

The Political Economy of the U.S. Mortgage Default Crisis

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Abstract

We examine the determinants of politician voting behavior on two of the most significant pieces of federal legislation in U.S. economic history: the American Housing Rescue and Foreclosure Prevention Act of 2008 and the Emergency Economic Stabilization Act of 2008. We find evidence that constituent interests and special interests influence voting patterns, even after controlling for politician ideology. Representatives from districts experiencing an increase in mortgage default rates are significantly more likely to vote in favor of the AHRFPA. Special interest campaign contributions from the financial services industry predicts voting in favor of the EESA, a bill which represents a transfer of wealth from tax payers to the financial services industry. We examine the trade-off between politician ideology and constituent and special interests, and we find that conservative politicians are less responsive to constituent mortgage default rates and financial industry campaign contributions, even in the midst of major financial turmoil. This latter finding suggests that politicians, through ideology, can commit against intervention even during severe crises.

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1 Introduction

The mortgage default crisis has led to two of the most significant pieces of federal legislation in U.S. economic history. In July 2008, the U.S. Federal Government passed the American Housing Rescue and Foreclosure Prevention Act (“AHRFPA”), which provides up to \$300 billion in Federal Housing Administration insurance for renegotiated mortgages and unlimited support for Freddie Mac and Fannie Mae. In October 2008, the U.S. Federal Government enacted the Emergency Economic Stabilization Act (“EESA”), which enables the Treasury Department to recapitalize banks through direct purchase of new equity and severely distressed mortgage backed securities up to \$700 billion. These bills have forced an increase in the national debt ceiling of over \$1 trillion, and they guarantee significant government intervention in the mortgage market and financial industry for years to come.

In this study, we empirically examine the determinants of politician voting behavior on these historically important bills. Political economists have long argued that government policy toward the economy is determined by the confluence of three factors: politician ideology, constituent interests, and special interests. However, previous empirical studies have difficulty separating the effects of politician ideology from other factors. For example, it is difficult to disentangle politician ideology from constituent interests given that legislators with a track record of voting conservatively (the most common measure of ideology) also represent districts in which constituent interests are aligned with the conservative agenda.

We are in a unique position to resolve this empirical difficulty given a data set that contains precise measures of constituent and special interests that can be separated from the effects of ideology on voting behavior. Using this data set, we show that constituent and special interests are an important determinant of voting behavior on the AHRFPA and the EESA, even after controlling for politician ideology. Even more important, the ability to distinguish politician ideology from constituent and special interests allows us to examine the trade-offs inherent in political decision making. In this regard, we demonstrate that politicians ideologically opposed to government intervention in the economy are less responsive to heightened constituent and special interests, even in the midst of a major financial crisis.

In our analysis of the AHRFPA, we find strong evidence that constituent interests affect politician voting behavior. Using zip code level data on mortgage defaults, we are able to precisely measure changes in constituent demand for mortgage relief at the district level, and we find that U.S. representatives from high mortgage default districts are more likely to vote in favor of the

AHRFPA, even after controlling for ideology and district demographic characteristics. When we decompose the 2007 year end default rate into the 2005 year end default rate and the change in default rate from 2005 to 2007, we find that politicians are primarily responding to the change in the default rate. Since ideological preferences are fixed in the short run, this result further strengthens the interpretation that representatives respond directly to constituent interests. Our preferred estimate implies that a one standard deviation increase in mortgage default rates in 2007 leads to 12.5 percentage point increase in the likelihood of voting for the AHRFPA.

Further we find that representatives are remarkably precise in responding to their constituents' interests. Since the mortgage bill has no impact on voters with credit card or auto defaults, a representative should not change his voting behavior if the percentage of non-mortgage related defaults changes. We find that defaults on non-mortgage debt (credit card, auto loans, etc.) have no predictive power in determining votes on the AHRFPA, while mortgage debt default rates have strong predictive power.

Interestingly, politicians do not respond equally to all of their constituents. Instead, they respond to their own voting bloc. More specifically, Republican politicians are more likely to vote for the AHRFPA if the zip codes within their district experiencing mortgage defaults have a high number of registered Republicans. In contrast, Republicans are less responsive if the high mortgage default rate zip codes within their district have a high number of registered Democrats. These results provide support to the "dual constituency" hypothesis that legislators respond more strongly to their own supporters within their overall constituency (Fiorina (1974)).

We also find evidence in support of the view that representatives respond to constituent interests due to electoral pressure. Representatives are more likely to respond to an increase in their constituents' default rates by voting in favor of the AHRFPA if their election is closely contested or if their district lies in a presidential swing state.

We then turn to an examination of the EESA, which represents an unambiguous wealth transfer from tax payers to the financial services industry. Given the wealth transfer, the EESA allows for a tight test of special interest influence on Congressional voting patterns. We find that one of the most important determinants of voting patterns on the EESA is the amount of campaign contributions from the financial services industry. Our estimates imply that a one standard deviation increase in campaign contributions from the financial services industry leads to a 10 percentage point increase in the likelihood of a politician voting for the bill. Moreover, this estimate is robust to the inclusion

of politician ideology, district census demographics, the fraction of constituents working for the financial industry, and whether the representative serves on the financial committee. Our results demonstrate that special interest campaign contributions influence voting patterns on this historical legislation.

Our results suggest that constituent interests and special interests determine politician voting patterns on the AHRFPA and the EESA, respectively. In the last section of the analysis, we examine the trade-off between politician ideology and constituent and special interests. More specifically, in both the AHRFPA and the EESA, there is an important conflict: While heightened constituent and special interests push politicians to vote in favor of massive government intervention, conservative politicians with ideological opposition to the legislation may be less responsive to such heightened interests.

We find strong evidence for such a trade-off. For the AHRFPA, mortgage default rates in a congressional district have a significantly weaker impact on politician voting behavior if the politician is ideologically conservative. In other words, constituent interests have a lower impact when the politician is ideologically opposed to government intervention. Likewise, in regard to the EESA, campaign contributions from the financial services industry have a significantly weaker impact on politician voting behavior if the politician is ideologically conservative. Taken together, these results highlight the importance of politician ideology with respect to heightened constituent and special interests. When politicians are ideologically conservative, they are less responsive to constituent and special interests even in the midst of a major financial crisis.

We are the first, to our knowledge, to explore the political economy of the mortgage default crisis. Our findings also represent an important contribution to the political economy literature on constituent interests, special interests, and the politics of financial bailouts. By leveraging the suddenness of the mortgage crisis shock, our analysis can precisely isolate the effect of constituent interests from ideology and district demographics on Congressional voting patterns, which is related to work by Poole and Rosenthal (1985, 1997), Heckman and Snyder (1997), Peltzman (1984 and 1985), Grier and Munger (1991), Levitt (1996), Lee, Moretti, and Butler (2004) and, with specific reference to consumer bankruptcy reform, Nunez and Rosenthal (2004). Moreover, we are the first, to our knowledge, to show that politicians respond to their own specific voting bloc within their broader constituency, which is related to research by Fiorina (1974) and Levitt (1996). Our findings on the importance of special interests is related to research by Ansolabehere, Snyder, and

Tripathi (2002), Austen-Smith (1987, 1995), Bombardini and Trebbi (2008a, 2008b), Gawande and Bandypadhyay (2000), Goldberg and Maggi (1999), Grossman and Helpman (1994, 2001), Nunez and Rosenthal (2004), and Stratmann (1991, 2005)).

We also demonstrate the importance of the trade-off between politician ideology and constituent and special interests. This finding is particularly important for the literature on the political economy of financial markets (Perotti and von Thadden (2006), Bolton and Rosenthal (2002), Kroszner and Strahan (1999), Kroszner and Rajan (1994), Kroszner (1991), Khwaja and Mian (2004)). More specifically, our findings suggest that ideologically conservative politicians may be able to commit ex ante to a position that opposes government intervention ex post, even in the midst of a severe financial crisis. The ability to partially commit against ex post intervention is an important aspect of the pricing of systematic risk as it relates to extreme crisis situations.

The rest of our analysis proceeds as follows. The next section provides background on the AHRFPA and the EESA, and describes how these bills were perceived by constituents and special interests. Section 3 presents the data and summary statistics. Section 4 presents the empirical model and the results. Section 5 concludes.

2 The Legislative Response to the Mortgage Default Crisis

In this section, we describe the two pieces of legislation that are central to our analysis. We also describe how these bills were perceived by constituents and special interests at the time of passage.

Before describing the details of the bills, it is important to emphasize the magnitude of the mortgage default crisis and its effects on the economy. From 2005 to 2007, Mian and Sufi (2008) show that the aggregate default rate on mortgages more than doubled. According to the S&P/Case Shiller home price indices, home prices have declined by 20% since the peak in 2006. The U.S. Department of Treasury was forced to nationalize the mortgage giants Freddie Mac and Fannie Mae in September 2008 given their enormous losses on subprime mortgage backed securities. Some of the world's largest financial institutions, including Bear Stearns, AIG, Lehman Brothers, and Washington Mutual, have failed or been acquired directly because of the plummeting value of subprime mortgage backed securities. It is in this environment that the U.S. Congress has conducted a massive intervention in financial markets through the AHRFPA and the EESA.

2.1 The American Housing Rescue and Foreclosure Prevention Act of 2008

The initial U.S. Congressional response to the mortgage default crisis evolved between the summer of 2007 and the summer of 2008, leading to the signing of the American Housing Rescue and Foreclosure Prevention Act (AHRFPA) on July 30, 2008 by President Bush.¹ The final version of the AHRFPA included a number of provisions meant to aid the ailing housing sector. The act gave the U.S. Federal Government, through the Federal Housing Administration, the ability to insure \$300 billion of refinanced mortgages. Such insurance was provided for mortgage lenders that voluntarily agreed to reduce mortgage principal and delinquency fees.

The AHRFPA also increased the Treasury's authority under existing lines of credit to Freddie Mac, Fannie Mae, and the Federal Home Loan Banks for 18 months, giving Treasury standby authority to buy stock or debt in those companies. The amount of the line of credit was unlimited during these 18 months.² In addition, the act increased FHA loan limits and provided tax breaks for first-time home buyers, both of which were attempts to increase the demand for housing. Finally, the act called for a regulatory overhaul of the Office of Federal Housing Enterprise Oversight (OFHEO) by establishing the Federal Housing Finance Agency, which is charged with broad supervisory and regulatory powers over the operations, activities, corporate governance, safety and soundness, and mission of the Government Sponsored Enterprises (GSEs).

Overall, at the time of passage, the AHRFPA represented one of the most dramatic government interventions in the housing sector in recent history. The New York Times (July 24th, 2008) reported that "[the legislation] would rank in importance with the creation of the Home Owners' Loan Corporation to prevent foreclosures in the 1930s as part of the New Deal, and the legislation in 1989 responding to the savings and loan crisis." A quote from a Wall Street Journal article (July 24th, 2008) argued that "... this is the most important piece of housing legislation to come along in a generation." As Paletta and Hagerty (2008) noted, "as a result of the bill, Congress will raise the national debt ceiling to \$10.6 trillion from \$9.8 trillion."

In discussing how constituent and special interests perceived this legislation, it is important to emphasize that politician voting patterns were influenced by the perceptions of these interests at the

¹The following information comes from a document entitled "H.R. 3221: Detailed Summary" available at http://financialservices.house.gov/detailed_summary_of_hr_3221.pdf. See also Herszenhorn (2008), Montgomery (2008), and Paletta and Hagerty (2008).

²This line of credit to Fannie Mae and Freddie Mac became obsolete in September when the U.S. Department of Treasury took over the institutions.

time of passage. In terms of the perceived beneficiaries of the legislation, the primary component of the bill, the FHA insurance for renegotiated mortgages, represented a transfer from tax payers to the lenders and borrowers that renegotiate mortgages. Under the legislation, the renegotiation of any mortgage is voluntary, which implies that neither lenders nor borrowers could be made worse off directly from the bill.³ There is, however, some evidence that mortgage lenders faced implicit pressure to agree to write down principal in order to initiate renegotiations. For example, on the day the bill was passed, Representative Barney Frank (D-MA), chairman of the House Financial Services Committee, was quoted in the New York Times as follows: "Many of these institutions know this is coming. I hope they will be able to take advantage of it right away." And in the Washington Post, Frank is quoted as follows: "I would be very disappointed if, having helped us formulate this, they don't take advantage of it." Overall, the primary beneficiaries of the legislation were households either in default or close to default on mortgage payments. Mortgage lenders were also beneficiaries, but there may have been implicit Congressional pressure that would reduce the benefits if mortgage lenders were forced to renegotiate mortgages at a loss.

Our main focus in the empirical analysis below is the vote on the final passage of this bill help on July 26th, 2008.⁴ However, there was also a vote on May 8th, 2008; the focus of this previous vote was the \$300 billion insurance program, as Freddie Mac and Fannie Mae had yet to experience sharp losses that required government intervention.⁵ In specifications below, we exploit the fact that some politicians switched votes to help understand the determinants of voting behavior on the final version of the AHRFPA.

³Through general equilibrium effects on the future contracting environment, it is possible that borrowers and lenders could be worse off after the legislation if it created moral hazard or additional credit rationing. However, we are interested in measuring the direct costs and benefits to parties that could potentially renegotiate existing contracts.

⁴Roll call 519: "Concur in Senate Amendment with House Amendment: H R 3221 Foreclosure Prevention Act of 2008".

⁵Roll call 301: "On Agreeing to the Senate Amendment with Amendment No. 1: H R 3221 Foreclosure Prevention Act of 2008". The Wall Street Journal (May 9, 2008) refers to the vote as follows: "The House voted 266-154 in favor of the centerpiece of the legislation – \$300 billion in federal loan guarantees – despite a White House veto threat." In particular, "The heart of the legislation is a program to help struggling homeowners by providing them with new mortgages backed by the Federal Housing Administration. The guarantees would be provided if lenders agree to reduce the principal of a borrower's existing mortgage."

2.2 The Emergency Economic Stabilization Act of 2008

Beginning in the second week of September 2008, a series of events indicated that the U.S. financial sector was in the midst of a severe crisis. While the lack of capital in the banking industry had been a problem since August of 2007, more troublesome patterns emerged with distress at Lehman Brothers during the week of September 8th, 2008, which ultimately led to the largest bankruptcy filing in history on Monday, September 15th. On Tuesday, September 16th, the US government nationalized the American International Group (AIG) after the insurance firm experienced sharp losses and potential downgrades related to the writing of credit default swaps. On Wednesday, September 17th, a few large money market funds "broke the buck," which effectively meant losses on deposits that were supposed to be close to riskless. In the midst of the financial market turmoil, on Friday, September 19th, initial news reports suggested that "the federal government is working on a sweeping series of program that would represent perhaps the biggest intervention in financial markets since the 1930s" (Wall Street Journal, September 19th).

The EESA (2008) passed the U.S. House of Representatives on Friday, October 3rd. The hallmark of the legislation was authorization for the U.S. Department of Treasury to buy up to \$700 billion of "mortgages and other assets that are clogging the balance sheets of financial institutions ..." (Dodd (2008)). While the original intention of the bill was for the Treasury to buy severely distressed subprime mortgage backed securities, more recent interpretations suggest that the act can be used by Treasury to inject capital directly into banks through an equity investment. The bill also included up to \$150 billion of unrelated tax breaks for individuals and businesses, and an increase in FDIC insurance for depositors from \$100,000 to \$250,000.

How was this bill perceived by constituents and special interests? At least in the short run, it is clear that the legislation represented a large wealth transfer from U.S. tax payers to the financial services industry. At the time of this writing, the Treasury has yet to purchase assets or equity from financial institutions. But if the legislation is to help resolve the lack of capital in the banking industry, it will most likely involve purchasing distressed assets and equity from financial institutions at values above what the private market is willing to pay. For this reason, the most direct beneficiary of the legislation was the financial services industry.

Our main focus in the empirical analysis is the vote in the U.S. House of Representatives on

this bill on October 3rd, 2008.⁶ There was also a vote on Monday, September 29th, 2008.⁷ In the initial vote, the House rejected the bill. The October 3rd bill was different in two main respects: first, it called on the FDIC to lift protection from \$100,000 to \$250,000 for individual depositors. Second, it included the additional tax breaks mentioned above. While our primary focus is on the October 3rd vote, we also examine the characteristics of 58 legislators that voted against the September 29th bill and for the October 3rd bill.

3 Data and Summary Statistics

3.1 Data

Our analysis of the determinants of voting patterns on the AHRFPA and the EESA utilizes four main sets of data: consumer credit data, congressional electoral and voting data, campaign contribution data, and voter registration data. Data on consumer debt outstanding and delinquency rates are from Equifax Predictive Services. Equifax collects these data from consumer credit reports, and aggregates the information at the zip code level. The availability of disaggregated geographical data on defaults is a major advantage of our analysis, as it allows us to measure constituent interests as they relate to the default crisis. Furthermore, the availability of zip code level default data allows us to construct measures of a politician's particular voting bloc within the congressional district. The Equifax data are available at an annual frequency from 1991 to 1997, and at a quarterly frequency from 1998 through the fourth quarter of 2007.⁸ In the following analysis we define default amounts as any amount that is 30 days or more delinquent. The majority of our analysis focuses on mortgage default rates, but we also examine home equity and non-housing consumer debt default rates in some of the results. In order to aggregate zip code level data to the congressional district level, we utilize the MABLE-Geocorr software.⁹

Our second main data set covers congressional district electoral and voting behavior. These

⁶Roll call vote 681 on "Motion to concur in Senate Amendment" on H.R. 1424 "Emergency Economic Stabilization Act of 2008"

⁷Roll call vote 674 on "On Concurring in Senate Amendment with an Amendment" on H.R. 3997 "To amend the Internal Revenue Code of 1986 to provide earnings assistance and tax relief to members of the uniformed services, volunteer firefighters, and Peace Corps volunteers, and for other purposes"

⁸See Mian and Sufi (2008) for further details on the Equifax data.

⁹Supported by the Missouri Census Data Center. Zip codes are 5-digit ZIP (ZCTA-ZIP Census Tab. Area 2000) and matched to congressional districts. All the aggregates are population weighted sums.

data include party affiliation, vote margins in the November 2006 midterm elections, committee assignments of the representatives from the district (Stewart and Woon (2008)), and the DW-Nominate representative ideology scores which are increasing in conservatism (Poole and Rosenthal (1997)).¹⁰

Our third main data set covers campaign contributions by special interest groups. We obtain campaign contributions data from the Center for Responsive Politics (CRP), a nonpartisan and nonprofit organization, which directly collects the information from the Federal Election Commission political contributions reports.¹¹ The advantage of the CRP data is that it covers contributions from Political Action Committees (PACs, the main channel for firms' political activity) and individual contributions (above \$200) sorted on the basis of the contributor's employer. This allows for a comprehensive measurement of the overall contributions of a specific industry. Our main industry of interest is the Finance, Insurance, & Real Estate industry. The top four contributors from this industry in the 2008 election cycle are Goldman Sachs (\$4.5M), Citigroup (\$3.7M), JP Morgan Chase & Co (\$3.3M), and Morgan Stanley (\$3.1M).

Our fourth main data set is zip code level voter registration data. These data are collected directly from voter registration forms, and are provided by the political technology firm Aristotle.¹² While the data are not available for all states, they are available for 84% of the U.S. Congressional Districts. These data allow us to weight zip code level default rates using the fraction of voters that are registered Republicans or registered Democrats.

3.2 Summary Statistics

Table 1 presents summary statistics. The variables are split into five categories: measures of constituent interests, a measure of special interests, a measure of ideology, other political variables, and census demographics. Districts are separated by the party affiliation of the representative in the 110th Congress (2007-2008).

Our main proxy for constituent support for the AHRFPA of 2008 is the mortgage default rate as of the end of 2007. While mortgage default rates for Democratic districts are higher than for

¹⁰Within the political science literature DW-nominate is one of the most popular proxies for ideology. In extreme synthesis, the DW-Nominate score is an estimated ideological position based on the legislator's past roll call voting records within a random utility choice model.

¹¹See <http://www.opensecrets.org> and <http://www.fec.gov/disclosure.shtml>

¹²We are extremely grateful to Matthew Gentzkow and Jesse Shapiro for sharing these data with us.

Republican districts in both 2005 and 2007, both experience a sharp increase in default rates over these two years. For Republican districts, the increase in the mortgage default rate from 2005 to 2007 (2.2%) is equivalent to almost two standard deviations in the mortgage default level as of 2005 (1.2%). The registered Republican and Democratic mortgage default rate is constructed using the zip code level information on defaults and voter registration. The registered Republican (Democratic) default rate is constructed as the population weighted sum of default rates across zip codes where the weights are given by the fraction of registered Republicans (Democrats) in the zip code. We also construct the “home default rate” by aggregating home equity defaults with mortgage defaults, and the combined variable closely mirrors the mortgage default rate. Table 1 also includes information on the non-home default rate, which includes defaults on credit card debt, auto debt, consumer loans, and student loans.

Measures of constituent support for the EESA of 2008 include the fraction of the workforce in a congressional district that is employed by the financial services industry and the fraction of households with greater than \$200,000 in annual household income. In addition to the mortgage default rate, these variables measure constituent support for the EESA given that the bill represents a transfer of wealth from tax payers to the financial services industry.

Our primary measure of special interest support for the EESA is campaign contributions made by the financial services industry, defined in the CRP data as donations from the Finance, Insurance, & Real Estate industry. The statistics in Table 1 represent the aggregate campaign contributions by the financial services industry since 1992. The mean for both Republicans and Democrats is about \$500,000. In terms of politician’s ideology, the DW nominate score, which is increasing in conservatism of the representative, is significantly lower for Democratic districts than for Republican districts. Table 1 also lists summary statistics for political and census demographic control variables.

4 Empirical Model and Results

In this section, we derive and estimate a reduced form model that examines the determinants of politician voting behavior on the AHRFPA and the EESA. As we show below, the goal of the empirical analysis is to test whether, for a given ideological stance on legislation, constituent and special interests influence the voting pattern of politicians.

4.1 Empirical Model

Our empirical specifications are based on the following simple politician utility model. Consider a legislature with $i = 1, \dots, N$ members. Each member i is characterized by preferences over her vote on a particular bill v :

$$U_i = \theta f(v_i) + g(v_i) + \varepsilon_i^v \quad (1)$$

where the function f maps the Yea/Nay vote into a unidimensional ideological preference space and g maps the vote into reelection probabilities that, for simplicity, are in the same units in which utility is measured. The parameter θ converts ideological losses into increments of reelection probabilities and ε_i^v is a random preference component. A random utility approach to the representative decision implies that the choice of a Yea vote ($v = 1$) follows

$$\Pr(v_i = 1) = \Pr(\theta(f(1) - f(0)) + g(1) - g(0) > \varepsilon_i^0 - \varepsilon_i^1).$$

In general, ideological losses and deterioration of electoral prospects may or may not conflict. Whenever a vote conflicts with the representative's ideological stance *and* with constituent interests, the probability of voting in support will be low. Whenever a vote conflicts with the representative's ideological stance *but* favors the member's constituent interests, the probability of voting in support of the bill will depend on the relative strength of the two. A representative will support a bill even if it is relatively against her principle if the vote produces a large enough increment of her reelection prospects.

Operationally, we will assume stark functional forms only to keep the empirical analysis as transparent as possible, with $f(v_i) = -ID_i * v_i$ and $g(v_i) = \beta_1 CI_i * v_i + \beta_2 SI_i * v_i$. In these equations, ID_i indicates the (unidimensional) ideological position of the representative from congressional district i , approximated by the *DW - NOMINATE* first dimension score, CI_i indicates a proxy for constituent interest in congressional district i , and SI_i a proxy for special interest support. The reelection probability depends on two factors: (i) the ability to convince voters that the member caters to their interests (CI), and (ii) campaign spending, determined by the ability to attract special interest contributions (SI). Notice that, without loss of generality in this respect, our assumptions about f and g imply that representatives may or may not favor the bill, but both constituents and special interests are modeled to always be in favor.

The choice of a Yea vote further simplifies to:

$$\Pr(v_i = 1) = \Pr(-\theta ID_i + \beta_1 CI_i + \beta_2 SI_i > \varepsilon_i^0 - \varepsilon_i^1), \quad (2)$$

which can be directly estimated, given distributional assumptions on $(\varepsilon_i^0 - \varepsilon_i^1)$. We make use of (2) to test $\beta_1 = \beta_2 = 0$ in order to discriminate between purely ideological voting (Poole and Rosenthal (1996a, 1996b, 2005)) and 'economic' incentives in congressional voting (Peltzman (1984), Kalt and Zupan (1984), Gillian, Marshall, Weingast (1989), and numerous others subsequently). The specification in (2) allows us to estimate whether, for a given ideological aversion to the bill (ID_i), constituent interests (CI_i) and special interests (SI_i) are strong enough to tilt the representative's vote in favor of the bill.

In order to empirically implement (2), we must find empirical analogs for constituent and special interests. As mentioned in Section 2.2, our main empirical proxy for constituent interests on the AHRFPA is the mortgage default rate as of the end of 2007. Our main measures of constituent interests for the EESA is the mortgage default rate, the fraction of the district population that works in the financial services industry, and the fraction of the district population that has a household income greater than \$200,000. In all specifications, our primary measure of special interests is campaign donations from the financial services industry.

4.2 The AHRFPA of 2008 and the Role of Constituent Interests

In this section, we empirically estimate (2) to examine the determinants of politician voting patterns on the AHRFPA. As mentioned in Section 2, the AHRFPA represents a major government intervention designed to reduce foreclosures through a \$300 billion program of FHA-backed refinanced mortgages. In our analysis we focus primarily on votes in the pivotal U.S. House of Representatives roll call 519 (July 26th, 2008).¹³ In some specifications, we also examine voting patterns on roll call 301 (May 8th, 2008). Given that the AHRFPA was designed to reduce foreclosures through principal forgiveness on mortgages in payment default, we measure constituent support of the legislation using the mortgage default rate in the district as of the end of 2007.

Table 3 presents voting patterns by political party. Democrats almost unanimously vote in favor of the AHRFPA in the July 26th vote, with only 3 Democrats voting against. In contrast, there is substantial variation in Republican voting patterns, with 45 Republicans voting in favor

¹³All voting data are collected from the Library of Congress THOMAS (thomas.loc.gov/).

and 149 against. The voting patterns are similar for the May 8th vote. As Panel C demonstrates, there is substantial variation in politicians that switch votes from May 8th to July 26th. There are 17 representatives that switch from voting "no" in the May 8th vote to "yes" in the July 26th vote. There are 19 representatives that switch from voting "yes" in the May 8th vote to voting "no" in the July 26th vote. We examine these "switchers" in specifications below.

4.2.1 The Effect of Constituent Interests: Baseline Estimates

Figure 1 presents initial evidence on the importance of constituent interests in explaining voting patterns on the AHRFPA. It plots the correlation between mortgage default rates and the propensity to vote in favor of the AHRFPA. We focus only on Republicans given that Democrats vote almost unanimously for the AHRFPA. Figure 1 plots the non-parametric relation between mortgage default rates and the propensity to vote in favor of AHRFPA by Republican legislators. Republicans from higher default rate areas are more likely to vote in favor of AHRFPA. The effect appears across the distribution, and is particularly strong when default rates rise above 7%.

Table 4 presents linear probability regression estimates of the effect of mortgage default rates on voting patterns for Republicans.¹⁴ The estimate of 6.76 in Column 1 is statistically significant at the 1% level, and implies that a one standard deviation increase in mortgage default rate leads to a 12.7 percentage point increase in the likelihood of voting for AHRFPA. In Columns 2 and 3, the specification also includes measures of ideology and special interests. Campaign contributions by the financial services industry do not affect voting patterns.¹⁵ However, more conservative politician ideology has a strong negative effect. Despite the explanatory power of politician ideology (the R^2 of the regression increases by almost three times), the estimate on the mortgage default rate is almost identical with the inclusion of the DW nominate ideology score. In other words, the effect of constituent interests on voting patterns is largely orthogonal to the effect of ideology, which allows us to cleanly identify the independent effect of constituent interests on voting patterns.

¹⁴All marginal effects reported in our analysis are almost identical in both qualitative and quantitative significance if we use a probit maximum likelihood specification in place of a linear probability specification.

¹⁵The precise measure of special interests is the natural logarithm of the average campaign contributions by the financial industry to the politician per congressional cycle. In unreported specifications, we also include a more precise measure of campaign contributions by the mortgage industry, which is a subset of the financial services industry. We find no evidence that campaign contributions by the mortgage industry affect voting patterns, nor does inclusion of this additional variable affect the coefficient on constituent interests.

In Column 4, we report results when deconstructing the 2007 default rate into the 2005 level default rate and the change from 2005 to 2007. As the results show, it is the change in the default rate from 2005 to 2007 that leads Republicans to vote in favor of the legislation, not the level in 2005. Given that politician ideology is unlikely to change dramatically in just two years, these results further mitigate the concern that default rates lead to votes in favor of the AHRFPA through an ideology channel.

In Columns 5 and 6, we present estimates from further robustness tests that include political control variables (Column 5) and census demographic characteristics (Column 6). The presence of these control variables increases the R^2 of the regression from 0.23 to 0.30, but they have only a slight effect on the coefficient on the mortgage default rate. We want to emphasize that the inclusion of census demographic characteristics in Column 6 leads to estimates of the effect of constituent interest on voting patterns that are extremely precise and very conservative. The reason is that district level demographics also measure constituent interests. For example, the fraction of households that are hispanic and the 2007 year end mortgage default rate are highly correlated (0.51 correlation coefficient). In other words, it is not obvious that demographic variables should be viewed as control variables when trying to estimate the effect of constituent interests. The fact that the mortgage default rate predicts votes in favor of the AHRFPA even after controlling for demographics strengthens our interpretation that representatives are responding precisely to constituent interests, and not ideology or some other district characteristic.

Finally, in Column 7, we present estimates from an ordered probit specification that exploits information on “switchers,” or those Republicans that switch their vote from May 8th, 2008 (Vote 301) to July 28th, 2008 (Vote 519). Mortgage default rates should weigh heavily on the electoral prospects of Republicans who voted against the bill in May 2008 by opening them to criticisms from challengers. Hence, we would expect that switchers to a "Yes" vote to represent districts with high default rates. As the estimate on the mortgage default rate in Column 7 demonstrates, Republicans from high mortgage default rate districts as of the end of 2007 are more likely to switch in favor of the legislation, and Republicans from low default rate districts are more likely to switch to voting against the legislation.

4.2.2 Precision in Targeting Constituent Interests

Table 4 shows that the mortgage default rate as of 2007 leads to votes in favor of the AHRFPA, even after controlling for ideology and district demographic characteristics. In Table 5, we show further evidence that representatives are extremely precise in targeting constituent interests. An advantage of the Equifax data on defaults is that we have disaggregated default rates on all consumer debt. As a result, we are able to see if voting behavior by Republicans responds to general consumer credit difficulties or if it responds precisely to the increase in mortgage default rates.

Panel A shows that default rates across different types of consumer credit are very highly correlated. For example, the mortgage default rate is highly correlated with the auto default rate (0.66) and the credit card default rate (0.58). Given these high correlations, one might conclude that it would be difficult for representatives to distinguish general consumer credit difficulty from mortgage specific defaults.

Panel B shows that representatives are extremely responsive to the home default rate (which includes mortgage and home equity defaults), even after controlling for the non-home default rate (which includes defaults on credit card debt, auto loans, consumer loans, and student loans). More specifically, Republicans from high home default rate districts are more likely to vote in favor of the AHRFPA. The estimate in Column 1 implies that a one standard deviation increase in the home default rate leads to a 15 percentage point increase in the likelihood of voting for the AHRFPA. The estimation also shows that the non-home default rate has no predictive power in explaining votes on the AHRFPA. Taken together, the results in Panels A and B show that despite the high correlation between general consumer credit difficulty and mortgage defaults across districts, politicians appear to respond uniquely to mortgage defaults when deciding whether or not to vote for the AHRFPA.

4.2.3 Responding to Voting Bloc within Constituency

The "dual constituency" hypothesis (Fiorina (1974)) posits that politicians respond more to the interests of their own supporters within their overall constituency. This hypothesis is difficult to test given that such a test would require constituent interest variables that are measured separately for a politicians' supporters and non-supporters within their electorate. Our unique advantage in this regard is zip code level information on mortgage defaults and zip code level voter registration data. This allows us to construct a Democratic and Republican mortgage default rate for each Congressional district, where the default rates are constructed using the fraction of registered

Democrats and Republicans within each district.

However, one drawback with only having zip code level data is the high correlation between the Democratic and Republican mortgage default rates within each Congressional district. More specifically, there will be perfect correlation between the two default rates within a district if either of the following two conditions hold: (1) if the default rate is constant across all zip codes in the district or (2) if the fraction of registered Republicans and registered Democrats is constant across all zip codes within the district. The correlation coefficient for the Democratic and Republican mortgage default rates in our sample is 0.90. Figure 2 shows this more directly; it presents the histogram of the difference across Congressional districts in the Democratic and Republican mortgage default rates. As the Figure 2 shows, the majority of the Districts are close to 0, which implies no difference between the two default rates. It is clear from Figure 2 that inclusion of both the Democratic and Republican mortgage default rates within the same regression will suffer from serious multicollinearity problems.

Despite this collinearity problem, we find evidence in Table 6 that Republican politicians are more responsive to Republican default rates than Democratic default rates. The weakness of the coefficient estimates in Columns 1 and 2 likely reflect the multicollinearity problems discussed above, although the difference between the coefficients on the Democratic and Republican default rates is statistically significant when we include the census and political control variables. In Columns 4 and 5, we attempt to reduce the collinearity problem by estimating the specification on only the sample of districts above the median in the absolute difference between the Republican and Democratic mortgage default rates. In these specifications, we find strong evidence that Republican politicians only respond to registered Republican mortgage default rates. Columns 4 and 5 offer support to the "dual constituency" hypothesis that politicians respond more strongly to the interests of their own supporters within their constituency.

4.2.4 Electoral Competition and Constituent Interests

The previous three subsections demonstrate that an important determinant of Congressional voting behavior on the AHRFPA is constituent interests. In this subsection, we show that the effect of constituent interests is stronger when the representative faces a more competitive race.

In Table 7, the primary measure of electoral competition is the margin of victory for the incumbent in the previous Congressional election in 2006. We focus in particular on districts where the

margin of victory is quite low (less than 6%), given that there is likely not a difference in electoral competition in districts where the margins are quite large. In other words, a district with a margin of victory of 30% is likely as safe as a district with a 35% margin of victory. For the results reported in Columns 1, 2, and 3, we create indicator variables for competitive districts, where competitive is defined as a margin of victory of 2% (10 districts), 4% (18 districts), and 6% (23 districts), respectively. We then interact the competitive district indicator variable with the mortgage default rate as of the end of 2007. As the results demonstrate, the effect of constituent interests is stronger in competitive districts. The interaction effect is particularly strong when competitive is measured narrowly as a margin of victory below 4%, and it weakens when competitive is measured more broadly as a margin of victory below 6%.

In Column 4, we define the competitive district variable as 0 if the previous margin of victory is over 30%, and 0.30 minus the margin of victory if the margin of victory is less than 30%. For example, if the margin of victory in the 2006 election is 5%, the competitive district variable takes on the value 0.25. This functional form is a convex function of the margin of victory, and it is meant to capture the fact that districts with large margins are unlikely to be competitive regardless of whether the margin is 30 or 40%. The results in Column 4 also suggest that constituent interests matter more in districts that are competitive.

In Column 5, we define a competitive district as any district in a 2008 Presidential election swing state. The motivation behind this test is the argument that these districts are likely to face heightened voter and media attention given the importance of the presidential election between John McCain and Barack Obama.¹⁶ As the results in Column 5 demonstrate, Republicans are more responsive to constituent interests if they are in a presidential swing state. The swing state effect is economically large: Voting behavior on the AHRFPA is twice as sensitive to default rates for Republicans in a presidential swing state.

Overall the results in Table 7 suggest that a primary channel through which constituent interests affect politician voting behavior is electoral competition. When representatives face a greater probability of losing in the 2008 election, they are more likely to respond to high mortgage default rates by voting in favor of the AHRFPA.

¹⁶The swing states are defined according to <http://www.fivethirtyeight.com> as of July 17th 2008. Swing states include Ohio, Missouri, Michigan, Florida, North Carolina, Nevada, Indiana, Montana, Virginia, Colorado, and New Mexico. Our results are slightly stronger if Pennsylvania is also included as a swing state.

4.3 The EESA of 2008 and the Role of Special Interests

This section examines how special interests affect Congressional voting patterns on the EESA of 2008. Our main focus is on votes in the 681 roll call on October 3rd, 2008. However, we also examine votes in the 674 roll call on September 29th, 2008. Given that the EESA represented a major transfer of wealth from tax payers to the financial services industry, we measure special interest activity through the amount of campaign contributions by the financial services industry to politicians. In addition to the mortgage default rate, we also measure constituent interests with the fraction of constituents that work in the financial services industry, and the fraction that have annual household income greater than \$200,000.

Table 4 presents voting patterns by political party. In contrast to the AHRFPA vote in July, the EESA vote involves significant variation in voting patterns for both parties. Almost 75% of Democrats voted for the EESA on October 3rd, whereas only 45% of Republicans voted in favor. These numbers increased from 60% for Democrats and 25% for Republicans on the September 29th vote. Panel C shows that the direction of "switching" between the two roll calls is almost completely in one direction. Of the 59 representatives that switched votes, 58 switched from voting against on September 29th to voting in favor on October 3rd.

4.3.1 The Effect of Special Interests: Baseline Estimates

Figure 3 shows one of the central results of this subsection. There is a strong positive relation between the amount of financial service industry campaign contributions received by a politician and their probability of voting for the EESA of 2008. The effect is strongest at the lower end of the campaign contribution distribution, and slightly levels off at the higher end of the campaign contribution distribution.

Table 9A examines this result in a regression context. The linear probability estimate in Column 1 shows that campaign contributions by the financial services industry has a strong positive effect on the probability of voting in favor of the EESA. The coefficient estimate implies that a one standard deviation increase in the log of contributions per cycle (1.76) leads to a 10 percentage point increase in the probability of voting for the legislation. The estimate is robust to the inclusion of political ideology. Unsurprisingly, increasing the conservativeness of politician ideology has a strong negative effect on the probability of voting for the legislation. The mortgage default rate within the district has no significant influence on voting patterns on EESA.

In Column 2, we include an indicator variable for whether the politician is a Republican. With the inclusion of the politician ideology variable, party affiliation has no significant impact on voting patterns. In Columns 3 and 4, we add additional political and census demographic control variables, which slightly increase the magnitude of the estimate on financial services industry campaign contributions.

One possible concern with the coefficient estimate on financial services industry campaign contributions is that these contributions proxy for constituent interests through an employment channel. To test this hypothesis, the specifications reported in Columns 5 through 7 include the share of the district population employed in the financial services industry and the share with annual household income greater than \$200,000. There is strong evidence that representatives are more likely to vote in favor of the EESA if a higher fraction of their constituency is employed in the financial services industry. However, the coefficient estimate on our measure of special interests is only slightly smaller with the inclusion of these variables. In other words, campaign contributions affect voting behavior even after controlling for a financial services employment channel.

4.3.2 The Politics of Switching

One advantage in the empirical study of the EESA is the proximity of two different votes on the same legislation. This enables us to examine the determinants of "switchers," or the politicians that first vote against the bill on September 29th and then for the bill on October 3rd. An analysis of "switchers" offers insight into how party leaders, the Bush administration, and the financial services industry target representatives to pass the legislation. As shown above in Table 8, there are 58 politicians that switch from against to for votes; the party breakdown is 32 Democrats and 26 Republicans.

In Columns 1 through 3 of Table 9B, we show that the basic determinants of votes in favor of the EESA in the September 29th, 2008 roll call are similar to the determinants of votes in favor on October 3rd, 2008. As in the October 3rd roll call, conservative politicians are less likely to vote for the legislation, and politicians that receive large amounts of campaign contributions from the financial services industry are more likely to vote in favor of the legislation. One difference is that the coefficient estimate on the fraction of employees working in the financial industry is not significant in the September 29th roll call despite being significantly positive in the October 3rd roll call.

In Column 4, we examine the determinants of switching votes in the October 3rd roll call. We isolate the sample to representatives that vote against the legislation on September 29th, 2008. The estimates in Column 4 suggest that constituent interests, special interests, and ideology all affect the decision to switch votes. Politicians with higher mortgage default rates and a higher fraction of constituents working for the financial services industry are more likely to switch votes, whereas conservative politicians are less likely to switch votes. In addition, politicians that receive higher campaign contributions from the financial services industry are also more likely to switch to voting for the legislation.

In Columns 5 and 6, we split the sample to separately examine Democrats and Republicans, respectively. Democrats with high mortgage default rates and with a high amount of campaign contributions from the financial services industry are more likely to switch to voting in favor of the legislation. For Republicans, only the fraction of constituents working in the financial industry is a significant determinant of which politicians switch votes.

Overall, the results in Table 9B suggest that party leaders, the Bush administration, and the financial services industry relied on both constituent interests and special interests in targeting representatives for additional votes. Democratic leaders targeted both representatives from high mortgage default areas and representatives already aligned with the financial services industry. Republican leaders targeted representatives from areas with a high fraction of constituents employed in the financial services industry.

4.4 The Interaction of Ideology with Constituent and Special Interests

A main advantage of our data set is the ability to isolate the effects of ideology from constituent and special interests on politician voting behavior. In Section 4.2, we show that constituent interests influence voting patterns on the AHRFPA even after controlling for politician ideology. In Section 4.3, we show that special interests influence voting patterns on the EESA even after controlling for politician ideology. In both sections, we demonstrate that politician ideology plays a very important role: conservative politicians are much more likely to vote against both the AHRFPA and the EESA.

The ability to isolate ideology from constituent and special interests also allows us to examine the trade-offs inherent in political decision making. In particular, in this section, we explore how politicians weigh their ideological conservatism against heightened constituent and special interests

in the midst of a financial crisis. We do so by including in the regression specifications interaction terms of ideology with constituent interests and with special interests for both the AHRFPA and the EESA votes.

In Columns 1 and 2 of Table 10, we examine voting patterns of Republicans on the AHRFPA with the inclusion of the interaction terms. The coefficient estimate on the mortgage default rate is significantly positive, which implies that politicians from districts with high mortgage default rates are more likely to for the legislation. This is consistent with results shown in Section 4.2. However, the interaction term with ideology is significantly negative. This implies that politicians from districts with a high mortgage default rate are less responsive if they have a conservative ideology.

In order to evaluate the magnitude of the interaction effect, it is useful to examine the partial derivative with respect to mortgage default rates using estimates from Column 2:

$$\frac{\partial \text{YesVoteAHRFPA}}{\partial \text{MortgageDefaultRate}} = 19.7 - 28.2 * \text{ConservativeScore}$$

At the mean ideology score for Republicans, the partial derivative of a Yes vote on AHRFPA with respect to the mortgage default rate is 4.4, which implies that a one standard deviation increase in default rates leads to a 7.9 percentage point increase in the probability of voting for the AHRFPA. If we examine the ideology score at one standard deviation below the mean (more liberal), the partial derivative of a Yes vote on the AHRFPA with respect to the mortgage default rate is 9.2, which implies that a one standard deviation increase in default rates leads to a 16.3 percentage point increase in the probability of a Yes vote on the AHRFPA. Finally, if we examine the partial derivative at one standard deviation above the mean (more conservative), the partial derivative is -0.3, which implies no response in the probability of voting in favor of the legislation with respect to an increase in default rates. These magnitudes suggest that conservative politicians are able to credibly commit to not voting for government intervention, even in the presence of heightened constituent interests.

In Columns 3 and 4, we conduct a similar exercise with EESA to evaluate the trade-off of ideology and special interests. In these specifications, the coefficient estimate on special interests is positive and significant, but the coefficient on the interaction term of ideology with special interests is negative. In other words, politicians that receive large campaign contributions from the financial services industry are more likely to vote for the legislation (consistent with Table 9A), but the effect

is weaker if the politician is ideologically conservative.

Again, the easiest way to evaluate the magnitude is to examine the partial derivative with respect to campaign contributions using the estimates from Column 4:

$$\frac{\partial \text{YesVoteEESA}}{\partial \text{FinancialIndustryContributions}} = 0.08 - 0.06 * \text{ConservativeScore}$$

At the mean ideology score for the full sample, the partial derivative of a Yes vote on EESA with respect to financial industry campaign contributions is 0.079, which implies that a one standard deviation increase in campaign contributions leads to a 12 percentage point increase in the likelihood of voting in favor of EESA. At one standard deviation below the mean ideology score (more liberal), the partial derivative is 0.109, which implies that a one standard deviation increase in campaign contributions leads to a 17 percentage point increase in the probability of voting for EESA. Finally, at one standard deviation above the mean ideology score (more conservative), the partial derivative is 0.049, which implies that a one standard deviation increase in campaign contributions leads to a 8 percentage point increase in the probability of voting for EESA.

Overall, the estimates in Table 10 demonstrate that a conservative ideological stance weakens the responsiveness of politicians to heightened constituent and special interests. These results suggest that politicians, through ideology, may be able to commit themselves from intervening even in a severe financial crisis.

5 Conclusion

We examine Congressional voting patterns on the AHRFPA of 2008 and the EESA of 2008, which represent two of the most significant pieces of federal legislation in U.S. economic history. In contrast to previous studies in political economy, we are able to isolate the effects of constituent and special interests on politician voting behavior, even after controlling for politician ideology. We find that constituent interests strongly influence politician voting patterns on the AHRFPA, with Republicans being more likely to vote in favor of the legislation if their district is experiencing high mortgage default rates. Politicians are extremely precise in their response to constituent interests, and they respond more strongly to their own supporters within the electorate. A likely channel for the importance of constituent interests is electoral competition. In addition, special interest campaign contributions from the financial services industry predict votes in favor of the EESA.

This result is robust to the inclusion of politician ideology, the fraction of the electorate employed by the financial services industry, and census demographic controls. Our results are consistent with the hypothesis that politicians voted in favor of the EESA in part due to special interest campaign contributions from the financial services industry.

Finally, we demonstrate the importance of the trade-off between politician ideology and heightened constituent and special interests. While politicians are influenced by constituent and special interests in their voting behavior, we find that the effect of constituent and special interests is significantly smaller for conservative politicians. This finding suggests that conservatives stick to their political ideology even in the midst of a severe financial crisis.

While this analysis focuses on the response to the mortgage default crisis, a closely related area of future research is the political economy of the subprime mortgage credit expansion that preceded the crisis. In particular, from 2000 to 2005, preliminary evidence suggests that the mortgage industry increasingly targeted politicians from districts in which there were a high fraction of subprime borrowers. Figure 4 provides evidence of this fact. It maps the relative growth of campaign contributions by the mortgage industry to representatives from Congressional districts that contain a high versus low fraction of subprime borrowers. The sharp increase starting in 2000 coincides with the expansion of securitization and subprime mortgage lending (Mian and Sufi (2008)). In addition, Figure 4 shows that there is no similar relative increase in non-mortgage financial industry campaign contributions during this time frame.

This preliminary finding suggests that our results here are a first step in a larger effort to understand the role of the U.S. government in the subprime mortgage credit expansion. For example, did the sharp relative growth in campaign contributions by the mortgage industry to high subprime Congressional districts influence regulatory policy? Did the increase in the affordable housing mandate by the Department of Housing and Urban Development cause an increase in subprime mortgage lending? Did state predatory lending regulations reduce the impact of subprime lending on housing markets? We look forward to research that pursues these questions.

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Table 1
Summary Statistics for Congressional Districts

	Democrats						Republicans					
	N	Mean	SD	10 th	50 th	90 th	N	Mean	SD	10 th	50 th	90 th
<i>Measures of Constituent Interests</i>												
Mortgage Default Rate (07Q4)	236	.068	.033	.035	.06	.11	199	.055	.019	.034	.052	.077
Mortgage Default Rate (05Q4)	236	.039	.024	.017	.034	.070	199	.033	.012	.017	.031	.049
ΔMortgage Default Rate (05Q4-07Q4)	236	.029	.024	.0056	.022	.066	199	.022	.020	.0047	.015	.048
Registered Republican Default Rate (07Q4)	198	0.062	0.027	0.034	0.056	0.106	166	0.053	0.019	0.034	0.049	0.075
Registered Democratic Default Rate (07Q4)	198	0.073	0.032	0.037	0.067	0.120	166	0.059	0.021	0.036	0.054	0.085
Home Default Rate (07Q4)	236	.065	.032	.033	.058	.110	199	.053	.018	.033	.050	.073
Non-Home Default Rate (07Q4)	236	.092	.028	.059	.085	.130	199	.077	.016	.057	.077	.100
Fraction of workforce in financial industry	236	0.050	0.021	0.030	0.044	0.078	199	0.049	0.019	0.031	0.045	0.078
Fraction of Households with >\$200K Income	236	0.023	0.019	0.009	0.015	0.046	199	0.024	0.019	0.010	0.017	0.049
<i>Measure of Special Interest</i>												
Financial Industry Campaign Contributions (\$000)	236	495	550	68	325	1,109	199	581	534	125	421	1,260
<i>Measure of ideology</i>												
DW Nominate Ideology Score	234	-0.405	0.189	-0.631	-0.405	-0.204	194	0.543	0.175	0.321	0.530	0.768
<i>Other Political Variables</i>												
On Financial Committee	236	0.161	0.368	0.000	0.000	1.000	199	0.176	0.382	0.000	0.000	1.000
# Terms Served	236	6.203	4.762	1.000	6.000	13.000	198	5.768	3.889	1.000	5.000	11.000
Vote Margin November 2006	236	49	3	8	42	100	199	27	21	5	24	42
<i>Census Demographics (2000)</i>												
Fraction Hispanic Households	236	0.122	0.165	0.009	0.046	0.371	199	0.070	0.100	0.008	0.035	0.181
Fraction Black Households	236	0.152	0.177	0.010	0.068	0.462	199	0.072	0.071	0.009	0.049	0.181
Median household income (\$000)	236	44	11	31	41	61	199	46	12	34	44	64
Fraction Households in Poverty	236	0.140	0.063	0.070	0.125	0.229	199	0.106	0.042	0.055	0.100	0.159
Fraction of Households in Urban Areas	236	0.831	0.203	0.471	0.937	1.000	199	0.738	0.181	0.491	0.746	0.973
Fraction of Households with less than high school	236	0.219	0.092	0.124	0.196	0.353	199	0.179	0.059	0.113	0.165	0.265
Fraction of Households with only high school	236	0.280	0.065	0.192	0.282	0.369	199	0.294	0.062	0.208	0.300	0.366

Congressional Districts are defined “Democrat” or “Republican” according to the winning party in that district in 2006 elections (110th Congress).

Table 2
Correlation Matrix for Constituent Interests, Special Interests, and Politician Ideology

A. Full Sample

	DW Nominate Ideology Score	Mortgage Default Rate (07Q4)
Mortgage Default Rate (07Q4)	-0.272***	
Ln(Financial Industry Campaign Contributions)	0.080*	-0.143***

B. Democrats

	DW Nominate Ideology Score	Mortgage Default Rate (07Q4)
Mortgage Default Rate (07Q4)	-0.189***	
Ln(Financial Industry Campaign Contributions)	0.284***	-0.166**

C. Republicans

	DW Nominate Ideology Score	Mortgage Default Rate (07Q4)
Mortgage Default Rate (07Q4)	-0.011	
Ln(Financial Industry Campaign Contributions)	-0.151**	-0.098

***, **, * Correlation statistically distinct from 0 at the 1%, %5 and 10% levels, respectively.

Table 3
Voting Patterns on the American Housing Recovery and Foreclosure Prevention Act of 2008

Panel A: 519 Vote (July 26, 2008)			
	(1)	(2)	(3)
	Democrats	Republicans	Total
# Voting "Yes"	227	45	272
# Voting "No"	3	149	152
Total	230	194	424
Panel B: 301 Vote (May 8, 2008)			
	(1)	(2)	(3)
	Democrats	Republicans	Total
# Voting "Yes"	0	154	154
# Voting "No"	229	39	268
Total	229	193	422
Panel C: Switchers			
	(1)	(2)	(3)
	# Voting "Yes" on 301	# Voting "No" on 301	Total
# Voting "Yes" on 519	131	17	148
# Voting "No" on 519	19	245	264
Total	150	262	412

Table 4
Constituent Interests and Voting Patterns on the AHRFPA of 2008

	(1)	(2)	(3)	(4)	(5)	With Census Controls (6)	Ordered Probit On "Switchers" (7)
	Dependent Variable: Voted in favor of AHRFPA '08 (July 26 th , 2008)						
Mortgage Default Rate (07Q4)	6.756*** (1.448)	6.535*** (1.301)	6.693*** (1.300)		6.685*** (1.307)	4.535** (1.922)	11.538** (5.116)
DW Nominate Ideology Score		-0.891*** (0.159)	-0.869*** (0.164)	-0.845*** (0.165)	-0.852*** (0.156)	-0.826*** (0.157)	0.554 (0.450)
Ln(Financial Industry Contributions per cycle)			0.015 (0.012)	0.013 (0.012)	0.009 (0.012)	0.008 (0.014)	0.017 (0.034)
Mortgage Default Rate (05Q4)				2.067 (2.329)			
ΔMortgage Default Rate (05Q4-07Q4)				7.440*** (1.322)			
Finance Committee					0.115 (0.081)	0.088 (0.080)	
Number of Terms Served					0.007 (0.008)	0.006 (0.007)	
Vote Margin '06 Elections					-0.001 (0.001)	-0.000 (0.002)	
N	194	189	189	189	189	189	183
R ²	0.09	0.23	0.23	0.25	0.24	0.30	

This table presents coefficient estimates relating voting patterns on the 519 Vote (July 26, 2008, passage of the AHRFPA of 2008) to the congressional district mortgage default rate as of 2007Q4. The sample includes voting Republicans only. Census controls in Column 6 include percentage Hispanic, percentage black, percentage living in urban setting, log of median household income, percentage below poverty, percentage less than high school, and percentage with high school only. Robust standard errors in parentheses. ***, **, * Coefficient estimate statistically distinct from 0 at the 1%, %5 and 10% levels, respectively.

Table 5
Targeting Constituents' Interests: Which Default Rate Matters for Votes on the AHRFPA of 2008?

Panel A: Correlation Matrix							
	Mortgage Default Rate	Home Equity Default Rate	Credit Card Default Rate	Automobile Default Rate	Other Default Rate	Home Default Rate	Non-Home Default Rate
Mortgage Default Rate	1.00						
Home Equity Default Rate	0.75	1.00					
Credit Card Default Rate	0.58	0.68	1.00				
Automobile Default Rate	0.66	0.68	0.77	1.00			
Other Default Rate	0.58	0.71	0.82	0.77	1.00		
Home Default Rate	1.00	0.79	0.60	0.67	0.60	1.00	
Non-Home Default Rate	0.68	0.74	0.93	0.90	0.93	0.69	1.00

Panel B: Regressions			
	With Political Controls		With Census and Political Controls
	(1)	(2)	(3)
Dependent Variable: Voted in favor of AHRFPA '08 (July 26 th , 2008)			
Home Default Rate (07Q4)	8.711*** (2.043)	8.439*** (2.090)	6.162** (2.546)
Non-Home Default Rate (07Q4)	-2.735 (2.291)	-2.333 (2.375)	-2.964 (3.004)
DW Nominate Ideology Score	-0.849*** (0.165)	-0.841*** (0.158)	-0.807*** (0.157)
Ln(Financial Industry Contributions per cycle)	0.016 (0.012)	0.010 (0.012)	0.008 (0.014)
N	189	189	189
R ²	0.23	0.25	0.30

Panel A shows correlations of default rates across congressional districts, and Panel B presents coefficient estimates relating voting patterns on the 519 Vote (July 26, 2008, passage of the AHRFPA of 2008) to the congressional district home and non-home default rate as of 2007Q4. The home default rate includes defaults on mortgages and home equity loans, and the non-home default rate includes defaults on credit card debt, auto loans, student loans, and consumer loans. The sample includes voting Republicans only. Political controls include a financial committee indicator variable, terms served, and margin of victory in 2006 election. Census controls include percentage Hispanic, percentage black, percentage living in urban setting, log of median household income, percentage below poverty, percentage less than high school, and percentage with high school only. ***, **, * Coefficient estimate statistically distinct from 0 at the 1%, 5%, and 10% levels, respectively. All the pairwise correlations are significant at 1 percent.

Table 6
Do Politicians Respond Uniquely to Their Own Voting Bloc?

Sample:	All Republicans	All Republicans	All Republicans	Republicans in Districts with Large Difference in Default Rates	Republicans in Districts with Large Difference in Default Rates With Census and Political Controls
	(1)	With Political Controls (2)	With Census and Political Controls (3)	(4)	(5)
Dependent Variable: Voted in favor of AHRFPA '08 (July 26 th , 2008)					
Republican Mortgage Default Rate (07Q4)	4.797 (3.493)	4.437 (3.369)	8.177** (3.394)	8.493** (3.156)	16.010*** (3.516)
Democrat Mortgage Default Rate (07Q4)	1.878 (3.321)	2.301 (3.202)	-1.748 (3.664)	-2.280 (3.361)	-9.796*** (3.874)
DW Nominate Ideology Score	-0.962*** (0.183)	-0.951*** (0.177)	-0.904*** (0.190)	-1.150*** (0.308)	-0.820*** (0.306)
Ln(Financial Industry Contributions per cycle)	0.015 (0.013)	0.007 (0.012)	0.009 (0.013)	0.028* (0.016)	0.037** (0.015)
N	157	157	157	77	77
R ²	0.25	0.27	0.32	0.34	0.45

This table presents coefficient estimates relating voting patterns on the 519 Vote (July 26, 2008, passage of the AHRFPA of 2008) to the party-specific congressional district mortgage default rate as of 2007Q4. The sample includes voting Republicans only. The Republican (Democrat) Mortgage Default Rate is constructed by weighting default rates in the zip codes within the district by the fraction of registered Republicans (Democrats) in the zip codes. In Columns 4 and 5, we limit the sample to the districts above the median absolute difference between Republican and Democrat default rates. Political controls include financial committee indicator variable, terms served, and margin of victory in 2006 election. Census controls include percentage Hispanic, percentage black, percentage living in urban setting, log of median household income, percentage below poverty, percentage less than high school, and percentage with high school only. ***, **, * Coefficient estimate statistically distinct from 0 at the 1%, 5%, and 10% levels, respectively.

Table 7
Do Politicians Respond More to Constituent Interests in More Competitive Districts?

	(1)	(2)	(3)	(4)	(5)
	Dependent Variable: Voted in favor of AHRFPA '08				
Competitive District	-0.110 (0.302)	-0.217 (0.233)	-0.032 (0.248)	-0.009 (0.009)	-0.325 (0.139)
Mortgage Default Rate (07Q4)	6.284*** (1.379)	6.324*** (1.380)	6.474*** (1.390)	4.201** (2.134)	4.950** (2.055)
(Mortgage Default Rate)*(Competitive District)	7.312* (4.132)	8.269** (3.678)	4.304 (4.535)	0.294* (0.163)	4.649*** (2.528)
DW Nominate Ideology Score	-0.808*** (0.164)	-0.807*** (0.165)	-0.826*** (0.164)	-0.813*** (0.162)	-0.848*** (0.162)
Ln(Financial Industry Contributions per cycle)	0.010 (0.012)	0.010 (0.012)	0.009 (0.012)	0.003 (0.012)	0.015 (0.012)
Constant	0.200 (0.209)	0.203 (0.209)	0.204 (0.211)	0.355 (0.234)	0.274 (0.218)
Definition of Competition	Margin less than 2% in 2006	Margin less than 4% in 2006	Margin less than 6% in 2006	Linear Censored	Swing States
N	190	190	190	190	190
R ²	0.25	0.25	0.25	0.26	0.24

This table presents coefficient estimates relating voting patterns on the 519 Vote (July 26, 2008, passage of the AHRFPA of 2008) to the congressional district mortgage default rate as of 2007Q4. Each specification includes an interaction term that measures districts that are competitive for the incumbent in the November 2008 election. The sample includes voting Republicans only. Robust standard errors in parentheses. ***, **, * Coefficient estimate statistically distinct from 0 at the 1%, 5%, and 10% levels, respectively

Table 8
Voting Patterns on the Emergency Economic Stabilization Act of 2008

Panel A: 681 Vote (October 3rd, 2008)			
	(1)	(2)	(3)
	Democrats	Republicans	Total
# Voting "Yes"	172	91	263
# Voting "No"	63	108	171
Total	235	199	434
Panel B: 674 Vote (September 29th, 2008)			
	(1)	(2)	(3)
	Democrats	Republicans	Total
# Voting "Yes"	140	65	205
# Voting "No"	95	133	228
Total	235	198	433
Panel C: Switchers			
	(1)	(2)	(3)
	# Voting "Yes" on 674	# Voting "No" on 674	Total
# Voting "Yes" on 681	204	58	262
# Voting "No" on 681	1	170	171
Total	205	228	433

Table 9A
Special Interests and Voting Patterns on the EESA of 2008

	Alternative Measures of Constituent Interests						
	(1)	(2)	(3)	With Census Controls (4)	(5)	(6)	With Census Controls (7)
Dependent Variable: Voted in favor of EESA '08 (October 3 rd , 2008)							
Mortgage Default Rate (07Q4)	0.489 (0.822)	0.474 (0.829)	0.365 (0.932)	0.556 (1.376)	0.776 (0.833)	1.176 (0.876)	1.054 (1.395)
DW Nominate Ideology Score	-0.307*** (0.045)	-0.391*** (0.125)	-0.275*** (0.050)	-0.232*** (0.053)	-0.296*** (0.045)	-0.291*** (0.045)	-0.235*** (0.052)
Ln(Financial Industry Contributions per cycle)	0.057*** (0.011)	0.058*** (0.011)	0.075*** (0.013)	0.068*** (0.013)	0.050*** (0.010)	0.048*** (0.010)	0.064*** (0.012)
Indicator for Republican		0.091 (0.128)					
Fraction Constituents Working in Financial Industry					0.039*** (0.010)	0.028*** (0.010)	0.029*** (0.012)
Fraction Constituents with >\$200,000 Income						2.691*** (0.933)	2.447* (1.802)
Finance Committee			-0.067 (0.057)	-0.085 (0.057)			-0.100 (0.057)
Number of Terms Served			0.015*** (0.005)	0.012* (0.005)			0.012* (0.005)
Vote Margin '06 Elections			0.001 (0.001)	0.000 (0.001)			0.000 (0.001)
N	427	427	427	427	427	427	427
R ²	0.13	0.13	0.15	0.19	0.15	0.16	0.20

This table presents coefficient estimates relating voting patterns on the 681 Vote (October 3rd, 2008, passage of the EESA of 2008) to campaign contributions by the financial services industry. Census controls include percentage Hispanic, percentage black, percentage living in urban setting, log of median household income, percentage below poverty, percentage less than high school, and percentage with high school only. Robust standard errors in parentheses. ***, **, * Coefficient estimate statistically distinct from 0 at the 1%, %5 and 10% levels, respectively.

Table 9B
What Determines Which Politicians Switch Votes on EESA of 2008?

Sample	Full Sample			Condition Sample on those that Vote against Bill on September 29 th , 2008		
	(1)	(2)	With Political and Census Controls (3)	Full (4)	Democrats (5)	Republicans (6)
Dependent variable	Voted in Favor of EESA '08 (September 29 th)			Voted in Favor of EESA '08 (October 3 rd) After Voting Against (September 29 th)		
Mortgage Default Rate (07Q4)	-1.039 (0.856)	-0.570 (0.905)	0.314 (1.464)	2.083* (1.122)	3.056** (1.534)	1.072 (1.487)
DW Nominate Ideology Score	-0.304*** (0.045)	-0.295*** (0.045)	-0.241*** (0.051)	-0.183*** (0.056)	-0.180 (0.188)	-0.248 (0.157)
Ln(Financial Industry Contributions per cycle)	0.049*** (0.011)	0.043*** (0.011)	0.064*** (0.016)	0.020** (0.008)	0.035** (0.016)	0.010 (0.009)
Fraction Constituents Working in Financial Industry		0.009 (0.012)	0.015 (0.013)	0.053*** (0.020)	0.035 (0.032)	0.067*** (0.025)
Fraction Constituents with >\$200,000 Income		2.262** (1.122)	1.392 (1.979)	4.321* (2.266)	11.580** (4.734)	1.884 (2.573)
N	426	426	426	223	94	129
R ²	0.11	0.12	0.19	0.16	0.17	0.14

Columns 1 through 3 of this table present coefficient estimates relating voting patterns on the 674 Vote (September 29th, 2008, passage of EESA of 2008) to campaign contributions by the financial services industry. The specifications reported in columns 4 through 6 isolate the sample to those that voted against the EESA of 2008 on September 29th (674 vote) and examine the determinants of politicians that switched their vote on October 3rd, 2008 (681 vote). Political controls include financial committee indicator variable, terms served, and margin of victory in 2006 election. Census controls include percentage Hispanic, percentage black, percentage living in urban setting, log of median household income, percentage below poverty, percentage less than high school, and percentage with high school only. ***, **, * Coefficient estimate statistically distinct from 0 at the 1%, 5%, and 10% levels, respectively.

Table 10
How do Politicians Trade-off Ideology Versus Constituent and Special Interests?

Dependent Variable	Sample	With Political and Census Controls Republicans only	Full sample	With Political and Census Controls Full sample	
		(1) Voted in Favor of AHRFPA '08	(2) Voted in Favor of AHRFPA '08	(3) Voted in Favor of EESA '08	(4) Voted in Favor of EESA '08
DW Nominate Ideology Score		1.858* (0.986)	1.351 (1.147)	0.233 (0.233)	0.315 (0.303)
Mortgage Default Rate (07Q4)		22.140*** (4.335)	19.715*** (6.008)	1.140 (0.974)	1.099 (1.272)
(Ideology Score)*(Mortgage Default Rate)		-29.673*** (7.760)	-28.230*** (9.942)	1.737 (2.007)	2.634 (2.129)
Ln(Financial Industry Contributions per cycle)		0.089 (0.064)	0.051 (0.072)	0.069*** (0.012)	0.084*** (0.017)
(Ideology Score)*(Ln(Campaign Contributions))		-0.108 (0.077)	-0.065 (0.088)	-0.058*** (0.016)	-0.063*** (0.023)
N		189	189	427	427
R ²		0.26	0.32	0.14	0.21

This table examines how politicians trade-off their ideological stance against constituent and special interests. Columns 1 and 2 report specifications examining the determinants of voting behavior on the AHRFPA '08 501 vote (July 26th, 2008). Columns 3 and 4 report specifications examining the determinants of voting behavior on the EESA '08 681 vote (October 3rd, 2008). Political controls include financial committee indicator variable, terms served, and margin of victory in 2006 election. Census controls include percentage Hispanic, percentage black, percentage living in urban setting, log of median household income, percentage below poverty, percentage less than high school, and percentage with high school only. ***,**,* Coefficient estimate statistically distinct from 0 at the 1%, 5%, and 10% levels, respectively.

Figure 1

AHRFPA '08 vote against mortgage default rate in Republican districts

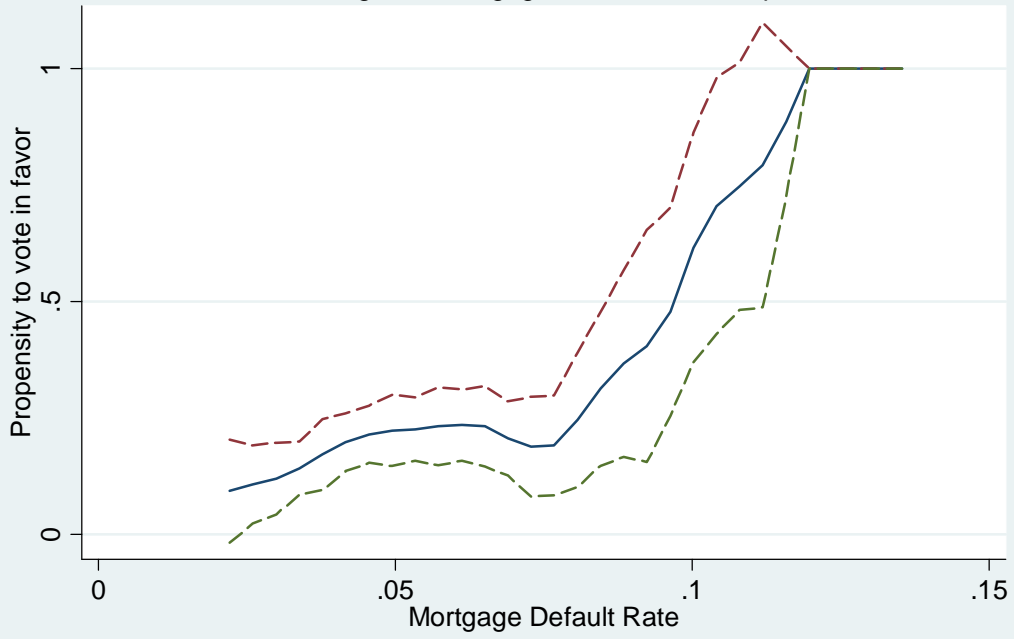


Figure 2

Republican and Democratic Default Rate Difference

