

## **Policy Responses to Banking Crises over the Longer Run**

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### **Abstract**

What determines government policy responses to banking crises? One prominent thesis is that democratic governments seek to minimize the public burden of bank insolvency to avoid electoral sanction, and thus are less likely to bail out banks than authoritarian governments. We find no evidence to support this contention. On the contrary, we contend that it omits important dynamic trends, notably financialization, shaping policy responses to crises in many countries. Drawing on a new dataset of policy responses since the mid-1970s, we use a longer time window to investigate the role of different factors in the evolving policy responses to such crises. We argue that rising financialization and leverage are associated with a pro-bailout constituency that has become broader and deeper over time. This has increased the propensity for governments in democracies to respond to systemic banking crises with increasingly extensive bailouts.

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Consistent with mainstream understandings of democratic political

accountability, one argument in the literature on the politics of financial crises is that greater electoral competition will decrease the likelihood that governments will respond to banking crises with bailouts that impose substantial costs on taxpayers (Keefer, 2007). To investigate this claim, Rosas distinguishes between two extreme forms of policy response to banking crises, “Bagehot or Bailout” (Rosas, 2006). A “Bagehot” response conforms to an ideal market-conforming policy by providing lender of last resort (LOLR) facilities only to solvent banks providing good collateral, by forcing write-downs of banks’ non-performing loans (NPLs), by permitting the recapitalization of banks only by private investors, by protecting few if any depositors, and by enforcing the immediate closure of insolvent banks. By contrast, a “Bailout” response provides LOLR facilities to banks indiscriminately and at length, transfers NPLs from banks at public expense, recapitalizes banks with public funds, engages in regulatory forbearance, provides blanket protection of all depositors, and allows insolvent banks to continue operating. Rosas finds that authoritarian governments are more likely than democracies to undertake costly bailout responses that impose costs on taxpayers.

Others focus on explaining variations in the detail of recent bank bailouts in advanced democracies. Woll, for example, argues that open-ended bailouts of banks are more likely when the political power of the banking sector is high and when this sector is sufficiently cohesive to push the burden of resolution onto the public purse (Woll, 2014, 2016). Culpepper and Reinke argue along similar lines that bank bailouts are more likely to be designed in ways that minimize taxpayer costs when the structural power of the banking sector – shaped mainly by the degree of dependence of major banks on the national market – is lower (Culpepper & Reinke,

2014).

In this paper, we focus on understanding and explaining the overall trend in policy responses to banking crises rather than the cross-sectional variation in policy responses. We argue that there is a rising propensity for bailout policies after banking crises re-emerged as an important policy problem in the 1970s. Our findings are inconsistent with the claim that the democratization process should have favored a trend towards Bagehot rather than Bailout responses. We argue instead that processes of financialization and rising leverage have led to a growing dependence of various groups, including middle class voters, on systemic banks, favoring the emergence of a stronger pro-bailout coalition. Our dynamic analysis supports the view of those who argue that the increasing structural power of banks, including in advanced democracies, has promoted policy responses that depart from the Bagehot rule.

The rest of the paper is organized as follows. Section 1 outlines theories that may help to explain the long run dynamics of crisis-related policy responses. We offer our own theory that emphasizes the role of associated processes of financialization and leverage. Section 2 considers how we might measure the trend in policy responses to banking crises. It explains how we construct a new dataset of policy responses since the mid-1970s and shows that there is a growing propensity for governments to respond to systemic banking crises with bailouts of the financial sector. In section 3, we assess our hypotheses regarding financialization and leverage and competing theories. Section 5 concludes.

## 1 What shapes policy responses?

Most of the existing literature in this area focuses on comparative statics rather than dynamics. Rosas's inference was that democratic leaders, as opposed to authoritarian leaders, faced electoral sanction and were therefore less likely to bail out well-connected banks (Rosas, 2006, p. 185). This argument sits in a general tradition that links bailouts to cronyistic regimes associated with insider relations that are relatively unconstrained by democratic accountability (Corsetti, Pesenti, & Roubini, 1999; Johnson & Mitton, 2003; Keefer, 2007).

Others have focused on variations in the degree of policy influence of banking sectors in democratic countries rather than on the effects of regime type (Culpepper & Reinke, 2014; Woll, 2014, 2016). Culpepper and Reinke argue that states are less able to impose costs on banks who receive bailouts in circumstances in which the sector's structural power – inversely related to banks' dependence on the national market – is high (Culpepper & Reinke, 2014). Woll also focuses on banks' structural power, arguing that banks are most able to shift bailout costs to the public sector where they can avoid an industry-led response. She sees structural power as more reliant on perception than material factors, particularly regarding whether the banks are seen by government as able to remain inactive during negotiations (Woll, 2016, p. 374).<sup>1</sup>

All these authors share the claim that democratic governments will be more likely to provide bailouts when the sector's structural power is high, but they do not situate this claim in a broader political economy theory of how the role of finance

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<sup>1</sup> For a similar argument regarding the perceptive sources of the structural power of finance, see (Bell & Hindmoor, 2015).

has evolved over the long run. Nevertheless, we may infer some dynamic propositions from this literature. First, the spread of democratic governance since the 1970s<sup>2</sup> should have exercised a dampening effect on the propensity of governments to provide bailouts after systemic banking crises. Second, and conversely, a secular trend of rising structural power enjoyed by the financial sector should have increased the propensity for bailouts since this time.<sup>3</sup> Since both of these effects should be offsetting, it is uncertain whether there should be any long-term policy trend.

From a more panoramic perspective, it is clear that additional forces have been at work. Prior to the mid-twentieth century, public intervention to stabilize banking systems was comparatively limited in magnitude and scope, reflecting “the more limited political pressures to provide it” (Bordo, Eichengreen, Klingebiel, & Martinez - Peria, 2001, p. 71). By contrast, since then, “it is unthinkable that any government or central bank would now stand idly by and watch the closure of any of its major banks, the realization of large-scale losses on the bank deposits of its citizens and the collapse of its financial markets, if the authorities could avoid such events” (Goodhart, 1999, pp. 356–357). As one early commentator on America’s 1933 Banking Act argued, “the new law makes banking more of a social enterprise and increases the responsibility of the federal government for banking stability”

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<sup>2</sup> Marshall and Cole (2014, 20-32).

<sup>3</sup> The consensus in the literature is that the spread of financial openness and the globalization of banking since the 1970s, and the increasing economic importance of the financial sector, has increased its structural power, defined in terms of its collective ability to influence policy outcomes – including the ability to shape the policy agenda and rule out outcomes perceived as detrimental (Andrews, 1994; Bell & Hindmoor, 2015; Cerny, 1994; Culpepper & Reinke, 2014; Helleiner, 1994; Strange, 1990).

(Preston 1933, 585). Soon after the war, political parties began to make new promises to voters regarding economic and financial stabilization. One of the most explicit was contained in the 1950 British Labour Party manifesto, which proposed to “take whatever measures may be required to control financial forces, so as to maintain full employment and promote the welfare of the nation.”<sup>4</sup> Mass education and the media also spread awareness of the possibilities of government stabilization policies, at least in more advanced democracies. This policy trend is often associated with the early postwar norms of embedded liberalism and the associated tendency of modern (democratic) states to socialize economic risk, including via financial repression.

In recent decades, however, these postwar interventionary norms have been in retreat as “neoliberal” ideas concerning the general desirability of market-conforming economic policies regained ascendancy. After all, these ideas played a powerful role in the remarkable liberalization of finance that accelerated after the 1970s (Helleiner, 1994, pp. 25–50). Although this has often been associated with rising financial instability, this has not produced a general reversion to the postwar policy norms associated with embedded liberalism. Even during the most recent crises in the North Atlantic region, neoliberal ideas have proven remarkably resilient (Blyth, 2013; Farrell & Quiggin, 2011). Again, we might expect from this long term ideational trend that there would have been a retreat from bailout policies towards stricter, market-conforming Bagehot policies during crises.

Thus, some prominent theories concerning policy responses to banking crises

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<sup>4</sup> <http://www.labour-party.org.uk/manifestos/>, accessed 12 November 2013.

support an implicit expectation that there should be no trend towards increasing bailouts during banking crises, and indeed that a reversion towards the nineteenth century idea of Bagehot rule in crisis interventions might be expected. As those who have studied patterns of crisis interventions will know, however, this expectation seems not to be borne out in practice. Extensive bailouts of the financial sector have continued and, as we show later, have become more rather than less extensive. Thus, although neoliberal policymakers often foreswear bailouts in principle, in practice they are hypocrites. Put differently, the Bagehot rule has become increasingly prone to a time-inconsistency problem: solemnly intoned by policymakers in tranquil times, and increasingly broken during banking crises.

What can explain this inconsistency? Our argument is that the emphasis on political accountability mechanisms in the literature misses other underlying trends in democracies that have increased the dependence of a variety of constituencies on large banks. More specifically, we argue that the size and influence of political constituencies favouring “market conforming” policies (“Bagehot” policies for short) has diminished over time, and that of those favouring policies associated with financial sector “Bailouts” has increased substantially. The argument is related to the literature on the structural power of finance, but we specify in detail the sources of political support for Bagehot and Bailout policies and provide a stylized summary of how these have evolved over time.<sup>5</sup>

### 1.1 Bagehot constituencies

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<sup>5</sup> For simplicity we abstract from the impact of crisis depth in this section. The deeper the banking crisis, the greater the relative size of the Bailout coalition is likely to be.

*Current taxpayers* have a strong interest in avoiding bailouts of insolvent banks that would incur current costs or future liabilities for the public sector.<sup>6</sup> As such, the taxpayer interest lies in Bagehot policies that avoid incurring the burden of bank insolvency. However, as the broadest and most diffuse group, taxpayers have the weakest capacity for organizing politically to prevent the socialization of insolvent banks' liabilities.

*Banks* (and the individual bankers who work within them) can have conflicting interests depending upon their relative vulnerability in a crisis. Although solvent banks may derive some general stabilization benefits from bailouts of insolvent banks, if interconnectedness between banks is low the former are likely to oppose socializing bad banks' losses, since this could encourage moral hazard and associated risky behavior.<sup>7</sup> If they accept the need for rescues of insolvent banks, they are likely to prefer public to private sector assistance and to favour the attachment of punitive conditions. Standard collective action theory suggests that the more organized the sector, the more likely that banks will be able to shift the burden of rescues to the public sector (more Bailout, *ceteris paribus*). Grossman and Woll take a contrary position, arguing that a high level of sectoral organization facilitates public-private dialogue and burden sharing (Grossman & Woll, 2014; Woll, 2014, 2016). The nature of banks' and their senior managements' relationships with policymakers, and banks' levels of dependence on the domestic market can also shape these terms (Bell & Hindmoor, 2015; Culpepper & Reinke, 2014).

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<sup>6</sup> Public liabilities can include the contingent liabilities often created by state guarantees and purchases of such banks' distressed assets.

<sup>7</sup> Bad banks will have the opposite preference (discussed below).



Thus, it is difficult to generalize about the relationship between industry structure and organization on the one hand and policy outcomes on the other. As we argue below, however, rising financial interconnectedness and complexity has reduced whatever incentives strong banks had to oppose rescues of bad banks, and increased the need for public sector assistance.

Similar considerations apply to other economic actors linked to the banking sector. *Investors and creditors* who have lent to good banks will, in circumstances of low financial sector interdependence, prefer to avoid the direct and indirect costs of bailouts, since these could jeopardize the value of their assets.<sup>8</sup> To the extent that the fortunes of their investments and loans are linked to the survival of distressed banks, however, they are likely to favour bailouts even if these encourage risky behaviour in the long term. *Non-financial firms* that are heavily dependent on particular banks will also tend to have preferences that are aligned with their bank. Generally, firms dependent on solvent banks will only support extensive public sector bailouts under circumstances of rising financial interconnectedness, when they cannot be confident that their own bank will survive if a strict Bagehot policy is enforced.

*Public sector beneficiaries*, including public sector workers and welfare recipients, will wish to preserve their share of and access to public expenditure.<sup>9</sup> Generally, if costly public bailouts threaten this share, this diffuse group of actors

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<sup>8</sup> In bank partnerships, senior bankers will often also be significant shareholders. The rise of equity-based compensation in banking since the 1990s has also blurred this distinction for listed banks.

<sup>9</sup> The latter includes groups who depend on social insurance, public pensions, and public schooling.

should oppose them. This provides incentives for governments intent on providing such bailouts to try to obscure their cost by providing guarantees and other forms of contingent liabilities to distressed banks, or to allow central banks to bear the burden. As with taxpayers, public sector beneficiaries might be persuaded to support bailouts if they are convinced that the costs are small, or that they are necessary to prevent a broader economic collapse that would substantially reduce future national income and total public sector revenue. Excepting in elections, such beneficiaries may also find it difficult to sustain concerted opposition to public bailouts.

## 1.2 Bailout constituencies

*Bad banks* and associated actors are the main constituency that will favour the socialization of their losses by the public sector and/or by their good bank competitors. Insolvent banks will prefer extensive, cheap and unconditional assistance. This preference will also apply to the shareholders, creditors, employees and other principal dependents of bad banks, who will prefer to shift their potential losses to taxpayers and other groups. This pro-bailout group includes a potentially large creditor constituency, depositors with assets in bad banks.

As noted above, the structure and organization of the banking sector, and of finance-government relations, could shape the influence of these distressed banks on other private actors and the government. Where bad banks are of great size, importance, concentration, or are already publicly owned, bailouts may be more forthcoming because their failure could generate large losses for politically connected interests. Again, we argue below that rising financial interconnectedness and complexity has increased the influence that (large) bad banks can bring to bear

over other private and public sector actors.

*Non-financial firms* dependent on the continued provision of credit by bad banks will also favour bailouts for these banks. Such dependence should be stronger in economies in which banks are of central importance in financial intermediation and long-term club-like relationships exist between individual private banks and firms,<sup>10</sup> and in economies characterized by close business-government relations, including state ownership of large firms and banks. In financial systems that are relatively dependent on the flow of bank credit, as in many coordinated market economies (CMEs) and developing countries, the demand for commercial bank bailouts from small and large non-financial firms may be particularly strong.

### 1.3 Why the Bailout constituency has grown over time

We now turn to our main argument: the constituency in favour of Bailouts has grown and increasingly dominates the Bagehot constituency, including in advanced democracies. Two main interconnected developments have swelled the ranks of the Bailout constituency and weakened the Bagehot constituency, which we summarize as financialization and the democratization of leverage. A third development, financial globalization, has ambiguous implications but the first two factors swamp its impact.

The first development increasing the relative importance of the Bailout constituency is financialization. There is a growing importance of banks in modern complex economies as facilitators of the payments system, as brokers who match

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<sup>10</sup> This was historically true of Japan and Germany, for example, where major firms obtained most of their external credit from principal or “Haus” banks.

lenders with borrowers, and as managers of other actors' savings and risk. Kay describes these developments and the associated process of financialization as one of financial deepening and increasing complexity, characterized by “the substitution of trading and transactions for relationships, and the [associated] restructuring of finance businesses” (Kay, 2015, Part 1).

The growth of complex markets in financial securities has increased the interconnectedness of banks and other actors in the economy, reducing the incentives for actors associated with strong banks to oppose bailout policies. Savers, for example, have accumulated wealth including bank deposits and other assets such as stocks, bonds, and houses (Piketty & Zucman, 2014, pp. 1280–1281).<sup>11</sup> They rely heavily on an increasingly diverse set of financial institutions to act as intermediaries between themselves and borrowers. As household savings have accumulated and financial inclusion grown over time, the size and intensity of their preference for government protection of this wealth has strengthened, with consequences for levels of moral hazard and financial sector risk (Calomiris & Haber, 2014). Since a large proportion of middle class wealth is held in the form of housing equity, these households are most likely to favor policies.<sup>12</sup> Since strict Bagehot policies would

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<sup>11</sup> House ownership rates outside of the wealthiest households have increased. For example, in the UK in 1918, 77% of all households rented their accommodation, mainly from wealthy private landlords. Ownership rates grew rapidly from the 1950s and by 1971, 50% of households were owner-occupiers.

<http://webarchive.nationalarchives.gov.uk/20160105160709/http://www.ons.gov.uk/ons/r el/census/2011-census-analysis/a-century-of-home-ownership-and-renting-in-england-and-wales/short-story-on-housing.html>. Ownership rates before WWII in the United States were higher than in the UK, around 45% from the 1890s, but also rose significantly after WWII. <https://www.census.gov/prod/cen2010/briefs/c2010br-07.pdf>.

<sup>12</sup> The wealthiest households, whose housing assets tend to be less important in their asset portfolios, may be less favourable towards policies that protect the housing wealth of lower

threaten the value of their financial wealth, large parts of the household sector are likely to oppose them.

The growth in middle class pension assets has also been significant in developed countries since 1945. Since the 1990s, a growing policy trend to constrain the growth in public pension provision has prompted a generalized move away from defined benefit pensions towards defined contribution schemes. This shifts financial risk onto households and individuals and increases their incentive to monitor the market value of their pension assets.<sup>13</sup> Thus, in countries in which defined contribution pension schemes dominate, we expect middle class demand for financial asset price protection to be high.

As a result of financialization, we also expect most households to share a growing interest in the protection of systemic banks. These large, complex financial institutions have increasingly become seen by their creditors and other stakeholders as “too big to fail” because any such failure would impose unacceptably large costs on the wider financial network and economy (Kay, 2015; Stern & Feldman, 2004). Systemic banks are often market makers in key markets, issue debt and equity instruments to non-financial firms, and link household savings with securitized lending to such firms through wholesale financial markets. They have also become

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and middle-income households during crises. Protecting housing wealth can be very costly. In the United States over 2006-9, Mian and Sufi estimate that the total loss of housing wealth was \$5.5 trillion, or about 40% of GDP (Mian & Sufi, 2014, p. 19). This loss, which was heavily concentrated among low and middle-income households, was not far short of total federal government expenditure in 2009 of nearly \$6 trillion.

<sup>13</sup> Under defined contribution schemes, employers are effectively responsible for making up for shortfalls in the value of pension fund assets, reducing the incentive of employees to monitor underlying asset values and portfolio composition.

among the most important issuers of equity<sup>14</sup> and debt<sup>15</sup> instruments for their own purposes. Systemic banks have today come to dominate corporate bond issuance: by end 2015, outstanding debt issuance by US-based financial firms was \$14.97 trillion, compared to \$5.52 trillion of issuance by non-financial firms.<sup>16</sup> Financial firms also take part in an increasing share of global bond issuance. Vanguard's Global Bond Index Fund, designed to track the global bond market, comprised of 57.7% in issuance by governments and supranational agencies, 11.9% in asset-backed securities (issued primarily by banks), 10.4% in corporate bonds, and 7.4% in financial firm issuance in March 2016.<sup>17</sup>

For all these reasons, middle class pension and insurance assets increasingly depend directly on the health of systemic banks, as does the wealth of the richest households. Lower income households, whose income, employment and wealth have also become increasingly dependent on financial stability generally, will share this interest even if bailouts of large financial institutions generate unequal

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<sup>14</sup> For example, in June 2016, the financial sector comprised over 16% of the market capitalization of the S&P 500 index of the 500 largest listed US firms, second only to the IT sector. Large financial firms comprise the largest sectoral component (20%) of the Morgan Stanley World Index, which covers 85% of the free float-adjusted market capitalization in each of 23 developed countries. All 30 current FSB-designated global systemically important banks ("G-SIBs") are listed, often on multiple stock exchanges, and figure prominently in many equity funds. (Data from S&P, Morgan Stanley, and the Financial Stability Board as of June 8, 2016).

<sup>15</sup> Major banks are also deeply involved in the bond markets. As of end-2007, the largest component (30%) of the \$31.74 outstanding US bond market debt was mortgage-related securities, followed by corporate debt (17%) and US Treasury debt (14%). (SIFMA, *US Bond Market Issuance and Outstanding*, accessed June 8, 2016).

<sup>16</sup> TDSAMRIAFCUS and TDSAMRIAONCUS series, Federal Reserve Bank of St. Louis, FRED database, accessed June 8, 2016.

<sup>17</sup> Vanguard Global Bond Index Factsheet, June 2016.

distributional effects.

Since financialization is associated with increasing connectedness among financial firms, it also erodes the tendency of good banks to favor allowing bad banks to fail. Rising interconnectedness heightens systemic fragility and facilitates the spread of economic disruption to all parts of the financial system and economy in times of financial distress. Because systemic banks increasingly rise and fall together, even relatively strong banks may support the rescue of bad systemic banks. The increasing size of such banks also means that this requires public sector support. Too big to fail also means that such banks are often too big for the private sector to rescue. For similar reasons, financialization will intensify the (national) corporate sector interest in rescues of systemically important banks.<sup>18</sup> Finally, as public sector net indebtedness rose from the 1960s, so too has the interest of the public sector in the maintenance of the financial system. Creditworthy governments came increasingly to borrow by issuing bonds that are sold to a variety of investors such as pension and insurance funds as well as banks – thus, their interests are closer to those of large firms. For some countries, the rising contribution of the financial sector to corporate profits since the 1970s has also been an increasingly important contributor to tax revenue (Bell & Hindmoor, 2015; Krippner, 2005).

These developments have also eroded some of the traditional differences between different models of capitalism. As the literature on comparative capitalisms suggests, banks are historically of central importance to financial intermediation in coordinated market economies (Hall & Soskice, 2001; Zysman, 1983). Nevertheless,

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<sup>18</sup> This may be less true for globalized firms, as we discuss below.

even in more capital markets-oriented financial systems such as those in liberal market economies such as the UK and USA, high levels of financialization tends to increase the interconnectedness of banks and capital markets in ways that increases systemic fragility in crises (Yellen, 2013). This has eroded the differences between the financial systems of CMEs and LMEs ((Hardie, Howarth, Maxfield, & Verdun, 2013).

In short, financialization has increased the interconnectedness of the financial system and the dependence of other actors on its health and on that of large systemically important banks in particular. This growing dependence is the underlying cause of the increasing structural power of these banks that has been noted by many authors. This structural power has both material and ideational aspects. The material dependence of many other actors, including states, on the large financial flows intermediated by these banks is clear, but the *perception* of dependence on systemic banks and the financial sector more generally can be loosely related to material dependence and act as an important constraint on policymakers (Bell & Hindmoor, 2015; Watson & Hay, 2003). For both reasons, since strict Bagehot policies would be perceived as very harmful to the interests of many actors and large segments of society, the size of the intra-crisis Bailout coalition has grown substantially with financialization.

A second, related development has reinforced this effect: rising leverage. Increasingly, lower and middle-income households became net borrowers as they used bank loans to finance purchases of large durables such as houses and cars. Mortgage lending grew especially rapidly after World War One. According to Jordà,



Schularick, and Taylor, over the past century banking increasingly became the business of household real estate financing: “In relation to GDP, non-mortgage bank lending to companies and households has remained stable, with virtually all of the increase in the size of the financial sector stemming from a boom in mortgage lending to households” (O. Jordà, Schularick, & Taylor, 2016, p. 140). They refer to this process as the “democratization of leverage” and argue that it has resulted in increased financial fragility (Goodhart & Erfurth, 2014; Ò. Jordà, Schularick, & Taylor, 2015).

In countries in which economic inequality has been rising, those groups experiencing relative income stagnation have often been especially dependent on increased borrowing to sustain consumption. House price inflation in excess of lower and middle class wage growth by itself has resulted in increasing leverage for these households (Mian & Sufi, 2014, pp. 78–79; Rajan, 2010; Weber & Schmitz, 2011, p. 647). Since house price declines threaten the consumption expenditure of relatively poor households, they have an interest in policies that support house prices, in particular the maintenance of the flow of credit.<sup>19</sup> Individual leveraged households also have a general interest in the maintenance of the flow of credit to other borrowing households, so that “fire sales” are avoided (since generalized sales would threaten the value of their house). Thus, rising leverage gives the lower and middle classes an additional interest in bank bailouts in financial crises. The impact of this development over the past century should have been reinforced by the expansion of

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<sup>19</sup> Households facing falling asset prices are also likely to support policies that require banks to offer debt relief to borrowers rather than forced asset sales. However, such policies directly threaten the narrow interests of savers, banks, and the relatively wealthy.

electoral franchises in many countries after World War One.

A third development, financial globalization, is related to the first two. It has also been seen as a key source of the rising structural power of finance in relation to the state (Cerny, 1994; Strange, 1990; Watson & Hay, 2003). However, there are also reasons why it could mitigate the effect of the first two factors on the coalition for bank bailouts during crises. On the one hand, financial globalization can increase the credibility of an exit threat by large banks, which may improve their ability to obtain bailouts on especially generous terms (Culpepper & Reinke, 2014). On the other hand, if the commitment of large globalized banks to the national economy is perceived by other actors as low, it could erode political support for bailout policies among other domestic actors.

The globalization of non-financial firms might also reduce their interest in bailouts of national banks. Since the 1970s, globalizing firms have become less dependent on national finance, particularly national bank finance. Large firms increasingly finance their investment from profits, rather than borrow from banks (Kay, 2015). Where they need bank finance, such as for large acquisitions, such firms can tap an increasingly globalized banking system and related global capital markets. This makes such firms increasingly dependent on policy interventions by multiple governments to support such global banks. This is also true for globalized systemic banks themselves, whose position could be threatened by the collapse of systemic banks whose home base is elsewhere (as the collapse of Lehman Brothers in September 2008 demonstrated for many banks in Europe). However, the ability of global banks and firms to influence policy outcomes in countries outside of their

home base is uncertain.

To summarize, the overall impact of financialization and rising household leverage has been to increase the interest and weight of a variety of actors, including other banks, firms, households and governments, in bailout policies during banking crises. Globalization is a potentially mitigating factor that might weaken support for bank bailouts, but we argue this is unlikely to apply in the case of banks that are perceived as systemic in the relevant country. Overall, these trends have redrawn the preference map in favor of Bailout policies. This includes rising support for bailouts of large, especially systemic banks, and rising demand for asset price support, especially in those countries in which middle class wealth is concentrated in housing and in defined contribution pensions.

This means that the constituencies favouring bailouts are increasingly broad, rather than simply narrow and concentrated. The main constituencies left as potential supporters of Bagehot policies are taxpayers and public sector beneficiaries. However, we expect these groups to be relatively weak sources of support for Bagehot policies. First, the costs of bailouts are generally widely distributed and they will often find it difficult to organize collectively outside elections (with the possible exception of countries with strong public sector unions). Second, the full costs of bailouts may be hidden via contingent liabilities, may only materialize after considerable delay, and potential opponents will often lack strong incentives to mobilize against potentially costly bailouts at the outset (Gandrud & Hallerberg, 2014, p. 4). It is also open to governments to pretend that bailouts will be

limited and will not prevent market-conforming solutions.<sup>20</sup> Third, taxpayers and public sector beneficiaries are also employees, consumers and (sometimes) firms: real world actors have composite interests, thus further diluting their incentives to act collectively to limit their tax liabilities or to maximize their share of public spending. Fourth, elites may be able to deflect this potential opposition to bailouts by claiming that extensive intervention today will minimize larger future public losses. One example of this technique is provided by George W. Bush – not a noted supporter of government intervention before the crisis – in his address to the nation on September 24, 2008:

I propose that the federal government reduce the risk posed by [banks'] troubled assets and supply urgently needed money so banks and other financial institutions can avoid collapse and resume lending. This rescue effort is not aimed at preserving any individual company or industry. It is aimed at preserving America's overall economy. It will help American consumers and businesses get credit to meet their daily needs and create jobs...I also understand the frustration of responsible Americans who pay their mortgages on time, file their tax returns every April 15th, and are reluctant to pay the cost of excesses on Wall Street. But given the situation we are facing, *not passing a bill now would cost these Americans much more later.*<sup>21</sup>

There is also a related, practical reason why governments will likely be increasingly inclined to provide extensive bailouts rather than strict Bagehot policies. As noted above, financialization and rising leverage have combined to increase

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<sup>20</sup> For example, in 2008 the European Union set out three arguably contradictory objectives for bank rescue packages: bank rescues should simultaneously stabilize the financial sector, including avoiding failure of systemic financial institutions; stabilize the non-financial sector; and “preserve the liberal market model” by ensuring that shareholders and management bear losses (as summarized in (Weber & Schmitz, 2011, p. 640)).

<sup>21</sup> “President Bush’s Speech to the Nation on the Economic Crisis,” transcript, *New York Times*, September 24, 2008, emphasis added.

financial fragility, including the fragility of the financial system as a whole (“systemic risk”). As financial systems have become more complex and interconnected, so too has the potential for banking crises to be both more frequent and more costly (O. Jordà et al., 2016; Kay, 2015). This rising complexity can be seen in the rise of the shadow banking sector and in other measures of interconnectedness among financial institutions (Gai, Haldane, & Kapadia, 2011; Yellen, 2013). As financial networks grow within economies, the centrality of banks within them tends also to increase. Although our argument does not depend simply on the claim that crises have become deeper over time, it is evident that the larger the banking sector and the deeper the financial crisis, the more the potential support for large financial sector bailouts (Weber & Schmitz, 2011, p. 642). The likelihood of increasingly systemic banking crises has also made it more challenging for governments facing a crisis to distinguish with a reasonable degree of accuracy insolvent from illiquid banks, a key condition of Bagehot policies. Thus, processes of financialization and associated increases in systemic financial risk have for political and practical reasons increased the likelihood that governments will opt for Bailouts rather than Bagehot.

Since the growing Bailout constituency is not clearly divided along traditional left-right party lines, we do not expect the supply of such policies to be strongly affected by government partisanship. We would also expect the processes we outline above to have weakened traditional right-wing principled support for market-conforming policy solutions.<sup>22</sup> Although left-wing parties have also

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<sup>22</sup> For instance, the financial fallout after the collapse of Lehman Brothers prompted the Bush Treasury to reverse its earlier principled opposition to using public funds to recapitalize banks. “Government owning a stake in any private U.S. company,” Hank Paulson, then Treasury Secretary, explained, “is objectionable to most Americans – me included. Yet the

sometimes opposed bank bailouts due to concerns about their redistributive effects on workers and public sector beneficiaries, as the interest of these groups in the maintenance of bank credit has increased, so too should these parties have become less opposed to bank bailouts.<sup>23</sup>

We do not underestimate the contentious politics that surrounds bank interventions. As former US Treasury Secretary Timothy Geithner remarked, “The whole thing about financial crises is the tools that work are the ones that will make you look like you’re in bed with the banks”.<sup>24</sup> It is also clear that vocal opposition to bailouts can come from both left and right – as is clear from the cases of the Tea Party and the Occupy movement in the United States after 2008. Nor are we arguing that “bailouts” have become less politically charged than in the past. Clearly, public opinion surveys often report that voters are distrustful of “bankers” and government “bailouts” while being robustly in favor of government intervention to prevent generalized financial and economic collapse (Gallup, 2009; Goolsbee & Krueger, 2015, p. 9). It is not a novelty to suggest that voters often want contradictory things.

Our working hypotheses are summarized below.

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alternative of leaving businesses and consumers without access to financing is totally unacceptable.” (As quoted in Edmund L. Andrews and Mark Lander, “White House Overhauling Rescue Plan,” *New York Times*, 11 October 2008).

<sup>23</sup> However, Weber and Schmitz find in their recent study of European interventions that the conditionality attached to state aid is more generous in countries where social democrats have a larger share of parliamentary seats (Weber & Schmitz, 2011).

<sup>24</sup> Quoted in Andrew Ross Sorkin, “President Obama Weighs His Economic Legacy,” *New York Times Magazine*, April 28, 2016, <http://www.nytimes.com/2016/05/01/magazine/president-obama-weighs-his-economic-legacy.html? r=3>.

**Hypothesis 1:** *Higher levels of financialization will be positively associated with Bailout policy responses to banking crises, irrespective of regime type.*

**Hypothesis 2:** *Democracy will be positively associated with Bailout policy responses to banking crises.*

**Hypothesis 3:** *Financialization will condition the impact of democracy on policy responses to banking crises, and, as such, democratic governments should be more likely to implement Bailout policy responses in economies with higher levels of financialization.*

## **2** *Measuring policy responses*

How should we measure crisis policy responses? Some authors have investigated particular categories of policy response, such as the provision of public liability guarantees to banks (Grossman & Woll, 2014). The drawback of a narrow focus of this kind is that government responses to systemic banking crises are typically multi-faceted, often encompassing a wide range of policies that can be substitutes or complements. For this reason, we follow Rosas in trying to devise a broader description of policy response (Rosas, 2006). Rosas counted a number of microeconomic policy measures that can be categorized as either “Bailout” or “Bagehot” – measures that taken together either serve to prevent insolvent banks from failing, or alternatively that ensure that losses by such banks are crystallized and borne by their owners, employees and investors.

This approach can be criticized on a few grounds. First, as already noted, it can be difficult during crises for policymakers to distinguish between insolvent banks

and those that are solvent but are suffering from acute liquidity problems (Brunnermeier, James, & Landau, 2016, pp. 116–119; Goodhart, 1999; Swagel, 2015). If policymakers feel compelled for this reason to provide less discriminating support to banks, this procedure could overestimate their underlying preference for bailouts. Since we are more interested in understanding how policymakers have responded to the pressure of banking crises over time than in their own preferences, we do not feel this is a major concern. Second, in focusing largely on microeconomic measures, Rosas left aside macroeconomic policy responses, which have been an important component of the policy response to systemic banking crises since the 1970s (Laeven & Valencia, 2013). Their omission could underestimate the propensity of governments to provide generalized support to the economy as well as financial sector bailouts. However, there seems to be no strong reason to believe that this potential bias has changed over the period since 1974.

We therefore opt for a similar procedure to Rosas, focusing on microeconomic policy responses to banking crises and measuring the overall tendency for governments to depart from a market-conforming, “Bagehot” policy stance (Rosas, 2006). We create an additive policy response index that builds on the work of Rosas (2006), Keefer (2007), and Grossman and Woll (2013) in seeking to assess the extent to which governments pursue a Bagehot or Bailout response to a systemic banking crisis. Our analysis includes government responses to 122 separate systemic banking crises with start dates from 1976 to 2009. These 122 crises – identified in Table 1 – are a subset of a larger collection of systemic episodes found



in Laeven and Valencia (Laeven & Valencia, 2008, 2013).<sup>25</sup>

**[INSERT TABLE 1 HERE]**

Table 2 extends Rosas’s earlier depiction of the crucial elements of policies one would expect from a coherent Bagehot or Bailout response. The first column of Table 2 identifies five crucial policy issues areas: Last-Resort Lending, Nonperforming Loans, Bank Recapitalization, Socialization of Liabilities, and Bank Exit Policy. Entries in each subsequent column refer to the policy decisions that characterize a Bagehot or a Bailout response.

**[INSERT TABLE 2 HERE]**

We extend the coding scheme of Honohan and Klingebiel to develop nine binary indicators that can be related to the five policy issue-areas detailed in the Bagehot-Bailout classification of Table 2 (Honohan & Klingebiel, 2000). The raw data for the index ranges from -2 to 7, with higher values indicating more Bailout policy responses and lower values suggesting more Bagehot policy responses. We draw on various sources to develop the index (Bordo, 2001; Gandrud, 2013; Gandrud & Hallerberg, 2014; Honohan & Klingebiel, 2000, 2003, Laeven & Valencia, 2008, 2013). We consider all policy responses that occur within three years after the crisis window. This window is bounded by the year of onset and the final year of the crisis recorded in the Laeven and Valencia database.

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<sup>25</sup> These crisis datings are made *ex post* and defined as systemic if two conditions are met: “Significant signs of financial distress in the banking system...” and “Significant banking policy intervention measures in response to significant losses in the banking system” (Laeven & Valencia, 2013, p. 3). We recognize that this may bias the crisis codings towards cases in which interventions were significant, but in the period since 1970 we are not aware of a crisis in which major banks have been threatened with failure and governments have not intervened.

**[INSERT TABLE 3 HERE]**

Table 3 shows how the nine indicators – *Bank Liquidity, Public Asset Management, Recapitalization, Guarantees, Deposit Insurance, Deposit Freeze, Deposit Loss, Forbearance, and Bank Restructuring* - relate to the policy issues in Table 1. *Bank Liquidity* is an example of a Bailout government response regarding last-resort lending that is coded as “+1” if any of the following are true: (1) governments extended support for longer than 12 months and the overall support is greater than total banking capital (Honohan & Klingebiel, 2000, 2003); (2) claims from monetary authorities on banks at least doubled with respect to the previous year and were greater than five percent of deposits (Laeven & Valencia, 2008, 2013); or (3) sources described liquidity support as extensive and open-ended. *Deposit Loss* is an example of an indicator of Bagehot policy response that is coded as “-1” if governments imposed losses on bank depositors.

**[INSERT FIGURE 1 HERE]**

Figure 1 plots the aggregate count of the nine separate policy response categories. We find that governments tend to opt most frequently for Bank Restructuring followed by Deposit Insurance, Recapitalization, and Bank Liquidity support. Governments tend to use Deposit Freezes and impose Deposit Losses more sparingly. The most Bagehot policy responses (-2) occurred following a crisis in Latvia in 1995, where depositors were forced to incur losses and banks holding 40 percent of assets were closed, but no further intervention was implemented. The most Bailout responses (7) were observed in Hungary after a crisis developed in 1991

in which eight banks holding 25 percent of the financial system's assets were deemed insolvent. The government employed the full range of Bailout policy measures and none of those related to the Bagehot response.

The raw data are revealing, but they overlook the extent to which the various indicators are correlated and potentially exaggerate the dimensionality of the data. We thus use the *first principal component* of the nine indicators as our preferred measure of government policy responses to banking crises. This measure ranges from -2.862994 to 3.185681, with higher values indicating a more coherent set of Bailout policy responses and lower values suggesting a more coherent set of Bagehot policy responses. Figure 2 plots the histogram of the response index. It reveals a somewhat bimodal distribution, though government responses tend to lean more strongly in the Bailout direction.

**[INSERT FIGURE 2 HERE]**

Figure 3 provides a summary picture of our policy response indicator for countries suffering SBCs since 2007. It is immediately apparent that virtually every government facing a systemic banking crisis in the period 2007-9 engaged in highly market-nonconforming bailouts. Most of the major democracies (including France, Germany, the UK and the USA) score highly on this index, indicating that they each adopted a set of policy measures generally associated with a bailout of the financial system. Some European democracies score somewhat less highly, in line with the only non-democracy, Kazakhstan. Mongolia is the lone, relatively underdeveloped democracy in this period to have exhibited a policy response more consistent with a

Bagehot response.<sup>26</sup>

**[INSERT FIGURE 3 HERE]**

In fact, if we look over the whole sample period of crises for which we have data, 1976-2009, there appears to be a strong trend towards increasingly higher incidences of bailout responses to banking crises (Figure 4). Figure 4 also shows that there is an increasing tendency for banking crises to occur in democratic polities since the mid-1990s. By the time of the global financial crisis in 2007-8, most banking crises occur in democracies, including the most advanced democracies, and these indicate a relatively high bailout response by historical standards. In the period before the 1990s, by contrast, banking crises were much more likely to occur in authoritarian developing countries and even then, bailout responses were only moderately elevated in the early 1980s. In short, this initial evidence casts considerable doubt on the idea that policy responses to systemic banking crises are shaped mainly by regime type.

**[INSERT FIGURE 4 HERE]**

### **3 Analysis**

In this section we offer a preliminary quantitative assessment of the determinants of this response index. For each determinant we compute the average value for the window of the crisis period and the three years that follow it (since some policy responses are often delayed).

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<sup>26</sup> Iceland exceptionally allowed its banks to go bankrupt. However, it also recapitalized these banks with taxpayer funds, provided unlimited deposit insurance, bank liability guarantees, and extensive liquidity support to its banking sector – all inconsistent with Rosas’s Bagehot measure (Laeven & Valencia, 2013, p. 25).

*Independent variables:*

We explore the effect of democracy on government policy responses using data from Polity IV (Marshall, Jaggers, and Gurr 2013). We use a range of different indicators to investigate the influence of financialization, which may be associated with increasing size, strength, and development of deposit money banks, rising leverage among households and the corporate sector as well as rising complexity and interconnectedness among financial institutions. Many commentators use measures such as the contribution of the financial sector to total economic value added, or to total corporate profits (Krippner, 2005). Unfortunately, such measures are only available for a few advanced economies.

We therefore turn to alternative measures of financialization for which data are more widely available. We begin *with Liquid Liabilities* as a proportion of GDP – a commonly used measure of financial depth – that captures absolute size of the financial sector based on the liabilities of the central bank, deposit money banks, and other financial institutions. Historically, financial repression in much of the developing world meant that the central bank took on an expanded role in the allocation of domestic credit (Beck, Demirgüç-Kunt, & Levine, 2000). While useful for capturing overall financial depth, *Liquid Liabilities* fails to assess the relative importance of the public versus private sector. We thus consider alternative measures such as *Deposit Money Bank Assets* to GDP and the ratio of *Deposit Money Bank Assets Share*, which measures the ratio of deposit money bank assets to total financial assets. The former gives evidence of the absolute size of Deposit Money Banks, while the latter measures the importance of Deposit Money Banks in credit

allocation relative to the Central Bank. Deposit money banks may have greater political influence in economies with large private financial sectors – measured either in absolute or relative terms – and thus may have greater political influence to secure a preferred Bailout response. Bank failures in such economies may also be more disruptive, heightening societal demand for stabilization.

We also consider the market structure of the banking system using a measure of *Concentration* defined as the ratio of the three largest banks' assets to total banking sector assets. Concentrated banking interests may coordinate more easily to secure a preferred Bailout response or, alternatively, promote more balanced public-private burden sharing (Grossman & Woll, 2014). Alternatively, a highly fragmented market might be evidence for undercapitalized banks (Beck et al., 2000, pp. 9–10), leading to a Bailout response.

We measure the leverage of households and the corporate sector using the *Private Credit* from domestic money banks and other financial institutions-to-GDP ratio. In addition to leverage, the preference of households and the corporate sector for Bailout policies may be conditional on the level of financial wealth and inclusiveness in an economy. We use *Deposit Share* - the ratio of deposits in the financial system to GDP – as an indicator for bank-based financial wealth and inclusion. If households and firms are highly leveraged or operate in an economy with higher levels of bank-based financial wealth and inclusion, then bank closures would threaten borrowers and savers with severe economic consequences.

Bond and equity markets are a key part of financialization in capital market-oriented economies. In addition to having more capital markets based and (often)

more private-sector oriented financial systems, economies with higher levels of stock market tradable volume and private bond market capitalization are more likely to be more open to financial innovation (securitization), and more financially complex and interconnected. Many middle-income developing countries with large state-owned banks score highly on various bank size and private sector leverage measures, but tend to have less developed bond and equity markets. We thus consider both the total shares traded on domestic stock exchanges (*Stock Market*) and private bond market capitalization (*Private Bond*) as a proportion of GDP. We also develop a composite measure of financialization that sums *Stock Market* and *Private Bond* capitalization as a proportion of GDP.

All the financialization data are from the World Bank's *Global Financial Development and Structure Dataset* (Beck, Demirgüç-Kunt, Levine, Čihák, and Feyen 2013). With the exception of *Concentration*, all the financialization variables are skewed and thus we use their natural log in the regression analysis. We use the Chinn-Ito (2006) measure of capital account openness (*KAOPEN*) to assess the impact of financial globalization.

We also consider how housing assets may shape government policy response. Measuring national-level residential property prices in a cross-national comparative manner presents challenges (Scatigna, Szemere, & Tsatsaronis, 2014). We use the 57 national series selected by the Bank for International Settlements (BIS) with the aim of being comparable across countries (Bank for International Settlements 2016). We focus on the property price level (*Property Prices*) as it helps to capture the extent of housing equity wealth within a country.

Government policy responses have significant distributional consequences, as bailouts imply current and future taxpayers and welfare state beneficiaries should bear the burden of rescue packages that benefit bank creditors. Cross-national differences in societal tolerance for inequality might shape how citizens respond to the distributional impact of bank rescues. Policymakers may interpret existing inequality as a signal that the unequal distributional effect of socializing private losses via bailouts will be more easily accepted (see also (Weber & Schmitz, 2011)). Economies with higher inequality may also be more prone to bailouts to sustain borrowing by lower income groups to support consumption.

To assess the influence of income inequality (*Inequality*), we use a standard measure of the Gini coefficient, devised by Solt (Solt, 2008, 2016). The measure ranges from zero to 100, with higher values indicating higher market income inequality.

To test whether the above variables condition the effect of democracy on government policy responses, we create an interaction term that combines our measure of democracy with each of the variables. This interaction term permits us to assess the conditional effect of democracy across various levels of above variables on the expected government policy response.

We also include some control variables. We use the level of economic development – the natural log of per capita GDP measured in 2005 US dollars – as a proxy for the fiscal capacity of governments to afford the expense associated with bank bailouts. These data are from Penn World Tables. We also consider the influence of exchange rate regime, public debt burden, and trade openness.



Exchange rate commitments, high public debt burdens, and trade globalization may constrain the capacity of governments to undertake the fiscal and monetary measures associated with bank bailouts.<sup>27</sup> We might expect governments to move closer to a more coherent Bagehot response to the extent that their economies have a more fixed exchange rate regime, higher public debt burden, and higher levels of trade integration. To examine exchange rate commitments, we use the Ilzetski, Reinhart, and Rogoff (2010) coarse exchange rate regime measure. Their measure has size categories, with higher values indicating a more flexible exchange rate regimes. Data on public debt burdens are from Mauro et al., which provides the most comprehensive database of fiscal variables currently available (Mauro, Romeu, Binder, & Zaman, 2013). Data on trade openness are from the World Bank (2015) *World Development Indicators*. Table 4 provides summary statistics for all variables.

**[INSERT TABLES 4 - 6 HERE]**

We estimate a series of ordinary least squares regressions that model government policy responses to banking crises. Missing values pose some concern in this analysis. Banking crises are relatively rare events. The summary statistics show that the public debt and exchange rate data exhibit somewhat high levels of missingness. Inclusion of all the covariates above thus further depletes the already small number of crisis windows. We thus estimate both a reduced-form specification where public debt and exchange rate data are excluded and more comprehensive specification where these variables are included.

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<sup>27</sup> Mosley (2003) and Obstfeld (1998), among others, articulate the idea that capital markets will discipline governments during tranquil times. During crises, when capital market actors may be more sensitive to default risk, it is plausible that such constraints will increase.

Tables 5 - 8 present the results. We begin with models - reported in Tables 5 and 6 - that investigate the unconditional effect of our variables. The coefficient for *Democracy* is positively signed in all models and attains statistical significance in many of the reduced-form specifications (Models 1, 2, 3, 4, 6, 7, and 8). These results are at odds with the expectations derived from Rosas's (2006) earlier work and instead provide some tentative support for the conjecture that modern democracies may be more prone to bailouts (hypothesis 2).

We also find evidence from both specifications that governments are more prone to implement Bailout policy responses in economies with higher levels of stock market tradable volume, higher residential property prices, and greater market income inequality and income redistribution. We fail to find similar significant unconditional effects for our measures of the size, strength and development of deposit money banks, for leverage among households and the corporate sector, and for capital account openness. This finding suggests there may be general Bailout propensities associated with highly developed capital markets as well as greater housing wealth and market income inequality and redistribution that apply to both democratic and non-democratic governments (hypothesis 1).

To provide a sense of this generalized propensity our sample, we use Figure 5 to plot the policy response index against stock market value traded (ln). The relationship is positive, as expected: higher stock market capitalization is associated with a more coherent Bailout response.<sup>28</sup> The northeast region of the figure features crisis episodes in highly financialized economies with well-developed capital

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<sup>28</sup> Coefficient = 0.250, se = 0.059, t = 4.17, R-squared = 0.20.

markets and extensive public interventions, including Malaysia 1997, United States 2007, United Kingdom 2007, and Switzerland 2008. The southeast region of the figure contains crisis episodes in less financialized economies and more market-conforming policy responses, such as Romania 1990.

**[INSERT FIGURE 5 HERE]**

Why might higher levels of stock market tradable value induce a general propensity for bailouts across all regimes types? As the fallout from Lehman Brothers' collapse suggests, one reason may be due to the growth of financial innovation, complexity, and interconnectedness within economies with higher levels of stock market capitalization, which heightens the negative externalities associated with bank (and "shadow bank") closures in such economies. Higher levels of stock market capitalization also suggest that greater amounts of household and corporate wealth tied to equity markets could be at risk from sharp falls in asset prices that often follow banking crises. Sharp falls in asset prices during crises can quickly threaten highly leveraged banks with insolvency (Admati & Hellwig, 2013).

This relationship between bank insolvency and asset price falls can also harm the wider economy via the "wealth effect." Weaker demand and weaker investment could depress output, particularly in highly financialized economies where growing leverage drives higher stock market valuations (Brunnermeier & Schnabel, 2015; Ò. Jordà et al., 2015). Leveraged borrowers may be forced to sell assets to avoid default, further depressing prices and wealth. Financial institutions that have extended credit to investors or accepted shares as collateral then also suffer losses, which forces them to rein in lending, depressing output even more.

To avoid losing political support from households and firms, governments may be prone to public intervention to stabilize the financial system. Such was the case in Malaysia in 1997-1998 when the regime, in an effort to maintain survival, rescued holders of fixed capital whose profitability had been severely damaged during the crisis (Pepinsky, 2008).<sup>29</sup>

However, we also find evidence for specific Bailout propensities to be associated with the relative importance of deposit money banks and with the private sector leverage in democratic countries. This is consistent with our expectation that in relatively financialized bank-based economies with democratic regimes governments will be under strong pressure to protect the interests of depositors as well as the broader economy. Table 6 reports the results for our conditional model specifications. The coefficient for the interaction term is consistently positive and significant in both specifications when we combine Democracy with *Liquid Liabilities*, *Deposit Money Banks*, *Deposit Money Banks Share*, *Private Credit*, and *Deposit Share*.

The preferred method to interpret the effect of interaction terms is through graphical presentation of the relationship between changes in the variables constituting the interaction term and the outcome of interest (Brambor, Clark, & Golder, 2006). We therefore plot the marginal effect of Democracy as each of the variables identified above varies from its observed minimum to its maximum values. We present the 95% confidence interval and include a histogram of the distribution of the relevant financialization variable.

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<sup>29</sup> Malaysia has a high level of stock market value traded where the investments of listed firms are overwhelmingly tied to fixed capital (heavy machinery, production, property ownership and development, natural resources, and others).

**[INSERT FIGURES 6 – 10 HERE]**

Figures 6 – 10, which use the results from Table 6, show that Democracy has a substantive and statistically significant effect on the propensity to implement Bailout policy responses for high values of *Liquid Liabilities*, *Deposit Money Banks*, *Deposit Money Banks Share*, *Private Credit*, and *Deposit Share*.<sup>30</sup> Moreover, the histogram in each figure shows that there are a sizeable number of observations that fall in the range of statistical significance.

Democratic governments may wish to serve as effective representatives of the taxpayer and to avoid sharing the burden of bank insolvency through Bailout policies. Yet these results suggest this preference is time-inconsistent. Democratic politicians have a higher specific propensity for Bailout policies in economies with larger banks, higher private sector leverage, and greater bank-based financial inclusion and wealth. In these conditions, democratic governments might choose Bailout policies because size provides banks with greater political influence, or because greater leverage, inclusion, and wealth creates higher societal demands for stabilization, or both. Irrespective of the interpretation, the contention that democracy acts a regime that prevents Bailout polices receives no empirical support in our analysis.

We now turn briefly to our control variables. Several models in Tables 5 – 8 indicate that richer economies and those with lower public debt burdens are more likely to choose Bailout policies. This result likely reflects the greater policy space

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<sup>30</sup> These results are robust to use of Cheibub, Gandhi, and Vreeland (2010) as an alternative measure of democracy.

for these economies to engage in taxpayer-funded financial rescues. We find little evidence that exchange rate commitments or trade globalization constrains (or enables) particular policy responses.

Finally, we are doubtful that our results could be due to any underlying trend towards an increasing intensity of banking crisis. The 2007-9 crisis was unusually deep by the standard of recent advanced country experience, but many developing countries faced equally disastrous crises in the 1980s and 1990s. We constrain our focus to systemic banking crises, or crises that have been deemed by IMF researchers to be relatively severe, involving a substantial part of a country's banking sector. Our results are also robust to the exclusion of crises since 2007, suggesting other factors are likely at work in shaping this rising general tendency. We also investigated whether estimates of the intensity of financial stress are correlated with an increased propensity to engage in bailouts, and our results suggested that there was no significant relationship.

#### **4 Conclusion**

We have argued that politics shapes the relationship between banking crises and policy responses in complex ways, and that this relationship has evolved over time. One standard argument is that democratic political leaders will seek to minimize the public burden of bank insolvency so as to avoid electoral sanction, and thus will be less likely to bail out banks than authoritarian governments (Keefer, 2007; Rosas, 2006). This comparative statics argument, we suggest, fails to take into account the ways in which finance, politics and policy responses to banking crises evolve dynamically over the longer term.

First, historical experience, new economic policy ideas, and rising societal expectations regarding financial and economic stabilization have produced a generally rising propensity for governments to intervene in a wide variety of ways in financial crises. Second, such interventions have encouraged rising financialization in many countries, associated with increasing leverage, complexity and interconnectedness – in short, rising systemic financial fragility. Since the 1970s, this has produced increases in both the incidence of systemic banking crises and in the propensity for policy responses that are inconsistent with a market-conforming “Bagehot” rule. Third, there is good reason to think that democratic political regimes will be more rather than less responsive to pressure from households and firms to ensure that this growing web of financial complexity does not collapse entirely, wreaking general economic and political havoc. High levels of financial interconnectedness and the growing importance of systemic banks also mean that private sector solutions to systemic crises are no longer possible, requiring increasingly extensive government interventions. Such policy responses, as Hyman Minsky argued, in turn mean that financialization has tended to develop most intensively and extensively in the advanced democracies (Minsky, 1992).

Thus, even if democratically elected governments would prefer to avoid costly public bailouts that create moral hazard, such preferences are dynamically time-inconsistent. High levels of financialization mean that governments have little choice but to intervene in ways that are inconsistent with this *ex ante* preference; and they do so in circumstances in which it is difficult to distinguish effectively between banks suffering from illiquidity and insolvency problems. The policy responses of democratic political leaders in banking crises, from the perspective of

the longer run, converge with the rising propensity of most governments to provide bailouts and increasingly to diverge from a strict Bagehot rule. This “Minskian” financial cycle has deep sociopolitical roots. The growth of the pro-Bailout constituency encourages an increasing role for financial services in the economy, as measured by value added and profit shares, but this sector is increasingly prone to instability that requires further and more extensive government interventions.

We do not deny that governments may also be induced to provide bailouts to banks that are large and politically connected, but we argue it is wrong to think that such factors are much more significant in authoritarian polities. Financialization has also brought with it rising political influence for the financial sector in major democracies (Hacker & Pierson, 2010; Johnson & Kwak, 2010). Yet, as we emphasize, democratically elected leaders also face growing pressure “from below” to ensure that banking crises do not destroy household wealth, incomes and jobs. This applies equally to democracies with relatively bank-oriented financial systems as to those with relatively capital markets-oriented financial systems. Indeed, we find a strong bailout propensity in those democratic countries that combine bank domination with high financialization. Germany is typical of this tendency. Its reputation for macroeconomic conservatism may be well deserved, but its propensity for non-market conforming microeconomic policy responses in banking crises is as strong as that in the United Kingdom and the United States.

Finally, as noted above, we find that trade and financial globalization neither constrains nor enables the propensity of governments to provide bailouts in banking crises. Financial globalization may play another role, however. As was starkly evident



in the global financial crisis that began in 2007, financial fragilities that emerged in the United States spread rapidly to banks in Germany and in the rest of Europe. As a result of such interdependencies, banking crises themselves tend to cluster in time. It may also be that policy responses in one country (e.g. the provision of blanket liability guarantees, as in Ireland in September 2008) induce similar policy responses elsewhere. Such network effects deserve investigation in future research.

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**Table 1. Sample of Banking Crises.**

Argentina 1980	Estonia 1992	Nigeria 2009
Argentina 1989	Finland 1991	Norway 1991
Argentina 1995	France 2008	Panama 1988
Argentina 2001	Germany 2008	Paraguay 1995
Armenia 1994	Ghana 1982	Philippines 1983
Austria 2008	Greece 2008	Philippines 1997
Azerbaijan 1995	Guinea 1985	Poland 1992
Belarus 1995	Guinea-Bissau 1995	Portugal 2008
Belgium 2008	Guyana 1993	Romania 1990
Bolivia 1986	Haiti 1994	Russian Federation 1998
Bolivia 1994	Hungary 1991	Russian Federation 2008
Brazil 1990	Hungary 2008	Sao Tome and Principe 1992
Brazil 1994	Iceland 2008	Senegal 1988
Bulgaria 1996	Indonesia 1997	Sierra Leone 1990
Burkina Faso 1990	Ireland 2008	Slovak Republic 1998
Burundi 1994	Italy 2008	Slovenia 1992
Cameroon 1987	Jamaica 1996	Slovenia 2008
Cameroon 1995	Japan 1997	Spain 1977
Cape Verde 1993	Jordan 1989	Spain 2008
Central African Republic 1976	Kazakhstan 2008	Sri Lanka 1989
Central African Republic 1995	Kenya 1992	Swaziland 1995
Chad 1983	Korea, Rep. 1997	Sweden 1991
Chad 1992	Kuwait 1982	Sweden 2008
Chile 1981	Kyrgyz Republic 1995	Switzerland 2008
China 1998	Latvia 1995	Tanzania 1987
Colombia 1982	Latvia 2008	Thailand 1983
Colombia 1998	Lebanon 1990	Thailand 1997
Congo, Dem. Rep. 1991	Lithuania 1995	Tunisia 1991
Congo, Rep. 1992	Luxembourg 2008	Turkey 1982
Costa Rica 1987	Macedonia, FYR 1993	Turkey 2000
Costa Rica 1994	Madagascar 1988	Uganda 1994
Cote d'Ivoire 1988	Malaysia 1997	Ukraine 1998
Croatia 1998	Mexico 1981	Ukraine 2008
Czech Republic 1996	Mexico 1994	United Kingdom 2007
Denmark 2008	Mongolia 2008	United States 1988
Djibouti 1991	Morocco 1980	United States 2007
Dominican Republic 2003	Nepal 1988	Uruguay 1981
Ecuador 1982	Netherlands 2008	Uruguay 2002
Ecuador 1998	Nicaragua 1990	Venezuela, RB 1994
Egypt, Arab Rep. 1980	Nicaragua 2000	Vietnam 1997
Equatorial Guinea 1983	Niger 1983	



**Table 2.** *Alternative Policy Responses to Banking Crises.*

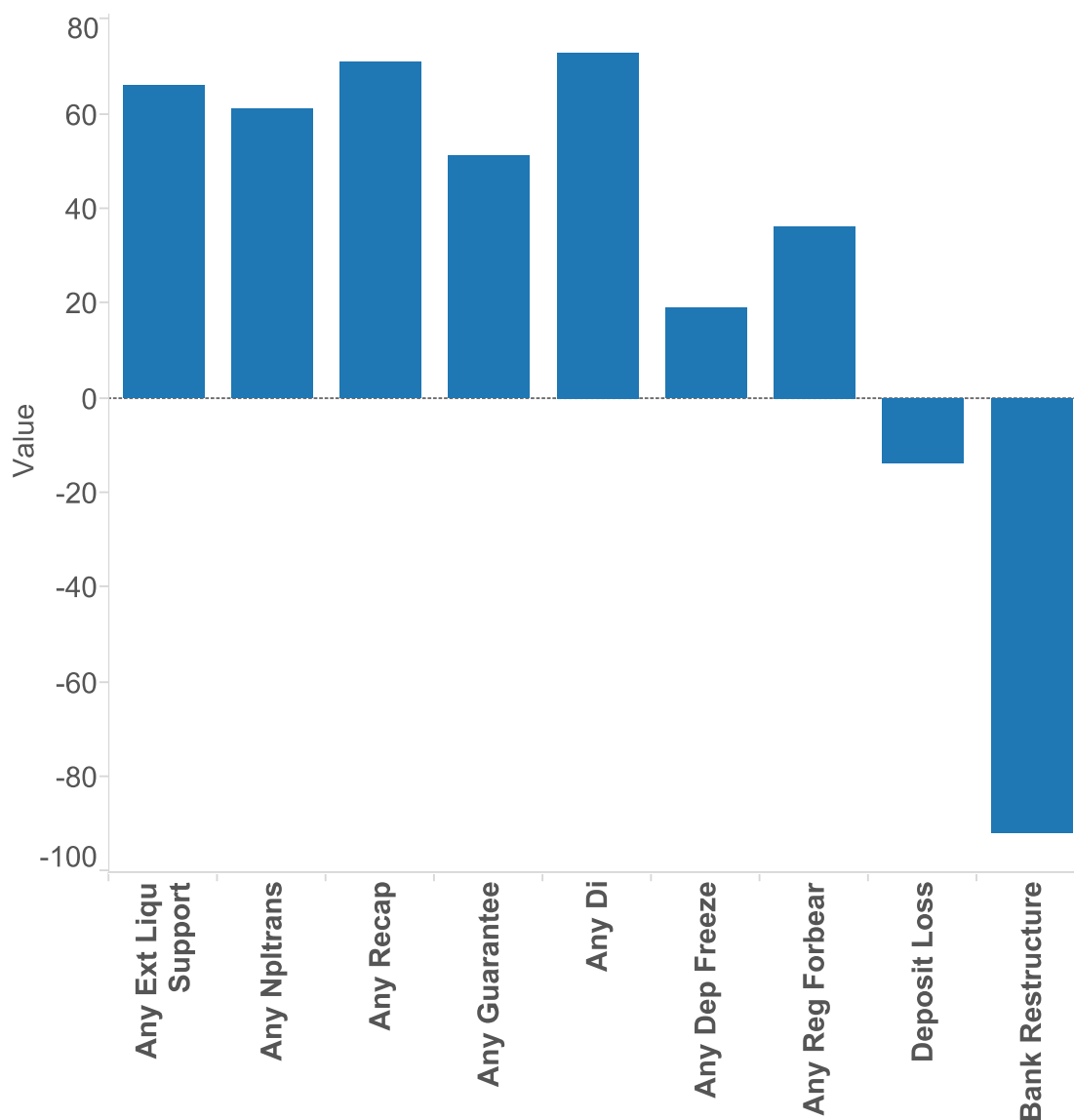
Policy Issue	Bagehot	Bailout
Last-Resort Lending	Monetary authorities lend on good collateral, for a limited duration	Monetary authorities provide open-ended support, as requested by banks
Nonperforming Assets	Banks forced to write non-performing assets off their balance sheets	Public sector assumes non-performing assets Debt relief program for distressed borrowers
Bank Recapitalization	Private sector recapitalization	Public sector recapitalization Regulatory forbearance
Socialization of Liabilities	Little, if any, protection for liability holders	Blanket protection of liability holders
Exit Policy	Banks closed or restructured after insolvency detected	Insolvent banks permitted to continue operations

**Table 3.** *Indicators of Policy Responses.*

Indicator	Proxy for Policy Issue Area	Coding Procedure
Bank Liquidity	Last-Resort Lending	Coded <b>+1</b> if any of the following are true: (1) governments extended support for longer than 12 months and the overall support is greater than total banking capital (Honohan and Klingebiel 2000, 2003); (2) claims from monetary authorities on banks at least doubled with respect to previous year and were greater than 5% of deposits (Laeven and Valencia 2008, 2013); or (3) sources described liquidity support as extensive and open-ended.
Public Asset Management	Nonperforming Assets	Coded <b>+1</b> if any of the following are true: (1) government transfers non-performing assets of banks to public asset management company; or (2) government implements debt relief program for borrowers, including via exchange rate guarantee or direct rescue.
Recapitalization	Bank Recapitalization	Coded <b>+1</b> if any of the following are true: (1) government recapitalizes banks through one-shot support scheme or repeated rounds; or (2) government nationalizes banks via majority equity stake.

Guarantees	Socialization of Liabilities	Coded <b>+1</b> if any of the following are true: (1) State-owned institutions hold 75% of total banking deposits (Honohan and Klingebiel 2000; 2003); (2) government issues an explicit guarantee of creditors, including but not limited to non-deposit liability holders.
Deposit Insurance	Socialization of Liabilities	Coded <b>+1</b> if government issues or maintains an explicit deposit insurance scheme.
Deposit Freeze	Socialization of Liabilities	Coded <b>+1</b> if the government freezes banks deposits or declares a bank holiday.
Forbearance	Exit Policy	Coded <b>+1</b> if (1) government fails to apply or enforce regulatory and supervisory rules and procedures for at least 12 months; (2) bank competition is restricted; (3) government fails to close distressed banks for at least three months; or (4) government permits insolvent banks to continue under original management.
Deposit Loss	Socialization of Liabilities	Coded <b>-1</b> if the government imposes losses on bank depositors.
Bank Restructuring	Exit Policy	Coded <b>-1</b> if government forces closure, merger, or sale of distressed banks.

**Figure 1. Aggregate Counts of Nine Policy Response Categories**



Any Ext Liqu Support: any extensive liquidity support to banks

Any Npltrans: any transfer of non-performing loans from banks

Any Recap: any recapitalization of banks

Any Guarantee: any general guarantee of bank liabilities

Any Di: any deposit insurance (creation, maintenance or extension of existing system)

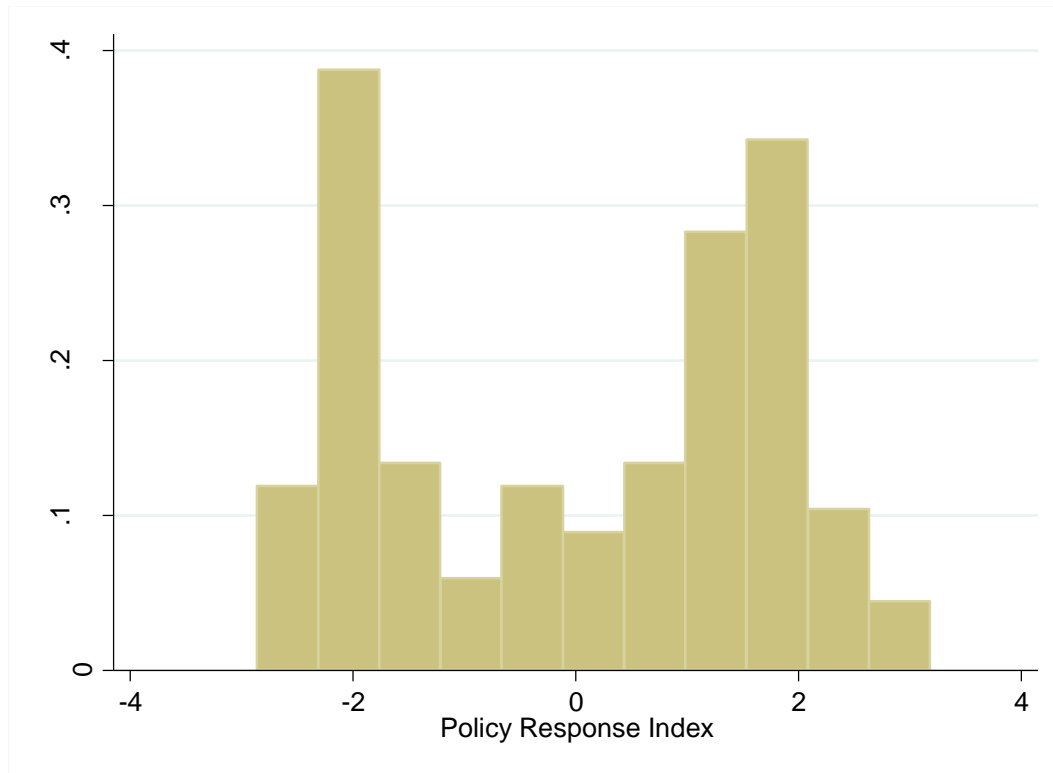
Any Dep Freeze: any deposit freeze policy

Deposit Loss: any form of losses imposed on bank depositors

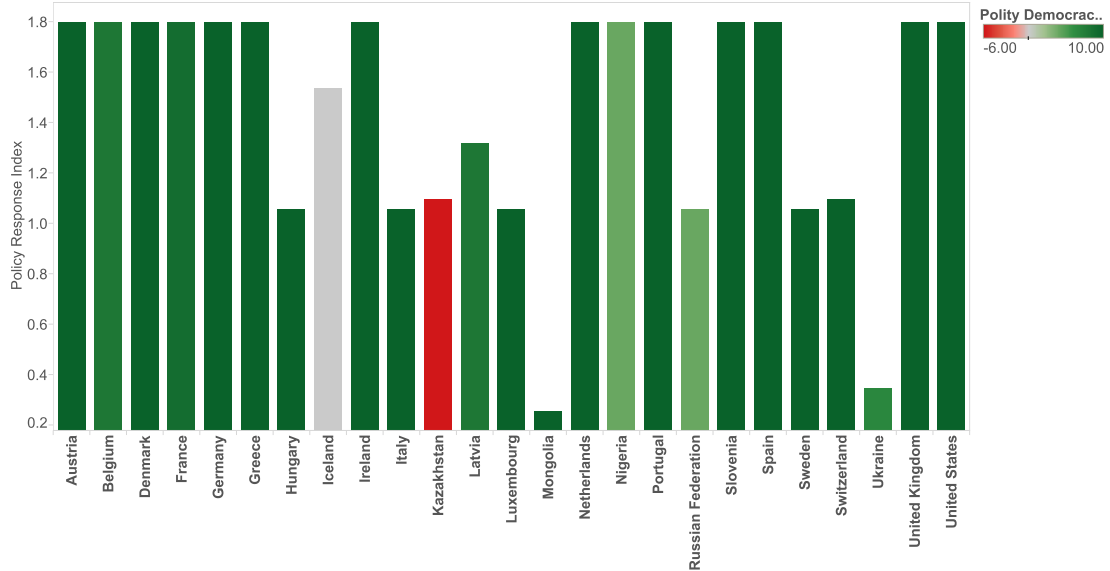
Any Reg Forbear: any form of regulatory forbearance extended to banks

Bank Restructure: any form of bank restructuring, including closure or mergers

**Figure 2.** Histogram of Policy Response Index.

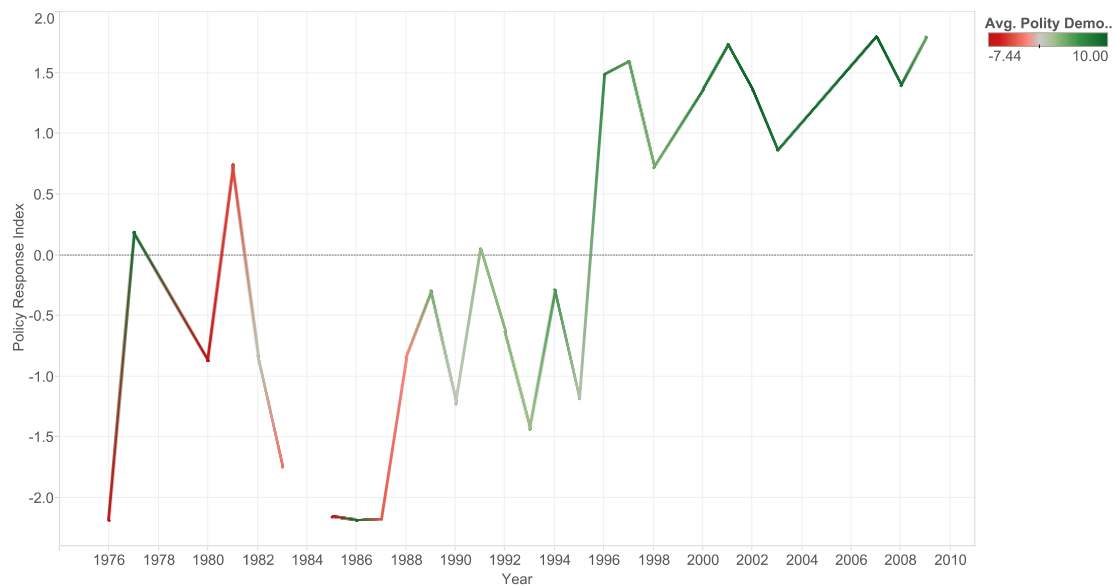


**Figure 3.** Crisis policy response index by country, 2007-9, with Polity2 detail



Note: Darker green indicates higher levels of democracy. Iceland is unrated by Polity IV, but generally considered a fully free democracy (e.g. by Freedom House).

**Figure 4. Average policy response scores since 1976 with average Polity2 detail**



Note: A higher policy response score indicates a higher tendency to provide financial sector bailouts. Darker green indicates higher average levels of democracy among crisis-hit countries in a given year.

**Table 4. Summary Statistics.**

Variable	Obs	Mean	Std. Dev.	Min	Max
Policy Response Index	125	-1.22E-08	1.693115	-2.897822	2.352285
Democracy	122	3.398634	6.640837	-9	10
Liquid Liabilities (ln)	113	3.625922	0.8033596	1.463255	5.893576
Deposit Money Banks (ln)	114	3.590031	1.033705	-0.6021297	5.463984
Deposit Money Banks Share (ln)	122	4.30377	0.3521625	3.19169	4.604499
Private Credit (ln)	114	3.391355	1.162274	-0.7617294	5.409961
Concentration	66	69.25506	19.22537	29.43597	99.99951
Deposit Share (ln)	114	3.288391	0.979464	0.6034657	5.879349
Stock Market (ln)	70	1.555133	2.445134	-5.283862	5.725924
Private Bond (ln)	40	2.63807	1.770722	-2.049409	5.197198
Stock Market + Private Bond (ln)	40	3.681135	1.47333	0.0274015	6.029732
Capital Account Openness	118	0.1116713	1.512864	-1.863972	2.439009
Property Prices	24	111.5679	29.62429	54.3525	209.43
Income Inequality	102	44.56059	10.25134	5.843882	78.59914
GDP Per Capita (ln)	121	8.583295	1.254252	5.740548	10.98478
Exchange Rate	71	2.507042	1.442946	1	5
Public Debt / GDP	59	55.31	39.77626	1.02666	204.871
Trade / GDP	119	0.0693273	0.1676161	1.34E-07	0.8610184

**Table 5. Analysis of Government Policy Responses to Banking Crises, 1976 - 2009 – Reduced Form**

VARIABLES	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
			0.0586*	0.0560*		0.0566*	0.0559*	0.0723				
Democracy	0.0549**	0.0569**	*	*	0.0289	*	*	*	0.0376	0.0425	0.0443	0.0351
	(0.0259)	(0.0275)	(0.0274)	(0.0262)	(0.0343)	(0.0275)	(0.0273)	(0.0377)	(0.0642)	(0.0648)	(0.126)	(0.0292)
Capital Account Openness	0.0978	0.151	0.141	0.0949	-0.0319	0.143	0.156	0.148	0.335*	0.323*	-0.326	0.140
	(0.113)	(0.122)	(0.120)	(0.116)	(0.111)	(0.121)	(0.121)	(0.119)	*	*	(0.217)	(0.119)
					0.612**				0.0060			0.620**
GDP Per Capita (ln)	0.495***	0.413**	0.332	0.437**	*	0.411*	0.289	0.0332	5	-0.0155	0.766*	*
	(0.163)	(0.195)	(0.217)	(0.186)	(0.179)	(0.211)	(0.203)	(0.264)	(0.420)	(0.385)	(0.415)	(0.187)
Trade / GDP	0.543	0.441	0.422	0.584	0.276	0.457	0.547	-0.108	-0.402	-0.398	0.373	-0.0114
	(0.927)	(0.952)	(0.936)	(0.947)	(0.789)	(0.941)	(0.941)	(0.876)	(0.758)	(0.757)	(0.591)	(0.898)
Liquid Liabilities (ln)		0.0542										
		(0.254)										
Deposit Money Banks (ln)			0.163									
			(0.212)									
Deposit Money Banks Share (ln)				0.380								
				(0.532)								
Concentration					-0.0114							
					(0.00717)							
Private Credit (ln)						0.0402						
						(0.192)						
Deposit Share (ln)							0.233					
							(0.209)					
Stock Market (ln)								0.150*				
								(0.0760)				

Private Bond (ln)									0.0276			
									(0.139)			
Stock Market + Private Bond (ln)										0.0578		
										(0.155)		
Property Prices											0.00892	
											*	
											(0.00506)	
Income Inequality												0.0244*
												(0.0137)
												-
Constant	-4.343***	-3.819***	3.513**	5.493**	3.918**	3.735**	3.345**	-0.0927	0.654	0.692	-6.982	6.261**
	(1.339)	(1.408)	(1.444)	(2.087)	(1.681)	(1.454)	(1.419)	(2.210)	(3.444)	(3.055)	(4.141)	(1.791)
Observations	108	101	101	106	58	101	101	66	38	38	22	90
R-squared	0.392	0.384	0.388	0.391	0.461	0.385	0.382	0.319	0.339	0.341	0.253	0.414
Standard errors in parentheses	*** p<0.01, ** p<0.05, * p<0.1											



**Table 6. Analysis of Government Policy Responses to Banking Crises, 1976 – 2009 – Comprehensive.**

VARIABLES	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Democracy	-0.00469 (0.0405)	0.00534 (0.0435)	0.00599 (0.0423)	-0.00618 (0.0435)	0.0492 (0.0611)	0.0137 (0.0431)	-0.000542 (0.0441)	0.0563 (0.0596)	0.0773 (0.0597)	0.0761 (0.0616)	0.0570 (0.117)	0.0104 (0.0409)
Capital Account Openness	0.189 (0.159)	0.198 (0.173)	0.181 (0.165)	0.198 (0.163)	0.123 (0.162)	0.223 (0.174)	0.171 (0.175)	0.155 (0.164)	0.288 (0.171)	0.343* (0.185)	-0.220 (0.355)	0.0328 (0.165)
GDP Per Capita (ln)	0.568* (0.309)	0.477 (0.328)	0.441 (0.328)	0.556 (0.339)	0.419 (0.304)	0.542 (0.323)	0.410 (0.337)	-0.0653 (0.392)	0.446 (0.458)	0.268 (0.418)	0.396 (0.544)	0.940*** (0.345)
Trade / GDP	-0.158 (1.021)	-0.152 (1.044)	-0.174 (1.000)	-0.143 (1.047)	-0.192 (0.926)	-0.153 (1.007)	0.0793 (1.067)	-0.269 (0.901)	-0.548 (0.773)	-0.517 (0.784)	-0.0748 (0.571)	-0.419 (1.011)
Exchange Rate	-0.0957 (0.130)	-0.0605 (0.146)	0.0232 (0.147)	-0.0799 (0.142)	-0.0472 (0.131)	-0.0197 (0.141)	-0.0431 (0.148)	-0.181 (0.138)	-0.218 (0.129)	-0.175 (0.127)	-0.316** (0.116)	-0.117 (0.136)
Public Debt / GDP	-0.00724 (0.00517)	-0.00751 (0.00528)	-0.00945* (0.00524)	-0.00722 (0.00585)	-0.00364 (0.00558)	-0.0102* (0.00533)	-0.00740 (0.00532)	0.00250 (0.00524)	-0.00646 (0.00557)	-0.00640 (0.00573)	-0.00120 (0.00598)	-0.00202 (0.00554)
Liquid Liabilities (ln)		0.196 (0.337)										
Deposit Money Banks (ln)			0.234 (0.316)									
Deposit Money Banks Share (ln)				0.124 (0.894)								
Concentration					-0.00981 (0.00889)							
Private Credit (ln)						-0.0431 (0.276)						
Deposit Share (ln)							0.290 (0.307)					
Stock Market (ln)								0.200** (0.0821)				
Private Bond (ln)									-0.223			

Stock Market + Private Bond (ln)									(0.150)				
										-0.217			
										(0.182)			
Property Prices												0.0124**	
												(0.00560)	
Income Inequality													0.0425**
													(0.0170)
Constant	-3.875	-3.833	-3.864	-4.339	-2.158	-3.630	-3.678	1.080	-2.396	-0.607	-3.086	-9.433***	
	(2.688)	(2.842)	(2.661)	(4.033)	(2.694)	(2.668)	(2.785)	(3.157)	(3.646)	(3.214)	(5.359)	(3.407)	
Observations	56	54	53	55	36	53	53	42	33	33	19	52	
R-squared	0.343	0.359	0.372	0.345	0.333	0.365	0.360	0.453	0.504	0.489	0.613	0.410	
Standard errors in parentheses	*** p<0.01, ** p<0.05, * p<0.1												

**Table 7. Analysis of Government Policy Responses to Banking Crises, 1976 – 2009 – Reduced-Form Interaction Terms.**

VARIABLES	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Democracy	-0.251**	-0.176*	-0.803***	-0.0377	-0.120	-0.179**	0.0698*	0.0881	-0.0174	0.0624**	-0.631	-0.148
	(0.111)	(0.0910)	(0.303)	(0.127)	(0.0776)	(0.0832)	(0.0385)	(0.126)	(0.254)	(0.0258)	(0.469)	(0.0999)
Capital Account Openness	0.0504	0.0523	0.0449	-0.0201	0.0593	0.0696	0.146	0.363**	0.309*	-0.0460	-0.210	0.106
	(0.123)	(0.121)	(0.113)	(0.114)	(0.123)	(0.120)	(0.120)	(0.150)	(0.154)	(0.133)	(0.223)	(0.119)
GDP Per Capita (ln)	0.472**	0.395*	0.382**	0.570***	0.441**	0.391*	0.0134	-0.0108	0.00249	0.501***	0.534	0.674***
	(0.189)	(0.211)	(0.180)	(0.196)	(0.206)	(0.198)	(0.270)	(0.427)	(0.397)	(0.161)	(0.429)	(0.186)
Trade / GDP	-0.441	-0.439	-0.00542	0.269	-0.369	-0.100	-0.168	-0.354	-0.405	-0.0292	0.356	0.0569
	(0.968)	(0.961)	(0.939)	(0.795)	(0.980)	(0.930)	(0.894)	(0.774)	(0.769)	(0.958)	(0.570)	(0.885)
Liquid Liabilities (ln)	-0.137											
	(0.254)											

Democracy x Liquid Liabilities (ln)	0.0874*** (0.0305)								
Deposit Money Banks (ln)		-0.00787 (0.215)							
Democracy x Deposit Money Banks (ln)		0.0673*** (0.0250)							
Deposit Money Banks Share (ln)			0.613 (0.521)						
Democracy x Deposit Money Banks Share (ln)			0.200*** (0.0704)						
Concentration				-0.0185 (0.0150)					
Democracy x Concentration				0.00101 (0.00185)					
Private Credit (ln)					-0.0632 (0.192)				
Democracy x Private Credit					0.0539** (0.0223)				
Deposit Share (ln)						-0.0189 (0.218)			
Democracy x Deposit Share (ln)						0.0739*** (0.0248)			
Stock Market (ln)							0.115 (0.114)		
Democracy x Stock Market (ln)							0.00570 (0.0139)		
Private Bond (ln)							0.232 (0.462)		
Democracy x Private Bond (ln)							-0.0259 (0.0558)		
Stock Market + Private Bond (ln)								-0.0709 (0.550)	
Democracy x Stock Market + Private Bond (ln)								0.0160 (0.0657)	
Democracy x Capital Account Openness								0.0302** (0.0151)	
Property Prices									-0.0482

Democracy x Property Prices											(0.0386)	
											0.00629	
											(0.00422)	
Income Inequality												0.0102
												(0.0154)
Democracy x Income Inequality												0.00394*
												(0.00206)
Constant	-3.772***	-3.594**	-6.157***	-3.071	-3.770***	-3.563**	0.0937	0.434	0.998	-4.504***	1.282	-6.013***
	(1.357)	(1.399)	(2.031)	(2.299)	(1.419)	(1.366)	(2.271)	(3.518)	(3.346)	(1.323)	(6.835)	(1.768)
Observations	101	101	106	58	101	101	66	38	38	108	22	90
R-squared	0.434	0.432	0.437	0.464	0.421	0.435	0.321	0.343	0.342	0.415	0.349	0.438
Standard errors in parentheses	*** p<0.01, ** p<0.05, * p<0.1											

**Table 8. Analysis of Government Policy Responses to Banking Crises, 1976 – 2009 – Comprehensive Interaction Terms.**

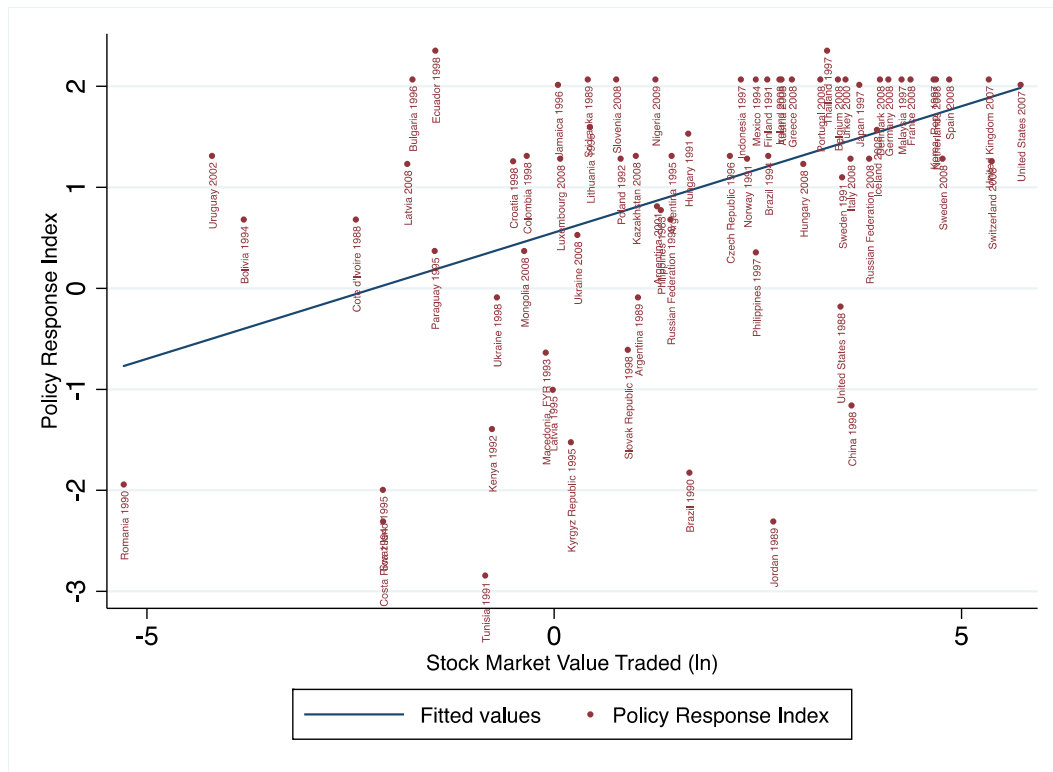
VARIABLES	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
	-					-	-					
Democracy	0.375**	-0.312**	-0.945**	0.655**	-0.180*	0.286**	0.00627	-0.102	-0.451	0.0105	-2.787	0.141
	(0.149)	(0.116)	(0.429)	(0.300)	(0.103)	(0.136)	(0.0884)	(0.146)	(0.311)	(0.0421)	(3.837)	(0.225)
Capital Account Openness	0.117	0.0712	0.0801	0.103	0.0961	0.159	0.137	0.173	0.144	-0.0321	0.0448	0.0290
	(0.165)	(0.158)	(0.166)	(0.154)	(0.179)	(0.168)	(0.165)	(0.189)	(0.212)	(0.236)	(0.508)	(0.166)
GDP Per Capita (ln)	0.300	0.384	0.520	0.457	0.467	0.328	-0.108	0.516	0.318	0.521*	0.394	0.955**
	(0.316)	(0.305)	(0.326)	(0.288)	(0.314)	(0.326)	(0.395)	(0.454)	(0.404)	(0.310)	(0.555)	(0.348)
Exchange Rate	-0.119	-0.0728	-0.123	-0.0858	-0.110	-0.123	-0.230	-0.263*	-0.261*	-0.112	0.320**	-0.116
	(0.140)	(0.140)	(0.138)	(0.125)	(0.143)	(0.147)	(0.148)	(0.131)	(0.132)	(0.130)	(0.119)	(0.137)
Public Debt / GDP	-	-	-	-	-	-	-	-	-	-	-	-
	0.00701	-0.00718	0.00041	-0.00809	0.00760	0.00727	0.00382	0.00492	0.00313	0.00672	0.00280	-0.00253

	(0.0049 7)	(0.00492 )	3 (0.00642 )	(0.00570 )	(0.0053 1)	(0.0051 1)	(0.0054 3)	(0.0056 0)	(0.0058 4)	(0.0051 6)	(0.0064 7)	(0.00565 )
Trade / GDP	-0.363 (0.985)	-0.659 (0.941)	-0.630 (1.030)	0.171 (0.895)	-0.563 (0.993)	-0.139 (1.029)	-0.293 (0.903)	-0.578 (0.761)	-0.331 (0.762)	-0.419 (1.036)	-0.0475 (0.585)	-0.466 (1.021)
Liquid Liabilities (ln)	-0.391 (0.391)											
Democracy x Liquid Liabilities (ln)	0.111** (0.0419)											
Deposit Money Banks (ln)		-0.245 (0.336)										
Democracy x Deposit Money Banks (ln)		0.0925** *										
		(0.0318)										
Deposit Money Banks Share (ln)			0.153 (0.860)									
Democracy x Deposit Money Banks Share (ln)			0.217** (0.0988)									
Concentration				0.0781* (0.0435)								
				- 0.0104* *								
Democracy x Concentration				(0.00503 )								
Private Credit (ln)					-0.229 (0.281)							
Democracy x Private Credit					0.0596* *							

	(0.0291)				
Deposit Share (ln)		-0.482 (0.458)			
Democracy x Deposit Share (ln)		0.0966* *			
		(0.0439)			
Stock Market (ln)			-		
			0.00244 (0.226)		
Democracy x Stock Market (ln)			0.0260 (0.0271)		
Private Bond (ln)				-1.046 (0.631)	
Democracy x Private Bond (ln)				0.0993 (0.0741)	
Stock Market + Private Bond (ln)					-1.336* (0.671)
Democracy x Stock Market + Private Bond (ln)					0.146* (0.0848)
Democracy x Capital Account Openness					0.0311 (0.0248)
Property Prices					-0.262 (0.371)
Democracy x Property Prices					0.0274 (0.0369)
Income Inequality					0.0616* (0.0366)
Democracy x Income Inequality					-0.00271 (0.00458)
					)

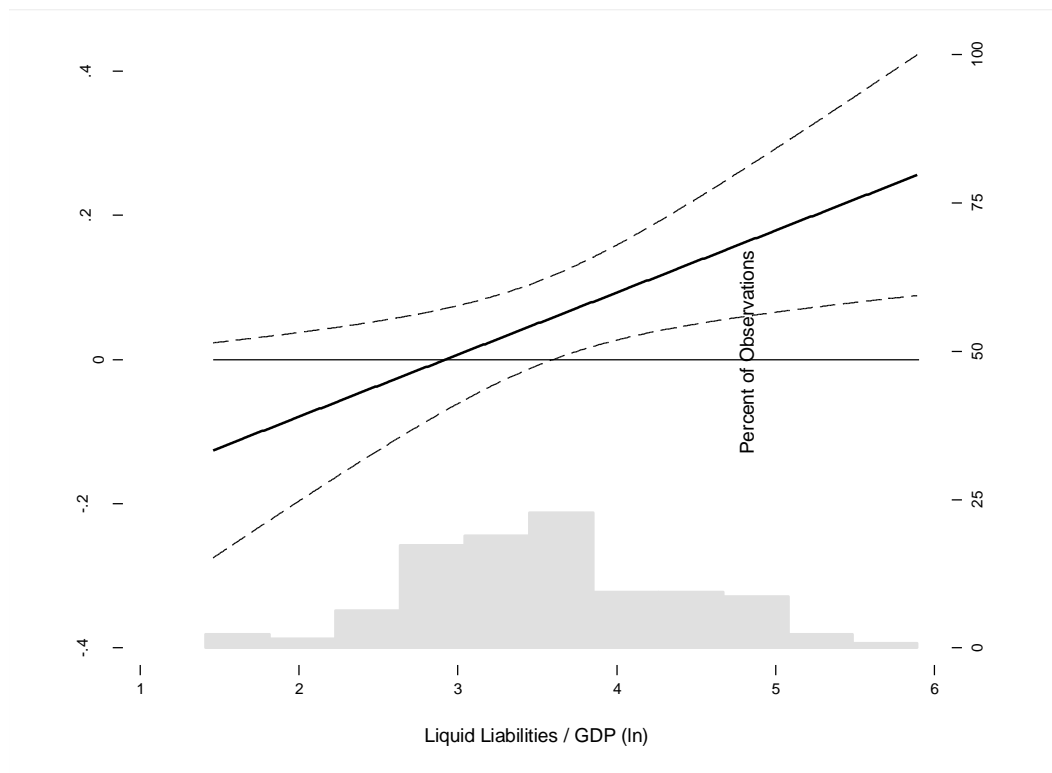
Constant	-0.359 (2.977)	-1.695 (2.575)	-4.483 (3.878)	-7.218* (3.541)	-2.382 (2.649)	-0.497 (3.038)	2.013 (3.307)	-1.678 (3.629)	2.903 (3.703)	-3.590 (2.682)	24.95 (38.21)	- 10.49** *
Observations	54	53	55	36	53	53	42	33	33	56	19	52
R-squared	0.446	0.473	0.408	0.424	0.420	0.423	0.468	0.538	0.545	0.364	0.633	0.415
Standard errors in parentheses	*** p<0.01, ** p<0.05, * p<0.1											

Figure 5. Policy Response Index and Stock Market Value Traded (ln), 1976 - 2009.



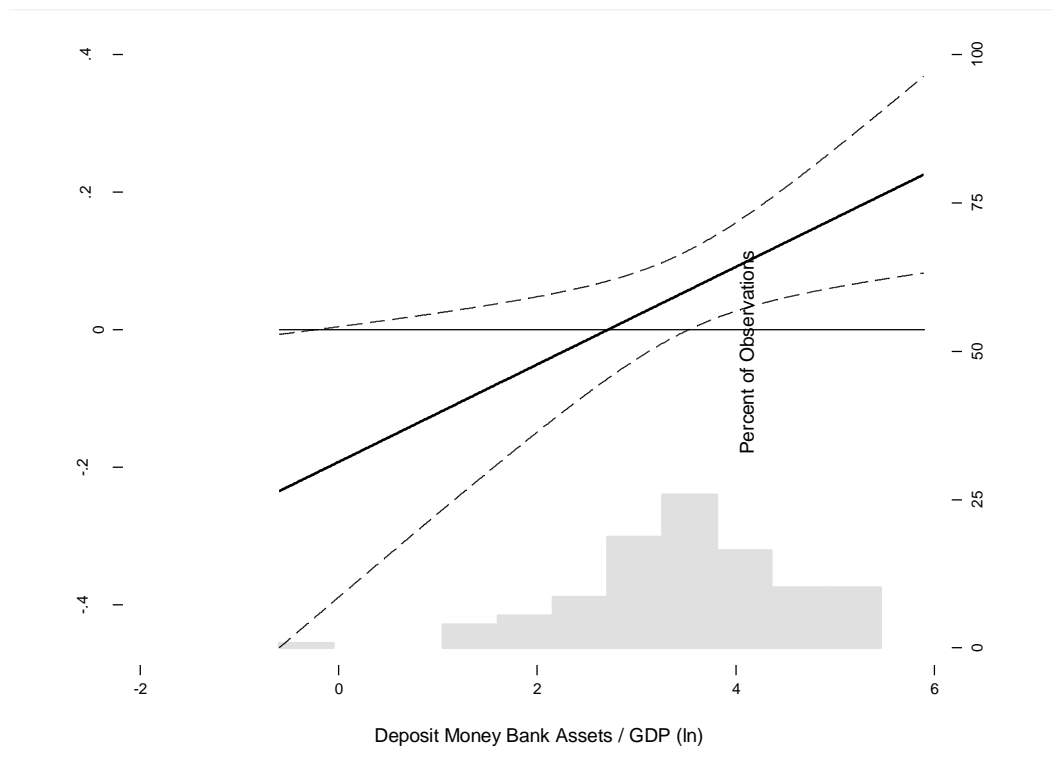


**Figure 6.** *Marginal Effect of Democracy on Policy Response Index conditional on Liquid Liabilities / GDP (ln).*



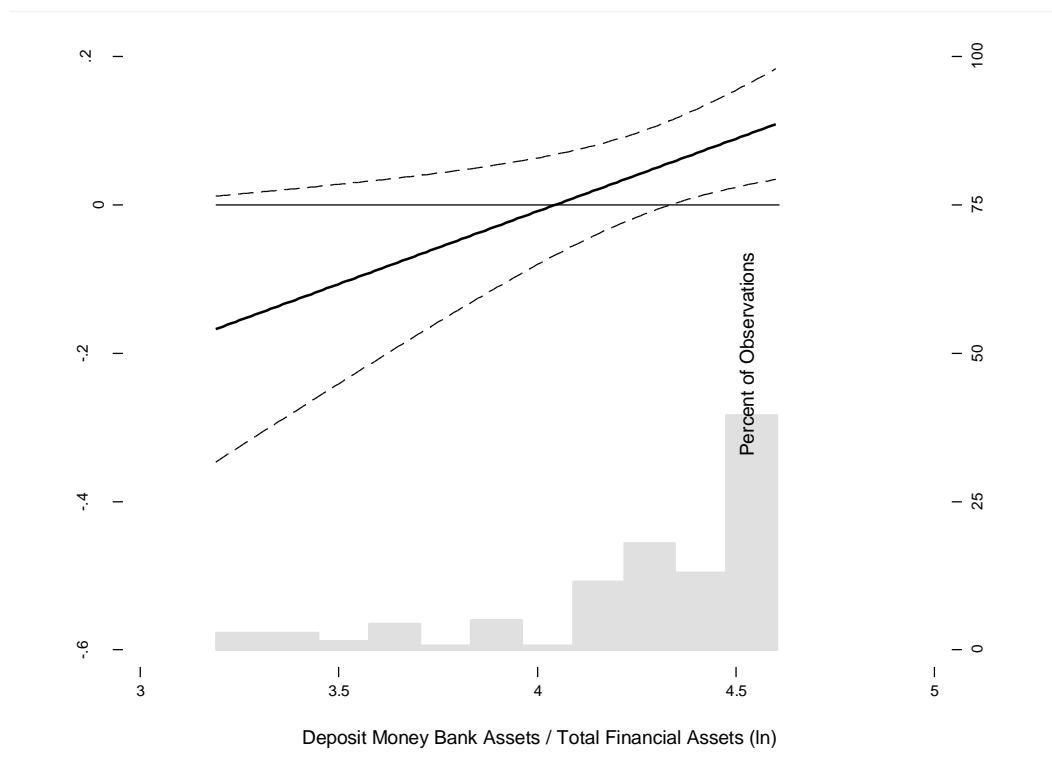
Dash lines represent 95% confidence interval.

**Figure 7.** Marginal Effect of Democracy on Policy Response Index conditional on Deposit Money Bank Assets / GDP (ln).



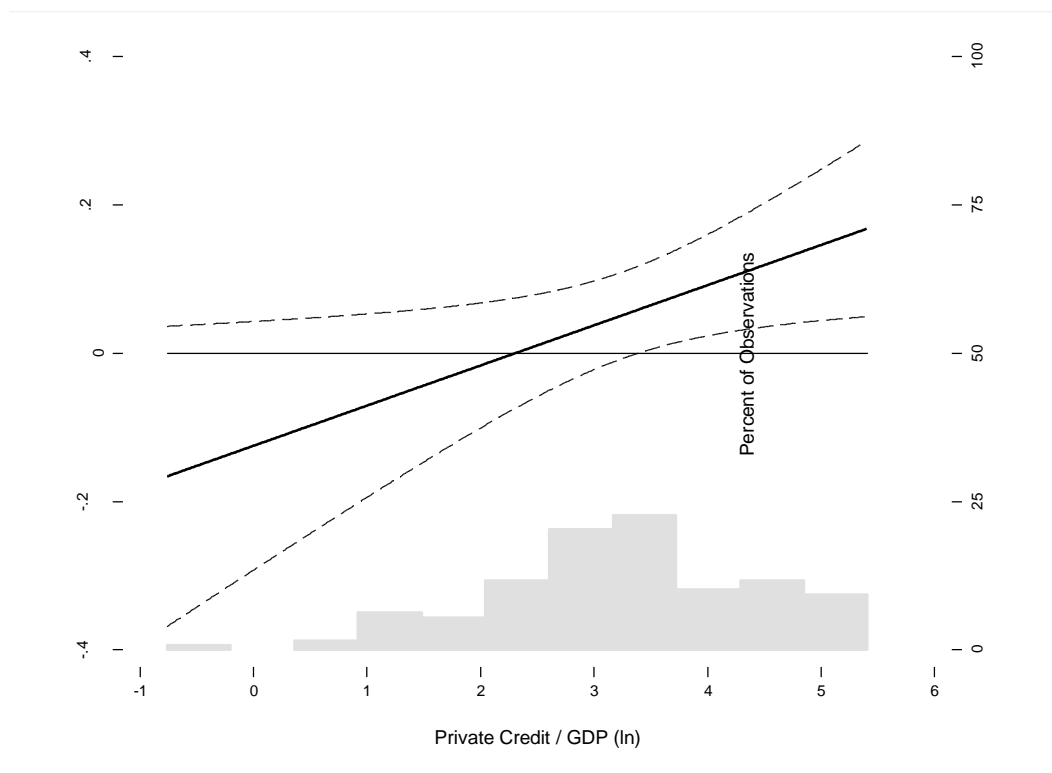
Dash lines represent 95% confidence interval.

**Figure 8.** *Marginal Effect of Democracy on Policy Response Index conditional on Deposit Money Bank Assets / Total Financial Assets (ln).*



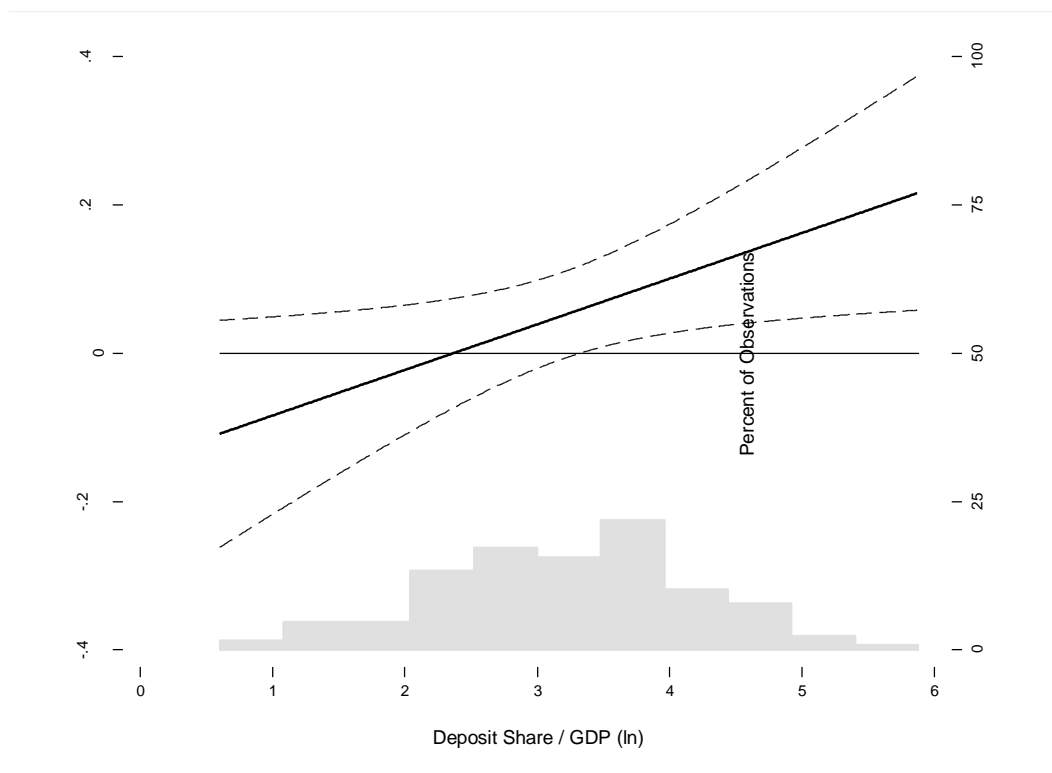
Dash lines represent 95% confidence interval.

**Figure 9.** *Marginal Effect of Democracy on Policy Response Index conditional on Private Credit / GDP (ln).*



Dash lines represent 95% confidence interval.

**Figure 10.** Marginal Effect of Democracy on Policy Response Index conditional on Deposit Share / GDP (ln).



Dash lines represent 95% confidence interval.