of CPP, recipients in the top quartile on political connections experienced a 0.3 percentage point decline in quarterly return on assets (ROA), a 1.9 percentage point decline in quarterly industry-adjusted stock returns, and a 5.2 percentage point decline in Tobin's Q, as compared to firms in the bottom quartile on political connections.

Interpreted broadly, the results in this article show that political connections play an important role in a firm's access to capital. Our evidence suggests that at least in some cases, private interests of politicians and regulators are pursued at the expense of public welfare, to the extent that it is proxied by financial returns on government investments. Overall, our findings are consistent with agency-type inefficiencies from political influence predicted in Shleifer and Vishny (1994) and are inconsistent with the efficiency-improving role of political connections as a means of information transfer.

The rest of this paper is organized as follows. Section 1 reviews related literature. Section 2 describes data and variables. Section 3 presents empirical results. The conclusion provides summary and commentary.

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1. Related Literature

Our paper is part of a literature pioneered by Stigler (1971) and Peltzman (1976) that studies how politics influences economic regulation.[3] More specifically, our research adds to the literature on the role of political factors in capital allocation, a topic that has been examined primarily in foreign markets.

For example, Sapienza (2004) finds that the interest rates charged by government-owned banks in Italy reflect the power of the party that controls the bank, resulting in preferential access to capital for party-affiliated borrowers. Faccio, Masulis, and McConnell (2006) provide evidence that politically connected firms are more likely to receive government funds in case of distress in thirty-five countries, especially if these countries receive funding from the World Bank or the International Monetary Fund. Dinc (2005) finds that government-owned banks outside the United States increase their lending activity in election years to gain voter support.

We study political ties in the United States and show that corporate political influence has a significant effect on economic outcomes even under strong corporate governance by international standards and despite the public disclosure of lobbying and political contributions. The U.S. setting also enables us to provide one of the most comprehensive studies of the various measures of political influence, to consider them simultaneously, and to examine their relative importance. Finally, our research design enables us to offer the first formal evidence on the propensity of firms to apply for federal investment and to study government investment decisions under one unified program with a well-defined set of selection criteria and the largest economic effects on the corporate sector.

Our research also contributes to the literature on political activism and firm value and helps reconcile prior empirical findings. In previous studies, Roberts (1990), Fisman (2001), Faccio (2006), Faccio and Parsley (2009), Goldman, Rocholl, and So (2009), and Cooper, Gulen, and Ovtchinnikov (2010) find that corporate political ties have a positive effect on firm value. Goldman, Rocholl, and So (2010) also document the real effects of political connections on corporate financial decisions and show that politically connected firms have preferential access to government procurement contracts. Others, such as Aggarwal, Meschke, and Wang

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[3] A related line of empirical investigation is focused on the impact of corruption on aggregate outcomes such as growth and investment rates across countries (see Mauro 1995; Keefer and Knack 1995; Hall and Jones 1999; La Porta et al. 1999; and Glaeser and Saks 2006).

(2009), argue that political activism is indicative of agency problems and show that firms with high political contributions experience lower risk-adjusted returns. Our evidence suggests that political connections serve as an insurance mechanism against extreme events. Thus, for example, the victory of a politician connected to the firm will increase the insurance value. However, this value will gradually decrease absent the occurrence of extreme events.

Previous literature has also shown that politically connected firms have higher leverage ratios than their nonconnected peers (for example, Johnson and Mitton 2003 and Cull and Xu 2005). Our results are consistent with one possible explanation for these findings – namely, that lenders may rely on an implicit government guarantee that politically connected firms will have access to government funds in case of a liquidity shock.

We also add to the literature on the interaction between firms and congressional committees. Kroszner and Stratmann (1998) develop a positive theory of specialized, committee-based congressional organization that fosters ties between interest groups and legislators through reputation building. Our research supports this theory by showing that connections of financial institutions to specific congressional subcommittees affect the allocation of government investments.

Last, our research contributes to the growing literature on financial regulation during the credit crisis of 2008. Veronesi and Zingales (2010) study the costs and benefits of TARP by examining the changes in enterprise value of the ten largest program participants around the announcement of first capital infusions. They argue that the first recipients of federal investments realized substantial gains from the program and identify the banks that were the biggest winners. We complement this research by studying how banks' political connections and financial performance affected their access to federal investment funds. Next, some recent studies, such as Harvey (2008), critique the design of federal investment programs and offer alternative ways to address the credit crisis. Although we do not discuss these alternatives, our results highlight one source of inefficiencies in the original investment program. In particular, to the extent that political connections played a role in the distribution of government capital, this influence was associated with lower returns on federal investments.

2. Sample Construction and Main Variables

2.1 Capital Purchase Program

On October 3, 2008, the Emergency Economic Stabilization Act (EESA) was signed into law. The act authorized TARP – a system of federal initiatives aimed at stabilizing the U.S. financial system. According to the original plan, the Treasury intended to buy insolvent bank loans and mortgage-backed securities, hold these assets, and later sell them to private investors. However, on October 14, 2008, the government announced a revised plan—the Capital Purchase Program (CPP)—which authorized the Treasury to invest up to $250 billion in financial institutions. Initiated in October 2008 and terminated in December 2009, CPP invested $204.9 billion in 707 financial institutions, becoming the first and largest of the 13 TARP programs.

In exchange for CPP capital, banks provided the Treasury with cumulative perpetual preferred stock, which pays quarterly dividends at an annual yield of 5 percent for the first five years and 9 percent thereafter. The amount of the investment in preferred shares is determined by the Treasury, subject to the minimum threshold of 1 percent of firm's risk-weighted assets (RWA) and a maximum threshold of 3 percent of RWA or $25 billion, whichever is smaller. In addition to the preferred stock, the Treasury obtains warrants for the common stock of publicly traded firms. The warrants, valid for ten years, are issued for such number of common shares that the aggregate market value of the covered common shares is equal to 15 percent of the investment in the preferred stock.

2.2 Sample Firms

Financial institutions eligible to participate in CPP comprise domestically-controlled banks, bank holding companies, savings associations, and savings and loan holding companies. For all banks and savings associations controlled by a holding company, CPP investments are made at the level of the holding company.

To construct our sample of firms, we begin with a list of all public domestically-controlled financial institutions that were eligible for CPP participation and were active as of September 30, 2008, the quarter immediately preceding the administration of CPP. This initial list includes 600 public financial institutions. Our focus on public firms is motivated by two reasons. First, the regulatory filings of public firms allow us to

identify whether or not a particular firm applied for CPP funds. Second, stock price data for public institutions enable us to analyze the returns on federal investments using market values. The public financial institutions account for the overwhelming majority (92.7 percent) of all capital invested under CPP. In particular, the 295 public recipients of CPP funds obtained $190.1 billion under CPP, according to the data from the Treasury's Office of Financial Stability.

To apply for CPP funds, a qualifying financial institution (QFI) submits a short two-page application (by the deadline of November 14, 2008) to its primary federal banking regulator – the Federal Reserve, the Federal Deposit Insurance Corporation (FDIC), the Office of the Comptroller of the Currency (OCC), or the Office of Thrift Supervision (OTS). The details on these banking regulators and their oversight responsibilities are summarized in Appendix I. If the initial review by the banking regulator is successful, the application is forwarded to the Treasury, which makes the final decision on the investment.

To identify CPP applicants and to determine the status of each application, we read quarterly filings, annual reports, and proxy statements of all CPP-eligible public financial institutions, starting at the beginning of the fourth quarter of 2008 and ending at the end of the fourth quarter of 2009. We also supplement these sources with a search of each firm's press releases for any mentioning of CPP or TARP and, in cases of missing data, we call the firm's investment relations department for verification. Appendix II shows sample disclosures made by public financial institutions regarding their applications to CPP or their decisions not to participate in the program. Using this procedure, we are able to ascertain the application status of 538 of the 600 public firms eligible for CPP (89.7 percent of all eligible public firms).

From the set of 538 firms with available data, we exclude the first wave of CPP recipients, namely the nine largest program participants announced at program initiation on October 14, 2008, thus arriving at our final sample of 529 firms. The excluded firms comprise Citigroup, JP Morgan, Bank of America, Goldman Sachs, Morgan Stanley, State Street, Bank of New York Mellon, Merrill Lynch, and Wells Fargo (including Wachovia). It has been argued that these nine institutions would have received government funding irrespective of their financial status or political connections as "too-big-to-fail" firms, which are critical for the stability of the financial system. There is also anecdotal evidence that some of these firms may have been requested to

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participate in CPP by the regulators to provide a signal to the market at the launch of the program.[4] We follow a conservative approach and exclude these firms from our sample. Our results are not sensitive to this sample restriction and remain the same if we retain these nine firms.

Of the 529 firms in our final sample, 424 firms (80.2 percent) submitted CPP applications, and the remaining 105 firms explicitly stated their decision not to apply for CPP funds. Among the 424 submitted applications, 337 applications (79.5 percent) were approved for funding. Finally, among the firms approved for funding, 286 (84.9 percent) accepted the investment, while 51 firms (15.1 percent) declined the funds. Figure I illustrates the partitioning of eligible firms into each of these subgroups. Panel A of Table 1 presents summary statistics on these investments. The average (median) amount of CPP investment in our final sample is $263.0 ($32.1) million.

2.3 Financial and Demographic Variables

To control for firms' financial condition and performance in the allocation of government investments, we follow the standardized assessment system employed by banking regulators in the review of CPP applications – the Camels rating system. The system derives its name from the six factors that are evaluated: *C*apital adequacy, *A*sset quality, *M*anagement, *E*arnings, *L*iquidity, and *S*ensitivity to market risk. Each of the six dimensions is rated by the firm's banking regulator on a scale from 1 (best) to 5 (worst) based on the financial statements and on-site examinations. These scores are then aggregated into one overall score of a firm's financial health.

Since the values of banks' *Camels* ratings are kept confidential, we introduce proxy variables for each of the six categories in the system. Our choice of proxies is guided by the financial indicators employed by the FDIC in the Quarterly Uniform Bank Performance Reports (also referred to as Call reports) that evaluate banks on similar dimensions. These reports also serve as the main source of financial data in our analysis. Appendix III offers detailed descriptions of each financial variable, and Panel A of Table 1 shows their summary statistics as of September 30, 2008.

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[4] Solomon, Deborah and David Enrich, "Devil Is in Bailout's Details", *The Wall Street Journal*, October 15, 2008.

As an illustration of Camels measures in Panel A of Table 1, consider the variable Capital Adequacy. This measure reflects a bank's Tier 1 risk-based capital ratio and shows that the vast majority of banks are well capitalized. The average (median) capitalization ratios for our sample are 12.8 (10.7) percent, approximately double the threshold of 6 percent stipulated by the FDIC's definition of a well-capitalized institution. The variable Asset Quality captures loan defaults and shows the inverse of the ratio of net losses on loans to the average amount of outstanding loans and leases. The variable Earnings, measured as the return on assets (ROA), shows that the average (median) bank in our sample has a quarterly ROA of 0.15 (0.53) percent, consistent with the typical profitability indicators of banking institutions characterized by a large asset base.

In addition to Camels characteristics, we also control for firm size (logarithm of book assets), age, and exposure to the crisis. The average (median) firm in our sample is 73 (76) years old (as of 2009) and holds book assets worth $6.0 billion ($1.1 billion). To proxy for a firm's exposure to the financial crisis, we use the ratio of foreclosed assets to the total value of loans and leases. As of October 30, 2008, this ratio for the average (median) firm in our sample was 0.39 (0.15) percent.

2.4 Measures of Political Influence

Connections to Treasury, Congress, and Banking Regulators via Boards of Directors

To construct this measure, we collect the data on boards of directors of our sample firms from the BoardEx database. After manually cleaning directors' employment histories in BoardEx, we identify directors who hold current or former positions at the Treasury, the firm's banking regulator, or Congress and label them as *connected directors*. We then construct our measure of connections as the number of connected directors on a firm's board in 2008-2009. Our results are not sensitive to this definition and remain unchanged if we use a 0/1 dummy for the presence of any connected director.

Panel A of Table 1 shows that 29.9 percent of firms employed connected directors during the administration of CPP. The majority of firms with connected directors (65.8 percent) employed one such director, and the average number of connected directors per firm was 1.6.

Bank Representation on the House Financial Services Committee

At the level of Congress, we investigate the ties between firms and the members of the House Financial Services Committee and its two subcommittees: the Subcommittee on Financial Institutions and the Subcommittee on Capital Markets.[5] The Committee on Financial Services played a key role in the development of the Emergency Economic Stabilization Act of 2008 and its modification in 2009. The Committee also continues to exert strong influence on amendments related to expanding TARP, which require the approval of Congress. This continued involvement of the Committee in monitoring TARP programs and approving TARP modifications fosters close interaction between the Treasury and committee members.[6]

Within the Financial Services Committee, we focus on two subcommittees, which oversee banking and financial markets. The Subcommittee on Financial Institutions supervises all primary banking regulators and matters related to the soundness of the banking system. The Subcommittee on Capital Markets reviews laws regulating investment banks and capital markets, among other issues. Based on congressional records, our main source for these data, the Financial Services Committee includes 71 members, and its subcommittees on Financial Institutions and Capital Markets comprise 45 and 50 members, respectively.

We focus on the committees in the House of Representatives rather than on those in the Senate for several reasons. First, election districts for the House are substantially smaller, resulting in a tighter link between a politician and firms headquartered in his or her district.[7] Second, districts of all representatives are

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[5] The full names of the two subcommittees are: Subcommittee on Financial Institutions and Consumer Credit, and Subcommittee on Capital Markets, Insurance, and Government Sponsored Enterprises.

[6] To illustrate the power of the House Financial Services Committee, consider the following example, published in the *Wall Street Journal* on January 22, 2009 (Paletta and Enrich 2009). In late September 2008, Boston-based OneUnited Bank found its capital depleted and its management compromised with a cease-and-desist order from the FDIC for poor lending practices and the abuse of management pay. Yet in mid-December 2008, the bank received $12,063,000 from CPP. In 2009-2010, the bank missed all of its dividend payments to the Treasury. The bank is headquartered in the home state of Rep. Barney Frank, head of the Financial Services Committee, who acknowledges that he had included into TARP a provision aimed at helping this particular bank and recommended to regulators that OneUnited be considered for capital investment under TARP. The bank's lawyer admitted that he had discussed the bank's financial situation over the phone not only with Frank but also with Rep. Maxine Waters (a member of the Financial Services Committee and Financial Institutions Subcommittee), who subsequently helped set up meetings between the Treasury and the bank's management. Waters' husband was a OneUnited director in 2004-2007 and held over $500,000 in OneUnited Stock at the time of CPP. In 2010, the House Ethics Committee initiated an investigation of Rep. Waters' influence in the allocation of capital to OneUnited under CPP.

[7] Unlike senators, who are elected in a statewide election, House representatives are elected in smaller districts within each state, with an average of nine election districts per state.

approximately equal by the number of voters (about 700,000 voters per district), providing an equitable

comparison base in the cross-section. Last, our focus on the House of Representatives enables us to cover all

eligible firms, including those located in Washington, DC, Puerto Rico, and U.S. territories, which elect

delegates to the House but have no representation in the Senate.

To link firms to the voting districts of politicians, we use the online database of Congress and look up

the House member who represents the voting district where the firm is domiciled (based on the zip code of the

firm's headquarters). Next, for each firm, we calculate a measure of representation on key committees. This

proxy is computed as the average of four indicators, each equal to one if the representative from the firm's

district served on the Subcommittee on Financial Institutions or the Subcommittee on Capital Markets in either

2008 or 2009. Thus, we have two indicators for each of the two years. For example, if a representative served on

the Financial Institutions Subcommittee but not the Capital Markets Subcommittee in both 2008 and 2009, a

firm from this representative's district will be assigned a score of 0.50.[8] A total of 124 firms (23.4 percent of our

sample) have a representative who was a member of at least one of the two subcommittees in 2008-2009.

Political Campaign Contributions

In addition to electoral ties that exist between politicians and banks headquartered in their election districts,

companies can establish connections with politicians by financing their election campaigns. In particular, the

financial sector is one of the largest contributors to federal political campaigns. While firms cannot directly

contribute to political campaigns, they can do so by establishing and sponsoring political action committees

(PACs), which are private groups organized to support political candidates.

We collect the data on PAC contributions and campaign financing from the Federal Election

Commission and manually clean it to standardize corporate affiliations of sponsoring firms. Since we would like

to measure the influence on politicians most closely involved with CPP, our measure of campaign contributions

is the amount of a firm's PAC contributions in 2007-2008 (the election cycle for the 2008 congressional

election) to the members of the Financial Institutions and Capital Markets Subcommittees of the House

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[8] $0.50 = (1+1+0+0)/4$

Financial Services Committee. Approximately 5.1 percent of firms in our sample made such political

contributions. The average amount contributed was $16,444, and the median amount was $7,500.

Approximately 42 (58) percent of contributed funds went to Republican (Democrat) candidates.

Lobbying Expenditures

Lobbying refers to the practice of petitioning government agencies. As a form of political influence, lobbying

has several distinct features. First, it is usually focused on government legislation or specific issues rather than

on particular politicians. Second, most companies lobby their interests by hiring an external lobbying firm,

which works with government officials on behalf of its clients.

Our lobbying data come from a database of lobbying reports maintained by the Senate's Office of

Public Records. Each report provides information on the issues lobbied, the government agencies petitioned, and

the amount spent.[9] The issue and agency classifications include 78 and 311 categories, respectively. We use the

issue and agency classifications to estimate the amount of lobbying expenditures directed specifically toward the

Treasury, Congress, and banking regulators and aimed at the issues that are most closely related to the

government assistance program, namely the issues of Finance, Banking, or Bankruptcy. The time period for our

lobbying activity starts in the first quarter of 2008 and ends in the first quarter of 2009 (the last quarter in which

firms were permitted to lobby the Treasury on CPP applications). Our measure of a firm's political influence via

lobbying is this amount of relevant lobbying expenditures scaled by firm size (book assets). Approximately 6.8

percent of firms in our sample engaged in lobbying activities that meet the relevance criteria discussed above.

Among these firms, the average (median) amount of relevant lobbying expenditures was $1.23 million ($341

thousand), as shown in Panel A of Table 1.

Index of Political Connections

In addition to providing evidence on each individual measure of political connections, we construct an index of

a firm's political connectedness. This approach allows us to aggregate all measures of political influence and

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[9] Lobbyists are obligated to disclose the category of the issues lobbied if the amount of lobbying expenditures exceeds $10,000.

assess a firm's overall intensity of political influence relative to that of other firms in our sample. To construct

this index for each firm, we calculate the firm's percentile ranking in our sample on each measure of political

influence and then find the mean of these rankings to derive an aggregate index score, normalized to lie between

0 and 1. For example, an index score of 0.90 indicates that a firm's average level of political influence places it

in the ninetieth percentile of our sample—that is, the top 10 percent of eligible firms.

Panel B of Table 1 shows the correlation matrix for our independent variables. The vast majority of

correlations are low, indicating that our variables capture distinct measures of political influence and financial

performance. In the next section, we study the relation between these variables, the likelihood of applying for

CPP funds, and the approval rate of submitted applications.

3. Empirical Results

This section presents our main empirical findings. We begin with nonparametric evidence on the effect of

political connections on the decision of eligible firms to apply for CPP funds and on the decision of regulators to

approve these applications. We then present formal regression evidence, followed by a discussion of alternative

hypotheses and tests of robustness. The section concludes with the analysis of ex-post performance of

government investments in politically connected and unconnected firms.

3.1 Applying to CPP and Application Approval

Panels A and B of Table 2 provide univariate evidence on the effect of political connections on the likelihood of

submitting an application for CPP funds and the likelihood of application approval, respectively. For each

measure of political connections, we divide the sample into firms that are connected (*Yes*) and unconnected (*No*)

according to that measure. For the political connections index, we compare between firms in the top (*Yes*) and

bottom (*No*) quartiles to distinguish between more connected and less connected firms.

Panel A of Table 2 shows that political connections do not appear to have a strong relation to the

likelihood of applying for government funds. While the differences between connected and unconnected firms

are consistently positive across all measures of political connections, they are not significant at conventional

levels. This result is not entirely unexpected, given that all but 19 percent of eligible public firms submitted a CPP application, an outcome consistent with the wide awareness of the program, a simple application procedure, and the scarcity of capital during the crisis.

Panel B of Table 2 demonstrates that better-connected firms that applied for CPP funds were significantly more likely to be approved for government investment. This result holds for each individual measure of political connections at the 5 percent level or better, and is reliably significant for the overall index of political connections (t = 2.84). Panel B of Table 2 also allows us to compare the effect of being connected according to each political measure. Connection to a House member serving on key finance sub-committees via the election district translated to an increase of 7.7 percentage points in the likelihood of being approved for CPP (the likelihoods were 77.6 percent for unconnected firms and 85.3 percent for connected firms). The magnitudes are bigger for the other measures. For instance, connections via directors implied an increase of 9.4 percentage points in being approved (76.6 percent for unconnected firms and 86.0 percent for connected firms), whereas connections via lobbying translated to an increase of 12.4 percentage points (79.3 percent for unconnected firms and 91.7 percent for connected firms). These numbers suggest that the economic magnitudes are non-trivial, as reflected by the political connections index, which implies an increase of 13.4 percentage points in the likelihood of approval from the bottom quartile (74.1 percent) to the top quartile (87.5 percent).

Next, we proceed with formal regression analysis. We estimate cross-sectional logit regressions to determine the influence of firm characteristics on the likelihood of applying for CPP funds and the likelihood of receiving CPP capital. The results of this estimation are presented in Table 3. In Panel A of Table 3, the dependent variable is an indicator equal to 1 if a firm applied for CPP funds. This specification is estimated using the 529 CPP-eligible public firms in our sample. In Panel B of Table 3, the dependent variable is an indicator equal to 1 if a firm's application for CPP was approved. This empirical model is estimated using a subset of 424 public firms, which submitted CPP applications. The set of independent variables includes four measures of political connections, Camels measures of financial condition and performance, firm size, age, and exposure to the crisis. To control for the possibility of systematic differences in decision criteria across bank regulators, we include regulator fixed effects.

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The results of the regression analysis are consistent with the univariate evidence. As shown in Panel A of Table 3, political connections appear to have little association with the likelihood of applying for CPP funds. Instead, the likelihood of submitting a CPP application is positively related to a firm's need for additional capital, as proxied by lower capital adequacy, lower liquidity, and higher foreclosures. We also find that a firm's propensity to apply for CPP funds is positively related to exposure to market risk. Since greater risk exposures typically require larger capital buffers, this evidence also supports the link between a firm's capital requirements and the likelihood of applying for government funds.

Panel B of Table 3 shows the results of estimating the likelihood of application approval. The measures of political connections are strongly positively associated with the likelihood of approval for CPP funds across all specifications. These results persist whether the measures of political influence are estimated individually, jointly, or with an index. The economic magnitudes of political influence are substantial. To estimate the magnitudes, we compute the marginal effect of each variable of political influence, while holding other variables at their average values. To standardize the interpretation of continuous variables, such as lobbying and political contributions, we compute the effect of a one standard deviation change in the variable of interest. In particular, we estimate the difference in the likelihood of CPP application approval associated with increasing the variable of interest from -0.5 standard deviations below its mean value to +0.5 standard deviations above its mean value. For variables based on discrete number of connections, such as connections to the House financial services subcommittees and connections to regulators via directorships, we estimate the difference between having no connection (variable of interest = 0) and having an average connection (variable of interest = average value for connected firms).

Based on the models (1)-(4), firms headquartered in the election district of a House member serving on key congressional finance committees were 6.6 percentage points more likely to be approved for CPP funds. Firms employing a director connected to the banking regulator or the Treasury were 9.3 percentage points more likely to have their application approved. Similarly, a one standard deviation increase in size-adjusted lobbying (political contributions to members of finance committees) is associated with an increase of 7.6 (5.2) percentage points in the likelihood of application approval. To provide an aggregate view, an increase of one standard

deviation in a firm's index of political connections is associated with a 7.1 percentage point increase in the likelihood of approval for government investment.

The evidence from financial and demographic variables indicates that firms were more likely to be approved for government investment if they had higher earnings and, to a lesser extent, lower foreclosures. For example, based on Column (6) in Table 3, a one standard deviation increase in quarterly earnings is associated with a 9.3 percentage point increase in the likelihood of approval for CPP funds. A one standard deviation increase in foreclosures is associated with a 1.3 percentage point decrease in the probability of approval for CPP funds. These results are broadly consistent with the declared mandate of the program to support stronger, financially viable applicants.

3.2 Robustness and Alternative Explanations

The results in the previous subsection suggest that firms' political connections had a significant effect on the likelihood of approval for government investment funds. In this section, we test the robustness of this main result to alterative explanations. We start by considering different measures of firm fundamentals and then address the issues of unobservable or unspecified variables correlated with political connections. The analysis continues with tests of alternative measures of systemic importance.

The first issue we consider is related to alternative measures of bank fundamentals. So far our choice of financial variables has been guided by the Camels system. Yet each dimension of the Camels ratings can be measured by several proxies, and we would like to test the robustness of our results to a different choice of condition and performance indicators. These alternative measures are discussed in Appendix III. Column (1) in Table 4 presents the estimation results with the new set of financial variables. The qualitative conclusions for all political variables and the majority of financial variables remain unchanged, suggesting that our main results are consistent across different measures of fundamentals.

We also show that our results are not driven by a particular subset of firms. Specifically, our findings hold after eliminating firms with the best or worst financial condition, as proxied by firms' capitalization levels (Columns (2) and (3) of Table 4, respectively). Our evidence is also robust to eliminating firms headquartered

in New York City (Column (4) of Table 4), indicating that our findings are not confined to this financial center with strong connections to Congress and banking regulators.

So far, we have viewed ties to Congress, connections to regulators, lobbying expenditures, and campaign contributions as forms of political influence. However, it is possible that these variables proxy for some omitted firm characteristics, which played a role in CPP investment decisions. For example, firms that hire directors from the banking regulators and the Treasury may represent institutions with better governance, which may be more likely to receive CPP funds. Similarly, although we always adjust lobbying expenditures and campaign contributions by size, these measures may still capture some omitted dimensions of systemic importance, which may increase a firm's likelihood of approval.

To address this alternative explanation, we construct placebo tests. As a placebo measure for connections to congressmen on key finance committees and directorship ties to banking regulators, we use connections that were active shortly before but not during the administration of CPP. Note that while the use of the *most recent* (but defunct) connections provides a cleaner control for firm fundamentals correlated with these measures, it works against us if former ties can still play a role. For connections to regulators via directorships, we select banks that had such a connection in 2006-2007, but not in 2008-2009. For connections to Congress, we select banks headquartered in the districts of House members who served on the House Financial Services Committee in the 109th Congress (2005-2007), but not during the administration of CPP.[10] As a placebo measure for lobbying expenditures, we use size-adjusted amount of corporate lobbying expenditures during the administration of CPP (2008-2009) spent on government agencies unrelated to CPP, i.e. all government agencies excluding Congress, Treasury, and banking regulators. As a placebo measure for campaign contributions, we use the amount of size-adjusted campaign contributions to candidates that ran as challengers in the 2008 congressional election and lost.

If our measures of political connections proxy for the influence on CPP application approval, they should have no effect if we use the most recent but defunct political connections, lobbying expenditures targeted at government agencies unrelated to CPP, and contributions to politicians without a congressional seat. On the

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[10] Following our main specification, we use connections to the subcommittees on Capital Markets and Financial institutions within the House Financial Services Committee.

other hand, if our measures of political connections are correlated with some desirable firm characteristic, they should still likely have an effect on CPP application approval after we change the recipient of lobbying and contribution funds or push back the timing of regulator connections.

Column (5) of Table 4 shows the results of estimating the likelihood of CPP application approval using placebo political connections. The index of political connections is constructed from placebo measures analogously to our main specification, and all other independent variables are the same as in our main regression in Table 3. The effect of the political connections index based on placebo measures is statistically insignificant, while the signs and magnitudes of coefficients on other variables remain similar to those in our main specification. In unreported results, we achieve the same conclusion when we estimate the effect of each placebo measure individually. This evidence suggests that our results are unlikely to be explained by firm fundamentals correlated with political connections, at least to the extent that these fundamentals are persistent in the short term.

Next, we consider the issue of systemic importance. The first potential concern is that our results may be driven by a subset of well-connected large firms, which would receive government funding irrespective of their political connections under the "too-big-to-fail" doctrine. While all of our tests have excluded the largest CPP investments announced at program initiation, it is possible that the list of the unconditionally supported systemically important institutions extends to other large banks. To address this possibility, we additionally exclude the top 5 percent (21 firms) of the largest firms in our sample. Column (1) in Table 5 shows the results of estimating our logit model of CPP application approval after excluding the largest banks. All qualitative conclusions hold, and the quantitative results are also similar.

It is also possible that the effect of systemic importance extends well beyond the largest banks and plays a significant role for midsize financial institutions. To distill the effect of political connections from that of systemic importance, we construct sized-matched subsamples of politically connected and unconnected banks. For each connected bank, with at least one measure of political influence greater than zero, we identify an unconnected bank, whose measures of political influence are all zero, closest in size (total assets). To ensure equitable size within each pair, we use only observations for which the difference in size between a connected

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firm and its unconnected match does not exceed 10 percent. Next, we re-estimate our base logit specification in the subsample of connected and unconnected firms and report our results in Column (2) of Table 5. The effect of political influence remains statistically significant and qualitatively similar despite the noticeable reduction in sample size as a result of the relatively restrictive size matching.

It is also possible that asset size alone is an insufficient statistic to capture systemic importance. For example, as a result of variation in the number of banks across different states, a smaller financial institution may be more important for its regional financial system than a bank of similar size located in a state with a high concentration of banks. If regionally important banks are more likely to be politically connected, this scenario could explain the positive relation between political influence and CPP application approval.

To test this alternative hypothesis, we construct a sample of connected and unconnected banks of similar size headquartered in the same state. Specifically, for each connected institution, we choose an unconnected bank closest in size and domiciled in the same state. As before, we require that the difference in size between two institutions within each pair not exceed 10 percent. We then repeat the estimation of our main logit specification in the matched subsample. The estimation results, shown in Column (3) of Table 5, are qualitatively similar to the findings in the main analysis and indicate a strong positive effect of political connections on the likelihood of approval for government funds.

Another alternative explanation we consider is that bank size, even when measured within the respective geographic region, does not fully reflect the bank's role in the financial system. In particular, a bank of a given size may be more systemically important if it is interconnected with a greater number of financial institutions. The failure of such a bank, even if relatively small in the context of the entire system, may cause systemic distress as a result of the ripple effect on the stability of connected institutions.

To estimate systemic importance of individual institutions, we use ΔCoVaR – a measure of systemic risk proposed by Adrian and Brunnermeier (2009) in the Federal Reserve Bank of New York Report at the time of the credit crisis. Intuitively, this measure estimates a bank's marginal contribution to systemic risk of the financial sector. In contrast to the traditional risk measures, which focus on the individual risk of financial institutions, such as value-at-risk (VaR), expected shortfall, and the volatility of losses, ΔCoVaR captures the

risk spillover across the financial network (such as the distortion in the supply of credit and capital) resulting from distress of a given financial institution.

More specifically, we define CoVaR of a particular bank as VaR of the financial sector conditional on this bank being in distress. Next, we find the difference between the computed CoVaR of an individual bank and the unconditional VaR of the financial system. This difference, ΔCoVaR, which captures the marginal addition of a particular bank to the overall systemic risk, serves as an alternative control for systemic importance in our robustness tests. Appendix III provides the detailed procedure for computing ΔCoVaR for our sample firms.

Column (4) of Table 5 presents the results of re-estimating our base logit model of CPP application approval, in which we use ΔCoVaR as an additional proxy for banks' systemic importance, while also controlling for firm size. We find that ΔCoVaR is positively and significantly related to the likelihood of receiving CPP capital, consistent with the conjectured role of systemic importance in CPP investment decisions. The positive effect of the index of political influence remains reliably significant at the 1 percent level even in a reduced sample and after controlling for an additional dimension of institutions' systemic risk.

Collectively, the evidence in this section suggests that our results are robust to the choice of control variables and measures of systemic importance, and that our evidence is difficult to explain by omitted or unobservable firm characteristics.

3.3 Performance of Investments in Politically Connected Firms

In this section, we compare the ex-post performance of investments in politically connected firms to that of their unconnected counterparts. Since all public CPP recipients are charged the same dividend rate on Treasury's capital investment, the main mechanism through which the Treasury can capture the upside from these investments is through the 10-year warrants, which the Treasury received on the stock of participating institutions. Put simply, the returns to taxpayers from each CPP investment depend on the subsequent stock performance of each CPP participant. Therefore, to assess the ex-post performance of government investments, we focus primarily on subsequent stock returns and market-based valuation measures of recipient institutions. For completeness, we also include accounting-based measures.

Table 6 provides evidence on the changes in the performance of CPP recipients after receiving federal capital. The table shows the results of difference-in-differences panel regressions, in which the dependent variable is a measure of accounting performance (ROA, column 1), market valuation (Tobin's Q, columns 2-3), or stock performance (raw, market-adjusted, and industry-adjusted stock returns in Columns 4-6, respectively). The detailed definitions and formulas for each performance measure are provided in the caption of Table 6 and in Appendix III.

To study the difference in the performance of CPP recipients before and after receiving federal capital, the set of independent variables includes an indicator variable "After CPP Investment", which is equal to 0 before January 2009 and 1 thereafter. While each CPP recipient received its federal investment on a different date, nearly all investments in our sample (89.9% by capital amount) were announced in October-December 2008. Therefore, for simplicity and standardization, we define the period beginning in January 2009 as the period "After CPP Investment".

The key independent variable of interest is the interaction term of the dummy "After CPP Investment" and the political connections index. The coefficient on this term captures the difference in performance, if any, between politically-connected and unconnected firms following the government investment. To control for time-variant changes in firm fundamentals, all regressions include Camels proxies, size, age, and foreclosures. To control for other observable and unobservable firm-specific characteristics, all regressions include firm fixed effects. The sample includes 294 publicly-traded CPP recipients in our sample. To ensure temporal consistency across all variables, we use quarterly data in all regressions. The time period is a 5-year window ending in the second quarter of 2010 (the most recent period available at the time of data collection).

All regression specifications paint a consistent picture of the performance of politically-connected investments. The coefficient on the interaction term "After CPP Investment" **x** "Political Connections Index" is always negative and statistically significant at least at the 5 percent level (and significant at the 1 percent level for 4 of the 6 columns), indicating that investments in politically connected firms significantly underperformed those in their unconnected counterparts. The differences in performance are also economically significant. For instance, an increase of one standard deviation in the Political Connections Index corresponds to a 0.22

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percentage point decline in quarterly ROA.[11] Similarly, an increase of one standard deviation in the Political

Connections Index corresponds to an underperformance of 1.45 percentage points per quarter based on industry-

adjusted returns.[12]

Among other variables, the negative coefficient on the dummy "After CPP Investment" (significant in 4

of the 6 columns) suggests that the financial performance of firms in the sample was mostly lower in the latter

part of the period, consistent with the effect of the financial crisis. The performance was also weaker for firms

with greater exposure to the crisis, as indicated by the negative coefficient on the variable "foreclosures" (also

significant in 4 of the 6 columns). Other variables appear to have less clearly defined associations with

performance, which vary depending on the selected measure.

In summary, the evidence in this section indicates that investments in politically-connected firms

underperformed those in their unconnected counterparts. To the extent that monetary returns on investment can

be used an indicator of investment efficiency, our findings are consistent with agency-type inefficiencies from

political influence predicted in Shleifer and Vishny (1994) and inconsistent with the efficiency-improving role

of political connections.

Conclusion

This paper provides empirical evidence on the effect of corporate political connections on government

investment decisions. We consider a wide range of measures of political influence – from ties to Congressmen

and regulators to lobbying expenditures and campaign contributions – and find a strong positive influence of

political connections on firms' access to federal investment funds.

We then seek to distinguish between two views on the role of political influence: (1) the view that

political connections reduce the efficiency of government investment by benefiting connected firms and

politicians at public expense; and (2) the view that political connections improve the efficiency of government

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[11] We obtain the decline of 0.22 percentage points in quarterly ROA by multiplying the standard deviation of the Political Connections Index (0.108) by -2.051, the regression coefficient on "After CPP Investment" **x** "Political Connections Index".
[12] We obtain an underperformance of 1.45 percentage points in quarterly industry-adjusted returns by multiplying the standard deviation of the Political Connections Index (0.109) by -0.133, the regression coefficient on "After CPP Investment" **x** "Political Connections Index".

investment by resolving the information asymmetry in the federal investment process. Using ex-post financial performance of government investments as an indicator of investment efficiency, we find evidence consistent with the former view, namely that investments in politically connected firms deliver inferior returns.

However, there may exist other important social benefits from investing in politically-connected firms that are not captured by monetary or financial returns. Examples of these social benefits may include job creation, financial stability, and community services, such as lending to important socio-economic groups. The analysis of these broader, less tangible social benefits from supporting politically connected firms is an interesting area for future research.

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Appendix I

Primary Banking Regulators of Qualifying Financial Institutions

The Federal Reserve is the primary regulator for bank holding companies and state-chartered banks that are members of the Federal Reserve System.[13] Together, these institutions account for more than 85 percent of QFIs in our sample and represent over 95 percent of assets.

The FDIC has supervisory authority over state-chartered banks that are not members of the Federal Reserve System. These banks comprise the majority of institutions in the banking system, but most of them are held by bank holding companies, and their applications must be also submitted to the Federal Reserve.

The OCC regulates and supervises all national banks. In contrast to state banks, which are chartered by state banking departments and regulated by state banking laws, national banks are chartered by the OCC and regulated by federal banking laws. Further, unlike state banks, national banks are required to be investing members of the Federal Reserve System. National banks are typically larger than state banks but do not need to have nationwide operations. The decision of a bank to seek federal or state charter often depends on its preference for regulatory authorities and regulating laws, since laws in some states give state banks more authority than national banks to engage in selected nonbank activities, such as real estate investments, among others.

OTS supervises savings associations (thrifts) and savings and loan holding companies. In the past, the primary operations of savings associations were limited to accepting deposits and making residential mortgage loans. However, the differences between banks and savings associations have diminished over time, and under the current law thrifts are authorized to offer largely all banking services. Savings and loan holding companies are companies that own savings associations.

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[13] In cases where the applying institution is a bank holding company, the application is submitted both to the regulator overseeing the largest bank of the holding company and to the Federal Reserve.

Appendix II

Sample Disclosures of CPP Application Status

Application Submission

Disclosure: "On November 14, 2008, the Company applied for the maximum funds available through the TARP Capital Purchase Program, which was approximately $28.0 million or three percent of our risk-weighted assets."

Company: Commonwealth Bankshares

Source: Annual report for the fiscal year ended December 31, 2008, page 17.

Decision not to Apply

Disclosure: "In light of the Company's regulatory capital, which is significantly in excess of well capitalized standards, and taking into consideration the Company's projected earnings, asset growth, and business strategy, we have decided not to seek Federal funding through the U. S. Treasury Department's Capital Purchase Program, although we believe we would be eligible for such funds."

Company: Louisiana Bancorp

Source: Quarterly report for the period ending September 30, 2008, page 23.

Application Approval and Acceptance of Funding

Disclosure: "Susquehanna Bancshares, Inc. (NASDAQ: SUSQ) has received preliminary approval to participate in the U.S. Treasury Department's voluntary Capital Purchase Program. Under the program, Susquehanna applied for and will receive $300 million in capital and in return will issue the Treasury $300 million in shares of Susquehanna preferred stock and warrants to purchase $45 million of Susquehanna common stock."

Company: Susquehanna Bancshares

Source: press release entitled "Susquehanna Bancshares, Inc. to Participate in U.S. Treasury Capital Purchase Program", November 29, 2008

Application Approval and Decision not to Accept Funding

Disclosure: "Chemical Financial Corporation (Nasdaq:CHFC) today announced that the Company has determined not to accept an $84 million capital investment recently approved as part of the U.S. Department of the Treasury's Capital Purchase Program (CPP). … Given the short timeframe between the release of the final CPP guidelines and agreements and the application deadline, the Company felt the prudent course of action was to submit its application to participate, and then take the opportunity to carefully consider all aspects of accepting funds awarded through the CPP. After such consideration, the Company's Board and management determined that the various restrictions and potential dilution to existing shareholders outweighed any potential benefits from the Company's participation in the CPP."

Company: Chemical Financial Corporation

Source: press release entitled "Chemical Financial Corporation Voluntarily Declines Participation in TARP Capital Purchase Program", December 18, 2008

Appendix III

Variable Definitions

1. CPP Variables

CPP Application = indicator equal to 1 if the firm applied for CPP funds.

CPP Approval = indicator equal to 1 if the firm was approved for (conditional on applying) CPP funds.

CPP Investment = indicator equal to 1 if the firm received (conditional on approval) CPP funds.

2. Political Variables

House financial services subcommittee = average of four indicators, each equal to one if the representative from the firm's district served on the Subcommittee on Financial Institutions or the Subcommittee on Capital Markets in either 2008 or 2009. Thus, we have two indicators for each of the two years. For example, if a representative served on the Financial Institutions Subcommittee but not the Capital Markets Subcommittee in both 2008 and 2009, a firm from this representative's district will be assigned a score of 0.50.

Number of connected board members = number of directors in 2008 or 2009 with simultaneous or former work experience at the banking regulators (Federal Reserve, FDIC, OTS, and OCC), Treasury or Congress.

Lobbying amount = Size-scaled total expenditures on lobbying activity targeted at the banking regulators, Treasury, or Congress on the issues of banking, financial institutions, or bankruptcy from the first quarter of 2008 to the first quarter of 2009, inclusive.

Contributions to financial services subcommittee members = Size-scaled total political contributions by the firm-sponsored political action committee(s) to the members of the Capital Markets Subcommittee and the Financial Institutions Subcommittee of the House Financial Services Committee in the 2008 congressional election campaign.

Political connections index = a firm's average percentile rank in our sample on each of the four measures of political connections; the index is scaled to range from 0 (low) to 1 (high).

3. Financial Variables

Capital adequacy = tier-1 risk-based capital ratio, defined as tier-1 capital divided by risk-weighted assets.
    Capital adequacy refers to the amount of a bank's capital relative to the risk profile of its assets. Broadly, this criterion evaluates the extent to which a bank can absorb potential losses. Tier-1 capital comprises the more liquid subset of bank's capital, whose largest components include common stock, paid-in-surplus, retained earnings, and noncumulative perpetual preferred stock. To compute the amount of risk-adjusted assets in the denominator of the ratio, all assets are divided into risk classes (defined by bank regulators), and less risky assets are assigned smaller weights, thus contributing less to the denominator of the ratio. The intuition behind this approach is that banks holding riskier assets require a greater amount of capital to remain well capitalized.
    In the robustness section, we also test an alternative specification of capital adequacy: core capital (leverage) ratio, determined as a ratio of tier-1 capital to average total assets minus ineligible intangibles.

Asset quality = the negative of net losses, scaled by total loans and leases.

Asset quality evaluates the overall condition of a bank's portfolio. A higher proportion of net losses indicates lower asset quality. For ease of interpretation, this ratio is included with a negative sign so that greater values of this proxy reflect higher asset quality.

In the robustness section, we also test an alternative measure: the ratio of loan and lease allowance to total loans. This ratio (also included with a negative sign) measures the adequacy of the allowance created by the bank to absorb losses on nonperforming loans.

Management quality = the negative of the number of corrective actions that were taken against bank executives by the corresponding banking regulator (FED, OTS, FDIC, and OCC) between 2006 and 2009.

In our sample, we have a total of 697 orders issued to 166 QFIs. The most frequent enforcement actions include prohibitions from further participation in banking activities,[14] orders to cease and desist,[15] and orders to pay civil money penalties.[16] To avoid subjectivity, we do not attempt to assess the severity of each corrective action but rather use the total number of enforcement orders issued to a QFI over the three-year period.

Earnings = return on assets (ROA), measured as the ratio of the annualized net income in the trailing quarter to average total assets. For robustness, we also measure Earnings using net interest income to earning assets.

Liquidity = cash divided by deposits. For robustness, we also measure Liquidity using the ratio of core deposits to asset growth.

Sensitivity to market risk = the sensitivity to interest rate risk, defined as the ratio of the absolute difference (gap) between short-term assets and short-term liabilities to earning assets.

The primary focus of risk analysis by bank regulators is on interest rate risk. The gap between short-term assets and liabilities approximates the net amount of assets or liabilities that need to be repriced within one year, affecting earnings. A greater absolute value of the gap reflects a higher interest rate risk.

Foreclosures = value of foreclosed assets divided by net loans and leases.

4. Demographic Variables

Size = the natural logarithm of total assets, defined as all assets owned by the bank holding company, including cash, loans, securities, bank premises, and other assets. This total does not include off-balance-sheet accounts.

Age = age (in years) of the oldest bank owned by the bank holding company as of 2009.

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[14] These orders prohibit bank managers convicted of unlawful activities or unsound banking practices from involvement in any insured depository institution without prior regulatory approval.
[15] Cease-and-desist orders are issued when a regulator determines that a bank has engaged in "an unsafe or unsound banking practice or a violation of law." These orders require banks to take corrective actions specified by the banking regulator.
[16] These orders require banking organizations to pay fines for engaging in unsafe banking practices, violations of law, or incompliance with orders of banking regulators.

5. Systemic Importance (ΔCoVaR)

ΔCoVaR = a measure of systemic risk developed by Adrian and Brunnermeier (2009). This proxy estimates a bank's marginal contribution to systemic risk of the financial sector. ΔCoVaR is the difference between CoVaR of an individual bank (i.e., value-at-risk of the financial sector conditional on this bank being in distress) and the unconditional value-of-risk of the financial system.

To estimate ΔCoVaR, we follow the methodology in Adrian and Brunnermeier (2009) and compute VaR and ΔCoVaR based on financial institutions' growth rates in market valued total financial assets. Formally, denote by ME_t^i the market value of an intermediary i's total equity, and by LEV_t^i the ratio of total assets to book equity. We define the normalized change in market value of total financial assets, Xt_i^t, by:

$$Xt_t^i = \frac{ME_t^i \cdot LEV_t^i - ME_{t-1}^i \cdot LEV_{t-1}^i}{ME_{t-1}^i \cdot LEV_{t-1}^i}$$

Analogously, the growth rate of market valued total assets for the financial system as a whole is given by the total market value weighted sum of the Xt_t^i across all institutions. Since the estimation of VaR and ΔCoVaR requires market data, we limit our sample to publicly traded eligible firms with at least ten years of available historical data. After applying this filter, we end up with a sample of 363 firms, of which 282 (53.4%) were awarded CPP capital.[17]

We start our estimation period in January 1986 and end in December 2008, using daily market data from CRSP and quarterly balance sheet data from COMPUSTAT. We calculate the total market value weighted sum of the Xt_t^i across all institutions in our sample and define the combined VaR of the financial system as the bottom 5 percent of the growth rate between 1986 and 2008. In a final step, for each QFI, we compute the measure of systemic risk, ΔCoVaR, as the difference between VaR of the whole system conditional on institution *i* having a growth rate equal to its own VaR and the system's unconditional VaR.

6. Performance

ROA = quarterly return on assets.

Tobin's Q = the book value of assets minus the book value of equity plus the market value of equity divided by the book value of assets.

Tobin's Q (Alternative definition) = the book value of assets minus the book value of equity plus the market value of equity divided by 0.9 times the book value plus 0.1 times the market value.

Market-adjusted returns = quarterly raw returns minus the returns on the CRSP value-weighted index.

Industry-adjusted returns = quarterly raw returns minus industry returns, where industries are defined by the 2-digit SIC code.

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[17] In an alternative specification, we also estimate VaR and ΔCoVaR based on a broader universe of financial institutions, which also includes publicly traded broker-dealers, insurance companies, and real-estate firms (SIC codes 62, 63-64, and 65-66, respectively). Although the vast majority of these firms are ineligible for CPP participation, their inclusion in the sample enables us to estimate the interconnectedness of QFIs with firms in other sectors of financial services. Our results (unreported) are qualitatively similar.

Figure 1
Sample Firms and their Investment Applications

```
        ┌─────────────────────────────┐
        │   600 Publicly traded firms │
        │  eligible for CPP investments│
        └─────────────────────────────┘
              │              ╲
              ▼               ╲
   ┌──────────────────────┐    ┌──────────────────────────┐
   │ 538 Firms with known │    │  Exclude 62 firms with no│
   │  CPP application status│   │ information on CPP status│
   └──────────────────────┘    └──────────────────────────┘
              │              ╲
              ▼               ╲
   ┌──────────────────────┐    ┌──────────────────────────┐
   │  529 Firms comprise  │    │ Exclude the first set of 9 large│
   │   the main sample    │    │ investments at CPP initiation│
   └──────────────────────┘    └──────────────────────────┘
              │              ╲
              ▼               ╲
   ┌──────────────────────┐    ┌──────────────────────────┐
   │ 424 Firms applied for CPP│ │ 105 firms did not apply for CPP│
   │      investments     │    │        investments       │
   └──────────────────────┘    └──────────────────────────┘
              │              ╲
              ▼               ╲
   ┌──────────────────────┐    ┌──────────────────────────┐
   │ 337 Firms were approved│  │ 87 firms were not approved│
   └──────────────────────┘    └──────────────────────────┘
              │              ╲
              ▼               ╲
   ┌──────────────────────┐    ┌──────────────────────────┐
   │286 Firms received CPP funds││ 51 firms declined CPP funds│
   └──────────────────────┘    └──────────────────────────┘
```
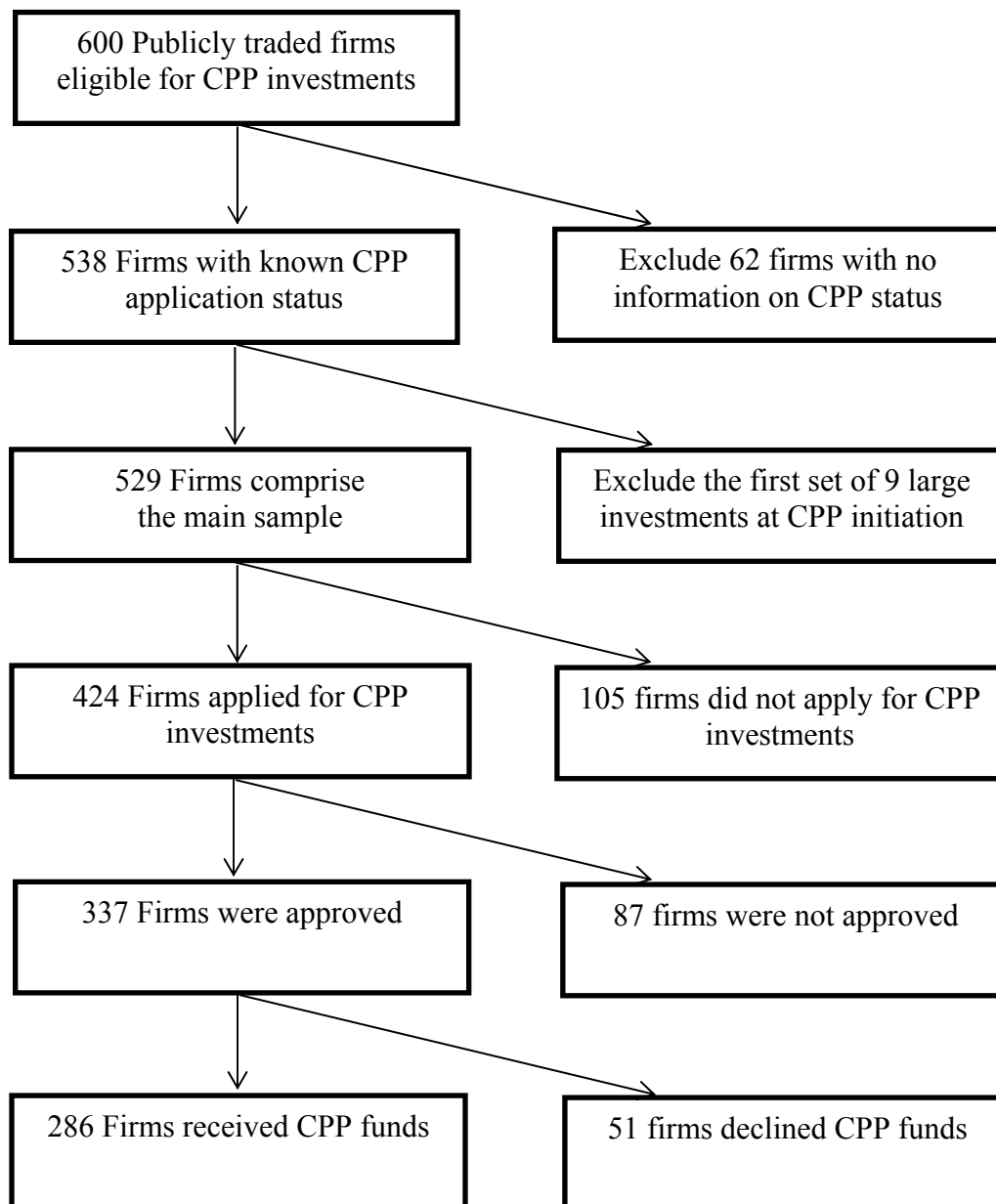
TABLE 1
Summary Statistics

This table reports summary statistics for our sample of firms (Panel A) and correlations among the main variables (Panel B). The sample consists of 529 publicly-traded financial firms eligible for participation in the Capital Purchase Program (CPP) with available data on program application status. The sample excludes the nine CPP investments in the largest banks announced at program initiation. *House financial services subcommittee* is an indicator equal to 1 if the House member representing the voting district of a firm's headquarters served on the Capital Markets Subcommittee or the Financial Institutions Subcommittee of the House Financial Services Committee in 2008 and 2009. *Connected board member* is an indicator equal to 1 if a firm's board of directors in 2008 or 2009 included a director with simultaneous or former work experience at the banking regulators (Federal Reserve, FDIC, OTS, and OCC), Treasury or Congress. The number of connected board members is reported for firms with at least one connected director. *Lobbying* (indicator, amount) is the firm's lobbying activity targeted at the banking regulators, Treasury, or Congress on the issues of banking, financial institutions, or bankruptcy from the first quarter of 2008 to the first quarter of 2009, inclusive. *Contributions* (indicator, amount) are political contributions by the firm-sponsored political action committee(s) to the members of the Capital Markets Subcommittee and the Financial Institutions Subcommittee of the House Financial Services Committee in the 2008 congressional election campaign. *Political connections index* is a firm's average percentile rank in our sample on each of the four measures of political connections; the index is scaled to range from 0 (low) to 1 (high). *CPP Application, Approval, and Investment* indicators are equal to 1 if the firm applied for, was approved for (conditional on applying), or received (conditional on approval) CPP funds. *Capital adequacy* is the Tier 1 risk-based capital ratio. *Asset quality* is the negative of the ratio of net losses to average total loans and leases. *Management quality* is the negative of the number of disciplinary orders issued to a firm's management by the firm's banking regulator in 2006-2009. *Earnings* is the return on assets (ROA). *Liquidity* is the ratio of cash to deposits. *Sensitivity to market risk* is the sensitivity to interest rate risk, defined as the ratio of the absolute difference (gap) between short-term assets and short-term liabilities to earning assets. *Foreclosures* is the ratio of foreclosed assets to net loans and leases. *Age* is the age of the oldest bank of the bank holding company as of 2009. *Assets* is the book value of assets of the bank holding company. All financial variables are reported as of September 30, 2008.

Panel A: Summary Statistics

Variable	Mean	25th percentile	Median	75th percentile	Standard deviation
Politics					
House financial services subcommittee indicator	0.234	0.000	0.000	0.000	0.424
Connected board member indicator	0.299	0.000	0.000	1.000	0.458
Number of connected board members	1.557	1.000	1.000	2.000	0.974
Lobbying indicator	0.068	0.000	0.000	0.000	0.252
Lobbying amount, $thousands	1,232	85	341	1,802	1,876
Contributions to financial services subcommittee members, indicator	0.051	0.000	0.000	0.000	0.220
Contributions to financial services subcommittee members, amount	16,444	3,000	7,500	18,500	23,518
Political connections index	0.501	0.420	0.479	0.543	0.102
CPP					
CPP application indicator	0.802	1.000	1.000	1.000	0.399
CPP approval indicator (if applied)	0.795	1.000	1.000	1.000	0.404
CPP investment indicator	0.849	0.000	1.000	1.000	0.359
CPP amount ($thousands), recipients	263,000	15,000	32,072	90,000	856,000
Financials					
Capital adequacy (%)	12.824	9.686	10.657	12.682	9.197
Asset quality (%)	-0.070	-0.059	-0.006	0.000	0.242
Management quality	-0.314	-1.000	0.000	0.000	0.464
Earnings (%)	0.147	0.020	0.532	0.867	1.986
Liquidity (%)	3.994	2.272	3.033	4.241	4.190
Sensitivity to market risk (%)	14.588	5.382	10.900	19.670	12.485
Foreclosures (%)	0.390	0.034	0.148	0.410	1.078
Demographics					
Age	73	23	76	111	49
Assets, $millions	5,978	556	1,130	3,058	20,463

Panel B: Correlations

	CPP approval indicator	House financial services subcommittee	Number of connected board members	Lobbying amount	Contributions to financial services subcommittee members	Political connections index	Capital adequacy	Asset quality	Management quality	Earnings	Liquidity	Sensitivity to market risk	Age	Assets
CPP approval indicator	1.000													
House financial services subcommittee	0.088	1.000												
Number of connected board members	0.108	0.018	1.000											
Lobbying amount	0.059	-0.028	0.229	1.000										
Contributions to financial services subcommittee members	0.094	0.045	0.290	0.358	1.000									
Political connections index	0.132	0.501	0.685	0.317	0.581	1.000								
Capital adequacy	0.004	0.016	0.092	0.025	0.293	0.134	1.000							
Asset quality	-0.057	0.053	0.079	0.037	0.053	0.099	0.016	1.000						
Management quality	-0.016	0.049	-0.217	-0.114	-0.207	-0.234	0.009	-0.083	1.000					
Earnings	0.229	0.006	0.066	-0.116	0.132	0.024	0.353	-0.018	0.042	1.000				
Liquidity	-0.019	-0.022	0.130	0.431	0.216	0.141	0.019	0.000	-0.046	-0.056	1.000			
Sensitivity to market risk	0.060	0.036	-0.073	-0.018	-0.084	-0.078	0.001	0.032	0.065	0.052	-0.029	1.000		
Age	0.137	-0.003	0.187	-0.046	0.140	0.159	0.102	0.113	-0.162	0.181	0.014	0.217	1.000	
Assets	0.100	0.027	0.338	0.166	0.705	0.505	0.139	0.035	-0.281	0.149	0.128	-0.081	0.250	1.000

TABLE 2
Univariate Evidence

This table presents difference-in-means estimates of the likelihood of applying for CPP funds (Panel A) and the likelihood of being approved for CPP funds, conditional on applying (Panel B). For each measure of political connections, we divide our sample into firms that are connected (*Yes*) and unconnected (*No*) according to that measure. For the Political connections index, we divide our sample into quartiles and compare between the bottom quartile (*No*) to the top quartile (*Yes*). The sample for Panel A includes 529 CPP-eligible public firms. The sample for Panel B includes 424 public firms that submitted CPP applications. Variable definitions are provided in Appendix III.

Panel A: Application

Sort Variable	No	Yes	Yes Minus No	t-statistic
House financial services subcommittee	0.795	0.823	0.028	0.671
Connected board member	0.795	0.816	0.021	0.561
Lobbying	0.793	0.842	0.050	1.797
Contributions to financial services subcommittee members	0.801	0.815	0.014	0.178
Political connections index	0.783	0.842	0.059	1.414

Panel B: Approval

Sort Variable	No	Yes	Yes Minus No	t-statistic
House financial services subcommittee	0.776	0.853	0.077	2.670
Connected board member	0.766	0.860	0.094	2.221
Lobbying	0.793	0.917	0.124	2.345
Contributions to financial services subcommittee members	0.786	0.955	0.168	1.999
Political connections index	0.741	0.875	0.134	2.840

TABLE 3
Application and Approval for Government Investment Funds

This table presents estimates from logit regressions explaining the likelihood of applying for CPP funds (Panel A) and the likelihood of being approved for CPP funds, conditional on applying (Panel B). In Panel A, the dependent variable is an indicator equal to 1 if a firm applied to CPP. In Panel B, the dependent variable is an indicator equal to 1 if a firm's application to CPP was approved. All variable definitions are provided in Appendix III. The standard errors (shown in brackets) are heteroskedasticity consistent. All regressions include regulator fixed effects. Significance levels are indicated as follows: * = 10%, ** = 5%, *** = 1%.

Panel A: Application

Model Number	(1)	(2)	(3)	(4)	(5)	(6)
House financial services subcommittee	0.076 [0.415]				0.047 [0.419]	
Number of connected board members		0.268 [0.186]			0.222 [0.192]	
Lobbying amount, scaled by size			0.025 [0.017]		0.019 [0.019]	
Contributions amount, scaled by size				0.150 [0.110]	0.082 [0.111]	
Political connections index						1.566 [1.492]
Capital adequacy	-0.068*** [0.021]	-0.069*** [0.022]	-0.074*** [0.022]	-0.072*** [0.021]	-0.075*** [0.022]	-0.070*** [0.022]
Asset quality	3.132* [1.873]	3.129* [1.869]	3.157* [1.876]	3.200* [1.904]	3.166* [1.888]	3.153* [1.885]
Management quality	0.073 [0.301]	0.087 [0.302]	0.077 [0.300]	0.095 [0.298]	0.100 [0.301]	0.078 [0.300]
Earnings	-0.054 [0.100]	-0.051 [0.100]	-0.052 [0.102]	-0.044 [0.098]	-0.049 [0.100]	-0.047 [0.099]
Liquidity	-0.039 [0.025]	-0.045* [0.025]	-0.062** [0.030]	-0.054** [0.027]	-0.068** [0.030]	-0.042* [0.025]
Sensitivity to market risk	-0.037*** [0.009]	-0.036*** [0.009]	-0.038*** [0.009]	-0.037*** [0.009]	-0.037*** [0.009]	-0.037*** [0.009]
Foreclosures	0.006* [0.004]	0.006* [0.004]	0.007* [0.004]	0.006* [0.003]	0.007* [0.004]	0.006* [0.003]
Size	0.198* [0.109]	0.136 [0.116]	0.156 [0.110]	0.144 [0.113]	0.082 [0.123]	0.143 [0.121]
Age	-0.007** [0.003]	-0.007*** [0.003]	-0.006** [0.003]	-0.007** [0.003]	-0.006** [0.003]	-0.007** [0.003]
Pseudo R^2	0.176	0.180	0.185	0.180	0.189	0.178
N_obs	529	529	529	529	529	529

Panel B: Approval

Model Number	(1)	(2)	(3)	(4)	(5)	(6)
House financial services subcommittee	0.895** [0.411]				1.054** [0.507]	
Number of connected board members		0.383** [0.195]			0.225** [0.112]	
Lobbying amount, scaled by size			0.038*** [0.011]		0.037*** [0.011]	
Contributions amount, scaled by size				0.219** [0.098]	0.133** [0.060]	
Political connections index						4.619*** [1.664]
Capital adequacy	-0.013 [0.023]	-0.010 [0.021]	-0.017 [0.021]	-0.028 [0.026]	-0.030 [0.024]	-0.020 [0.021]
Asset quality	1.260 [0.906]	1.278 [0.913]	1.449 [0.983]	1.265 [0.920]	1.562 [0.999]	1.371 [0.939]
Management quality	0.034 [0.304]	0.094 [0.304]	0.163 [0.309]	0.060 [0.300]	0.162 [0.311]	0.076 [0.304]
Earnings	0.258*** [0.074]	0.279*** [0.077]	0.292*** [0.082]	0.266*** [0.077]	0.304*** [0.083]	0.293*** [0.079]
Liquidity	0.001 [0.032]	-0.005 [0.033]	-0.025 [0.036]	-0.011 [0.036]	-0.023 [0.040]	-0.004 [0.035]
Sensitivity to market risk	0.008 [0.013]	0.010 [0.013]	0.005 [0.013]	0.009 [0.013]	0.004 [0.013]	0.008 [0.013]
Foreclosures	-0.001 [0.001]	-0.001 [0.001]	-0.006*** [0.002]	-0.001 [0.001]	-0.005*** [0.002]	-0.001 [0.001]
Size	0.170 [0.114]	0.120 [0.118]	0.220* [0.121]	0.114 [0.119]	0.128 [0.133]	0.062 [0.124]
Age	0.005 [0.003]	0.004 [0.003]	0.005 [0.003]	0.005 [0.003]	0.005 [0.003]	0.005 [0.003]
Pseudo R^2	0.088	0.089	0.121	0.087	0.137	0.099
N_obs	424	424	424	424	424	424

TABLE 4
Robustness

This table presents estimates from logit regressions explaining the likelihood of CPP application approval. The dependent variable is an indicator equal to 1 if the financial institution was approved for CPP funds. Control variables are defined as in Table 1, except in Column (1). In column (1), *Capital adequacy* is the tier 1 leverage capital ratio; *Asset quality* is the opposite of the ratio of the loan and lease allowance to total loans; *Earnings* is the ratio of net interest income to earning assets; and *Liquidity* is the ratio of core deposits to asset growth. Column (5) estimates a placebo test, in which the political connections index is defined using the following measures. For connections to regulators via directorships, we select firms that had such a connection in 2006-2007, but not in 2008-2009. For connections to Congress, we use firms headquartered in the districts of House members who served on the Capital Markets Subcommittee or Financial Institutions Subcommittee of the House Financial Services Committee in the 109th Congress (2005-2007), but not during the administration of CPP (2008-2009). As a placebo measure for lobbying expenditures, we use size-adjusted amount of corporate lobbying expenditures during the administration of CPP (2008-2009) spent on government agencies unrelated to CPP, i.e. all government agencies excluding Congress, Treasury, and banking regulators. As a placebo measure for campaign contributions, we use the amount of size-adjusted campaign contributions to candidates that ran as challengers in the 2008 congressional election and lost. Variable definitions are provided in Appendix III. All regressions include regulator fixed effects. The standard errors (in brackets) are heteroskedasticity consistent. Significance levels are indicated: * = 10%, ** = 5%, *** = 1%.

Description	Different Controls	Exclude top 25% capital adequacy	Exclude bottom 25% capital adequacy	Exclude NY	Placebo
Model Number	(1)	(2)	(3)	(4)	(5)
Political connections index	4.152**	5.789**	3.817**	4.379**	3.444
	[1.634]	[2.277]	[1.939]	[1.754]	[4.665]
Capital adequacy	-0.069	-0.063	-0.023	-0.013	-0.010
	[0.068]	[0.174]	[0.019]	[0.023]	[0.022]
Asset quality	0.756***	1.819	1.010	1.257	1.203
	[0.211]	[1.490]	[0.909]	[0.920]	[0.909]
Management quality	0.111	0.222	0.152	-0.097	0.085
	[0.305]	[0.388]	[0.342]	[0.321]	[0.302]
Earnings	0.459**	0.343***	0.172**	0.303***	0.255***
	[0.182]	[0.100]	[0.083]	[0.081]	[0.075]
Liquidity	0.000	-0.050	0.020	0.004	-0.005
	[0.000]	[0.043]	[0.049]	[0.036]	[0.033]
Sensitivity to market risk	0.010	0.026	0.000	0.003	0.009
	[0.013]	[0.019]	[0.014]	[0.013]	[0.013]
Foreclosures	0.001	-0.008***	-0.001	-0.001	-0.001
	[0.001]	[0.003]	[0.001]	[0.001]	[0.001]
Size	0.189	0.095	0.062	-0.006	0.158
	[0.131]	[0.170]	[0.144]	[0.128]	[0.119]
Age	0.005*	0.007*	0.004	0.004	0.005
	[0.003]	[0.004]	[0.003]	[0.003]	[0.003]
Pseudo R^2	0.095	0.203	0.058	0.094	0.080
N_obs	424	318	318	392	424

TABLE 5
Systemic Importance

This table presents estimates from logit regressions explaining the likelihood of CPP application approval. The dependent variable is an indicator equal to 1 if the firm's application for CPP was approved. In columns (2) and (3), we consider subsamples of all banks that are politically connected according to the political connections index and their best-match unconnected counterpart. In column (2), banks are matched by their size (book assets). In column (3), banks are matched by size to banks headquartered in the same state. In both columns (2) and (3), we require that the size difference between matched pairs not exceed 10%. In column (4), systemic importance is measured by ΔCoVaR, a measure suggested by Adrian and Brunnermeier (2009), and defined as the value at risk of the financial system conditional on an institution being under distress. Variable definitions are shown in Appendix III. All regressions include regulator fixed effects. The standard errors (in brackets) are heteroskedasticity consistent. Significance levels are indicated as follows: * = 10%, ** = 5%, *** = 1%.

Description	Exclude top 5% size	Size-Matched Sample	State-Size-Matched Sample	CoVaR
Model Number	(1)	(2)	(3)	(4)
Political connections index	4.944***	5.146**	13.549***	5.223***
	[1.753]	[2.016]	[4.991]	[1.936]
CoVaR				4.065**
				[1.838]
Capital adequacy	-0.070	-0.108**	-0.407***	-0.033
	[0.043]	[0.053]	[0.149]	[0.024]
Asset quality	1.396	1.776	2.420	-0.598
	[0.968]	[1.253]	[2.769]	[0.759]
Management quality	0.062	0.024	0.517	0.089
	[0.305]	[0.343]	[0.811]	[0.342]
Earnings	0.292***	0.504***	-0.098	0.378***
	[0.081]	[0.098]	[0.344]	[0.094]
Liquidity	-0.003	-0.034	0.108	-0.071**
	[0.040]	[0.055]	[0.104]	[0.033]
Sensitivity to market risk	0.010	-0.002	0.024	0.001
	[0.013]	[0.015]	[0.029]	[0.015]
Foreclosures	-0.001	-0.005**	-0.021**	-0.007***
	[0.001]	[0.002]	[0.010]	[0.002]
Size	0.015	0.203	-0.048	0.394**
	[0.131]	[0.151]	[0.497]	[0.165]
Age	0.005	0.003	0.014*	0.003
	[0.003]	[0.004]	[0.008]	[0.004]
Pseudo R^2	0.093	0.182	0.292	0.175
N_obs	403	362	84	363

TABLE 6
Investment Performance

This table presents estimates from panel regressions where the dependent variable is a measure of firm performance: return on assets, Tobin's Q, and stock returns. The sample period covers the second quarter of 2006 through the second quarter of 2010, and all variables are measured at quarterly frequency. *After CPP Investment* is an indicator variable equal to 0 before 2009 and 1 thereafter. *ROA* is return on assets. *Tobin's Q* is the book value of assets minus the book value of equity plus the market value of equity divided by the book value of assets. In column (3), we use an alternative definition of Tobin's Q to control for outliers, which divides the firm's market value by 0.9 times its book value plus 0.1 times its market value. *Market-adjusted returns* are raw returns minus the returns on the CRSP value-weighted index. *Industry-adjusted returns* are raw returns minus industry returns, where industries are defined by the 2-digit SIC code. All regressions include bank fixed effects. The standard errors (in brackets) are heteroskedasticity consistent. Significance levels are indicated as follows: * = 10%, ** = 5%, *** = 1%.

Dependent variable	ROA	Tobin's Q	Tobin's Q (Alternative definition)	Raw returns	Market-adjusted returns	Industry-adjusted returns
Model Number	(1)	(2)	(3)	(4)	(5)	(6)
After CPP Investment	0.353 [0.265]	-1.399*** [0.461]	-1.305*** [0.410]	-0.012 [0.033]	-0.127*** [0.032]	-0.139*** [0.031]
After CPP Investment x Political connections index	-2.051*** [0.500]	-3.707*** [0.862]	-3.245*** [0.767]	-0.148** [0.061]	-0.156*** [0.060]	-0.133** [0.058]
Capital adequacy	-0.048*** [0.004]	0.024*** [0.006]	0.022*** [0.006]	0.001*** [0.000]	0.001 [0.000]	0.001** [0.000]
Asset quality	0.811*** [0.117]	0.509** [0.205]	0.457** [0.183]	0.000 [0.015]	0.007 [0.014]	0.001 [0.014]
Liquidity	-0.032*** [0.008]	-0.038** [0.015]	-0.030** [0.013]	0.002* [0.001]	0.003*** [0.001]	0.004*** [0.001]
Sensitivity to market risk	-0.025*** [0.006]	-0.011 [0.010]	-0.011 [0.009]	0.000 [0.001]	0.001 [0.001]	0.001 [0.001]
Foreclosures	-0.003*** [0.000]	-0.002*** [0.000]	-0.002*** [0.000]	-0.000** [0.000]	0.000 [0.000]	0.000 [0.000]
Size	-0.455*** [0.169]	-10.856*** [0.307]	-9.663*** [0.273]	-0.148*** [0.023]	0.041* [0.022]	0.003 [0.022]
Bank fixed effects?	Yes	Yes	Yes	Yes	Yes	Yes
R^2	0.455	0.721	0.720	0.052	0.046	0.059
N_obs	5,906	5,438	5,438	5,254	5,254	5,254

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