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## The Personal Wealth Interests of Politicians and Government Intervention in the Economy

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## **The Personal Wealth Interests of Politicians and Government Intervention in the Economy**

### **Abstract**

We examine whether there is a correlation between personal wealth interests of politicians and their decisions to intervene in the economy. We use the setting of the government's support of financial institutions under the 2008 Emergency Economic Stabilization Act. We find that the personal wealth interests of politicians are positively associated with voting in favor of the EESA.

# **The Personal Wealth Interests of Politicians and Government Intervention in the Economy**

## **1. Introduction**

We use unique, comprehensive data on the wealth of US politicians during the financial crisis of 2008 to document empirically that the personal wealth interests of politicians exhibit a positive association with their vote to rescue financial institutions during the financial crisis of 2008. A better understanding of the basic question “what motivates politicians?” is important given the frequency of government interventions in the economy (Calderon and Schaeck, 2016). The typical answer in the political economy literature to this question is that politicians are economic agents who try to stay in office by balancing the interests of their voters and those of special interest groups (Buchanan, 1989; Levitt, 1996; Mian, Sufi and Trebbi, 2010; Peltzman, 1976; Peltzman). However, some authors argue that politicians are “persons of character” who seek public office in the public’s interest without much concern for whether there are benefits from them privately (Alesina, 1988; Witman, 1977).

The available evidence on this question, however, overlooks one important possibility. Politicians have a personal stake in the economy and the value of that stake depends, in part, on their legislative work. Thus, we propose to augment the standard voting model that includes ideological position and electoral prospects (see, e.g., Mian et al., 2010) by an additional economically-meaningful factor, i.e., personal wealth interests. Examining the role of the personal wealth of politicians in their voting poses three empirical challenges. First, such an investigation requires a direct measure of the wealth of politicians and, in particular of their asset holdings in firms. Second, there are at least three possible explanations for a correlation between the personal wealth interests of politicians and their vote to rescue financial institutions. For one, it is possible that politicians vote to directly benefit their own personal wealth. On the other hand, representatives who have a personal wealth stake in financial institutions might simply have better information about the gravity of the crisis than other representatives (perhaps by observing the loss of value in their holdings). Finally, it is possible that politicians who hold assets in the financial sector are more “finance friendly” or hold stronger beliefs about the importance of financial intermediation for the working of the economy than those who do not have these asset holdings and for that reason vote in favor of the rescue. We cannot separately identify personal wealth interests from the explanations that those with a stake in the financial sector have better

information or stronger beliefs about the importance of financial intermediation. For this, we would need to have a random assignment of asset holdings to politicians. We offer some tests, described in more detail below, in the absence of random variation in holdings, which explore the role of being “finance friendly” or having better information about the gravity of the crisis relative to the incentives coming from personal wealth, but we recognize that these tests fall short of separately identifying the possible explanations. Third, it is possible that asset holdings of politicians represent part of a “quid-pro-quo” relation between representatives and firms, in which politicians vote in the interests of the firms in which they hold stocks in return for campaign donations and other reelection support (Tahoun, 2014). Thus, the asset holdings of politicians in financial institutions might represent possible “latent connections” between firms and politicians. Such political connections are already known to have played a role in the bailout decision in the 2008 financial crisis (Duchin and Sosyura, 2012).

We attempt to address these three challenges in our empirical design by exploiting finely-grained data available due to the extensive personal finance disclosure laws governing US politicians. This data allows us to construct measures of asset holdings that include the stockholdings of politicians in financial institutions (and in non-financial firms), as well as more comprehensive measures of wealth that capture the politician’s bond and real estate holdings. In our tests, we examine how the personal wealth interests of members of Congress affect their vote on legislative proposals to deal with the deepening financial crisis in September and October of 2008. Specifically, we examine the House vote on September 29, 2008 on a draft bill proposed by Senator Christopher Dodd and Treasury Secretary Henry Paulson (H.R. 3997) and on a subsequent draft bill (H.R. 1424) that was voted on in both the Senate (on October 1) and the House (on October 3) and was ultimately turned into the Economic Emergency Stabilization Act (EESA). The EESA authorized the Treasury to spend \$700 billion in an effort to stabilize financial markets and restore liquidity.

We estimate that representatives are almost 60% more likely to vote in favor of government intervention when the financial crisis affected their personal wealth. We use a range of measures of personal wealth interest, not only to verify the robustness of our findings, but also to recognize the fact that the 2007–2008 crisis was not just limited to the financial sector, but affected markets broadly,

with spillovers to non-financial shares, real estate, and bond markets. Thus, the vote on EESA could potentially affect the personal wealth interests of politicians directly or indirectly by preventing their asset holdings from losing value. Thus, our measures of personal wealth interests vary from conservative estimates based on the value of a given politician's asset holdings in the financial sector to comprehensive estimates of changes in net wealth.

We face the challenge that asset holdings are endogenous. Individuals who believe that financial intermediation is important hold more stocks in the financial sector. All else equal, those individuals are also more likely to support the government's intervention in the financial sector during a crisis. Thus, an alternative interpretation of our findings is that "finance-friendly" members of Congress support government intervention in the economy. These politicians might be finance-friendly because they have asset holdings that are sensitive to the financial sector, because they are better informed about the gravity of the financial crisis and/or because they believe that financial institutions are important for the working of the economy. Our data does not allow us to disentangle these explanations. Instead, we offer several findings that probe each of these possible explanations in more detail. For example, we use proxies that are likely to capture a politician's belief in the financial sector that is based on work experience, education, and membership in finance-related congressional committees. We also use the past investment behavior of politicians to examine the possibility that beliefs in financial intermediation are behind our results. Specifically, as we have data on the history of asset holdings of politicians prior to the EESA vote, we are able to identify a group of politicians who hold assets in the sector before, but crucially, not during the crisis. These individuals are likely to have similar preferences compared with those who continue (or start) to invest in financial sector stocks in 2008. In particular, ex-investors and current investors are likely to share a belief in the importance of financial intermediation. The two groups, however, differ on one important dimension: whether they (still) own stocks during the crisis and can obtain personal wealth benefits from government intervention in the sector. If the ownership of financial stocks reflects beliefs in financial intermediation, one should not observe any differences in the voting behavior between ex-investors and current investors. If, on the other hand, personal wealth interests underlie the voting behavior in favor of the financial sector, we should find that current investors (but not ex-investors) are more likely to vote in

favor of the EESA. Our data show that being an ex-investor in the financial sector is not associated with voting. Only the asset holdings of current investors are associated with voting.

We also conduct “placebo tests” in which we examine whether being an investor in financial institutions is associated with other votes in the 110<sup>th</sup> Congress. We find that personal wealth interests are only associated with those votes that can potentially affect a given politician’s wealth, but not with other roll call votes, which makes it less likely that personal wealth interests proxy for beliefs.

We then examine a source of variation in personal wealth interests that is unlikely to be related to beliefs in the sector. We consider the participation in a defined contribution pension plan by the *wives* of members of Congress. Specifically, we construct a measure of personal wealth interests based on the *returns* on these plans over 2008. Since returns are exogenous, the variation in returns is arguably uncorrelated with other determinants of voting behavior. In addition, the spouse’s choice to participate in a plan is likely to be independent of the politician’s beliefs in the sector. Indeed, compelling recent evidence suggests that a substantial part of the variation in investment behavior is genetically determined (Cronqvist and Siegel, 2013). But even if the spouse’s holdings were highly influenced by the politician’s preference, returns on the spousal plans should not be subject to the same. We document that the returns on the spousal pension plan are strongly associated with the vote on the EESA and interpret this as evidence consistent with the idea that the correlation between asset holdings and congressional voting reflects personal wealth interests.

Finally, we address the last of the empirical challenges described above, namely that asset holdings might reflect (latent) political connections, by using a control-based strategy. We use again our detailed data on the politician’s asset holdings and compute measures of how responsive these asset holdings are (at the politician level) to campaign donations and lobbying expenditures of financial institutions, respectively. Adapting our approach from Tahoun (2014), these responsiveness measures proxy for the extent to which asset holdings vary with the reelection support and other influencing attempts from the financial sector. We find some evidence that latent connections between firms and politicians are associated with the vote on EESA, especially in the first vote, but these connections do not diminish the economic or statistical significance of having asset holdings in the financial sector to the vote.

Ultimately, our hypothesis is that politicians' voting is associated with their personal wealth interests. Mian et al. (2010) suggest that a politician's vote on the EESA is driven by their ideological position and their electoral prospects. In turn, their reelection probabilities are determined by the politicians' ability to convince voters that they cater to the constituency's interests, and by campaign spending, which is determined by their ability to attract special interest contributions. We propose that this voting model be augmented by an additional economically-meaningful factor, i.e., personal wealth interests, which may or may not conflict with either ideology or reelection probabilities. Indeed, we show that even in the presence of conflicting incentives deriving from voter interests, special interests, or political ideology, being an investor in the financial sector is significantly correlated with a politician's voting. For example, with an eye towards these possibly competing determinants of a politician's vote, we use nearest neighborhood matching to compare politicians who invest in financial institutions with those who do not. We match on campaign donations and on voter opposition to the EESA as well as (an exact match) on party affiliation and on ideology. We show that investors in financial institutions are more likely to vote in favor of the EESA compared with their matched counterpart, who do not hold assets in financial institutions.

The remainder of the paper is organized as follows. Section I summarizes the events of the financial crisis of 2008 and provides a brief literature review. Section II describes the data we use, and Section III presents our main findings on the relation between voting in Congress and the personal wealth interests of politicians. Section IV presents the conclusions.

## **2. Legislative Background and Prior Work**

### **2.1 The Congressional Response to the Financial Crisis of 2008**

Since August 2007, regulators have attempted to turn the tide of the solvency problems banks faced as a result of the losses from their exposures to subprime mortgages. Despite these efforts, in the summer of 2008, financial market strains intensified as concerns increased that credit losses were mounting (International Monetary Fund, 2008). The US government's intervention to guarantee support to two agencies with a crucial role in the American housing market (Fannie Mae and Freddie Mac) was not sufficient to prevent a firestorm (Acemoglu, Johnson, Kermani, Kwak and Mitton, 2011). In September 2008, Lehman Brothers submitted a bankruptcy filing that involved significant losses to

creditors and counterparties. Within days, market pressure forced the merger of Merrill Lynch with the Bank of America and the Federal Reserve (Fed) nationalized the American Insurance Group, the world's largest insurance company. With the liquidity crisis worsening and as banks increasingly lost confidence in the creditworthiness of their counterparts, interbank markets effectively seized up. Massive coordinated liquidity injections by the Fed and other major central banks did little to contain investors' panic.

On September 20, 2008, Treasury Secretary Henry Paulson released a three-page "Legislative Proposal for Treasury Authority to Purchase Mortgage Related Assets." Members of Congress were briefed on the plan in the chambers of House Speaker Nancy Pelosi. At that time the chairman of the Fed, Ben Bernanke offered the stark warning that "If we don't do this, we may not have an economy on Monday." (Sorking, Henriques, Andrews and Nocera, 2008). Two days later, Senator Christopher Dodd advanced a more detailed draft. On September 29, after many negotiations, the House voted on H.R. 3997 that combined Senator Dodd's draft with Mr. Paulson's original proposal. The House rejected the bill, with 205 in favor and 228 against. However, on October 1, 2008, the Senate approved H.R. 1424, by a vote of 74-25 that was an amended version of the bill that would become the EESA. On October 3, the House voted to concur with the Senate on H.R. 1424 and accepted the bill 263 to 171. That day, the President signed the bill into law as Public Law 110-343 (SigTarp, 2009).

The EESA authorized the \$700 billion TARP that intended to provide support to US financial institutions by means of the Treasury purchasing or guaranteeing "troubled assets". This support was achieved mainly through the Capital Purchase Program to which \$250 billion was made available and which intended to invest in "qualified financial institutions" that were deemed financially healthy.

## 2.2 Literature Review

An increasing number of studies uses the financial crisis, and in particular the legislative response to it, as a setting to study the behavior of politicians (and their relations with firms). Mian et al. (2010) provide compelling arguments for why the setting is advantageous when examining "the responsiveness of politicians to ... various political and economic factors" (p. 1973). Crises heighten voter interests in political issues and increase the salience of bills. Thus, we can expect constituents to be well informed and motivated to monitor their representative's voting behavior. What's more, voters'

interests potentially compete with those of financial institutions. Indeed, Mian et al. (2010) show that the campaign contributions from the financial industry affected the voting of the representatives on the EESA, although less so in the case of ideologically conservative members. On a related note, Duchin and Sosyura (2012) and Li (2010) show that politically connected financial institutions are more likely to receive government funding under TARP's Capital Purchase Program. This finding is consistent with a strand of literature that documents politicians can intervene in the economy and distribute favors to firms in several significant ways such as corporate bailouts, taxation benefits, and the facilitation of access to cheap sources of financing (Claessens, Feijen and Laeven, 2008; Faccio, Masulis and McConnell, 2006; Khwaja and Mian, 2005).

These prior studies investigate the value of firms' connections to politicians often by using the event study method to take advantage of sudden changes in the value of a connection (Acemoglu, Johnson, Kermani, Kwak and Mitton, 2016; Akey, 2015; Faccio, 2006; Ferguson and Voth, 2008; Fisman, 2001; Fisman, Fisman, Galef and Khurana, 2006; Goldman, Rocholl and So, 2009; Jayachandran, 2006; Johnson and Mitton, 2003; Knight, 2006; Leuz and Oberholzer-Gee, 2006). Other studies use various measures of political connections (usually campaign donations or lobby expenditures). These studies document that firms benefit by higher future stock returns (Borisov, Goldman and Gupta, 2016; Cooper, Gulen and Ovtchinnikov, 2010), delayed fraud detection (Yu and Yu, 2008), reduced SEC oversight (Correia, 2009), increased innovation (Reza, Ovtchinnikov and Wu, 2015), as well as by winning more government contracts (Goldman, Rocholl and So, 2008; Tahoun, 2014) and experiencing a lower degree of competition in markets (Benmelech and Moskowitz, 2010; Bunkanwanicha and Wiwattanakantang, 2009). On the other hand, some authors argue that connections to politicians carry few benefits and can indicate agency problems (Aggarwal, Meschke and Wang, 2009). Indeed, Kim (2015) documents that firms increase their investments in capital and R&D after the loss of their political connection.

Our contribution to this literature is to point out that politicians can be connected to firms in a way not considered in most of these earlier studies (however, see Tahoun (2014)). As investors, politicians have an interest in benefiting the firms in which they own stocks even if these firms do not contribute to election campaigns or are otherwise observably connected to a given politician.

Furthermore, the political economy literature has long debated whether members of Congress respond to the economic interests that their electorate or special interests provide (Peltzman, 1976; Peltzman, 1984) or whether they are “persons of character” who seek public office to change policy in the public interest (Alesina, 1988; Callander, 2008; Witman, 1977). Yet another possibility is that politicians seek to further their own narrow self-interest as measured by their net wealth just as any other utility maximizing agent would (Besley, 2004; Buchanan, 1989). The empirical evidence on this debate is mixed: for example, Diermeier et al. (2005) show that policy motivations at least partially explain the behavior of politicians; whereas Ferraz and Finan (2008) argue, in contrast, that monetary rewards are the principal motivation for politicians. Our study adds to this literature by arguing that the politician’s personal wealth is directly affected by their legislative work inasmuch as their personal assets are intimately linked with the firms that stand to benefit or lose from government intervention.

One extension of this literature considers whether politicians use knowledge obtained in office to trade stocks. The available evidence is mixed, with some studies suggesting that Congress members systematically beat the market index (Ziobrowski, Boyd, Cheng and Ziobrowski, 2011; Ziobrowski, Cheng, Boyd and Ziobrowski, 2004), while others argue that political constraints discourage politicians from trading on their information advantage (Eggers and Hainmueller, 2013). Complementing these insights are the findings in Cohen et al. (2013), who suggest that the voting behavior of politicians whose constituent firms are most affected by pending legislation predicts abnormal returns following the passing of the law. This finding suggests that politicians have a good sense of how their lawmaking affects firms.

More directly related to our study, Tahoun (2014) documents that the asset holdings of members of Congress are related to the campaign contributions of firms; this study suggests a quid-pro-quo relation between firms and politicians, facilitated by stock ownership, wherein firms benefit by obtaining more in government contracts.<sup>1</sup> Whereas Tahoun highlights a channel in which asset holdings are used to forge a relation between firms and politicians, we emphasize a more direct role of these

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<sup>1</sup> Note that firms may support politicians in multiple ways in addition to campaign donations. For example, they might increase employment for the politicians’ voters (Bertrand, Kramarz, Schoar and Thesmar, 2006). Or connected financial institutions might ease lending conditions for firms in the politician’s district (Dinç, 2005).

holdings by raising the possibility that a politician's voting can impact on the value of their holdings, which in turn might affect their decision of how to vote. Our approach complements the evidence in Tahoun (2014), inasmuch as not all politician shareholdings are intended to facilitate political connections and our conjecture is that even without a quid-pro-quo "deal" in place, politicians vote differently on issues related to firms in which they hold ownership than when they have no personal wealth interest.

### **3. Data and Summary Statistics**

#### **3.1 Data Sources**

Our primary interest is the association between politicians' personal wealth and government's intervention. We use data collected from several sources to investigate this association. We combine sources about a politician's equity investments, voting behavior and background, as well as election campaign contributions and congressional district data.

To start, we obtain data about the history of asset holdings of members of the 110<sup>th</sup> Congress from the Center for Responsive Politics for 2004-2008.<sup>2</sup> According to the Ethics in Government Act of 1978, members of Congress (and Executive Branch officials) are required to file annual reports disclosing their personal finances. Congressional ethics committees enforce and oversee compliance with this requirement. Members of Congress must file Financial Disclosure Report forms that record all assets that are held for investment and worth more than \$1,000 at year end. Assets held in any self-directed account or fund must be listed individually, along with their value and the type and amount of income they produce. When an asset is individually listed (as part of a holding of a fund), we include it in our computation of a politician's equity investment in a firm. Assets yielding more than \$200 in annual income must be listed, regardless of their value at year end. Members often report the value of each of their assets within one of several ranges. We use the midpoint of the range as our estimate of that asset's value. When a politician mentions owning an asset but reports its value as "N/A" we view this as a below-disclosure-threshold holding and count the asset as an investment but assign it a zero

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<sup>2</sup> We use the web query on [www.opensecrets.org](http://www.opensecrets.org) to retrieve the data. The classification of reported assets in the disclosure reports is not always straightforward. We rely on the CRP classification of assets as stock and verify this with the original disclosure reports if their classification is missing or unclear.

dollar amount.<sup>3</sup> They also record income, liabilities, and other sundry items.<sup>4</sup> These forms must be filed annually by May 15 for the prior calendar year. The Center for Responsive Politics collects these reports from the Senate Office of Public Records and the Office of the Clerk of the House. The Center screens each of the listed assets and we populate our database with reported asset holdings in publicly listed financial institutions and in Standard and Poor's 500 (non-financial) companies. We focus on S&P 500 companies to economize on the costs of hand-collecting the data.

In addition to data on the personal finances of members of the 110<sup>th</sup> Congress, we also collect data on their voting records from the Office of the Clerk of the House and the Senate Bill Clerk. We supplement this with data on each congressional member's margin of victory in the most recent election from the public records of the Federal Election Commission. Data on the number of terms each politician has served in Congress and whether they are running for reelection in the 2008 is provided in Mian et al. (2010). We obtain biographical data that includes prior employment history from the 2008 edition of Congressional Biographies (part of the official Congressional Directory prepared by the Joint Committee on Printing).<sup>5</sup> We determine the post-election employment of politicians not returning to Congress using data provided by the Capitol Insiders section of Political Moneyline.<sup>6</sup> To determine each politician's committee membership in the 110<sup>th</sup> Congress, we use data collected by Stewart and Woon (2009).<sup>7</sup>

We also require data on the voters' opposition to the government's support of the financial sector as well as on campaign contributions by financial institutions. We obtain voter opinion data from the 2008 edition of the Cooperative Congressional Election Study (CCES) (Ansolabehere, 2011). This data is available at the congressional district level, but was collected after the vote on the EESA (in October-November 2008). We therefore also obtain data from the Pew Research Center, which is based on a survey conducted in September 2008 (i.e., before the voting on EESA) and asks respondents about

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<sup>3</sup> This matters in analyses where we use indicator variables that denote investor status (which will take the value of unity for assets values as N/A) and variables that use the dollar amount of investments (which will be zero).

<sup>4</sup> These include contributions made in lieu of honoraria, gifts received, non-governmental positions held, travel that was paid for, and information referring to the member's spouse and dependent children.

<sup>5</sup> Available at: <http://www.gpo.gov/fdsys/browse>

<sup>6</sup> See: <http://www.politicalmoneyline.com/About.aspx>

<sup>7</sup> Available at: [http://web.mit.edu/17.251/www/data\\_page.html#1](http://web.mit.edu/17.251/www/data_page.html#1)

their views on the government's handling of the burgeoning crisis. We also measure voter interests by considering the constituency's mortgage default rates and the fraction of the voters working in the financial sector. Data from the Mortgage Bankers Association's National Delinquency Survey provides us with state-level data on residential mortgage delinquency and foreclosure rates. We use the data reported in Mian et al. (2010) on the finance employment of voters. We obtain data on campaign contributions by Political Action Committees (PAC) associated with financial institutions between 2003 and 2008 from the Center for Responsive Politics, which in turn collects this information directly from the Federal Election Commission. However, we do not use the Center's industry aggregated data, as their definition of the industry of interest "Finance, Insurance and Real Estate" includes companies that were not affected by the EESA.

We use census data on a range of variables describing a politician's district including the percentage of Hispanics and the percentage of people living in an urban environment.<sup>8</sup>

### 3.2 Summary Statistics

Table 1 presents the summary statistics for our variables of interest. These statistics are reported separately for congressional members who are investors in the financial sector and for those who are not. In table 1, the summary statistics for the variables of interest comprise the dollar amount of a representative's asset holdings in the financial sector, the dollar amount of expected losses due to investments in the financial sector, the dollar amount of expected losses in the total stock portfolio, the percentage loss in net wealth during 2008, and the beginning of 2008 dollar amount of net wealth. We calculate each representative's equity investment in the financial sector by adding the disclosed asset holdings in a sample of 555 publicly listed banks, savings associations, bank-holding companies, and savings and loan-holding companies (SIC 6020-6036), as well as life insurance companies (SIC 6310-6319) trading on the NYSE, Amex, or the NASDAQ.<sup>9 10</sup>

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<sup>8</sup> These census data are taken from the data supplement in Mian et al. (2010).

<sup>9</sup> Life insurance companies (i.e., members of the American Council of Life Insurers) collectively applied for consideration under TARP (unlike property-casualty insurers, who, through the American Insurance Association, issued a statement that they would not seek government support). Because the Treasury allowed firms to simultaneously apply for government support and acquire a federally regulated bank, life insurance companies satisfied the requirement that only companies with federal regulatory oversight could be considered for support.

<sup>10</sup> Financial asset holdings via mutual or index funds are included if provided in the Center for Responsive Politics database.

To illustrate the economic significance of the asset holdings of members of Congress in the financial sector, consider the following. In 2008, the collective investment of members of the House was between \$23.3 and \$74.5 million. About 30% (namely, 126 out of 434) of the representatives invested in financial institutions during 2008. The financial sector constitutes a meaningful fraction in the investment portfolios of politicians; we estimate that the average proportion of asset holdings in the financial sector compared to their holdings in non-financial S&P500 firms is about 18.5 percent (which is close to the sector weighting in the S&P500 at about 17.6 percent in 2007).

We compute the expected losses due to investments in the financial sector by multiplying the number of shares a politician holds in financial institutions at the beginning of 2008 by each of these shares' change in stock price on September 29, 2008. We intend this variable to measure the expected losses in the event Congress does not pass the EESA; the losses realized due to the drop in stock prices after the House failed to pass the initial bailout proposal is a reasonable proxy for the same. Note, however, that the losses realized on September 29, if anything, understate the full effect of the event as the market likely anticipated some possibility that Congress could pass the EESA.

A more comprehensive measure of the expected losses considers not only the effect on the value of the investments in the financial sector, but also the effect on other investments in the stock market. Analogous to the expected losses due to investments in the financial sector, we compute the expected losses in the total stock portfolio by multiplying the number of shares a politician holds in financial institutions as well as in nonfinancial S&P 500 firms by each of these shares' change in stock price on September 29. Asset holdings in the financial sector and in nonfinancial S&P 500 firms are highly correlated. The correlation between two indicator variables that capture whether a given politician holds assets in the financial sector and in the non-financial S&P 500, respectively, equals 0.50 ( $p < 0.01$ , untabulated).

We use the percent change in a politician's net wealth during 2008 as another proxy for the member's wealth-sensitivity to the financial sector. Net wealth is defined as the total assets minus the liabilities reported by politicians in their personal finance disclosures. This particular measure also captures changes in the value of bond and real estate holdings. As a final wealth-sensitivity proxy, which likely constitutes the upper bound of a politician's wealth exposure to the financial sector, we

use the dollar amount of the total net wealth (which again includes bond holdings and real estate in addition to equity).

Together, our set of proxies for the personal wealth-sensitivity to the financial sector of politicians covers the spectrum from conservative estimates relying on only the actual investments in financial institutions to more encompassing estimates that use data on the politicians' net wealth and might include assets not directly related to financial institutions (but whose value depends on the intervention of the government in the sector). A priori, what motivates the voting behavior of politicians is not clear. But the possibility exists that only direct investments in the financial sector are sufficiently salient to provide personal wealth incentives to members of Congress. On the other hand, politicians might understand that not only their equity investments in the sector might be affected by the vote, but so too their net wealth.

In table 1, we also list summary statistics for the control variables. Importantly, we provide information on those variables that studies document to affect voting behavior. Specifically, we report a measure of the voters' interests constructed from a question taken from the CCES 2008 (Ansolabehere, 2011) that asks whether the respondent, in principle, supports or opposes legislation on the government's intervention in the financial sector.<sup>11</sup> We report summary statistics on the percentage of voters at the congressional district who are opposed to the legislation.<sup>12</sup> We also report an alternative measure of the voters' interests used in prior work (Mian et al., 2010), that is, the importance of the financial sector to the representative's congressional district. This variable is defined as the fraction of the district workforce that is employed in the financial activities sector. We also add the number of financial institutions headquartered in the representative's district. In addition, Mian et al. (2010) point out that the change in mortgage default rates between the fourth quarter of 2005 and the same quarter in 2007 captures constituency interests and predicts the vote on the EESA. Our related variable, capturing mortgage defaults rates, is constructed at the state-level.

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<sup>11</sup> The CCES 2008 study explicitly asked a sample of 32,800 respondents about their support for the "U.S. government \$700 Billion Bank Bailout Plan."

<sup>12</sup> Respondents could also choose "not sure" or could not answer this particular question.

In addition, we include the total PAC donations made by publicly-listed financial institutions to a politician that we consider a measure of a politician’s incentives to respond to the special interests of the financial service industry (Kroszner and Stratman, 1998; Milyo, Primo and Groseclose, 2000). We report both a long-term measure of donations that covers total PAC spending between 2003–2008 as well as campaign donations during the 2007–2008 election cycle (Cooper et al., 2010).

#### 4. Results

##### 4.1 Voting in Congress on Proposals to Provide Support from Government to the Financial Sector

We first examine whether the personal wealth interests in the financial sector of representatives are associated with their votes on legislative proposal to deal with the deepening financial crisis in September and October of 2008. To illustrate our approach, consider figure 1 that uses data from the House’ vote on H.R. 3997 on September 29, 2008. The figure is a non-parametric plot of a politician’s wealth interest (measure by the change in net wealth) against the propensity to vote in favor of the bill. As the percentage loss in net wealth increases, so does the likelihood of supporting the intervention.

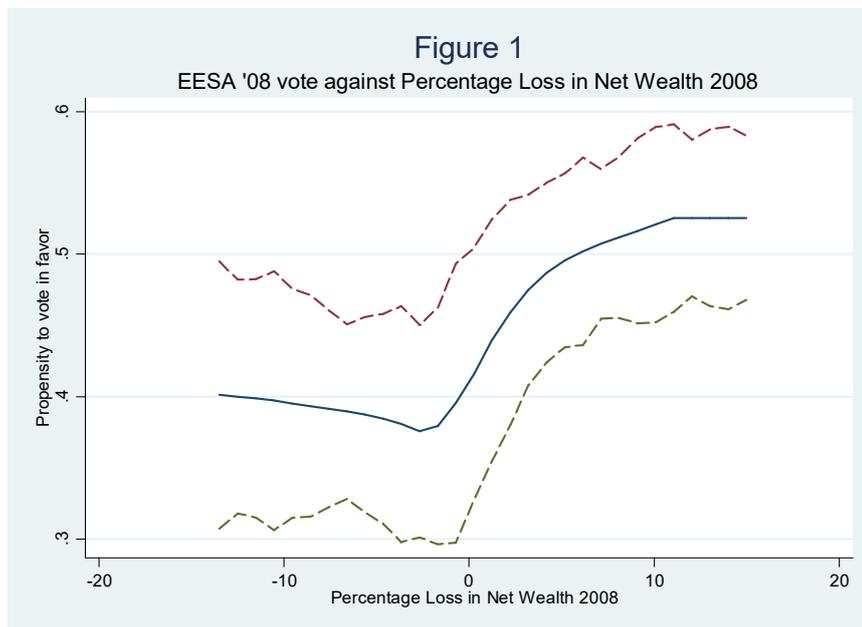


FIGURE 1.—Propensity to vote in favor of EESA in the first House roll call on September 29, 2008 against the percentage loss in the representatives’ Net Wealth. Negative numbers on the horizontal axis denote the percent gains in net wealth. Data source: The Office of the Clerk of the House and the Center for Responsive Politics. Dashed lines represent the 95% confidence intervals.

Thus, we predict that members with higher personal wealth interests are more likely to vote in favor of each of these proposals. Contemporary news reports suggested that at the second vote the leadership of both parties put considerable pressure on the membership to approve the government intervention; for this reason, the politician's incentives might differ between the two votes.<sup>13</sup> In particular, we believe that the first vote is a better test for our hypothesis about the role of personal wealth interests as politicians were under less pressure to follow the leadership's vote to support the government intervention. As such, they could vote more according to their own preferences and interests.

We estimate logit regressions of the propensity that a given politician votes in favor of each of the two legislative proposals. We report the results of these regressions in tables 2 (H.R. 3997) and 3 (H.R. 1424). The dependent variable takes the value of one if a representative votes for the proposal (Yea) and zero otherwise (Nay). We seek to explain variation in voting by differences in personal wealth interests among representatives. Each column in the table reports the results for different measures of personal wealth interests, moving from conservative estimates based on the dollar amount of asset holdings in financial institutions (column 3) to more encompassing estimates based on the politicians net wealth (columns 6-7). Note that for variables based on dollar amounts, we use a logarithmic transformation. However, our main specification simply uses an indicator variable that takes the value of one if a politician invests in the financial sector, and zero otherwise (columns 1-2). We include state fixed effects in each but the first regression of each vote (in column 1) and report robust standard errors in parentheses.<sup>14 15</sup>

The regressions disclose a strong association between the preferred measures of personal wealth interests and voting in favor of either of the two bills. A representative who is an investor in the financial sector is about 60% more likely to vote for the government intervention proposal. The predicted

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<sup>13</sup> <http://www.nytimes.com/2008/10/02/business/02bailout.html>

<sup>14</sup> Clustering standard errors by state does not materially affect inferences, but reduces the number of observations available for estimation.

<sup>15</sup> The number of observations varies across columns. The House represents 435 districts, but at the time of the voting, there was one vacancy (Ohio's 11<sup>th</sup> district). One representative (G. Weller, R) did not vote on HR 3997 due to "family matters", but did vote on HR 1424. When we include state fixed effects, observations are dropped in those cases where the state indicator perfectly predicts either the yea or the nay votes. Missing data on some of the personal wealth proxies may further reduce the dataset.

probability to vote “Yea” in the initial (final) vote is 67% (73%) for financial sector investors, whereas for non-investors in the financial sector the predicted probability is 41% (54%).

We add a set of controls that intends to capture a politician’s voting incentives other than those related to personal wealth. Specifically, consistent with prior research, we add a set of variables that captures the voters’ interests in each representative’s district as well as a variable that measures the importance of special interest groups in financing the politician’s election campaigns. We find that the incentives deriving from the conflicting interests of a given politician’s electorate (measured as the percentage of voters in a district who oppose the government’s intervention) are significantly negatively associated with the likelihood that a representative votes for the proposals in particular in the vote on H.R. 1424. However, this association is weaker in estimates for the initial bill once we control for state fixed effects, which suggests that state-wide voter sentiment on the initial bailout proposal dominates variation between districts within a state. Measured by the number of financial institutions in a given representative’s district as well as by the fraction of the workforce in the financial sector, voter interests seem to play a bigger role in the second vote. We find some evidence, consistent with Mian et al. (2010), that politicians who represent voters from areas with high mortgage default rates tend to support the government intervention more. Mian et al. (2010) measure default rates at the district level and (reflecting their higher precision for this variable) obtain stronger results. We find little evidence that donations by the financial sector to the election campaigns of House members are positively associated with their propensity to vote in favor of the initial bill. However, the association with campaign donations is stronger in the second vote.

We also add a series of controls in each regression that comprises the first dimension of the DW Nominat ideology score of each politician, which measures their conservatism (Poole and Rosenthal, 2007), their party affiliation, the victory margin over the closest competitor in the most recent congressional election, and the number of terms served in Congress (see, e.g., Kau, Keenan and Rubin, 1982). We add further controls to reflect whether the representative served on a finance-related committee, is not running for reelection in 2008, obtains a job in the finance sector after the 2008 election, and for their asset holdings in non-financial stocks. We find that of these political controls, the number of terms served (positively) and the Republican party affiliation (negatively) are associated with

the initial vote. We also find that politicians who are not running for reelection are more likely to support the government intervention in both H.R. 3997 and 1424.

Consistent with Mian et al. (2010), we include a range of census controls to capture heterogeneity in the representative's district. In unreported tests, we also control for the gender of politicians as prior studies have documented that women have different investment preferences than men (Barber and Odean, 2001).<sup>16</sup> Including gender does not change the inferences for our variables of interest and the coefficient on gender never attains significance.

*Do asset holdings proxy for latent connections between politicians and financial institutions?*

In table 4, we address the possibility that politicians' asset holdings in a firm are a proxy for their (latent) connections to the firm. The idea, first proposed in Tahoun (2014) is that asset holdings are a way for politicians to signal their interest in forming a relation with the firm. Thus, it is possible that our measure of personal wealth interests simply captures the quid-pro-quo relation between firms and politicians documented earlier in Tahoun (2014). To examine whether our findings are merely a manifestation of these earlier described channel or a separate economic force, we compute a measure in the spirit of Tahoun (2014) that captures the elasticity of the politician's asset holdings to campaign donations. Note that while the original Tahoun construct is measured at the firm-level, our adaption constructs the measure at the politician level, making it amendable to inclusion in our politician-level regressions reported in table 2. Specifically, we compute the "investment-PAC sensitivity" as follows. We estimate a politician specific-coefficient obtained from regressing the stock ownership by politician  $i$  in bank  $j$  at time  $t$  on the political donations received by politician  $i$  from bank  $j$  at time  $t$ . To estimate this politician-level regression, we use the Tahoun (2014) dataset, which covers the period 2004-2007 but restrict the sample to financial stocks. Our construct is higher when a larger proportion of the politician's assets are explained by PAC donations. We first add this variable to our standard set of controls (including state fixed effects) and show a positive association with the vote on H.R. 3997 (but not with the vote on H.R. 1424). We then include our preferred proxy for personal wealth interests ("investor in financial sector") and show that our estimates (in columns 2 and 6 remain very similar in

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<sup>16</sup> The age of a politician is another potentially important control. We do not include age, however, because it is highly correlated with the politician's number of terms served in office.

size to what we reported in tables 2 and 3. In addition, we no longer find a significant association between the investment-PAC sensitivity and either vote. We conclude from these tests that the association between personal wealth interests and the vote is distinct from those mechanisms described in Tahoun (2014). Next, we construct another version of the Tahoun measure, but now use the lobbying expenditure of firms rather than the campaign donations to compute the sensitivity of a given politician's asset holdings. We use lobbying expenditures because some authors (Kim, 2015) have argued that these expenditures represent a measure of influence that is less constrained by legal limitations compared with campaign (PAC) donations. When we include the lobby-expenditure version of the Tahoun measure in our regression in table 4 (column 4), it is statistically significant, negatively associated with the vote on H.R. 3997 (at  $p < 0.05$ ), but does not materially affect our variable of interest ("investor in financial sector), which remains significantly positively associated with the vote at  $p < 0.001$ . Together these findings suggest that the documented correlation between asset holdings and the voting on EESA is not picking up a possible quid-pro-quo relation between politicians and firms.

#### *Robustness check*

Our measure of voter opposition to the bailout is based on survey data collected in October-November 2008. Ideally, our measure of voter opposition should reflect opinions of constituents *before* the politicians voted on the EESA. Our alternative proxy is based on opinion data collected before the vote (in September 2008) but it is less precise as it is only available at the state level (for the 48 contiguous states) rather than at the congressional district level. To investigate whether our main results are affected by using post hoc voter opinion data, we run a (untabulated) regression in which we substitute the original district-level voter opinion proxy with the pre-EESA alternative. Specifically, we use two questions from the Pew Research Institute survey (Based on what you have read and heard, do you think the government is doing an excellent, good, only fair or poor job of handling the financial problems of Wall Street? and As you may know, the government is potentially investing billions to try and keep financial institutions and markets secure. Do you think this is the right thing or the wrong thing for the government to be doing?). Higher scores on these questions imply more voter opposition. Our inferences regarding personal wealth interests are not influenced by the choice of voter opinion proxy in either vote.

#### 4.2 Isolating Politicians' Wealth-Sensitivity from Preferences for Financial Institutions

A politician's asset holdings are likely endogenous and reflect unobserved heterogeneity. Consequently, the logit estimations of the relation between the voting behavior and the personal wealth sensitivity to the financial sector might be driven by this heterogeneity rather than by the incentives corresponding to personal wealth. In particular, we need to establish that politicians' preferences for the government's intervention are not systematically related with their preferences to hold stocks (or otherwise expose their personal wealth to the vicissitudes of the financial sector). Unobserved belief in financial institutions causes a correlated omitted variable problem that undermines our ability to attribute our findings on the voting behavior to wealth sensitivity. One way to address this problem is to add the observable characteristics of politicians that are likely related to those unobserved preferences for or belief in the financial sector. An alternative approach, which we use later in this subsection, is to exploit a random source of financial wealth in the politicians' portfolios.

We first use the empirical strategy of adding variables to our main specification that attempt to capture heterogeneity among politicians' preferences for the financial sector. We consider politicians who held stock in the financial sector prior to December 2007 (i.e., in any of the years 2004, 2005, 2006, and in part of 2007), but no longer owned any stocks in the sector as of January 1, 2008. We assume that these politicians are likely to share many of the unobserved characteristics with those members of Congress who continued (or started) to own financial sector stocks in 2008. In particular, both should share a belief in the importance of financial institutions. The two groups differ in one important dimension: whether they (still) own stocks during the crisis and can obtain private benefits from the government's support of the sector. There are 56 representatives who are ex-financial sector investors. In part because almost half of these individuals hold the stocks for three years consecutively we assume that these individuals believe in the importance of the sector.

We further add controls for those representatives who have worked in the financial sector before their election to Congress and for those who have obtained a degree in finance or economics. Work experience or educational background might predispose politicians to have stronger preferences for investing in the financial sector as well as for government support of the sector. Next, we add a control

for representatives who serve on the House Financial Services Committee, as members of this committee might have stronger preferences for the financial sector than others in the House.

In table 3, we repeat the main regression specification in columns 1-5 (6-10) for the vote on H.R. 3997 (H.R. 1424), but now add controls for a politician's preferences for the financial sector. We find very little evidence that any of these variables are associated with representatives' voting behavior. Indeed, none of these control variables that capture financial-sector preferences is significantly related to the vote at the conventional levels. Nor is our estimate of the association between personal wealth sensitivity and the propensity to vote for the intervention significantly affected. In unreported tests, we show that when we drop the indicator variable for being an investor in the financial sector, we still do not obtain a significant association between any of the preference for the financial sector controls. We conclude that our results are not due to multicollinearity between these preference-related variables and the variable of interest.

Thus, our principal finding that personal wealth incentives are positively associated with the likelihood of a given representative voting in favor of the EESA holds even after conditioning on a wide range of observable characteristics. However, this approach does not completely eliminate the possibility that unobservable characteristics affect our results. For example, in our definition of "investor in financial sector", we include a set of 27 politicians who only invest in financial institutions (i.e., these individuals do not invest in non-financial firms). It could be the case that these politicians have unobserved characteristics related to their beliefs about the financial sector that affect our inferences. For this reason, we compute an adjusted version of "Investor in financial sector" that requires politicians to not only invest in the financial sector, but *also* in non-financial firms. When we estimate our main specification with this adjusted version of our variable of interest (not tabulated), we find that the magnitude of the estimated coefficient *increases* (and its significance is unaffected). We conclude that the correlation we reported earlier is not due to politicians who *only* invest in financial institutions.

To further probe the possible effect of omitted unobservable variables on our inferences, we compute an informal test statistic, suggested by Altonji, Elber and Taber (2005), to assess how large the effect of "selection on unobservables" would have to be to account for the entire estimate of the

coefficient on the proxy for personal wealth sensitivity. To fully explain the coefficient found on the variable “Investor in financial sector” in column 2 of table 2, selection on unobservables would have to be 3.46 times larger than selection on observables.

Next, we turn to an alternative approach to address the source of the omitted variables bias in our main regression. This approach uses a random source of variation in the politicians’ wealth. We collect data from the politicians’ personal finance disclosure to determine whether their *wives* participate in a Defined Contribution (DC) plan. Conditional on the spouse’s participation, we compute the annual return over the year 2008 reported on this plan. We multiply the annual return by -1, to obtain a measure that is increasing in the losses during 2008, to ease comparison with our prior financial wealth interest proxies. We also compute an indicator variable “DC plan loss” that takes the value of one if the annual return on the spousal pension plan is negative. We find that the average return on spousal DC plans is 0.12 (median = 0.00) and that more than 50 percent of spousal DC plans have a positive return (unreported). These two new personal wealth interest measures are arguably uncorrelated with other determinants of voting behavior for two reasons. First, we condition on the *wife’s* decision to participate in a plan, rather than the politician’s. Thus, the participation decision should be independent from the politician’s beliefs.<sup>17</sup> Second, returns on pension plans are exogenous, and thus, conditional on participating in the plan, variation in these returns produce a personal wealth interest measure that is unaffected by beliefs.

Table 6 presents the results of estimating the main regression specification, but now using the two new personal wealth interest variables. We estimate these logit regressions in the sample of spouses who disclose their participation in DC pension plans (n=84). Given our extensive range of control variables, we do not report results based on state fixed effects estimation. We find a significantly positive association between the (negative) annual return on the spousal pension plan and the politician’s vote for the government intervention on H.R. 3997. Consistent with this finding, we also report a significant positive association between the indicator variable reflecting a loss (i.e., negative annual returns) on the spousal DC plan and the voting behavior. Using this latter variable, we estimate

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<sup>17</sup> The correlation between Investor in the financial sector and Return on spousal DC plans equals -0.25 (p<0.05).

that the predicted probability of voting in favor of the EESA is about 23 percent larger for politicians whose spouses report a loss on their plan than for politicians with spouses who disclose positive annual DC plan returns (based on estimates for the largest possible sample). We find similar results for the vote on H.R. 1424 albeit that the estimated coefficient on the “return on spousal DC plan” is a little smaller in magnitude and only marginally significant ( $p = 0.13$ ).

Our tests, concentrated on the returns on spousal DC plans, exploit a shock to the politician’s financial wealth that is unlikely to be correlated with other determinants of voting behavior (such as beliefs in the financial sector). Our evidence is consistent with the hypothesis that personal wealth interests per se are a potential explanation for the voting on the EESA.

We add two further tests that might help improve the attribution of the correlation between voting and asset holdings to personal wealth interests. We first use nearest neighborhood matching (Abadie and Imbens, 2006; Abadie and Imbens, 2011) to estimate the association between the preferred measure of personal wealth (“Investor in financial sector”) and voting. We match politicians based on the campaign donations from financial institutions and the degree of voters’ opposition against the EESA in their district. In particular, we want to separate the personal wealth interest from ideology. We therefore require an exact match on party affiliation as well as a test in which we require that politicians be matched on their ideology (in addition to voter opposition and campaign donations). Our (bias-corrected) estimate of the average treatment effect, reported in table 7, equals 0.116 ( $p < 0.05$ ) when requiring an exact match on party affiliation, which suggest that investors in the financial sector are 11.6 percent more likely to vote in favor of the H.R. 3997 than similar politicians who do not invest in the financial sector. Likewise, when matching politicians on the DW-Nominate ideology score, we find an average treatment effect of 0.131 ( $p = 0.02$ ). We obtain very similar results for the House vote on H.R. 1424. Together, these results suggest a sizeable difference related to being an investor in the financial sector for politicians who are very similar in terms of their ideology and their constituency and special interests.

Second, we examine whether personal wealth interests are associated with other roll call votes during the same Congress. We concentrate on those roll call votes for which we also have data on voter opposition to the legislation in a given representative’s district (from the 2008 CCES survey). The

resulting set of roll calls span a variety of topics and take place in 2007, i.e., in the first session of the 110<sup>th</sup> Congress.<sup>18</sup> Consequently, we use information on asset holdings at the start of 2007 in our tests. Our prediction is that our preferred measure “Investor in financial sector” is associated with those roll calls that potentially affect the politician’s asset holdings in financial institutions but not with other votes. Using the full set of control variables and including state fixed effects, we find no consistent association between any of these roll calls and our preferred measure. Note that one of these roll calls concerns the extension of NAFTA to include Peru and Columbia. Beliefs in the importance of the financial institutions are plausibly associated with beliefs in free trade. Yet, our personal wealth measure is not associated with the vote in favor of this bill.

#### 4.3 Cross-sectional tests

In this subsection, we examine the cross-sectional heterogeneity in the correlation between being an investor in the financial sector and EESA voting. In particular, we examine how this correlation varies across different values of the variables that control for voter interests, special interests.

These analyses address the question of how important personal wealth interests are relative to politicians’ other incentives. In particular, politicians face demands from voters and election campaign contributors that they need to balance against their narrow self-interest if they desire to remain in office for another term. Therefore, personal wealth incentives are strongest in the absence of conflicting interests from voters or from special interests. To test this prediction, we examine how the association between voting and asset holdings in the financial sector depends on the degree of the voters’ opposition against the EESA in the representative’s district. Campaign donations from financial institutions can represent their special interests. As both politicians who hold assets in the financial sector as well as donors from the sector presumably would stand to benefit from the EESA, their interests do not necessarily conflict. A priori then, it is not clear if and how the presence of special interest affects the relative importance of personal wealth interests or constituency interests.

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<sup>18</sup> Specifically, we examine Roll Call vote # 330, (H.R. 2237), # 18 (H.R. 2), # 443 (S. 5), # 437 (H.R. 6304), # 906 (H.R. 976), # 832 (H.R. 3221), and # 1060 (H.R. 3688). The CCES dataset also contains information about voter support for H.J.Res. 88. This roll call, however, took place during the 109<sup>th</sup> Congress.

We examine these issues more closely in a logit regression that includes interactions of our variable of interest (“Investor in financial sector”) with (one-by-one) dichotomized versions of voter and special interest proxies. We turn the variables that enter into the interaction into indicator variables (which take the value of one if their score is above the median, zero otherwise) for ease of interpretation. Mindful of Ai and Norton’s (2003) warning that coefficients and standard errors in logit regressions are difficult to interpret in the presence of interaction effects, we present our evidence in the form of average marginal effects in table 8.<sup>19</sup> For brevity and because the results do not vary much across proxies, we report only one proxy for voter and special interests each.

Perhaps the most important takeaway from table 8 is that the association between personal wealth interests and voting remains economically significant even in the presence of competing interests. Most clearly, this conclusion is supported by the row “double difference”, which provides a test of the differential marginal effect of being an investor in the financial sector versus being a non-investor in the financial sector comparing this difference across above and below the median values of the interacting variable. For example, the double difference reported in column (1) of table 8 equals 0.14 (s.e. = 0.12), which is the difference between the differential marginal effect of being an investor in the financial sector for politicians in districts where the percentage of voters opposing the bank bailout is below the median (0.29) and the differential marginal effect for politicians in districts with above the median opposition against the bailout (0.43). Although some of these double differences are economically meaningful, we do not find that they are statistically significant. In other words, having assets in the financial sector matters for voting regardless of the politician facing high or low voter opposition to the bank bailout or receiving high or low campaign contributions from the financial sector.

Whereas the double differences do not attain significance, it is worthwhile to note that the estimates of the levels of average marginal effects in each of the cells in table 8 conform to economic intuition. For example, politicians who receive more PAC donations by the financial sector are likely to vote in favor of the EESA (0.48) and when they are also an investor in the financial sector, this likelihood is even higher (0.79). For politicians with few financial sector donors, we also find a

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<sup>19</sup> We obtain very similar results (unreported) in a linear probability model.

significant higher likelihood to vote in favor of the EESA when they are investors in the financial sector (0.77), but without being investors their likelihood is markedly lower (0.31).

For the second House vote (on H.R. 1424), our results support the idea that voter interests affect the correlation between being an investor in the financial sector and voting. In particular, we find significant double differences in column 3 for the percentage of voters opposing bank bailout (0.18, s.e. = 0.11), respectively. When the percentage of voter opposition to the bailout is relatively low, the differential marginal effect of being an investor in the financial sector is 0.13, whereas in districts with strong voter opposition, the differential marginal effect is 0.32. Thus, we find that in districts where voters are not too strongly against the bailout, both investors and non-investors in the financial sector are likely to vote in favor of the bailout. However, if the voters are strongly opposed to the bailout, we find that non-investors are much less likely than investors to vote in favor of the bailout (0.44 vs. 0.76). Thus, for the second House vote, the personal wealth interests matter in particular when politician and voter interests are *not* aligned.

We further probe the effect of incentives coming from voters and special interest in unreported tests, in which we use data on whether an incumbent faces an uncontested re-election in November 2008. Uncontested elections reduce pressures on politicians to vote according to the wishes of special interests and constituents. As they run unopposed, these incumbents do not have to cater to their constituency's preferences because even if they support unpopular policies the electoral backlash will be small. Similarly, uncontested incumbents rely less on campaign donations from special interests. By contrasting contested versus uncontested elections, we provide another perspective on how important personal wealth interests are in explaining voting behavior in the presence (absence) of competing interests.

We interact the indicator variable for asset holdings in the financial sector (i.e., our preferred personal wealth sensitivity measure) with an indicator variable that takes the value of one for representatives who are uncontested in the upcoming election. We compute the marginal effects from the personal wealth sensitivity and show that the propensity to vote in favor of the EESA is 32.3 percent higher for politicians who hold assets in the financial sector than for those who do not in the group of uncontested elections ( $p = .07$ ). In *contested* elections, the differential propensity to vote in favor

between investors and non-investors equals, in contrast, to 18.5 percent ( $p < .01$ ). We conclude from this finding that when voter incentives are weak, the correlation between personal wealth interest and the vote is substantial. However, even when competing (i.e., voter) interest are present, personal wealth interest continue to be significantly correlated with voting by politicians.

#### 4.4 The Senate Vote on H.R. 1424

We have highlighted the House vote in our tests thus far. We have done so for three reasons. First, the Senate vote on October 1, was much different from the initial House vote because in the intervening days it became increasingly clear what the economic consequences might be if Congress were not to approve the bill. Senators were very much involved in crafting a “package” that would have sufficient bi-partisan support when the proposal was put to the vote in the Senate. In all, individual members likely experienced less leeway to depart from approved party policy (Hitt and Lueck, 2008). Thus, personal wealth interests would have to be strong to dominate these political realities. Second, some earlier studies suggest that senators, more than House members, are driven by policy preferences and not by electoral or special interests (Diermeier et al., 2005).<sup>20</sup> If so, then we would not necessarily expect personal wealth interests to matter much. Further, as Mian et al. (2010) point out, the sample for the senate is smaller than for the House, which potentially reduces the power of our tests. For this reason, we conduct the tests for the Senate using a limited set of control variables, which include the percentage of voters opposing bank bailouts in the state, the (logarithm of) long term PAC donations by the financial sector, as well as the party affiliation of senators, their seniority, the victory margin in the previous election, and whether they have asset holdings in the non-financial sector.

In unreported tests, we find the log of net wealth is positively associated with the vote, the estimate of 0.32 ( $z = 1.95$ ), corresponds with an average marginal effect of approximately 0.05 ( $z =$

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<sup>20</sup> The fact that senators represent a whole state might be one possible explanation for the finding in prior work that they are more strongly driven by policy preferences than House members (see, e.g., Abramowitz, 1980; Bafumi and Herron, 2010; Levitt, 1996 1996). We investigate this possibility by examining whether House members from states with a single representative in the House behave more like senators. We run our preferred regression specification augmented with an indicator variable that takes the value of one for each of the seven single representative states, and zero otherwise. We interact this new variable with our personal wealth proxy and drop the state fixed effects. In unreported results, we do not find an attenuation of the estimate of personal wealth interests and we also do not find a significant simple effect for single representative states. Thus, it would not appear that the policy over wealth preferences of senators stems from the latter representing the whole state.

2.15). This finding implies that a one-standard deviation change in the log of net wealth increases the propensity to vote in favor of the bill by about 8 percent. We do not find, however, a significant correlation between personal wealth interests and the vote for the remaining proxies.

A comparison between the two House votes and the Senate vote suggests that information about the gravity of the crisis spread at a dramatic pace in this short period. One possible explanation for the pattern we find across the three votes is that representatives who were investors in financial institutions had better information about the gravity of the crisis than the other representatives (perhaps by observing the loss of value in their own holdings). Thus, it is possible that asset holdings do not reflect a potential conflict of interest, but are simply a means by which politicians become better informed about whether government intervention is optimal for the economy.

Although on average the voting in the Senate does not appear to be associated with personal wealth interests, the possibility exists that asset holdings under specific conditions are correlated with voting. We examine this possibility by conditioning the relation on the voters' opposition against the EESA in each state. Specifically, we compute the marginal effects of the personal wealth interests by using the indicator measure of whether a senator holds assets in the financial sector on the Senate vote for the states with high voter opposition and for the states with low voter opposition. We find that the marginal effect of personal wealth interests is 0.15 ( $p = 0.07$ ) for senators who face voters with little opposition and  $-0.09$  ( $p > 0.10$ ) for those representing states in which voters strongly oppose the EESA. Thus, the propensity to vote in favor in the Senate is positively associated with personal wealth interests when other incentives are not too strong.

#### *E. Robustness: Transaction Data*

We use data on the 2008 opening balance of asset holdings of members of Congress to compute our personal wealth sensitivity proxies. Because the first vote did not take place until September 29<sup>th</sup>, 2008, the possibility exists that members divested their holdings or bought more stock in financial institutions in the months before the votes. If so, then our proxies based on the opening balance would not be very clean. We use transactions data from the Financial Disclosure Report to reconstruct the portfolio holdings of each politician on each of the voting days (i.e., September 29<sup>th</sup>, October 1<sup>st</sup>, and October 3, 2008). We then check the sensitivity of the results reported in tables 2 and 3 to the use of the

modified proxies. We find very much the same results and none of the inferences are changed. That said, these transaction data are not very clean. Politicians, for example, do not always report the date on which a purchase or sale occurred. For a significant proportion of transactions, then, we cannot be sure whether they occurred before or after the roll call on the bailout proposals. For this reason, we use the beginning balance holdings data for our main tests.

## **5. Conclusion**

In this paper, we exploit a new dataset with details on the personal wealth of members of Congress to demonstrate that politicians' personal wealth interests are correlated with their voting behavior. In particular, we use this dataset to document voting behavior on key legislative proposals to provide the government's support to the financial sector during the crisis of 2008. Although prior studies document that politicians respond to the interests of their constituency and pressure groups, it has gone virtually unnoticed that they are also investors. As investors, part of their wealth rests with firms whose wellbeing falls under their legislative influence. As such, our findings potentially suggest that the standard economic model of politician voting, which emphasizes the incentives deriving from electoral prospects and the utility gained from seeing one's ideology reflected in policies, should be augmented by a further economically meaningful factor: the personal wealth interests of a given politician.

We show that personal wealth interests are an important correlate of the voting behavior of politicians by examining the impact of personal wealth in settings with varying degrees of competing interests from voters and special interest groups. We report that personal wealth interests are correlated with a given politician's behavior in an economically meaningful way even when the voters strongly oppose the government's intervention. Indeed, the effect of personal wealth interests in general does not seem to depend much on the magnitude of the other determinants of the politician's vote.

Congress recognizes that politicians might use their office to further their personal finances. Doing so is not necessarily illegal. Indeed, federal law defines a conflict of interest quite narrowly and, in general, cases in which politicians support a decision that yields personal financial benefits do not qualify as conflicts of interest as long as the decision benefits many, and not just the member in question (Committee on Standards of Official Conduct, 2008). The House ethics manual even states that "Members of Congress frequently maintain economic interests that merge or correspond with the

interests of their constituents. This community of interests ... is therefore inevitable and unavoidable” (Committee on Standards of Official Conduct, 2008, p. 251). However, we show that personal financial interests are also correlated with voting behavior when the interests of voters and representatives conflict. Former House Speaker Nancy Pelosi has argued “when there’s a thought of conflict of interest between a member’s financial holdings and the government bailouts then the member should divest”. A number of high-profile ethics violations emphasizes that at least some constituencies might not be well represented despite this advice.<sup>21</sup> Congress recently approved the Stop Trading on Congressional Knowledge Act aimed to prevent members from taking advantage of non-public information gleaned from their activities as legislators. There is currently little evidence that members of Congress are indeed able to profit from confidential information (Ziobrowski et al., 2004), but our paper shows that a more direct way is available to politicians to protect their financial interests through their office. And thus while we refrain from drawing direct welfare implications from our results, we do note that strong political institutions are necessary for keeping representatives accountable to their voters and for preventing the abuse of power (Querubin and Snyder, 2013). Accountability, in turn, requires that voters have sufficient information about what explains a politician’s actions (Besley and Prat, 2006). Our study suggests that constituents need to pay attention to the asset holdings of their representatives in relation to their work in Congress.

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<sup>21</sup> See, e.g., the cases of Representatives Maxine Waters and Spencer Bachus.

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APPENDIX A: VARIABLE DEFINITIONS

<b><u>Variable definitions</u></b>	
House vote on H.R. 3997	Indicator variable that takes the value of unity if a given representative votes Yea on H.R. 3997 and zero otherwise
House vote on H.R. 1424	Indicator variable that takes the value of unity if a given representative votes Yea on H.R. 1424 and zero otherwise
Equity investment in financial sector	Dollar amount of a representative's disclosed asset holdings in publicly listed banks, savings associations, bank-holding companies, and savings and loan holding companies, as well as life insurance companies trading on the NYSE, Amex, or the NASDAQ
Expected losses due to investment in financial sector	Number of shares a representative holds in financial institutions at the beginning of 2008 multiplied by each of these shares' change in stock price on September 29, 2008.
Expected losses due to participation in the stock market	Number of shares a representative holds in financial institutions and in nonfinancial S&P 500 firms multiplied by each of these shares' change in stock price on September 29, 2008.
Percentage loss in net wealth in 2008	Percent change in a representative's net wealth during 2008. Net wealth is defined as total assets minus total liabilities reported in the representative's personal finance disclosures and includes bond holdings and real estate.
Net wealth at the beginning of 2008	Dollar amount of the total net wealth at the beginning of 2008 (includes bond holdings and real estate).
Percentage voters opposed to bank bailout	Percentage of voters in a congressional district that indicates in the CCES 2008 survey that they, in principle, oppose legislation on the government's intervention in the financial sector.
Fraction of workforce employed in financial sector	Fraction of the district workforce that is employed in the financial activities sector.
Number of financial institutions	Number of financial institutions headquartered in a given representative's district.
Change in mortgage default rates 2005Q4-2007Q4	Change in mortgage default rates between the fourth quarter of 2005 and the same quarter in 2007 measured at the state level.
Long term PAC donations by financial sector	Total PAC donations made by publicly listed financial institutions to a given politician between 2003 and 2008.
Election cycle 2006-08 PAC donations by financial sector	Total PAC donations made by publicly listed financial institutions to a given politician during election cycle 2006-2008.
DW Nominate ideology score	First dimension of the DW Nominate ideology score for a given politician (Poole and Rosenthal, 2007).

Party affiliation is Republican	Indicator variable that takes the value of unity if the politician is affiliated with the Republican Party and zero otherwise
Victory margin previous election	Victory margin over the closest competitor in the most recent congressional election for a given representative.
Number of terms served	Number of terms served in Congress by a given representative.
Finance committee member	Indicator variable that takes the value of unity if a given representative served on a finance-related committee and zero otherwise. Finance-related committees include the Senate Banking, Housing, and Urban Affairs, the Senate Finance, and the House Financial Services Committees.
Post-congress work in finance sector	Indicator variable that takes the value of unity if a given representative takes a job in the finance sector after the 2008 election
Not running for reelection	Indicator variable that takes the value of unity if a given representative is not running for reelection in 2008 and zero otherwise.
Equity investor in non-financial sector	Indicator variable that takes the value of unity if a given representative owns equity in non-financial S&P 500 firms
Finance-related education	Indicator variable that takes the value of unity if a given representative has obtained a degree in finance or economics and zero otherwise.
Previous employment in financial sector	Indicator variable that takes the value of unity if a given representative has worked in the financial sector prior to their election to Congress and zero otherwise.
Percentage Hispanic	The fraction of households that are Hispanic in a given representative's district.
Percentage Black	The fraction of households that are black in a given representative's district.
Log(median household income)	Natural logarithm of the median household income in a given representative's district.
Percentage in poverty	The fraction of households that are in poverty (according to the Census Bureau definition) in a given representative's district.
Percentage less than high school education	The fraction of the population in a given representative's district without high school attainment
Percentage high school education	The fraction of the population in a given representative's district with high school attainment
Return on spousal DC plan	The annual return over 2008 on the IRA plan of the spouse of a given representative.

TABLE 1  
SUMMARY STATISTICS

	Mean	Median	Standard Deviation	Mean	Median	Standard Deviation
Members of the House, N = 434						
	Investors in financial sector			Non-Investors in financial sector		
	N = 126			N = 308		
Yea vote on H.R. 3997 <sup>#</sup>	0.58	1.00	0.50	0.43	0.00	0.50
Yea vote on H.R. 1424 <sup>#</sup>	0.70	1.00	0.46	0.57	1.00	0.50
<i>Measures of personal wealth interests</i>						
Equity investment in financial sector (× \$1,000)	388.06	32.84	1803.34	-	-	-
Expected losses due to investment in financial sector (× \$1,000)	40.34	4.46	177.82	-	-	-
Expected losses due to participation in stock market (× \$1,000)	175.95	13.25	735.21	1.60	0.00	12.43
Percentage loss in net wealth in 2008 <sup>§</sup>	13.41	11.71	33.55	-15.46	2.63	85.43
Net wealth at the beginning of 2008 (× \$1,000)	12223.87	2306.25	41816.23	2651.70	489.76	19815.58
<i>Measures of voter interest</i>						
Percentage voters opposed to bank bailout (district)	72.72	74.51	9.41	71.92	73.84	9.51
Fraction of workforce employed in financial sector (district)	5.01	4.41	2.07	4.90	4.43	2.02
Number of financial institutions (district)	1.29	1.00	1.48	1.06	1.00	1.36
Change in mortgage default rates 2005Q4-2007Q4 (state)	0.91	1.12	2.07	1.21	1.19	1.94
<i>Measures of special interest (election campaign contributions)</i>						
Long-term PAC donations by financial sector (× \$1,000)	46.21	25.50	56.60	37.23	14.00	61.57
Election cycle 2006-08 PAC donations by financial sector (× \$1,000)	19.77	8.00	26.13	15.55	4.55	26.70
<i>Political controls</i>						
DW Nominate ideology score	0.05	-0.13	0.48	0.02	-0.19	0.52
Party affiliation is republican <sup>#</sup>	0.47	0.00	0.50	0.46	0.00	0.50

Victory margin previous election	33.16	30.00	24.82	36.64	32.00	26.78
Number of terms served	6.14	6.00	4.61	5.93	5.50	4.31
Finance committee member <sup>#</sup>	0.21	0.00	0.41	0.16	0.00	0.37
Post-congress work in finance sector <sup>#</sup>	0.15	0.00	0.36	0.11	0.00	0.32
Not running for reelection <sup>#</sup>	0.06	0.00	0.23	0.06	0.00	0.23
Equity investor in non-financial sector <sup>#</sup>	0.79	1.00	0.41	0.24	0.00	0.43
Finance-related education <sup>#</sup>	0.20	0.00	0.40	0.13	0.00	0.33
Previous employment in financial sector <sup>#</sup>	0.18	0.00	0.39	0.13	0.00	0.33
<i>Census controls</i>						
Percentage Hispanic	0.09	0.05	0.11	0.10	0.04	0.15
Percentage Black	0.13	0.08	0.14	0.11	0.05	0.15
Log(median household income)	10.69	10.63	0.26	10.68	10.66	0.24
Percentage in poverty	0.12	0.11	0.05	0.13	0.11	0.06
Percentage less than high school education	0.20	0.19	0.07	0.20	0.18	0.08
Percentage high school education	0.28	0.29	0.07	0.29	0.29	0.06

*NOTE.*—This table reports the summary statistics for the sample of members of the House who voted on H.R. 3997 and H.R. 1424. We split the sample based on whether a politician invested in publicly listed financial sector institutions at the beginning of 2008 (Investor in financial sector) or not (Non-investor in financial sector). At the time of the vote on the EESA, the House had one vacant seat. See appendix A for variable definitions.

The <sup>#</sup>denotes an indicator variable.

<sup>§</sup> Positive values denote a *loss* in net wealth in 2008 and negative values denote a *gain* in net wealth.

TABLE 2  
THE RELATION BETWEEN PERSONAL WEALTH INTERESTS AND THE HOUSE VOTE ON H.R. 3997

	<u>House Vote on H.R. 3997</u>						
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	Investor in financial sector	Investor in financial sector	Log(Equity investment in financial sector)	Log(Expected losses due to investment in financial sector)	Log(Expected losses due to participation in stock market)	Percentage loss in net wealth in 2008	Log(Net wealth at the beginning of 2009)
Personal wealth interest proxy	1.02*** (0.32)	1.70*** (0.39)	0.14*** (0.04)	0.15*** (0.04)	0.13*** (0.05)	0.01*** (0.00)	0.11* (0.06)
<i>Controls for voter interests</i>							
Change in mortgage default rates 2005Q4-2007Q4	0.10 (0.06)						
Number of financial institutions	0.12 (0.09)	0.18* (0.10)	0.16 (0.10)	0.16 (0.10)	0.15 (0.10)	0.16 (0.11)	0.14 (0.11)
Fraction of constituency working in financial sector	0.09 (0.07)	0.15* (0.09)	0.15* (0.09)	0.14 (0.09)	0.13 (0.09)	0.16* (0.09)	0.12 (0.09)
Percentage of voters opposing bank bailout	-0.04*** (0.02)	-0.04** (0.02)	-0.04* (0.02)	-0.03* (0.02)	-0.03 (0.02)	-0.02 (0.02)	-0.03 (0.02)
<i>Control for special interests</i>							
Log(Long term PAC donations by financial sector)	0.06 (0.05)	0.08 (0.07)	0.08 (0.07)	0.08 (0.07)	0.09 (0.06)	0.09 (0.06)	0.09 (0.06)
<i>Political controls</i>							
DW Nominate	0.11 (0.63)	-0.07 (0.81)	0.05 (0.82)	-0.04 (0.80)	-0.15 (0.78)	-0.12 (0.79)	-0.22 (0.79)
Party affiliation is Republican	-1.38** (0.63)	-1.76** (0.73)	-1.90** (0.74)	-1.76** (0.73)	-1.54** (0.71)	-1.46** (0.73)	-1.38** (0.70)
Victory margin in previous election	0.01 (0.01)	0.00 (0.01)	0.00 (0.01)	0.00 (0.01)	0.00 (0.01)	-0.00 (0.01)	0.00 (0.01)
Number of terms served	0.08*** (0.03)	0.10*** (0.03)	0.09*** (0.03)	0.09*** (0.03)	0.09*** (0.03)	0.11*** (0.03)	0.09*** (0.03)
Finance committee member	0.07 (0.29)	0.05 (0.35)	0.02 (0.35)	0.07 (0.35)	0.05 (0.34)	0.05 (0.37)	0.07 (0.35)
Post congress work in finance sector	0.14	0.10	0.17	0.20	0.29	0.28	0.25

	(0.34)	(0.42)	(0.40)	(0.41)	(0.41)	(0.41)	(0.40)
Not running for reelection	2.81***	3.82***	3.75***	3.80***	3.39***	3.79***	3.24***
	(0.76)	(1.12)	(1.09)	(1.20)	(1.22)	(1.10)	(1.08)
Equity investor in non-financial sector	-0.32	-0.85**	-0.77**	-0.60*	-1.06**	-0.09	-0.06
	(0.29)	(0.34)	(0.33)	(0.32)	(0.48)	(0.28)	(0.28)
<i>Census controls</i>							
Percentage Hispanic	-4.20**	-6.16**	-6.47**	-6.50***	-6.32***	-6.97***	-6.58**
	(1.88)	(2.57)	(2.56)	(2.51)	(2.43)	(2.68)	(2.63)
Percentage Black	-4.33***	-7.19***	-7.42***	-7.46***	-7.53***	-7.08***	-6.19***
	(1.28)	(1.86)	(1.87)	(1.85)	(1.86)	(2.05)	(1.93)
Percentage living in urban environment	0.30	1.86	1.96	1.97	2.48*	1.89	1.76
	(0.94)	(1.37)	(1.36)	(1.35)	(1.36)	(1.40)	(1.37)
Log(median household income)	2.76*	7.47***	7.49***	7.35***	7.58***	8.06***	7.27***
	(1.46)	(2.35)	(2.35)	(2.31)	(2.22)	(2.36)	(2.31)
Percentage in poverty	20.44***	42.24***	42.70***	41.92***	43.31***	46.00***	40.48***
	(7.58)	(11.84)	(11.88)	(11.61)	(11.45)	(11.10)	(11.81)
Percentage less than high school education	-0.55	-1.21	-0.74	-0.37	-0.47	0.65	0.49
	(3.54)	(4.98)	(4.95)	(4.86)	(4.73)	(5.03)	(5.01)
Percentage high school education	3.36	17.23***	16.76***	15.99**	16.93***	14.46**	13.51**
	(3.27)	(6.53)	(6.47)	(6.34)	(6.17)	(6.63)	(6.22)
State fixed effects	Excluded	Included	Included	Included	Included	Included	Included
Observations	433	405	405	405	405	379	390
Chi-squared	91.47	128.8	127.5	127	118.7	119.2	109.9
p-value	0.00	0.00	0.00	0.00	0.00	0.00	0.00

*Note.*—This table reports politician-level logit regressions on the vote in favor of H.R. 3997 for measures of the sensitivity of personal wealth interests to the financial sector. In columns 6-7, we drop politicians who have a negative net wealth in 2008. We also dropped one representative who did not vote on H.R. 3997. Except for column 1, all models contain state fixed effects. Robust standard errors are included in parentheses below the coefficient estimates. See appendix A for variable definitions.

\* Significant at 10%, \*\* significant at 5%, \*\*\* significant at 1%.

TABLE 3  
THE RELATION BETWEEN PERSONAL WEALTH INTERESTS AND THE HOUSE VOTE ON H.R. 1424

	House Vote on H.R. 1424						
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	Investor in financial sector	Investor in financial sector	Log(Equity investment in financial sector)	Log(Expected losses due to investment in financial sector)	Log(Expected losses due to participation in stock market)	Percentage loss in net wealth in 2008	Log(Net wealth at the beginning of 2009)
Personal wealth interest proxy	0.76** (0.32)	1.21*** (0.37)	0.10*** (0.03)	0.10** (0.04)	0.09* (0.05)	0.00 (0.00)	0.05 (0.06)
Change in mortgage default rates 2005Q4-2007Q4	0.07 (0.06)						
Number of financial institutions	0.10 (0.09)	0.21* (0.11)	0.20* (0.12)	0.20* (0.12)	0.20* (0.12)	0.21* (0.12)	0.21* (0.12)
Fraction of constituency working in financial sector	0.23*** (0.08)	0.30*** (0.10)	0.29*** (0.10)	0.29*** (0.10)	0.28*** (0.10)	0.28*** (0.10)	0.27*** (0.10)
Percentage of voters opposing bank bailout	-0.04** (0.02)	-0.05** (0.02)	-0.04** (0.02)	-0.04** (0.02)	-0.04** (0.02)	-0.03* (0.02)	-0.04** (0.02)
Log(Long term PAC donations by financial sector)	0.10* (0.05)	0.13* (0.07)	0.13** (0.07)	0.13** (0.07)	0.14** (0.06)	0.14** (0.06)	0.14** (0.06)
<i>Political controls</i>							
DW Nominate	-0.48 (0.71)	-0.51 (0.88)	-0.47 (0.88)	-0.50 (0.87)	-0.56 (0.85)	-0.66 (0.87)	-0.47 (0.84)
Party affiliation is Republican	-0.70 (0.66)	-1.01 (0.79)	-1.07 (0.79)	-1.03 (0.78)	-0.88 (0.76)	-0.71 (0.78)	-0.89 (0.75)
Victory margin in previous election	0.00 (0.01)	0.00 (0.01)	0.00 (0.01)	0.00 (0.01)	0.01 (0.01)	0.01 (0.01)	0.01 (0.01)
Number of terms served	0.03 (0.03)	0.05# (0.03)	0.05 (0.03)	0.05 (0.03)	0.05 (0.03)	0.05 (0.03)	0.04 (0.03)
Finance committee member	-0.32 (0.31)	-0.49 (0.35)	-0.50 (0.35)	-0.48 (0.35)	-0.49 (0.35)	-0.58 (0.38)	-0.58 (0.35)
Post congress work in finance sector	0.04 (0.38)	0.25 (0.45)	0.29 (0.44)	0.32 (0.45)	0.37 (0.44)	0.35 (0.44)	0.42 (0.44)

Not running for reelection	2.59*** (0.81)	2.87*** (0.89)	2.82*** (0.88)	2.89*** (0.95)	2.68*** (0.94)	2.52*** (0.88)	2.57*** (0.86)
Equity investor in non-financial sector	-0.03 (0.29)	-0.30 (0.33)	-0.22 (0.33)	-0.12 (0.33)	-0.37 (0.50)	0.32 (0.28)	0.28 (0.29)
<i>Census controls</i>							
Percentage Hispanic	-4.13** (1.62)	-4.42** (2.14)	-4.52** (2.15)	-4.56** (2.13)	-4.50** (2.09)	-4.55** (2.32)	-4.20* (2.23)
Percentage Black	-2.92* (1.50)	-4.26** (2.03)	-4.41** (2.03)	-4.45** (2.01)	-4.44** (2.00)	-5.11** (2.27)	-3.72* (2.10)
Percentage living in urban environment	1.31 (0.96)	2.37* (1.41)	2.40* (1.41)	2.41* (1.41)	2.67* (1.40)	2.26† (1.39)	1.98 (1.40)
Log(median household income)	3.54** (1.53)	6.98*** (2.42)	6.86*** (2.42)	6.75*** (2.38)	6.76*** (2.37)	6.78*** (2.44)	6.70*** (2.35)
Percentage in poverty	25.00*** (8.59)	39.20*** (12.98)	39.00*** (13.01)	38.49*** (12.85)	39.34*** (12.88)	40.34*** (13.02)	37.97*** (12.82)
Percentage less than high school education	-0.16 (3.67)	-1.42 (4.99)	-1.35 (4.93)	-1.14 (4.87)	-1.48 (4.73)	-1.89 (4.81)	-1.45 (4.81)
Percentage high school education	5.19 (3.67)	14.56** (6.92)	14.02** (6.82)	13.54** (6.71)	13.49** (6.63)	12.23* (6.78)	11.77* (6.66)
State fixed effects	Excluded	Included	Included	Included	Included	Included	Included
Observations	434	411	411	411	411	385	396
Chi-squared	90.21	133.1	129.5	129	119.4	110	112.2
p-value	0.00	0.00	0.00	0.00	0.00	0.00	0.00

*Note.*—This table reports politician-level logit regressions on the vote in favor of H.R. 1424 for measures of the sensitivity of personal wealth interests to the financial sector. In columns 6-7, we drop politicians who have a negative net wealth in 2008. Except for column 1, all models contain state fixed effects. Robust standard errors are included in parentheses below the coefficient estimates. See appendix A for variable definitions.

\* Significant at 10%, \*\* significant at 5%, \*\*\* significant at 1%.

TABLE 4  
VOTING IN FAVOR OF GOVERNMENT'S SUPPORT CONTROLLING FOR LATENT POLITICAL CONNECTIONS

	HOUSE VOTE ON H.R. 3997				HOUSE VOTE ON H.R. 1424			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Investor in financial sector		1.77*** (0.45)		1.96*** (0.41)		1.38*** (0.44)		1.30*** (0.39)
Investment-PAC sensitivity	0.73* (0.43)	-0.17 (0.53)			0.38 (0.43)	-0.41 (0.54)		
Investment-lobby expenditure sensitivity			-0.03 (0.04)	-0.101** (0.04)			-0.01 (0.04)	-0.05 (0.05)
Controls for voter and special interests	Included	Included	Included	Included	Included	Included	Included	Included
Political controls	Included	Included	Included	Included	Included	Included	Included	Included
Census controls	Included	Included	Included	Included	Included	Included	Included	Included
State fixed effects	Included	Included	Included	Included	Included	Included	Included	Included
Observations	405	405	405	405	411	411	411	411
Chi-squared	119.84	129.6	117.52	133.51	120.31	134.06	119.42	134.95
<i>p</i> -value	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

*Note:* This table reports on variations of the main specification to explain the House vote on the EESA. In columns (1) and (5) we add the Tahoun Investment-PAC sensitivity proxy to the set of control variables, but drop the variable of interest (Investor in financial sector). In columns (2) and (6) we include the Tahoun proxy together with the variable of interest (Investor in financial sector). Columns (3-4) and (7-8) add the Investment-lobby expenditure variable to the set of controls and then to the preferred specification together with the variable of interest. See appendix A for variable definitions. Robust standard errors are reported in parentheses.

\* Significant at 10%, \*\* significant at 5%, \*\*\* significant at 1%.

TABLE 5  
UNOBSERVED PREFERENCES FOR THE FINANCIAL SECTOR

	HOUSE VOTE ON H.R. 3997					HOUSE VOTE ON H.R. 1424				
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Investor in financial sector	1.84*** (0.41)	1.71*** (0.40)	1.70*** (0.39)	1.70*** (0.39)	1.86*** (0.41)	1.34*** (0.38)	1.19*** (0.36)	1.18*** (0.37)	1.21*** (0.37)	1.30*** (0.39)
Ex-investor in financial sector	0.47 (0.46)				0.51 (0.47)	0.48 (0.41)				0.41 (0.43)
Previous employment in financial sector		-0.21 (0.41)			-0.23 (0.42)		0.11 (0.43)			0.02 (0.44)
Finance or economics-related education			0.06 (0.38)		0.10 (0.39)			0.47 (0.40)		0.51 (0.41)
Finance committee member				0.05 (0.35)	0.11 (0.36)				-0.49 (0.35)	-0.43 (0.36)
Voter interest controls	Included	Included	Included	Included	Included	Included	Included	Included	Included	Included
Special interest controls	Included	Included	Included	Included	Included	Included	Included	Included	Included	Included
Political controls <sup>#</sup>	Included	Included	Included	Included	Included	Included	Included	Included	Included	Included
Census controls	Included	Included	Included	Included	Included	Included	Included	Included	Included	Included
State fixed effects	Included	Included	Included	Included	Included	Included	Included	Included	Included	Included
Observations	405	405	405	405	405	411	411	411	411	411
Chi-squared	128.8	129.1	128.7	128.8	129	132	132	133.8	133.1	137.7
<i>p</i> -value	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

*Note:* This table reports on variations of the main specification to explain the House vote on the EESA. We include our preferred measure of personal wealth interests (Investor in financial sector) and add consecutively (columns 1-4 and 6-9) proxies for unobserved preferences for the financial sector. In columns 5 and 10 we add all proxies for unobserved preferences for the financial sector at the same time. Robust standard errors are in parentheses. See appendix A for variable definitions.

\*\*\*, \*\*, \*, denotes significant at the 10%, 5%, and 1% levels respectively.

<sup>#</sup>Political controls do not include the finance committee member variable.

TABLE 6  
 USING SPOUSAL DEFINED CONTRIBUTION PLAN RETURNS AS A SOURCE OF EXOGENOUS VARIATION  
 IN POLITICIANS' WEALTH

	LOGIT			
	H.R. 3997		H.R. 1424	
	(1)	(2)	(3)	(4)
Return on spousal DC plan <sup>§</sup>	3.90*** (1.33)		2.74 (1.78)	
Negative return on spousal DC plan <sup>#</sup>		1.47* (0.75)		1.63* (0.85)
Controls	Included	Included	Included	Included
State fixed effects	Excluded	Excluded	Excluded	Excluded
Observations	84	84	81	81
Chi-squared	21.47	15.31	22.97	26.14
<i>p</i> -value	0.43	0.81	0.29	0.16

*NOTE.*—This table reports politician-level logit regressions on the vote in favor of H.R. 3997 and on the vote in favor of H.R. 1424 for the sensitivity of personal wealth interests to the financial sector. We use a sub sample of politicians whose spouses participated in Defined Contribution plans. Conditional on participation, we use the 2008 annual return on the IRA plan multiplied by  $-1$  and an indicator variable that equals one if the annual return on the spousal IRA plan was negative in 2008 as a source of exogenous variation in the politician's wealth sensitivity to the financial sector. All models include the full set of controls from table 2. See appendix A for variable definitions. Robust standard errors are included in parentheses below the coefficient estimates.

\* Significant at 10%.

\*\* Significant at 5%.

\*\*\* Significant at 1%.

The <sup>#</sup> denotes an indicator variable.

<sup>§</sup> Positive values denote a *loss* (i.e., negative returns) in 2008 and negative values denote a *gain*.

TABLE 7  
TREATMENT EFFECT ESTIMATES BASED ON NEAREST NEIGHBORHOOD MATCHING ON IDEOLOGY AND PARTY AFFILIATION

Personal wealth proxy: Investor in financial sector	<u>HOUSE VOTE ON H.R. 3997</u>		<u>HOUSE VOTE ON H.R. 1424</u>	
	Party affiliation	DW-Nominate	Party affiliation	DW-Nominate
	(1)	(2)	(3)	(4)
ATE	0.116** (0.06)	0.131** (0.06)	0.096* (0.05)	0.105** (0.05)
Observations	433	433	434	434
Additional matching variables	PAC donations, Voter opposition against bailout			
Exact match	Yes	No	Yes	No

*Note:* This table presents nearest neighborhood matching average treatment effect estimates (Abadie and Imbens, 2006; Abadie and Imbens 2011) of the preferred measure of personal wealth (i.e., “Investor in financial sector” onto the vote on H.R. 3997 and on H.R. 1424. Politicians are matched based on the campaign donations from financial institutions and on the degree of voter opposition against the EESA in their district. In Columns (1 and 3), we present the bias-corrected average treatment effect estimate when we also perform an exact match on Party affiliation of the politician. Columns (2 and 4) present the treatment effect when matching on the DW-Nominate measure of a given politician’s ideology. See appendix A for variable definitions. Inferences are based on robust Abadie-Imbens standard errors.

\* Significant at 10%, \*\* Significant at 5%, \*\*\* Significant at 1%.

TABLE 8  
CROSS-SECTIONAL VARIATION IN THE AVERAGE MARGINAL EFFECTS OF ASSET HOLDINGS IN THE FINANCIAL SECTOR

	HOUSE VOTE ON H.R. 3997		HOUSE VOTE ON H.R. 1424	
	Percentage of voters opposing bank bailout	Log(Long term PAC donations by financial sector)	Percentage of voters opposing bank bailout	Log(Long term PAC donations by financial sector)
	(1)	(2)	(3)	(4)
	<i>Below median</i>		<i>Below median</i>	
Non-investor in financial sector	0.50*** (0.05)	0.31*** (0.05)	0.72*** (0.05)	0.51*** (0.05)
Investor in financial sector	0.79*** (0.07)	0.77*** (0.08)	0.85*** (0.05)	0.74*** (0.08)
	<i>Above median</i>		<i>Above median</i>	
Non-investor in financial sector	0.28*** (0.05)	0.48*** (0.06)	0.44*** (0.06)	0.69*** (0.05)
Investor in financial sector	0.71*** (0.08)	0.79*** (0.07)	0.76*** (0.07)	0.90*** (0.04)
Double difference	0.14 (0.12)	-0.14 (0.12)	0.18* (0.11)	0.03 (0.12)

*NOTE.*—This table presents the cross-sectional variation in the average marginal effects of a given politician holding assets in the financial sector (or not) on the propensity to vote in favor of EESA. We present the marginal effects computed from our augmented main specification, which now includes an interaction term (and simple effect) of the percentage of voters opposing bank bailout and the natural logarithm of the long term PAC donations by financial sector, each added one-by-one. For ease of interpretation, we transform both of these variables into indicator variables that take the value of unity for scores above the median, and zero otherwise. All other independent variables are evaluated at their mean. The final row presents the estimate of the “double difference”, i.e., the differential marginal effect between non-investor and investor in financial sector compared across the above and below median value of the interacting variable. See appendix A for variable definitions. Robust standard errors are reported below the marginal effects estimates in parentheses.

\* Significant at 10%, \*\* Significant at 5%, \*\*\* Significant at 1%.

