Political Connections: Evidence from Insider Trading around TARP*

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Abstract

We exploit the 2008-2010 TARP bank bailouts after Lehman's failure to test for private information leakages from banking regulators to top corporate bank executives using insider trading data and information on political connections. In politically-connected banks, buying during the pre-TARP period is associated with increases in abnormal returns around TARP. For unconnected banks, insider trading and returns are uncorrelated. Results hold when comparing connected to unconnected executives within the same bank and are driven by political connections to financial branches of government. Through a FOIA request we obtained the previously unknown TARP funds requested by each bank. The ratio of requested to received funds strongly correlates with abnormal returns and is also a predictor of buying behavior by connected banks.

Jel Codes: D72, G01, G21, G28

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It is well established that there are strong and powerful linkages between corporations and politicians leading to mutual benefits (Acemoglu, Johnson, Kermani, Kwak, and Mitton, 2016; Bertrand, Kramarz, Schoar, and Thesmar, 2007; Faccio, Masulis, and McConnell, 2006; Fisman, 2001; Johnson and Mitton, 2003; Sapienza, 2004). For example, firms invest large amounts of money in campaign contributions and lobbying in addition to being a natural employer after a political career (Cooper, Gulen, and Ovtchinnikov, 2010; Luechinger and Moser, 2014; Mironov and Zhuravskaya, 2016; Shleifer and Vishny, 1994). However, a crucial, yet unexplored, question in the literature is the role of private information exchanges between government officials and corporate executives as a source of personal benefit.

In this paper we focus on the connections between financial sector regulators and bank top executives surrounding the Troubled Asset Relief Program (TARP) bailout announcement. U.S. financial institutions and its connections to politicians is a particularly interesting case study. The U.S. financial sector is by far the largest donor to political campaigns, contributing roughly $260 million to politicians in 2006 alone. This is more than twice that of the health care industry which ranks a distant second (Johnson and Kwak, 2011). The financial sector also spends large amounts on lobbying, and it benefits from a fast spinning "revolving door" between the Federal government and Wall Street that has attracted substantial media attention.[1]

A recent episode underscored the strong linkages between financial regulators and the top banks: the United States government announced on October 14, 2008 that the Department of Treasury would invest up to $700 billion in financial institutions through the Capital Purchase Program (CPP). This bank bailout, also known as TARP, became the largest federal investment program in recent U.S. history.[2] The bailout not only generated social outrage by using taxpayers' money to help revitalize financial institutions, but it also potentially creates moral hazard as it confirms that banks are, indeed, too-big-to-fail, too-many-to-fail or too-important-to-fail. Understanding the political economy of banks is therefore a crucial question for both policy-makers and academics alike.

[1] Lucca, Seru, and Trebbi (2014) provides striking evidence on a recent increase in worker flows from regulators to the private sector and vice versa. See also, for example, Boesler and Kearns (2015) for media attention.

[2] The main component of TARP, the Capital Purchase Program (CPP), is a preferred stock and equity warrant purchase program led by the US Treasury's Office of Financial Stability. We use the name TARP henceforth to refer to CPP.

We use insider trading data to explore whether political connections lead to private information flows from regulators to bankers before bank-specific TARP bailout decisions were made public. Our empirical strategy follows the approach employed in the insider trading literature. As we do not have the insiders' private information set or any variable that is perfectly related to it, we use forward-looking variables. To the extent that insiders' trades are also based on private information about their company that is not known by the market, these trades will have predictive power of the firm's future performance.[3]

We first obtained the full list of TARP receiving banks from the U.S. Treasury's TARP Transaction Report, which provides detailed information on each TARP agreement, including the amount received and the date at which the TARP injection was announced. We drop banks from our sample that are not publicly traded, banks for which we do not have any insider trading activities and also banks with no matched insiders in the BoardEx database (that we use for political connections). Our final sample is composed of 225 publicly listed banks that received TARP bailouts and 527 board members of these banks.

Our key variables are political connections and insider trading. We measure political connections by the previous employment history of top bank directors and officers obtained from BoardEx, which provides biographical information on board members and senior executives. We define an individual as connected if before joining the bank she worked in a financial regulator, the Treasury, or Congress .[4] A bank is defined as connected if at least one of its board members is connected. Moreover, for each of our 527 board members, we obtain insider trading data from the Thomson Financial Insider Filings database, defined as buying and selling shares of one's own bank. We only focus on open market buy and sell transactions of executives.

In a cross-sectional analysis of banks, we measure banks' stock performance, defined as the buy-and-hold return in the five days following the bank-specific TARP announcement (thereafter, *post-TARP period*).[5] We explore whether abnormal

[3]The insider trading literature provides evidence insiders' ability to predict future stock price changes in their own firm stock (see, e.g. Seyhun (1986), Seyhun (1992b), Lakonishok and Lee (2001), Huddart, Ke, and Shi (2007), Cohen, Malloy, and Pomorski (2012).

[4]We follow Duchin and Sosyura (2012) in their definition of political connections. Other papers that use previous employment history as a proxy for connections are Bertrand et al. (2007), Fan, Wong, and Zhang (2007), Faccio et al. (2006), Blau, Brough, and Thomas (2013) and Goldman, Rocholl, and So (2009).

[5]Following Duchin and Sosyura (2012), we compute the abnormal return on each day by sub-

bank returns can partly be explained by political connections and insider trading in the *pre-TARP period*, defined as the period between the Lehman failure date (September 15th, 2008) and the bank-specific TARP announcement date. We consider the Lehman failure date as the starting date because there was no bailout discussion before. Our detailed data on insider trading and connections allows us to not only analyze banks' behavior, but also to exploit heterogeneous behavior across connected and non-connected individuals within banks. Finally, we also shed light on a possible source of exchanged private information.

Among connected banks, we find that banks whose insiders bought more shares in the pre-TARP period experience positive and higher abnormal returns in the post-TARP period.[6] This result does not hold for unconnected banks, however. Furthermore, connected banks as a whole do not buy more shares in the pre-TARP period nor do they experience positive abnormal returns relative to unconnected banks. This result is consistent with insiders in connected banks receiving private information about the bank-specific TARP deal beforehand. Moreover, when decomposing connections into financial and non-financial government branches, we find that banks with connections to non-financial branches of government do not experience positive abnormal returns, suggesting that government connections *per se* do not matter; rather knowing people close to where the TARP decisions are made seems to be crucial.[7]

In our second set of results, we restrict the sample to connected banks and analyze trading data for both connected and unconnected *individuals within the same bank*. Despite substantially lower variation, including a smaller sample of banks, regressions with bank-fixed effects have enough statistical power to provide further support for our hypothesis. In particular, we find that connected executives buy more shares during the pre-TARP period in the banks that experience positive abnormal returns in the post-TARP period. Put another way, results hold when we compare connected and unconnected executives within the same bank. In a series of tests, we show that this result is robust to controlling for the usual trading habits of individuals in previous years. Additionally, we show that connected individu-

tracting the market index return from the raw bank return. Results are robust to directly using the raw returns.

[6]Results are robust to controlling for the firm characteristics that the literature on insider trading considers key, notably in our case size, as size is the only bank characteristic that is statistically different between connected and unconnected banks.

[7]Moreover, connections to the Treasury, which was crucial for TARP, provides the highest estimated coefficients.

als are not simply better market timers than unconnected individuals in general; they do not experience higher positive abnormal returns than their unconnected colleagues neither in tranquil economic times nor in crisis times other than during the TARP period.

We perform a variety of additional tests to ensure the robustness of our findings. First, one could argue that bank stock returns dropped sharply immediately after the Lehman failure and insiders who bought in that period were just taking advantage of the low prices. For this reason, we consider the initial TARP announcement date (October 14th, 2008) as an alternative starting point of our post-TARP period instead of the day Lehman failed (September 15th, 2008). Second, the literature documents that buy transactions contain more information than sell transactions of insiders so we focus on the value of buy transactions of insiders in our baseline analysis (Lakonishok and Lee, 2001). Nonetheless, we also use the net buy value of transactions, computed as buy minus sell to ensure the robustness of our analysis. Third, we use a dummy variable taking value of one for positive abnormal returns as an alternative stock performance measure instead of the continuous stock return used in our base results to ensure that outliers or higher but negative returns are not driving these results. Finally, the severity of the U.S. recession was not uniform across states. For this reason, we account for geographic variation by incorporating state-fixed effects in our regressions. Our results hold in all cases.

While our results are consistent with private information flowing from regulators to bankers, we have not shown a specific channel of this information which could help to explain both the variability in post-TARP period returns and the ex ante buying behavior of bank insiders. The terms of the TARP program were standardized across banks and enabled U.S. Treasury to acquire preferred stock – which pays dividends equal to five percent for the first five years of the program and nine percent beyond five years, as discussed in Annex A of the TARP contracts – and warrants for the common stock.[8] In the end, the CPP invested roughly $205 billion in 707 institutions, but an important limitation of the TARP Transaction Report is that the Treasury did not disclose any information on the amount of TARP funds that individual banks had *requested*.

Thus, the only individuals that, in principle, knew this figure were the financial regulators and the bank insiders (Sorkin, 2009). Therefore, we requested this in-

[8]TARP contracts can be found here: https://www.treasury.gov/initiatives/financial-stability/TARP-Programs/bank-investment-programs/cap/Pages/contracts.aspx

formation through a Freedom of Information Act (FOIA). This information allows us to compare the *actual* TARP funds allocated relative to the initially *requested* TARP funds by each bank. Indeed, we find that this ratio is a strong predictor of abnormal positive returns in the post-TARP period. Additionally, we find that increases in this ratio predict more buying behavior in the pre-TARP period, but only for connected banks. Therefore, the results suggest that the amount of TARP funds originally requested by banks over the finally granted amount could have been a source of private information exchanged.

Overall, results are consistent with private information flows between financial regulators and politically connected bankers who used this knowledge for their personal gain. In a broader sense, these information flows are an example of the close connections between key government officials and Wall Street, which in turn triggered social outrage. Our contributions to the literature are threefold: (1) Using insider trading data together with a large policy shock (TARP bank bailouts), this is the first paper to test private information leakages from regulators to corporate executives. Insider trading is not simply interesting for documenting whether top bank insiders make money but, following the literature on insider trading, for proxying the information that insiders have beforehand. (2) By exploiting not only cross-sectional variation, but also variation across politically-connected insiders within the same corporation, we obtain a cleaner identification; (3) We use a unique and unexplored dataset via FOIA on the amount of TARP funds the banks requested which allows us to provide suggestive evidence on a channel of leaked information.

The remainder of the paper is organized as follows. Section 1 reviews related literature. Section 2 describes the data and empirical strategy. Section 3 discusses the results. Finally, in Section 4 we conclude.

1 Related Literature

Economists have long studied the potential for individuals or firms to benefit from political influence or connections (Backman, 2001; Peltzman, 1976; Peltzman, Levine, and Noll, 1989; Stigler, 1971). This paper utilizes a unique dataset surrounding the TARP bailouts to connect insider trading to the existing literature on the value of political connections. In particular, we test for a new channel of ben-

efits, namely information leakages, which give connected insiders an advantage when predicting the eventual TARP bailout that their firm received.

Research has confirmed many positive outcomes following the TARP bailouts. Borrowers from TARP-receiving banks obtained more favorable loan contracts, relative to banks that did not receive TARP, following the bailout (Berger, Makaew, and Roman, 2016), and TARP statistically and economically increased job creation and decreased business and personal bankruptcies (Berger, Roman, and Sedunov, 2016). The TARP-receiving banks were able to increase their market share and market power which could exacerbate moral hazard in the banking sector (Berger and Roman (2015b), Berger and Roman (2015a)), but through increased capital cushions, TARP led to decreases in the systemic risk of banks, especially larger and safe banks located in better local economies.

But government bailouts could provide benefits to firms with more political influence, political connections or simply more politically knowledgeable. Previous empirical work has found that political connections are beneficial. There is evidence that firms that contribute to political campaigns outperform firms that do not (Cooper et al., 2010). In particular, firms that provided contributions to officials that eventually won the elections experience even higher stock returns than firms that contributed to the losing candidates (Akey, 2015; Claessens, Feijen, and Laeven, 2008). Firms tend to benefit as their connections become more politically powerful, as well (Faccio et al., 2006; Ferguson and Voth, 2008; Goldman et al., 2009). But these connected firms lose value after their political connections erode (Blanes i Vidal, Draca, and Fons-Rosen, 2012; Faccio and Parsley, 2009; Fisman, 2001). Looking specifically at the TARP bailouts, there is evidence that banks with political connections had a higher probability of receiving the bailout than similar unconnected banks (Duchin and Sosyura, 2012).

Political benefits accrue through multiple channels. First, connected firms may benefit from preferential access to financing which may provide more or cheaper loans to certain firms, sectors, or regions (Carvalho, 2014; Charumilind, Kali, and Wiwattanakantang, 2006; Khwaja and Mian, 2005; Sapienza, 2004). Second, connected firms get more government contracts which are potentially highly lucrative (Boas, Hidalgo, and Richardson, 2014). And third, political connections can provide support in an economic or financial crisis (Acemoglu et al., 2016; Blau et al., 2013; Faccio et al., 2006; Goldman, Rocholl, and So, 2013; Tahoun, 2014; Tahoun and Van Lent, 2013). Further, political connections are not only important in cor-

rupt countries. The impact of political connections is significant even in Denmark, arguably the world's least corrupt country (Amore and Bennedsen, 2013).

While politically-connected individuals and politically-connected firms benefit relative to unconnected individuals and firms, substantial empirical evidence also shows that insiders at firms earn abnormal returns from their trading. Early studies focusing on insider trading in the U.S. consistently present evidence that insiders earn significant abnormal profits by trading securities of their own firms (see e.g., Lorie and Niederhoffer (1968), Pratt and DeVere (1970), Jaffe (1974b); Jaffe (1974a), Finnerty (1976a), Finnerty (1976b)).[9] Later studies also confirm the evidence on insiders' ability to predict future stock price changes in their own firm stock using larger datasets and more developed statistical techniques (see, e.g. Seyhun (1986), Seyhun (1992b), Lakonishok and Lee (2001); Huddart et al. (2007); Cohen et al. (2012)).[10]

The empirical literature on insider trading documents that corporate insiders possess valuable information regarding the future price of their own firms' securities. Corporate insiders sell before significant stock-price decreases and buy before significant price increases. The literature examines the information content of insider trading by analyzing insiders trade before the major corporate events such as bankruptcy (Seyhun and Bradley, 1997), earnings announcements (Ke, Huddart, and Petroni, 2003; Piotroski and Roulstone, 2005), merger announcements (Keown and Pinkerton, 1981), seasoned equity offering (Karpoff and Lee, 1991), sell-offs (Hirschey and Zaima, 1989), takeovers (Seyhun, 1990), dividend policy (John and Lang, 1991; Ku and Westerfield, 1992), and share repurchases (Lee, Mikkelson, and Partch, 1992). Overall, these studies show that corporate managers possess nonpublic information and are able to exploit their informational advantage by trading with uninformed investors in the market. Our paper differs from these other ones in that the information leakage in our story comes from outside the firm and is only received by a subset of entities and individuals.[11]

[9] Many of these studies also show that it is possible for outsiders to earn profit by mimicking the trading of insiders. However, Seyhun (1986) and Rozeff and Zaman (1998) show that it is not possible to earn abnormal profit for outsiders by following transactions of insiders. On the other hand, Bettis, Vickrey, and Vickrey (1997) documents that outsiders can earn return.

[10] There are also studies that document the predictive ability of aggregated insider trading for future market movements (Jiang and Zaman, 2010; Lakonishok and Lee, 2001; Seyhun, 1992b, 1998, 1988).

[11] To the best of our knowledge, there is one paper linking insider trading to political connections, but it is not about information leakages. Bourveau, Coulomb, and Sangnier (2014) looks at trading behavior of insiders connected to President Sarkozy during the French 2007 presidential election.

This paper focuses on insider trading within banks surrounding a specific event: the U.S. Treasury's TARP bailout program. Politically-engaged banks were not only more likely to receive TARP funds, but they also received a greater amount of TARP support and received the support earlier than firms that were not politically involved (Blau et al., 2013; Duchin and Sosyura, 2012); but were insiders aware of their potential bailout package prior to this information being announced publicly? And if so, did insiders at these banks trade and profit from this information? Jagolinzer, Larcker, Ormazabal, and Taylor (2014) uses cross-sectional analysis across banks to examine insider trading around TARP bailouts, but it does not consider political connections. It finds no evidence that insiders anticipated the crisis, but they did manage to anticipate the recovery. An important limitation of these studies is that they cannot fully investigate the channel of political favoritism. For example, Duchin and Sosyura (2012) create a list of banks that were rejected from TARP from press reports because the list of TARP applications was not available from the U.S. Treasury. Through a FOIA request, we obtained the list of TARP bank applications including the amount of TARP funds that each bank requested. With this rich, unique data, we are able to ask whether connected banks received a higher share of the originally requested TARP funds than unconnected banks (they did) and test whether insiders at these banks might have traded on this non-public information.

2 Data and Empirical Strategy

This section discusses the data, sample selection, and empirical strategy used to examine the relationship between banks receiving TARP funds, trading by corporate insiders, the political connections of these insiders, and subsequent market performance of these financial institutions.

2.1 Data and Sample

Data for this paper come from several sources. We are first interested in banks that received TARP bailout funds. The list of TARP receiver banks and the date at which the TARP injection was announced are contained in the U.S. Treasury's

Their results indicate that politically-connected firm directors have a sense of impunity and engage in fraudulent behavior as they are more likely not to comply with trades legal reporting requirements.

TARP Transaction Report.[12] This report additionally provides the amount of TARP funds that each bank received as well as the outstanding balance that is still owed to the U.S. Treasury. For our work, we use the Transaction Report dated 04/14/2011. An important limitation of these data is that the U.S. Treasury has not disclosed any information on the amount of TARP funds that individual banks had requested. Through a Freedom of Information Act (FOIA) request, we obtained the amount that each bank originally requested.

Corporate insider transactions data come from Thomson Financial Insider Filings Database (TFN) which collects all insider trades reported to the SEC.[13] These insider trading records include the transactions of people subject to the disclosure requirements of Section 16(a) of the Securities and Exchange Act of 1934 reported on SEC Forms 3, 4, 5 and 144. We focus on the transactions from Form 4, which an insider fills out when his/her ownership position in the firm changes. The information we observe includes: (1) the name and address of the corporate insider, (2) issuer name of the security, (3) relationship of insider to the issuer (officers, directors or other positions held by insider in the firm), (4) whether it is an acquisition or disposition, (5) the transaction code which describes the nature of the transaction, (6) the transaction date, (7) the transaction amount, and (8) the transaction price. The transactions reported on Form 4 include all transactions that cause a change in ownership position. Among these transactions, we keep only insiders' open market purchases and sales.[14] All other types of transactions, such as grants and awards or exercise of derivatives, are excluded.[15]

Following Lakonishok and Lee (2001), before merging insider transaction data with other databases, we first identify and eliminate non–meaningful records in the insider trading database. We exclude amended records (Amendment Indicator is "A"), filings marked as inaccurate or incomplete by the Thomson database (cleanse

[12] http://www.treasury.gov/initiatives/financial-stability/reports/Pages/TARP-Investment-Program-Transaction-Reports.aspx

[13] According to Section 16(a) of the Securities and Exchange Act of 1934, corporate insiders (corporate officers, directors and large shareholders [who own more than 10 percent of the firm's stock]) are required to report their trades by the 10th day of the month that follows the trading month. Reporting requirements changed in 2002 as the Sarbanes-Oxley Act requires reporting to the SEC within two business days following the insider's transaction date. See Seyhun (1992a) Bainbridge (2012) and Crimmins (2013) for details on insider trading regulations.

[14] Thomson Financial Insider Filings database provides a data field which gives information on the nature of each transaction. We keep only transactions with codes "S" and "P", which stand for open market sale and purchase, respectively.

[15] Note, however, that the sales of stocks acquired through the exercise of a derivative are counted as an open market sale ("S") and is therefore included in our sample.

code “S” or “A”), small transactions where fewer than 100 shares were traded and also trades for which we do not have the insider's transaction price nor the closing price of the stock.[16] Additionally, filings in which the reported transaction price is not within 20 percent of the closing price in CRSP, and transactions including more than 20 percent of the outstanding shares are excluded to avoid potentially erroneous records.

Depending on their positions in the firm, insiders may have different access to firm-specific information (Lin and Howe, 1990; Piotroski and Roulstone, 2005; Ravina and Sapienza, 2010; Seyhun, 1986). The Thomson Financial Insider Filings database provides the role rank (data item is ”rolecode”) of insiders in their firm. This data item enables us to identify the position of the insider in the bank (i.e. officer, director, chairman of the board, large shareholder, etc.). Based on their differential access to private information about firm operations, we classify insiders into two sub-categories: top-five executives and independent directors. In our analysis, we mainly focus our attention on the trades of top-five executives and independent directors.[17][18]

To generate a political-connections measure by bank and by individual insider, we follow Duchin and Sosyura (2012). We consider a bank to be connected if it employed a director in 2008-2009 with simultaneous or former work experience at either a banking regulator, the Treasury, or Congress. The current and historic board members of each bank and their employment histories can be found in BoardEx. Our granular BoardEx data allow us to additionally create an individual board member connections measure, which allows us not only to control for any unobservable bank-level variation, but also to compare connected board members with unconnected board members at the same bank.

[16] Thomson Financial Insider Filings database provides the eight digit CUSIP number as an identifier for each security. We merge the insider trade information of each security on each date with CRSP daily stock file using CUSIP to obtain the closing price of the stock and the number of shares outstanding on each transaction date.

[17] Top-five executives, which includes the firm's Chairman of the Board, CEO, CFO, COO and President (The corresponding relationship codes in Thomson Financial Insider Filings database are “CB”, “CEO”, “CFO”, “CO”, and “P”, respectively.) has access to better firm-related information than insiders in the other categories (Beneish and Vargus, 2002; Core, Guay, Richardson, and Verdi, 2006)

[18] Executives may hold more than one title in the bank. Thomson Financial Insider Filings database provides information up to 4 different titles. In our independent director sample, we include only non-employee members of the board of directors. We exclude large shareholders who own more than 10 percent of the firm's stock unless they report any other title (such as director) than being a large shareholder.

Lastly, firm-level accounting data is obtained from Compustat; price and shares outstanding data come from CRSP Monthly and Daily Stock Files. Our final sample consists of 225 banks and 527 individual board members for which we have consistent data across all of our databases. If a bank received multiple TARP infusions, we focus only on the first disbursement.

2.2 Empirical Strategy

We aim to test the relationship between financial institutions whose insiders bought shares of their own firm prior to the firm-specific TARP announcement and the subsequent stock price movements following the announcement of the TARP bailout funds. We then want to test if these stock price movements differ depending on whether: (1) banks are politically connected; (2) trades were made by an insider that is politically connected.

Our first estimating equation at the cross-sectional bank level is:

$$Return_i = \beta_0 + \beta_1 Buy_i + \beta_2 Connected_i + \beta_3 Buy_i * Connected_i + \gamma Controls + \epsilon_i \quad (1)$$

where subscript *i* denotes the bank. $Return_i$ is the stock performance of bank *i* in the post-TARP period. To measure bank stock performance, we first compute the daily abnormal return by subtracting CRSP value-weighted index return from the daily stock return; we then compute the buy-and-hold return over a five day event window including the announcement date using these abnormal daily returns.[19] Our sample of banks loses on average 2.3% over this period and the large standard deviation (9.3%) indicates a large variation in stock performance.[20] Out of 225 banks, 109 banks have a positive abnormal return in the five day period after announcement.

[19] Alternatively, we measure bank stock performance with a dummy variable taking the value of 1 if that bank experienced a positive stock return after the bank-specific TARP announcement and 0 otherwise.

[20] Consistent with previous findings, we find that the average return on the bank-specific TARP announcement day is close to zero ((Bayazitova and Shivdasani, 2012); (Jagolinzer et al., 2014)). Without market–adjustment it is 0.51% and market-adjusted return on the announcement day is 0.03% (with standard deviation 8.01).

[Table 1 about here.]

One of our variables of interest in equation (1) is the insider trading measure. We use the total value of buy transactions in each bank, Buy_i, as our main measure. In each bank, we first take the open market buy transactions for each insider on each day between Lehman failure (September 15th, 2008) and the day of the bank-specific TARP announcement.[21] We then compute the value of each transaction (transaction price $\times$ number of shares purchased) and sum over all transactions scaled by market capitalization of the bank as of September 15th, 2008. We calculate market capitalization as the share price multiplied by the shares outstanding obtained from CRSP:

$$Buy_i = 100 * \frac{\sum_{i=1}^{n} Buy_{i,k,20080915:T-1}}{MarketCap_{i,20080915}}$$

where subscript *i* denotes the bank and *T* denotes the bank-specific TARP announcement date and *k* denotes insider. Insider buys are quite small overall; the median bank insider buys a small fraction of the overall company at only 0.002%. The mean value is higher at 0.073%. We therefore argue that movements in stock prices are because of a signal the market takes from insider trades as opposed to the insider trades themselves.

Lastly, $Connected_i$ is a dummy variable equal to 1 if bank *i* is politically connected and 0 otherwise. Our main connection of interest is constructed using BoardEx. A bank is defined as connected if at least one of the insiders has previous or concurrent work experience at a federal bank regulator. To be specific, connected institutions include: Board of Governors of the Federal Reserve System and regional Reserve Banks, Federal Deposit Insurance Corp, Office of the Comptroller of the Currency (OCC), US Department of the Treasury, US Securities and Exchange Commission (SEC), US House of Representatives, and the US Senate.

As an alternative specification at the cross-sectional bank level, we also estimate:

$$Buy_i = \beta_0 + \beta_1 Connected_i + \beta_2 Return_i + \beta_3 Return_i * Connected_i + \gamma Controls + \epsilon_i \quad (2)$$

[21] Results hold if we exclude days after Lehman failure and take the initial day as of October 14th or if we just focus 30-day before the bank-specific TARP announcement date.

which is similar to equation (1) after having swapped the dependent variable and the key regressor of interest. We introduce this alternative specification as it will be useful to set a parallel to our individual–level estimations described below. We now perform a Poisson regression analysis as the distribution of our dependent variable is highly skewed. Both in equations (1) and (2), our coefficient of interest is β_3 and we expect it to be positive. We include several control variables following both the insider trading literature and recent literature on the TARP bailout program. A full set of summary statistics are reported in Table 1. All control variables are as of 2008:Q3. Our banks have an average of $13.5 billion in assets, and the median bank has $1.8 billion in assets. The market capitalization of the median bank is $180 million whereas the mean is $1.6 billion. The median book-to-market ratio is 1. The average buy-and-hold stock return of our sample banks in 12 months preceding Lehman failure (2007 October-2008 September) is 4.6%. During this 12-month period median bank lost 8%.

In the second part of the paper, we conduct our analysis at the individual level. This will help us address a number of concerns with cross-sectional regressions at the bank level. For example, it may be that our results suffer from omitted variable bias as connected banks might have different unobservable features compared to unconnected banks. Furthermore, one would like to learn more about the trading behavior of the actual bank executives. To this end, we test whether connected individuals bought more during the pre-TARP announcement period especially when their bank experienced a higher positive abnormal return in the post-TARP period. In this set of results, we restrict our sample to banks in which we have both connected and unconnected insiders. As the return variable is defined at the bank-level, we use buy transactions value for each individual as the dependent variable.

We estimate the following equation at the individual level with bank fixed effects:

$$Buy_i = \beta_0 + \beta_1 Connected_i + \beta_2 Return_i * Connected_i + BankFE + \epsilon_i \quad (3)$$

where subscript *i* now denotes an individual and $BankFE$ stands for bank fixed effects. The main variable of interest is the interaction of the connection dummy and bank stock performance. We expect its coefficient (β_2) to be positive. We again perform a Poisson regression analysis as we did in equation (2).

3 Results

3.1 Bank-level Results

In Panel A of Table 2 we explore the relationship between insider buying in the pre-TARP period and bank stock return in the post-TARP period (see equation (1)). In columns (1) to (3) the main variable of interest is a dummy *Connected*, taking value of 1 if the bank is connected and 0 otherwise. Column (1) is the baseline regression while in columns (2) and (3) we control for returns in the previous period, size and book-to-market ratio that are well-known determinants of stock return. The estimated coefficient of *Connected* is never statistically significant, implying no differential abnormal return across types of banks. In the remaining columns we add the amount of stock bought in the pre-TARP period and interact it with the political connections dummy. In the baseline regression (column (4)) we report that the estimated coefficient on the interaction term is positive and statistically significant. For connected firms, a one standard deviation increase in the *Buy* variable is associated with a 0.065 increase in the *Return*, which is close to two thirds of a standard deviation. As the severity of the U.S. recession was not uniform across states, in column (5) we account for geographic variation by incorporating state-fixed effects and results are remarkably stable. Finally, in columns (6) to (8) we incorporate the same control variables as in columns (2) and (3), and again, the estimated coefficient remains stable. Interestingly, throughout columns (4) to (8), the magnitude of the estimated coefficient for the interaction terms remains very stable, while at the same time we observe notable increases in the R-squared, which is suggestive of our main measure being exogenous to observables and unobservables (Altonji, Elder, and Taber, 2005).

[Table 2 about here.]

Panel B of Table 2 reports results from our alternative specification presented in equation (2). Similarly to the previous panel, columns (1) to (3) do not include an interaction term and the main variable of interest is the *Connected* dummy. Insiders at connected banks did not buy shares disproportionately leading up to the TARP bailouts. In columns (4) to (8) we include an interaction term between the political connection dummy and the abnormal bank-level return obtained in the post-TARP period, and results can be summarized as follows: only the subset of

connected banks experiencing positive abnormal post-TARP returns bought more than a proportional amount of shares beforehand.

A concern is that our results may be driven by outliers such as a small number of banks with outsized market reactions following TARP announcements. To address this, in Table 3 we include a dummy variable equal to 1 if a bank experienced a positive abnormal return instead of using the continuous size of the market reaction used in Table 2. A second potential concern is that we are only picking up insider buying and ignoring insider selling. It is possible that insiders also sold large amounts of shares prior to the TARP announcements and this could bias our results. To address this concern, in Table 4, we use net buy as an alternative insider trading measure. In both robustness tables we find that our initial results hold.

[Table 3 about here.]

[Table 4 about here.]

3.2 Individual-level Results

Until this point, our analysis has been aggregated to the bank-level, but our rich individual-level dataset on connections and trading behavior enables us to include bank fixed effects, improve the identification and shed light on a potential mechanism. Bank fixed effects allow us to control for time-invariant unobserved heterogeneity between banks and rule out alternative explanations. For example, perhaps there was a self-selection by connected insiders to healthy banks based on soft information. In this case, our previous results would be unable to determine whether the effect is driven by connected insiders or soft information. By including bank fixed effects, we are able to compare *connected* individuals with *unconnected* individuals *at the same bank* to isolate the effect of the connection.

In Table 5 we restrict our sample to the 26 connected banks for which we have insider trading information on both connected and unconnected individuals. For each bank, we obtain an estimate of buying behavior for connected individuals and another for unconnected individuals during the pre-TARP period.

In column (1), we only include individuals who are independent directors and the main variable of interest is the interaction of the abnormal return dummy variable

used in Table 2 Panel B together with a dummy taking a value of one for the connected group of individuals. The coefficient on this interaction term is positive and statistically significant at the one percent level. In column (2), we replicate column (1) by adding CEOs in addition to independent directors and results remain stable. Columns (3) and (4) replicate these results after replacing the abnormal return dummy variable with its continuous equivalent used in Table 2 Panel A. In all these specifications, results suggest that connected individuals bought more shares in the pre-TARP period if the post-TARP abnormal bank-level return would in turn be positive; importantly, this result is not found for unconnected individuals. More importantly, columns (5) to (8) repeat the same structure of regressions but now also include bank fixed effects. Remarkably, our coefficients of interest remain positive and statistically significant.

As a robustness check, in Table 6 we again use individual-level regressions with bank fixed effects, but now we include two time periods. The goal is to account for the buying behavior of individuals in tranquil times. While we still have the same dependent variable as in the previous table (i.e. buying behavior at the individual level), now our regressor of interest is a triple interaction: the fact that individuals with political connections buy more beforehand if abnormal returns will be positive afterwards, does this happen in general or rather especially during the TARP period? Results of our triple interaction suggest that the latter is the case. In column (1) we report results for independent directors and a 4 year pre-TARP time period. In column (2) we also add CEOs. Columns (3) and (4) replicate the first two columns but with a 2 year pre-TARP time period. In all four specifications we report positive and statistically significant triple interaction terms.

3.3 Mechanism and Information Diffusion

Overall, results both at the bank-level and also at the individual-level are consistent with information flows between regulators and bank insiders before TARP decisions were made public. As previously discussed, we propose a possible piece of information responsible for the differential trading behavior of connected individuals and banks: the ratio of the actual TARP amount a bank received divided by the amount requested. A FOIA request made it possible to construct this ratio, which is a strong predictor of post-TARP positive abnormal returns (Table 7, column 1): in a cross-sectional regression of banks, we find that higher values of this

ratio strongly and positively correlate with bank performance after bank-specific TARP information was made public. This result also holds after including a set of controls and state-level fixed effects in columns (2) and (3). Results are similar in columns (4) to (6) where we replicate the analysis using a dummy for positive abnormal stock returns instead of the continuous variable. If the ratio increases by one standard deviation (i.e. 22%), then the expected abnormal return will increase by 0.65%, which is close to a standard deviation increase.

[Table 5 about here.]

[Table 6 about here.]

[Table 7 about here.]

Once we have established the explanatory power of the ratio in predicting abnormal returns, Table 8 reports how this ratio is correlated with the buying behavior of banks. Table 8 resembles Panel B of Table 2, where the dependent variable was the buying behavior at the cross section of banks, but now the bank-level ratio variable is used as the regressor of interest instead of the post-TARP bank-level abnormal return. Column (1) reports a positive coefficient for the interaction term between the bank-level connection measure and the ratio of received of requested amount: only among connected banks do we observe a strong positive association between a bank receiving a larger fraction of requested funds and its bank executives buying more stock beforehand. This result is robust to the usual set of bank-level controls (column (2)), or using the log of the ratio to mitigate the impact of outliers (columns (3)-(4)).

[Table 8 about here.]

3.4 Robustness: Types of Connections and Trading in Tranquil Times

Up until now, we have been claiming that banks with political connections to the financial branches of government are in the best place to obtain private information beforehand about key TARP decisions. But what happens to banks with connections to non-financial branches of government? Are they equally useful in shaping

the buying behavior of bank executives? In Table 9, we rerun Table 8 after also adding a variable measuring each bank's non-financial government connections. While our coefficient of interest related to financial connections is still positive and statistically significant with a similar magnitude as in Table 8, the new terms on non-financial connections are neither economically nor statistically significant.

[Table 9 about here.]

[Table 10 about here.]

Finally, in Table 10, we investigate the differences in insider trading profitability at the individual level in different time periods before the Lehman failure. The goal is to understand whether connected individuals systematically obtain higher returns from investment (perhaps due to better unobservables that also make them end up being politically connected) or not. We follow Inci, Narayanan, and Seyhun (2016) by using a calendar–time approach to form two portfolios: one for connected and another one for unconnected individuals. The connected portfolio on any date consists of all stocks purchased by connected executives during the 50 trading days ending on that date.[22] The portfolio return on date t is:

$$\frac{1}{n_t} \sum_{i=1}^{n_t} R_{it}$$

where $R_{i,t}$ is the gross date t return on purchase i, and n_t is the number of purchases in the portfolio (corresponding to n_t insider purchase events) in the previous 50 trading days. This portfolio is updated on a daily basis by deleting stocks purchased more than 50 days earlier. This calculation yields a time series of daily returns for the connected portfolio. The daily returns for the unconnected portfolio are computed similarly.

Abnormal returns are calculated as the intercept from Capital Asset Pricing model (CAPM) in the following time-series regression for each portfolio j:

$$R_{jt} - R_{ft} = a_j + \beta_j (R_{mt} - R_{ft}) + \epsilon_t$$

[22] During this interval, if more than one connected executive purchased a stock, or if the same executive purchased a stock multiple times, then that stock appears multiple times in the portfolio.

where R_{jt} is the daily return on the calendar-time portfolio, R_{mt} is the return on a value-weighted market index, R_{ft} is the daily return on a three-month Treasury bill.

Columns (1) to (6) report results for normal times defined as July 2005 to June 2007. The coefficient α_j in column (1) shows that the difference in mean daily returns is close to zero (0.001), a result consistent with connected individuals not having better portfolio returns on a systematic basis. Column (2) present results if we use Fama and French (1993) three-factor model and column (3) present results using Carhart (1997) four-factor model. In order to check our results' sensitivity to the interval we used, we perform a similar analysis with an alternative interval. Columns (4) to (6) replicate the analysis by replacing 50 days with 90 days. Columns (7) to (12) replicate the analysis for the crisis period but before TARP defined as from July 2007 to August 2008. Overall, the results in this table suggest that connected and unconnected individuals experience similar returns in both normal times and crisis times.

4 Conclusion

Strong and powerful linkages between corporations and politicians often lead to mutual benefits (Acemoglu et al., 2016; Bertrand et al., 2007; Faccio et al., 2006; Fisman, 2001; Johnson and Kwak, 2011; Sapienza, 2004). In particular, the fast spinning 'revolving door' between governments and the financial sector together with the financial sectors' outsize lobbying expenditures have attracted substantial media attention since the global financial crisis. In this paper, we test whether the insider trading behaviour of politically-connected banks (and politically-connected insiders at these banks) is consistent with having received private information leakages from financial regulators in the times surrounding the U.S. governments' TARP announcement. We find that insiders in politically-connected banks did not buy more shares in the lead up to the TARP bailout announcement than unconnected banks, but politically-connected banks where insiders bought shares prior to the TARP announcement experienced abnormal stock returns following the announcement. Further, we find that this result holds not just for connected *banks*, but also for connected *individuals* at these banks. These results are robust to a variety of additional tests including alternative date windows, alternative measures of buying and selling shares, and alternative classifications of abnormal returns. Ad-

ditionally, a placebo test of whether connections to the non-financial branches of the U.S. government matter is negative, implying that being connected specifically to financial regulatory agencies is the useful feature.

We utilize a unique dataset of the amount of funds that each bank requested in its TARP application obtained via a FOIA request. Among connected banks, there is a strong correlation between receiving a higher share of the requested TARP funds and insider buying, but this result does not hold among unconnected banks. Lastly, we also do not find that connected banks and insiders outperform unconnected banks in non-TARP periods.

Our results clearly point to the importance of political connections in financial institutions and corporations more broadly. While these results do not suggest that banks with political connections received favorable treatment in the TARP bailouts, connected insiders were able to utilize their connection to individually profit. Our paper aims to not just identify that political connected individuals could benefit from their connections, which the literature has shown to be true in many episodes including the TARP bailouts, but also to understand the mechanism through which an insider can extract these profits. Using our unique dataset, we find evidence of significant information leakages between regulators and insiders.

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Table 1
Summary Statistics

	Obs.	25%	Median	75%	Mean	Standard Deviation
Return	225	-0.080	-0.025	0.039	-0.023	0.093
Return $_{dummy}$	225	0.000	0.000	1.000	0.387	0.488
Connected	225	0.000	0.000	0.000	0.147	0.355
Connected $_{nonfin}$	225	0.000	1.000	1.000	0.551	0.498
Buy(%)	225	0.000	0.002	0.051	0.073	0.229
Net Buy(%)	225	0.000	0.000	0.031	0.014	0.434
Total assets(mil)	225	911.306	1780.942	5149.937	13539.994	38973.886
Market capitalization(mil)	225	61.912	179.916	631.123	1675.466	6088.712
Book-to-market	225	0.755	1.009	1.386	1.131	0.641
Past year return	225	-0.274	-0.080	0.189	-0.046	0.318
Received amount (mil)	225	20.000	37.515	110.000	314.131	931.268
Requested amount (mil)	211	20.000	37.000	124.000	308.767	928.244
Received/Requested	211	1.000	1.000	1.000	0.995	0.216

This table presents summary statistics for the sample of 225 banks. Return, is the buy–and–hold return over 5–day event window including the announcement day using abnormal daily returns. Daily abnormal return is computed as daily return – daily CRSP value–weighted index return. Return $_{dummy}$ is a dummy variable that takes value of 1 if $Return$ is positive. Connected is a dummy variable that takes value of 1 if the bank is connected. We define bank as connected if any of the insiders previously worked in a government position as defined by (Duchin and Sosyura, 2012). Connected $_{nonfin}$ is a dummy variable that takes value of 1 if the bank is connected to any non–financial committee. Buy is the total value of insiders' buy transactions between Lehman failure date (Sept 15th, 2008) and bank–specific TARP announcement date (adjusted by market capitalization as of September 2008). Net Buy is computed by subtracting insiders' sell transactions from buy transactions between Lehman failure date (Sept 15th, 2008) and bank–specific TARP announcement date (adjusted by market capitalization as of September 2008). Total assets is the book value of assets as of the 3rd quarter of the 2008. Market capitalization is computed as (price times shares outstanding (Compustat Items: prcc_f $\times$ csho)) as of the 3rd quarter of the 2008. Book–to–market is the ratio of equity book value (Compustat Item: ceq) to equity market value (price times shares outstanding (Compustat Items: prcc_f $\times$ csho)) as of the 3rd quarter of the 2008. Past year return is the buy–and–hold return from October 2007 to September 2008. Received amount is the amount of TARP funds that bank received. Requested amount is the amount of TARP funds that bank had originally requested. Received/Requested is the ratio of the amount of TARP funds that bank received to the amount of TARP funds that bank had originally requested.

Table 2

Bank Return in the post-TARP period, Ex-ante Insider Trading and Political Connections

Panel A

Dependent variable: Return	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Connected × Buy				0.299***	0.250***	0.236***	0.236**	0.240***
				(0.065)	(0.093)	(0.090)	(0.091)	(0.092)
Connected	-0.001	0.009	0.009	-0.018	-0.018	-0.010	-0.008	-0.008
	(0.016)	(0.015)	(0.015)	(0.017)	(0.018)	(0.017)	(0.017)	(0.017)
Buy				-0.014	-0.006	-0.016	-0.017	-0.016
				(0.028)	(0.040)	(0.039)	(0.039)	(0.039)
Size		-0.008**	-0.008**			-0.010**	-0.009**	-0.009**
		(0.003)	(0.003)			(0.004)	(0.004)	(0.004)
Book-to-market		0.008	0.011				0.005	0.011
		(0.009)	(0.011)				(0.010)	(0.012)
Past year return			0.009					0.017
			(0.022)					(0.025)
Observations	225	225	225	225	225	225	225	225
R-squared	0.000	0.027	0.027	0.025	0.204	0.225	0.226	0.228
State FE	NO	NO	NO	NO	YES	YES	YES	YES

This table shows results from cross-sectional bank-level regressions. The dependent variable ($Return$) is the buy-and-hold return over a 5–day period after the bank specific TARP announcement. In columns 1 to 3 the main variable of interest is the dummy $Connected$ that takes value of 1 if the bank is connected. We define bank as connected if any of the insiders previously worked in a government position as defined by Duchin and Sosyura (2012). In columns 4 to 8 the main variable of interest is $Connected$ times Buy. The variable Buy is the total value of insiders' buy transactions between Lehman failure date (Sept 15th, 2008) and bank-specific TARP announcement date (adjusted by market capitalization as of September 2008). All remaining variables are defined as in Table 1. The OLS estimator is used. The constant term is included but not reported to avoid cluttering. Robust standard errors are in parentheses. ***, ** and * indicate statistical significance at the 1%, 5% and 10% level, respectively.

Panel B

Dependent variable: Buy	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Connected × Return				12.791***	23.771***	21.689**	22.401**	22.188**
				(4.661)	(6.627)	(8.753)	(8.920)	(9.203)
Connected	-0.312	0.142	0.171	-0.412	-0.210	-0.136	0.067	0.052
	(0.431)	(0.401)	(0.412)	(0.381)	(0.328)	(0.425)	(0.465)	(0.481)
Return				-1.552	-1.336	-0.525	-0.758	-0.617
				(3.217)	(3.708)	(4.141)	(4.064)	(4.029)
Size		-0.597***	-0.581***			-0.485***	-0.423***	-0.418***
		(0.114)	(0.107)			(0.149)	(0.143)	(0.143)
Book-to-market		0.296*	0.088				0.480**	0.389
		(0.172)	(0.259)				(0.237)	(0.355)
Past year return			-1.064					-0.343
			(0.913)					(0.875)
Observations	225	225	225	225	225	225	225	225
State FE	NO	NO	NO	NO	YES	YES	YES	YES

In this table, the dependent variable is Buy, defined as in Panel A. The Poisson estimator is used. For any further information, see Panel A.

Table 3

Robustness: Alternative Measure of Stock Performance

Panel A

Dependent variable: $Return_{dummy}$	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Connected × Buy				1.683***	1.343***	1.255**	1.257**	1.285**
				(0.353)	(0.498)	(0.503)	(0.504)	(0.513)
Connected	0.044	0.126	0.127	-0.048	-0.048	0.001	0.024	0.026
	(0.093)	(0.092)	(0.092)	(0.099)	(0.125)	(0.124)	(0.124)	(0.124)
Buy				0.111	0.108	0.048	0.033	0.038
				(0.160)	(0.199)	(0.191)	(0.189)	(0.186)
Size		-0.059***	-0.058***			-0.061**	-0.058**	-0.058**
		(0.019)	(0.019)			(0.024)	(0.024)	(0.024)
Book-to-market		0.081*	0.104*				0.060	0.110
		(0.047)	(0.059)				(0.058)	(0.070)
Past year return			0.066					0.141
			(0.128)					(0.151)
Observations	225	225	225	225	225	225	225	225
R-squared	0.001	0.048	0.049	0.031	0.184	0.209	0.213	0.217
State FE	NO	NO	NO	NO	YES	YES	YES	YES

This table shows results from cross-sectional bank–level regressions. $Return_{dummy}$ is a dummy variable that takes value 1 if the buy-and-hold return over a 5–day period after the bank specific TARP announcement is positive. In columns 1 to 3 the main variable of interest is the dummy $Connected$ that takes value of 1 if the bank is connected. We define bank as connected if any of the insiders previously worked in a government position as defined by Duchin and Sosyura (2012).). In columns 4 to 8 the main variable of interest is $Connected * Buy$. Buy is the total value of insiders' buy transactions between Lehman failure date (Sept 15th, 2008) and bank-specific TARP announcement date (adjusted by market capitalization as of September 2008). All remaining variables are defined as in Table 1. The OLS estimator is used. The constant term is included but not reported to avoid cluttering. Robust standard errors are in parentheses. ***, ** and * indicate statistical significance at the 1%, 5% and 10% level, respectively.

Panel B

Dependent variable:Buy	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Connected × Return				1.790**	2.883***	2.407***	2.262**	2.259**
				(0.738)	(0.831)	(0.921)	(0.924)	(0.939)
Connected	-0.312	0.142	0.171	-1.595***	-2.077***	-1.539**	-1.216*	-1.211*
	(0.431)	(0.401)	(0.412)	(0.556)	(0.601)	(0.615)	(0.638)	(0.662)
$Return_{dummy}$				0.351	0.209	0.218	0.191	0.224
				(0.454)	(0.516)	(0.548)	(0.541)	(0.547)
Size		-0.597***	-0.581***			-0.511***	-0.449***	-0.440***
		(0.114)	(0.107)			(0.144)	(0.140)	(0.139)
Book-to-market		0.296*	0.088				0.427*	0.270
		(0.172)	(0.259)				(0.252)	(0.359)
Past year return			-1.064					-0.618
			(0.913)					(0.865)
Observations	225	225	225	225	225	225	225	225
State FE	NO	NO	NO	NO	YES	YES	YES	YES

In this table, the dependent variable is Buy, defined as in Panel A. The Poisson estimator is used. For any further information, see Panel A.

Table 4

Robustness: Alternative Measure of Insider Trading

Panel A

Dependent variable: Return	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Connected × Net Buy				0.266***	0.229***	0.220***	0.222***	0.226***
				(0.076)	(0.078)	(0.077)	(0.077)	(0.078)
Connected	-0.001	0.009	0.009	-0.010	-0.012	-0.004	-0.002	-0.001
	(0.016)	(0.015)	(0.015)	(0.016)	(0.017)	(0.016)	(0.016)	(0.016)
Net Buy				-0.010	-0.020	-0.026	-0.028	-0.028
				(0.008)	(0.018)	(0.018)	(0.018)	(0.018)
Size		-0.008**	-0.008**			-0.010**	-0.010**	-0.010**
		(0.003)	(0.003)			(0.004)	(0.004)	(0.004)
Book-to-market		0.008	0.011				0.007	0.013
		(0.009)	(0.011)				(0.010)	(0.012)
Past year return			0.009					0.016
			(0.022)					(0.025)
Observations	225	225	225	225	225	225	225	225
R-squared	0.000	0.027	0.027	0.026	0.208	0.233	0.235	0.237
State FE	NO	NO	NO	NO	YES	YES	YES	YES

This table shows results from cross-sectional bank-level regressions. The dependent variable ($Return$) is the buy-and-hold return over a 5-day period after the bank specific TARP announcement. In columns 1 to 3 the main variable of interest is the dummy $Connected$ that takes value of 1 if the bank is connected. We define bank as connected if any of the insiders previously worked in a government position as defined by Duchin and Sosyura (2012). In columns 4 to 8 the main variable of interest is $Connected * NetBuy$. $NetBuy$ is the total net value of insiders' buy transactions between Lehman failure date (Sept 15th, 2008) and the bank-specific TARP announcement date (adjusted by market capitalization as of September 2008). All remaining variables are defined as in Table 1. The OLS estimator is used. The constant term is included but not reported to avoid cluttering. Robust standard errors are in parentheses. ***, ** and * indicate statistical significance at the 1%, 5% and 10% level, respectively.

Panel B

Dependent variable: Net Buy	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Connected × Return				0.953**	1.597***	1.209**	1.137**	1.111**
				(0.451)	(0.598)	(0.584)	(0.568)	(0.557)
Connected	0.026	0.087*	0.087*	0.048	0.023	0.040	0.075	0.072
	(0.041)	(0.051)	(0.051)	(0.046)	(0.037)	(0.040)	(0.046)	(0.045)
Return				-0.306	-0.499	-0.539	-0.554	-0.540
				(0.328)	(0.443)	(0.446)	(0.444)	(0.440)
Size		-0.029***	-0.030***			-0.033**	-0.028**	-0.028**
		(0.007)	(0.007)			(0.013)	(0.012)	(0.012)
Book-to-market		0.108**	0.050				0.098**	0.070
		(0.048)	(0.054)				(0.041)	(0.051)
Past year return			-0.171					-0.081
			(0.119)					(0.099)
Observations	225	225	225	225	225	225	225	225
R-squared	0.000	0.038	0.047	0.006	0.479	0.488	0.503	0.504
State FE	NO	NO	NO	NO	YES	YES	YES	YES

In this table, the dependent variable is $NetBuy$, defined as in Panel A. The OLS estimator is used. For any further information, see Panel A.

Table 5

Insider Trading Behavior: Variation across Individuals Within the Same Bank (Cross-section and Bank Fixed Effects)

Dependent variable: Buy	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Connected	-1.562**	-1.752**	-4.290***	-4.480***	-1.627**	-1.862**	-3.865***	-4.008***
	(0.739)	(0.771)	(1.053)	(1.048)	(0.648)	(0.741)	(1.180)	(1.176)
Connected × Return	21.275**	21.275**			13.962*	14.615*		
	(10.388)	(10.388)			(7.241)	(8.713)		
Connected × Return			3.923***	3.923***			3.112**	3.037**
			(1.182)	(1.182)			(1.272)	(1.300)
Observations	52	104	52	104	52	104	52	104
Bank FE	NO	NO	NO	NO	YES	YES	YES	YES

This table shows results from cross-sectional individual-level regressions for 26 banks that had both connected and unconnected individuals. The dependent variable (Buy) is the value of an individual's buy transactions between Lehman failure date (Sept 15th, 2008) and bank-specific TARP announcement date (adjusted by market capitalization as of September 2008)). In columns 1 and 2 the main variable of interest is $Connected$ times $Return$. $Return$ is continuous measure of the buy-and-hold return over a 5-day period after the bank specific TARP announcement date. In columns 3 and 4 the main variable of interest is $Connected$ times $Return_{dummy}$. $Return_{dummy}$ is a dummy variable that takes value 1 if the buy-and-hold return over a 5-day period after the bank specific TARP announcement is positive. The dummy $Connected$ that takes value of 1 if the individual is connected. Columns 1 and 3 only include independent directors while columns 2 and 4 additionally add CEOs. The Poisson estimator is used. The constant term is included but not reported to avoid cluttering. Columns 5 to 8 repeat the same regressions after including bank fixed effects. Robust standard errors are in parentheses. ***, ** and * indicate statistical significance at the 1, 5 and 10 percent level, respectively.

Table 6

Insider Trading Behavior: Variation across Individuals Within the Same Bank (Time Dimension and Bank Fixed Effects)

Dependent variable: Buy	(1)	(2)	(3)	(4)
Connected × $Return_{dummy}$ × Dummy Post Lehman	2.744**	2.471*	2.400*	2.312*
	(1.324)	(1.418)	(1.275)	(1.349)
Connected	-1.383**	-1.486**	-1.607***	-1.722***
	(0.602)	(0.597)	(0.524)	(0.518)
Connected × $Return_{dummy}$	0.366	0.566	0.575	0.608
	(0.732)	(0.660)	(0.698)	(0.626)
Dummy Post Lehman	-0.984**	-0.944**	-0.805*	-0.767
	(0.425)	(0.449)	(0.438)	(0.475)
Connected × Dummy Post Lehman	-2.481*	-2.521*	-2.188*	-2.224*
	(1.286)	(1.312)	(1.239)	(1.280)
$Return_{dummy}$ × Dummy Post Lehman	0.317	0.233	0.212	0.107
	(0.505)	(0.546)	(0.506)	(0.562)
Observations	104	208	104	208
Bank FE	YES	YES	YES	YES

This table shows results from individual-level regressions with two time periods for 26 banks that had both connected and unconnected individuals. In columns 1 to 3 the main variable of interest is $Connected$ * $Return_{dummy}$ * $DummyPostLehman$. The dummy $Connected$ takes value of 1 if the individual is connected. $Return_{dummy}$ is a dummy variable that takes value 1 if the buy-and-hold return over a 5-day period after the bank specific TARP announcement is positive. $DummyPostLehman$ takes value of 1 for the period between Lehman failure date (Sept 15th, 2008) and bank-specific TARP announcement date and takes value of zero for either the period between October 2004 and Lehman failure date (columns 1 and 2) or the period between October 2006 and Lehman failure date (columns 3 and 4). All remaining variables are defined as in Table 1. Columns 1 and 3 only include independent directors while columns 2 and 4 additionally add CEOs. We use the Poisson estimator. Robust standard errors are in parentheses. ***, ** and * indicate statistical significance at the 1%, 5% and 10% level, respectively.

Table 7

Explaining the post-TARP return based on bank-level characteristics

VARIABLES	(1) Return	(2) Return	(3) Return	(4) $Return_{dummy}$	(5) $Return_{dummy}$	(6) $Return_{dummy}$
Received/Requested	0.029**	0.035***	0.029**	0.285***	0.292***	0.303***
	(0.014)	(0.012)	(0.013)	(0.072)	(0.067)	(0.094)
Size		-0.003	-0.001		-0.038	-0.031
		(0.004)	(0.005)		(0.025)	(0.031)
Book-to-market		0.008	0.017		0.085	0.107
		(0.012)	(0.013)		(0.064)	(0.078)
Past year return		-0.000	0.014		0.003	0.062
		(0.023)	(0.027)		(0.137)	(0.166)
Observations	211	211	211	211	211	211
R-squared	0.006	0.066	0.281	0.016	0.084	0.261
State FE	NO	NO	YES	NO	NO	YES
Month FE	NO	YES	YES	NO	YES	YES

This table shows results from cross-sectional bank-level regressions. The main variable of interest is Received/Requested that is the ratio of the amount of TARP funds that bank received to the amount of TARP funds that bank had originally requested. All remaining variables are defined as in Table 1. In columns 1 to 3, the dependent variable is the continuous measure of bank-level abnormal returns; in columns 4 to 6 it is the dummy version of abnormal returns that takes value 1 if they are positive. The OLS estimator is used. The constant term is included but not reported to avoid cluttering. Robust standard errors are in parentheses. ***, ** and * indicate statistical significance at the 1%, 5% and 10% level, respectively.

Table 8

Effect of Received over Requested Ratio on Buying Behavior: Standard Connections Measure

VARIABLES	(1) Buy	(2) Buy	(3) Buy	(4) Buy
Connected × ln(Received/Requested)	7.785***	6.986**		
	(2.982)	(3.004)		
Connected × (Received/Requested)			9.554***	8.532**
			(3.495)	(3.486)
Connected	-0.069	0.376	-9.630***	-8.165**
	(0.471)	(0.496)	(3.396)	(3.410)
Received/Requested			-0.024	-0.071
			(0.245)	(0.228)
ln(Received/Requested)	0.269	0.107		
	(0.483)	(0.451)		
Size		-0.448***		-0.451***
		(0.123)		(0.123)
Book-to-market		0.312		0.311
		(0.426)		(0.423)
Past year return		-0.134		-0.123
		(0.915)		(0.910)
Observations	211	211	211	211
State FE	YES	YES	YES	YES

This table shows results from cross-sectional bank-level regressions. The dependent variable (Buy) is the value of an individual's buy transactions between Lehman failure date (Sept 15th, 2008) and bank-specific TARP announcement date (adjusted by market capitalization as of September 2008)). In columns 1 and 2 the main variable of interest is $Connected$ times $ln(Received/Requested)$. The dummy $Connected$ takes value of 1 if the bank is connected. We define bank as connected if any of the insiders previously worked in a government position as defined by Duchin and Sosyura (2012). $ln(Received/Requested)$ is the ratio of the amount of TARP funds that bank received to the amount of TARP funds that bank had originally requested in logs. In columns 3 and 4 the main variable of interest is $Connected$ times $(Received/Requested)$ and we replicate the analysis by using $Received/Requested$ without log for robustness. All remaining variables are defined as in Table 1. The Poisson estimator is used. The constant term is included but not reported to avoid cluttering. Robust standard errors are in parentheses. ***, ** and * indicate statistical significance at the 1%, 5% and 10% level, respectively.

Table 9

Effect of Received over Requested Ratio on Buying Behavior: Adding Non-Financial Connections Measure

VARIABLES	(1) Buy	(2) Buy	(3) Buy	(4) Buy
$Connected$ × (Received/Requested)	9.593***	8.748**		
	(3.480)	(3.413)		
$Connected$ × ln(Received/Requested)			7.889***	7.284**
			(2.979)	(2.950)
$Connected$	-9.693***	-8.410**	-0.090	0.347
	(3.376)	(3.353)	(0.463)	(0.496)
$Connected_{nonfin}$ × (Received/Requested)	-0.768	-0.876		
	(1.804)	(1.653)		
$Connected_{nonfin}$ × ln(Received/Requested)			-0.576	-0.782
			(1.566)	(1.480)
$Connected_{nonfin}$	0.924	1.058	0.142	0.172
	(1.778)	(1.595)	(0.451)	(0.495)
Received/Requested	0.687	0.720		
	(1.815)	(1.639)		
ln(Received/Requested)			0.725	0.688
			(1.527)	(1.377)
Size		-0.450***		-0.449***
		(0.123)		(0.123)
Book-to-market		0.290		0.292
		(0.469)		(0.468)
Past year return		-0.115		-0.123
		(0.972)		(0.981)
Observations	211	211	211	211
State FE	YES	YES	YES	YES

This table shows results from cross-sectional bank-level regressions. The dependent variable (Buy) is the value of an individual's buy transactions between Lehman failure date (Sept 15th, 2008) and bank-specific TARP announcement date (adjusted by market capitalization as of September 2008)). In columns 1 and 2 the main variable of interest is $Connected$ times $(Received/Requested)$ and $Connected_{nonfin}$ times $(Received/Requested)$. The dummy $Connected$ takes value of 1 if the bank has financial government connections and the dummy $Connected_{nonfin}$ takes value of 1 if the bank has non-financial government connections. $Received/Requested$ is the ratio of the amount of TARP funds that bank received to the amount of TARP funds that bank had originally requested. In columns 3 and 4 the main variable of interest is $Connected$ times $ln(Received/Requested)$ and $Connected_{nonfin}$ times $ln(Received/Requested)$ and we replicate the analysis by using $Received/Requested$ in logs for robustness. All remaining variables are defined as in Table 1. The Poisson estimator is used. The constant term is included but not reported to avoid cluttering. Robust standard errors are in parentheses. ***, ** and * indicate statistical significance at the 1%, 5% and 10% level, respectively.

Table 10

Differences in Insider Trading Profitability

	Normal times: July 2005 – June 2007						Crisis times: July 2007 – August 2008					
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
VARIABLES	Return 50-day	Return 50-day	Return 50-day	Return 90-day	Return 90-day	Return 90-day	Return 50-day	Return 50-day	Return 50-day	Return 90-day	Return 90-day	Return 90-day
Constant	0.000	0.001	0.000	0.000	0.000	0.000	0.001	0.001	0.001	0.001	0.001	0.001
	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
MKT-RF	0.514***	0.337***	0.376***	0.556***	0.364***	0.433***	0.253**	0.214**	0.159	0.301***	0.259***	0.241***
	(0.083)	(0.087)	(0.098)	(0.093)	(0.102)	(0.109)	(0.103)	(0.101)	(0.098)	(0.063)	(0.062)	(0.063)
SMB		0.471***	0.514***		0.528***	0.603***		0.713***	0.617**		0.459**	0.429**
		(0.162)	(0.161)		(0.171)	(0.174)		(0.245)	(0.264)		(0.187)	(0.200)
HML		-0.019	0.089		0.049	0.239		-0.148	-0.386		0.094	0.019
		(0.251)	(0.281)		(0.224)	(0.260)		(0.287)	(0.339)		(0.189)	(0.237)
UMD			-0.143			-0.252*			-0.189			-0.060
			(0.162)			(0.153)			(0.133)			(0.097)
Observations	502	502	502	502	502	502	295	295	295	295	295	295
R-squared	0.075	0.096	0.097	0.094	0.120	0.126	0.029	0.068	0.076	0.076	0.108	0.110

This table reports the regression results of Capital Asset Pricing Model (CAPM), Fama-French (1993) three-factor model and Carhart (1997) four-factor model using daily calendar time returns of connected-unconnected insider trading portfolios. MKT is the return on a value-weighted market index, RF is the daily return on a three-month Treasury bill, SMB is the difference in returns of value-weighted portfolio of small stock and big stocks and HML is the difference in returns of value-weighted portfolio of high and low book-to-market stocks. The portfolios are constructed by allocating insider trades into either connected portfolio or not connected portfolio. Columns (1) to (6) report results for normal times defined as July 2005 to June 2007. Columns (1) to (3) focuses on returns in 50-day period. The trades stay in their respective portfolio for fifty trading days after the trading date of the insider. In the event of no trading by an insider over the preceding fifty trading days, it is invested in the stock market earning the daily market return. If more than one insider is trading a particular stock on a given date, then that stock will appear multiple times in the portfolio on that date, once for each insider purchase. Columns (4) to (6) replicate the analysis in columns (1) to (3) by replacing 50 days with 90 days. Columns (7) to (12) replicate the analysis for the crisis period but before TARP defined as from July 2007 to August 2008 (during this period real estate prices and bank stock prices were declining). The OLS estimator is used. Robust standard errors are in parentheses. ***, ** and * indicate statistical significance at the 1%, 5% and 10% level, respectively.