Banking crises and the effect of political checks and balances on special interest influence

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Abstract: This paper develops and tests a model of the effect of political checks and balances on the incentives of elected veto players to cater to special interests. A larger number of veto players reduces political incentives to make deals with special interests, but the effect is declining in the rents available from such deals. Evidence from country responses to banking crises supports these conclusions: governments make smaller fiscal transfers to the financial sector and are less likely to exercise forbearance in dealing with insolvent financial institutions the larger the number of political veto players, conditional on the value of rents at stake. This simple explanation for special interest influence is robust to controls for more subtle institutional effects that are prominent in the literature, including the competitiveness of elections, regime type (presidential versus parliamentary) and electoral rules (majoritarian versus proportional).

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Studies of policy making in places as distant as the United States, Ghana and Zambia have yielded ample evidence of the often damaging effects of special interest influence on government policy making, over issues as diverse as agriculture, automobile emissions and financial sector regulation. At the same time, judging by apparently wide differences in the levels of distortion in economic policy that seem to be tolerated across countries, susceptibility to special interests also vary widely. However, the question of why some countries are more permeable to special interest policies than others remains open.

A growing body of research has investigated how different constitutional features of countries, including whether they are presidential or parliamentary, and whether they are majoritarian or not, affect government decisions to allocate resources to public rather than private goods.[1] Another striking source of institutional variation across countries, more basic than either of these two constitutional dimensions, is the extent to which countries exhibit political checks and balances. This paper investigates theoretically and empirically the effect of checks and balances on the incentives of government decision makers to authorize special benefits for narrow interest groups at the expense of voters at large.

The model developed below shows that political checks and balances can present a significant disincentive to the approval of special interest legislation, although this effect dissipates the larger are the payoffs to veto players of granting favors to special interests. These predictions are corroborated in an examination of two policy decisions that countries take in response to banking crises. The evidence shows that fiscal transfers in the event of

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[1] See, for example, Persson, Roland, and Tabellini (1997) and Lizzeri and Persico (2001).

banking crisis are significantly smaller and forbearance – delay in intervening in troubled

financial institutions – less likely the larger the number of veto players. However, the effect

is weak when the rents involved are large. The tests below explore alternative institutional

explanations for government response to crisis, such as the competitiveness and timing of

elections, whether systems are presidential or parliamentary, and whether they exhibit

majoritarian voting rules. Even when these are significant in explaining government

response to financial crisis, however, they do not undermine the support found for the

hypotheses advanced in this paper regarding the number of veto players.

Checks and balances and economic policy

Most research investigating the link between the number of veto players and policy

outcomes focuses on one of three issues: credibility, response to crisis, and government

spending. North and Weingast (1994), Tsebelis (1999), and Keefer and Stasavage (2000),

among others, look at the implications for the credibility of government policy when no

policy change can occur unless multiple veto players with divergent preferences agree to it.

Keefer and Stasavage (2000), for example, conclude that central bank independence can only

be effective when there are political checks and balances that inhibit the ability of political

decision makers to reverse central bank decisions.

Alesina and Drazen (1991) consider the implications for government response to

crisis when there are essentially two veto players, each with imperfect information about the

costs of adjustment of their opposition. Waiting in response to crisis has value, because it

reveals additional information about the opposition. The introduction of a second veto

player therefore inefficiently delays country responses to crisis. The evidence below,

regarding banking crises, suggests that there may be substantial offsetting influences that also

affect the speed and nature of country responses to crisis.

Persson, Roland and Tabellini (1997) and Humphreys and Bates (2001) employ an approach that is closest to the one in this paper. Like this paper, both employ a model in the spirit of Ferejohn (1986). Persson, *et al.* trace the effects on government spending when political institutions shift from a system with an elected executive and no legislature to one with both an executive and an elected legislature. Assuming that the executive can propose non-amendable spending limits and the legislature has the sole right to propose spending allocations, they conclude that spending decisions are closer to those preferred by voters under the latter system. Their model is designed to compare systems with one and two veto players only since their focus is on the effects of institutional rules governing inter-veto player bargaining. This paper differs from theirs in considering a rent-seeking problem that is not fiscal, and in allowing for any number of veto players.

Humphreys and Bates allow elected officials to decide simultaneously on the provision of both public and private goods. They demonstrate that, depending on the size of the electorate and the utility of public relative to private goods, the provision of public goods can be lower than predicted in Ferejohn's model. They argue the demands of veto players are more cheaply satisfied with public rather than private goods as the number of veto players rises. However, the level of public goods provision that satisfies the electoral constraint appears always to satisfy the veto player constraint unless the number of veto players is lower than the number of voters. The argument in this paper focuses exclusively on the relationship between the number of veto players and non-voting special interests who make pecuniary transfers to veto players to derive testable hypotheses linking the number of veto players to regulatory inefficiency.

Finally, a significant literature on pork barrel spending (e.g., Schwartz 1994) suggests that checks and balances might exacerbate special interest influences on government policy.

This literature demonstrates that where legislators each represent only a fraction of all voters, the budget becomes a common pool such that they have an incentive to approve a package of pork barrel allocations to each district that leaves all voters worse off. While not referring explicitly to veto players, the basic logic extends to a voting rule where all legislators must agree on any budget. The argument that follows captures an additional, straightforward effect of checks and balances that is not the focus of the pork barrel literature: the larger the number of veto players, the smaller is the share of rents that accrues to each veto player from any particular decision and, under some conditions, the lower their incentive to approve policies that redirect resources to narrow constituency groups at the expense of broader constituencies.

Checks and balances and rent-seeking

Following Ferejohn (1986), all candidates for office are identical or, equivalently, candidates are unable to make credible policy commitments prior to election that would allow them to distinguish themselves. Voters, therefore, establish a retrospective voting rule to decide whether to retain incumbents: if voter welfare meets a certain threshold during the tenure of an incumbent, the incumbent is re-elected; otherwise not. Incumbents compare the lifetime welfare they can achieve through two different strategies: first, approving transfers to special interests that allow them to just meet the threshold and be re-elected or, second, maximizing these transfers (and the associated rents they receive from those transfers) in their current period in office and, following their removal from office, earning income through private sector activities. Voters observe the policy actions of the government and know the connection between those actions, their own welfare and the welfare of government decision makers.

Candidates compete to hold n veto gates (i.e., there are n checks and balances). As in Lizzeri and Persico (2001), all candidates are elected by all voters (there is only one electoral district). Non-incumbents receive a flow of private income. Incumbent veto players enjoy a share of rents from deals with special interests. They also receive non-pecuniary or ego rents from holding office. Although difficult to quantify, these are often assumed in the literature (see Persson and Tabellini 1999, for example), and are likely to be high. It is easy to encounter quotes such as these from veto players around the world. Carlos Andres Pérez, for example, a former president of Venezuela, maintained, "I have said many times I am a man with only one ambition – history[.]" while Gonzalo Sánchez de Lozada's defeat in a presidential election in Bolivia was described as ". . . a moment of disillusion and loss [that] had a profound impact. The almost-president entered a period of deep depression[.]" (Grindle, p. 65 and p. 113). Ego rents are assumed to be independent of the number of veto players.[2] As in Besley and Coate (1999), the pecuniary transfers to politicians directly enhance their utility and are not campaign contributions that increase re-election chances.[3]

Veto players set a policy $\boldsymbol{x}$, $x \in [0, 1]$, where $\boldsymbol{x}$ is a normalized subset of the real line assumed closed, bounded and connected.[4] For clarity and without loss of generality, $x = 0$ is

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[2] Independence is for convenience. It is only necessary that ego rents decline less than proportionally as the number of veto players increases. This is reasonable since, for example, the non-pecuniary benefits of being one of 100 United States Senators are likely to be less than four times greater than the non-pecuniary benefits of being one of 435 members of the House of Representatives.

[3] In a model in which voters have heterogeneous preferences over a policy dimension other than special interest transfers, politicians might be able to obtain rents fro special interest transfers and avoid replacement by satisfying some voters on the other policy dimension. Under plausible voting rules, however, candidates would not be able to satisfy extreme voters on one policy dimension in order to extract rents from special interest transfers on the other dimension. For example, Cox (1990) proves that candidates adopt the position preferred by the median voter if all veto players are elected from the same constituency (the whole country), the number of votes per voter is less than or equal to the number of seats at stake (in this case, veto players, or n); voters must cast all their votes but cannot cast more than one vote for any candidate; and the number of candidates is greater than the number of veto players, but less than or equal to twice the number of votes per voter. Such politicians, therefore, would be unable to offer policy concessions to certain groups of voters in order to offset the electoral effects of their rent-seeking behavior.

[4] These are common assumptions in such a model, where the stability of decision equilibria are not a focus of

the policy most preferred by voters while special interests most prefer the policy given by $x = 1$. The magnitude of favors to special interests is simply $q = d(x - 0)$, where d is a distance function and q is the extent to which policies authorized by veto players diverge from the outcome most preferred by voters. Special interests earn profits $\pi(q)$ in each period that the favors are authorized. Profits from rent-seeking are maximized at the most preferred policy of special interests, $q = 1$, and $\pi_q > 0$. The share of rents that veto players receive from special interests is assumed exogenous and equal to $\alpha\pi(q)$, $0 < \alpha \leq 1$; each veto player receives a share of these rents given by $\alpha\pi(q)/n$.[5] The non-pecuniary rents from office-holding are given by R. Special interests do not vote (or are a vanishingly small fraction of the voting population), but the policies that benefit them impose costs on voters given by $c(q)$, $c_q > 0$.

The key decision for voters is to choose a threshold level of costs $\bar{c}(q)$ such that, if they experience costs above the threshold, they vote out the incumbent in favor of a challenger, and if costs are at the threshold or below it, they retain the incumbent. If they choose too high a threshold, the incumbent finds it advantageous to authorize the highest possible level of rents, be ejected from office and pursue a private career forever after. If they choose too low a threshold, voters accept a lower level of welfare than they need to in order to discipline incumbent behavior with respect to special interests.

Incumbents compare payoffs from choosing q such that $c(\bar{q}) = \bar{c}$, or choosing the maximum level of rents given by $q=1$. Given an infinite horizon, a discount rate r, payoffs

attention. See, for example, Segal, Cameron and Cover (1992).

[5] The fixed and non-negotiable share of rents is a benign simplification. The conclusion of the model is that as the number of veto players rises, concessions to special interests are less likely. This conclusion would be strengthened if the simplification were not made, since bargaining between veto players and special interests would likely become more difficult as the number of veto players grew.

to private sector activities given by V, incumbents agree to the lower level of rents that allows them to be re-elected if

$$(1) \qquad \sum_{t=0}^{\infty} \left[\frac{\alpha}{n} \pi_t(\bar{q}_t) + R_t \right] \frac{1}{(1+r)^t} \geq \frac{\alpha}{n} \pi_0(1) + R_0 + \sum_{t=1}^{\infty} \frac{V_t}{(1+r)^t}.$$

For simplicity, R_t and V_t are assumed constant over time, as is the relationship between policies and rents, $\pi(q)$. We can then rewrite (1) as:

$$\frac{\frac{\alpha}{n} \pi(\bar{q}) + R}{r} \geq \frac{\alpha}{n} \pi(1) + R + \frac{V}{r} - V \text{ or } \pi(\bar{q}) \geq r\pi(1) + \frac{n}{\alpha} [(1-r)(V-R)]$$

Voters can do no better than to choose a threshold level of costs such that the policy $\bar{q}$ consistent with the threshold sets (1) to equality. Lower thresholds (and therefore lower $\bar{q}$) lead current and future incumbents to pursue the highest level of rents and forego re-election. Higher thresholds (higher $\bar{q}$) are unnecessarily generous to incumbents and special interests, to the detriment of voter welfare.[6] In equilibrium, therefore, incumbents confront

$$(2) \qquad \pi(\bar{q}) = r\pi(1) + \frac{n}{\alpha} [(1-r)(V-R)],$$

adopt policies $\bar{q}$ and are re-elected.[7]

The two propositions that are tested below follow immediately from (2). The first is that the threshold policy of rent-seeking is declining in the number of veto players. Totally differentiating (2) with respect to n yields

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[6] Humphreys and Bates (2001) show that the ability of the elected officials to manipulate the distribution of both government-provided private and public goods to voters can lead voters to accept a threshold higher than $\bar{q}$, since the government can offer some subset of voters a lower cost set of private goods in exchange for them reducing their minimum demands regarding public goods.

[7] Re-election is weakly dominant, given the inequality, but would of course be strongly dominant if $\bar{q}$ were epsilon larger.

(3) $$\frac{\partial \overline{q}}{\partial n} = \left(\frac{\partial \pi\left(\overline{q}\right)}{\partial \overline{q}}\right)^{-1} \frac{1}{\alpha}\left[(1-r)(V-R)\right].$$

As long as incumbents value the non-pecuniary benefits of office-holding sufficiently, expression (3) is less than zero and special interest favors decline in the number of veto players. Veto players are unwilling to adjust upwards the rents they authorize to special interests to offset fully the declining share that each receives as their number increases. If they do not value these non-pecuniary benefits highly, however, veto players adjust to higher numbers of veto players by simply insisting on a higher level of rents to offset the smaller share that each receives. There are no countries that are studied in the empirical tests below, however, for which one can plausibly argue that the non-pecuniary benefits of office-holding are trivial, or that the income foregone from office-holding is extraordinarily high.

The second implication of the model that is tested below relates to the term $\frac{\partial \pi}{\partial \overline{q}}$, the change in total rents after a given change in policy q. Depending on industry or country circumstances, the same policy change can generate much different rents for special interests and veto players to share. The grant of monopoly rights over telecommunications generates larger rents when there are 1 million telephone users than where there are only 100,000; a one percentage point increase in tariffs on imported steel generates larger rents when there is significant domestic production of steel than when there is little. The term $\frac{\partial \pi}{\partial \overline{q}}$ captures precisely this difference. Inspection of equation (3) reveals that the larger is the term $\frac{\partial \pi}{\partial \overline{q}}$, the smaller is the effect of a change in the number of veto players on policies towards special interests (q).

The implicit decision making process embedded in this framework is that agreement by all veto players is required to *authorize* benefits to special interests. It might also be the case that such agreement is required to *deny* benefits. For example, it could be the case that q equals one unless all veto players agree to reduce it. Given the assumptions in the foregoing analysis, particularly regarding the exogenous bargain between special interests and veto players, the conclusions of the analysis still hold. However, other reasonable assumptions are possible when action is required to deny benefits rather than to grant them.

For example, if no collusion is possible among veto players, then special interests would target just one veto player, offering that veto player a share of the rents just sufficient to persuade that veto player to block efforts to deny benefits to the special interest. Voters, in turn, would only punish that particular veto player with removal from office. In this case, veto players only obtain non-pecuniary rents from office, except for the one who agrees to cooperate with the special interests. Special interests would therefore offer a veto player a share a of the total rents such that $\alpha\pi(1) + R + \dfrac{V}{r} - V \geq \dfrac{R}{r}$. The total share of rents surrendered by special interests would drop, and the effect of the number veto players would be negligible. In the presence of collusion among veto players, though, the earlier results hold: voters would find it rational to hold all veto players accountable for the costs of special interest benefits, and the number of veto players would influence the susceptibility of policy making to special interest influence.[8]

Special interests, checks and balances and policy distortions in the financial sector

In the last fifteen years, more than 40 countries have experienced banking crises. In several cases, crisis has triggered losses exceeding 50 percent of national income.

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[8] See Rasmusen and Ramseyer (1994) for a thorough analysis of corruption in this vein.

Considerable evidence suggests that regulatory failures benefiting special interests exacerbated the magnitude of crisis. Those failures are consistent with the influence of special interests over policies and provide a unique setting for an empirical examination of the hypotheses developed in the preceding section. Two policy actions are the focus of the empirical tests below. One is the magnitude of fiscal transfers authorized by governments to the financial sector once a banking crisis has occurred. Another is the probability that a government will promptly intervene in insolvent banks, rather than stand by passively once insolvency is revealed (that is, rather than forbear).

All empirical tests of the effect of political institutions on government incentives to tilt policy towards narrow or special interests rely on a categorization of policy outcomes as benefiting predominantly one or the other. Existing research, looking at fiscal variables, has assumed for example that some categories of government expenditure (e.g., health and education) are less likely to benefit special interests than are other categories (e.g., public investment). There are naturally numerous exceptions to these categorizations, but they are generally agreed to be few enough so as to justify proceeding with testing. In any case, to the extent that researchers falsely classify some policies as reflecting a preference for special interests, they bias their tests towards finding no institutional effect on policy outcomes. This section makes a similar case for categorizing different regulatory policies towards the financial sector as favoring or not special interests.

The validity of the assumption that particular policies (in the empirical work below, fiscal transfers to insolvent banks and forbearance) favor special interests hinges on two conditions. First, special interests are the primary beneficiaries of these policy decisions, while general and diffuse interests are the primary losers. Second, the decision making

process among veto players for approving policy responses to crisis resembles the process assumed in the model. These two conditions are explored in this section.

Banking crises and special interests

Banking crises occur when major banking institutions have assets (loans) that are worth less than their liabilities (deposits, but also obligations to other creditors). The literature examining the causes of banking crises has found an important catalytic role for government regulatory policy, such as the presence of deposit insurance and the strength of prudential regulation.[9] Special interests – owners and borrowers linked to imprudent banks – are generally found to benefit from these policies, while few special interests are identified that line up against them. Instead, depositors (in cases where depositors are not indemnified after banks cease operations) or taxpayers (where indemnification and/or recapitalization occurs) bear the brunt of weak prudential oversight.[10]

We would expect, then, that the magnitude of banking crises – as measured by the difference between assets and liabilities in insolvent banks – should be greater where special interests are more influential. However, for most crisis countries, there is data on neither the assets nor the liabilities of insolvent institutions. The available data is rather on the government response to crisis once it occurs, on whether governments forbore in response to banking crises and on the magnitude of fiscal transfers governments made to the banking sector. However, these policies, too, can be linked to special interest influence.

Governments can respond to emerging insolvencies by clamping down on lending and portfolio abuses, replacing bank management, forcing insolvent banks to merge with solvent institutions, shutting down insolvent institutions, and aggressively pursuing

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[9] See, among a large literature, Akerlof and Romer (1994) and Demirgüç-Kunt and Detragiache (2000).

[10] This is not to say that there are no special interests that might oppose the friendly regulatory treatment of imprudent institutions, only that the stake of these special interests is likely to be much less than the stake either

defaulting borrowers in insolvent banks. Alternatively, they can forbear. Delayed intervention, if not accompanied by intensified oversight of their operations, allows banks to build up bad assets at an accelerating rate as they "gamble for resurrection."[11] This benefits the owners and managers of high risk banks, their borrowers, and government officials who enjoy a financial interest in either the banks or the borrowers.

Throughout this period, governments can make fiscal and quasi-fiscal transfers to banks to ensure their liquidity, even as their assets drop below their liabilities. Once crisis is manifest and even liquidity can no longer be maintained, governments can also choose to recapitalize financial institutions. Financial transfers, without accompanying ownership, management and regulatory changes, also tend to work to the benefit of the owners, managers and borrowers of insolvent institutions, since they allow them to keep lending.

Of course, the fact that special interests benefit from such policies does not preclude the possibility that social-welfare maximizing governments might have pursued these policies anyway, even in the absence of special interest influence. Theoretically, forbearance is recommended when managers have acted prudently but have been caught up in unpredictable exogenous shocks (Dewatripont and Tirole, p. 183). In practice, though, this reasoning is not usually the justification for forbearance. On the one hand, regulators have imperfect information about the extent to which management actions have contributed to bank liquidity problems. Moreover, to the extent that regulators can differentiate illiquid from insolvent banks, there is no question that intervention is called for. On the other hand, the empirical literature suggests that non-technical, political reasoning drives the decision to

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of the diffuse interests that lose from these policies or of the special interests that gain from them.

[11] Akerlof and Romer, 1994, introduced the phrase and discuss the phenomenon. In a few of the worst cases, such as in the Albanian pyramid schemes or the Benin bank crisis, governments did not intervene and losses approached 100 percent of national income. Social unrest, civil war and violent regime changes tended to follow, and depositors were rarely indemnified.

forbear (Kroszner and Strahan 1996). It is therefore unlikely that forbearance is driven by criteria unrelated to special interest influence.

Financial transfers to the banking sector can also be theoretically justified as an appropriate policy. To the extent that banks have relationships with quality borrowers that those borrowers cannot re-establish quickly with new financial institutions, bank closure unnecessarily stunts the recovery of markets from credit market collapse. A diversion of fiscal resources to recapitalization therefore hastens recovery. There is no empirical support for this position, however, and much more support, at least anecdotally, for the argument that large fiscal transfers are often made to allow banks to continue lending to or to avoid foreclosing on well-connected delinquent borrowers.[12]

In addition, if governments were motivated only by broad national interests in formulating their response to crisis, then we would expect a proportional relationship between the magnitude of loans or deposits in insolvent banks, on the one hand, and fiscal transfers on the other. For the few countries for which this data exists, however, no such relationship can be found. In Chile, the assets of insolvent institutions (one measure of the magnitude of crisis) amounted to approximately 22 percent of GDP, but bailout costs were twice as high, 41 percent. In Colombia, assets amounted to 8 percent of GDP, but the fiscal costs of resolving the crisis were lower, 5 percent. Deposits in insolvent institutions (a second measure of crisis magnitude) were approximately 5 percent of GDP in Uruguay, where bailout costs were 7 percent of GDP; however, deposits in insolvent institutions were

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[12] For example, government officials in East Asia encouraged or allowed the massive sale of foreign reserves in an attempt to sustain currency values in the face of devaluation pressures. These officials or their supporters had financial interests in local banks that benefited significantly from this action. Those banks had taken on large foreign-currency denominated liabilities that could not be repaid out of the proceeds of domestic lending if a significant devaluation occurred. In the face of pressures on their currencies, and in a fruitless attempt to avoid bank insolvencies, government officials sold off most foreign exchange reserves.

9 percent of GDP in Malaysia in 1985, where the bailout amounted to only 4.7 percent of GDP.[13]

There is little evidence, then, in support of the argument that government responses to crisis are driven by non-political criteria unrelated to special interests. There is still the question, however, of whether different special interests might both favor and oppose fiscal transfers and forbearance. Previous research on different issues in financial sector policy making has identified splits within the financial sector according to the size of the financial institutions and between bank and non-bank financial institutions.[14] Prudent financial institutions may exist that resist bailouts of imprudent and insolvent institutions; insurance companies or other non-bank financial institutions may be both substantial and be interested in stable banking systems. However, the opposition of such groups would emerge only in countries with well-developed financial systems, where cross-ownership between the sectors was limited, and in which they expected to bear the brunt of the bailout costs. These conditions are not likely to be met in most countries in the sample below. Moreover, if the conditions are met, the empirical results would then be biased towards the null hypothesis of finding no institutional effects on government decision making.

How do governments make decisions about fiscal transfers and forbearance?

The model requires that all veto players agree before special interests can receive benefits. If, on the contrary, special interests receive benefits *unless* government acts, the

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[13] The asset and deposit information are from Caprio and Klingebiel, 1997; the size of the financial sector comes from Beck, Demirgüç-Kunt and Levine. It is worth noting that these individual cases support the explanatory power of checks and balances that is tested below. High transfers were made in the countries (Chile and Uruguay) that are recorded as having only one check, while Colombia and Malaysia are recorded as having more than one check (two in the case of Colombia and, because of the number of coalition partners in its admittedly monolithic governing party, seven in Malaysia).

[14] Even when special interests have conflicting goals they may still prefer the same policy. Romer and Weingast (1991) document how healthy savings and loans opposed increasing resources to the regulatory agencies because they feared those resources would come at their expense; insolvent savings and loans opposed increased funding because they knew this would trigger the end of forbearance. These two narrow interests

effect of checks and balances can be attenuated. Decision making regarding fiscal transfers almost certainly and universally corresponds to that envisioned in the model: few governments are likely to be able to authorize large fiscal transfers, worth many percentage points of national income, without the concurrence of all veto players.

However, decisions about fiscal transfers and regulatory forbearance are often made by different subsets of veto players. In particular, in countries that exhibit multiple veto players, more of those veto players typically participate in a decision to make large fiscal transfers to the financial sector than approve a decision to forbear or to intervene in an insolvent financial institution. This latter decision is more typically the province of the executive branch alone. Consequently, one would expect the influence of the number of veto players to be a more pronounced determinant of fiscal transfers than of forbearance. In fact, the evidence about the effects of checks and balances reviewed below is notably stronger in the case of fiscal transfers than forbearance.

Prior empirical research on the political economy of government responses to banking crises

There are a number of studies that take institutions into account in the analysis of banking crises. Romer and Weingast (1991) consider the committee structure of Congress and the distribution of narrow interests across congressional jurisdictions in identifying the determinants of legislative decisions to increase funding to the Federal Savings and Loan Insurance Corporation. They do not directly test hypotheses about the impact of institutional change on policy outcomes.[15] Kroszner and Strahan (1996) argue that regulators who lack resources are more reluctant to intervene in insolvent financial

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were not opposed by other narrow and well-organized interests, and so prevailed for several years.

[15] They do note that potential future losses from congressional inaction were highly uncertain. One effect of this was that congressmen could not see any way to claim credit from constituents for efforts to prevent these losses – but were certain that they would trigger constituent displeasure by transferring resources from other

institutions: if they appeal to legislators for additional funding, they open themselves to the possibility that politicians will hold them responsible for crisis. Rosenbluth (1989) focuses on financial regulation in Japan. She identifies a shift away from one specific electoral institution – single non-transferable voting – as contributing to a more aggressive regulatory posture towards insolvent Japanese financial institutions. In his investigation of financial crisis in the Philippines, Hutchcroft (1998) amply documents the interaction of narrow interests (cronies) with political veto players (Marcos). Unlike work on public expenditure, broad institutional influences on regulatory decision making, and particularly the response of countries to banking crises, have not been the subject of extensive empirical research. The tests below help to fill this gap.

Data

The hypotheses outlined earlier – that checks and balances reduce incentives to cater to special interests, but that this effect diminishes as the rents available to them grow – require both financial sector and institutional information. The variables used in the tests below are summarized in Table 1.

Honohan and Klingebiel (1999) have assembled data on government responses to financial crisis for 40 crises in 35 countries.[16] In particular, they have calculated the magnitude of fiscal transfers governments made in response to crisis and they have tracked whether governments exercised forbearance in their oversight of insolvent banks. Their calculations of fiscal transfers include both the fiscal and quasi-fiscal outlays for financial system restructuring, including the recapitalization cost for banks and the costs of indemnifying depositors. Transfers range from 0.5 to 55.1 percent of GDP.

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priorities to the recapitalization of the FSLIC.

[16] They relied on Caprio and Klingebiel (1997) and Lindgren, Garcia and Saal (1996), resolving conflicts by consulting with country experts.

For all forty crisis episodes, Honohan and Klingebiel used interviews with country experts, IMF reports and other sources, to determine whether, for each crisis, government officials reacted to the emergence of insolvent banks with forbearance. Here the focus is on type III forbearance, the most lenient, in which the variable equals one when governments relaxed regulations or did not enforce regulations for at least a twelve month period after being informed about solvency problems in the financial sector, and zero otherwise. Twenty-four countries (26 crisis episodes) exercised this level of forbearance.

The theory requires as well information on the magnitude of rents that are in play in financial sector decision making. Rents are always difficult to assess, but a logical candidate is the size of the financial sector. The larger is the sector, the greater the rents that are shifted as a consequence of such regulatory changes as the timing of intervention decisions in insolvent institutions. The size of the financial sector is therefore used as a proxy for the benefits to special interests (and politicians) of favors to special interests in the financial sector. In particular, a commonly used measure of the size of the financial sector, M_2/GDP, is employed in the regressions below, for the year prior to the first year of the crisis. In the regressions below, the size of the financial sector is taken one year prior to the first year at which the crisis is dated.

It might be argued that the fiscal costs of crisis are similarly nothing more than a consequence of the size of the financial sector. This is not the case, however. As a matter of logic, fiscal transfers in the event of crisis are a function of the magnitude of unpayable loans in the financial sector, which may or may not be large as the financial sector itself grows. Empirically, there is no correlation between M_2/GDP and the fiscal costs of crisis (the correlation coefficient in the sample used below is negative and small, -0.018).

The theory also calls for information on political institutions. The Database of Political Institutions (DPI), version 3 (Beck, et al., 2000) provides useful measures of the political institutions that the foregoing discussion has identified as important. All of the political variables used below are three year averages, starting with the first year of crisis (reported by Honohan and Klingebiel), and extending back to two years prior to crisis (or the average of values in years *t*, *t-1*, *t-2*, *t*=first year of crisis).

The number of veto players is captured by the variable *Checks3* from that data set (hereinafter, *checks*). This variable is built up from several other variables collected in the data set. Two of these are the legislative and executive indices of electoral competitiveness (*EIEC* and *LIEC* in DPI), scaled one to seven, that indicate the competitiveness of elections.[17] If the legislative index of electoral competitiveness is less than five (where five indicates that multiple parties can legally be established, but where only one party wins any seats in the legislature), *checks* is one. This reflects the notion that legislatures that are not competitively elected are unlikely to act as a check on the executive. In presidential systems, *checks* is the sum of one (if *EIEC* is greater than four, to distinguish elected and un-elected presidents), one (for the president), one for each legislative chamber, and one if the first government party is closer in political orientation (left, right or center) to the first opposition party than to the party of the president. If the legislature is closed list (voters must vote for parties and cannot register candidate preferences) and the president's party has a majority in parliament, the legislature is not counted as a check. Similarly, if the legislature is not competitively elected, the presumption is that the president entirely controls policy and again the legislature is not counted as a check. The process is the same in parliamentary systems, except that checks counts one for the prime minister and adds the number of parties in the

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[17] Where there are no elections, countries receive a one; the scores rise to seven if elections exhibit multiple

governing coalition; the number is reduced by one if there is a closed list and the prime minister's party is in the coalition.

The *checks* variable does not capture differences in the constituencies of veto players. This creates a bias against finding empirical results in support of the hypothesis that multiple checks are an obstacle to special interest influence. As the number of veto players rises, individual veto players are more likely to have narrower constituencies, much as the constituencies of American senators would be larger if there were only 25 states and 50 senators instead of 50 states and 100 senators. To the extent that an increase in the number of veto players coincides with the narrowing of veto player constituencies, a common pool problem emerges such that veto players have an increased incentive to channel resources to their constituents (e.g., the employees of insolvent banks) at the expense of all other constituencies. This is the pork barrel problem described by Schwartz (1994). The model in this paper can therefore be thought of as an efficiency-promoting effect of checks and balances that might offset the inefficient pork barrel tendencies previously identified, at least implicitly, in the literature.

An additional institutional control used below is the proximity of elections. A large literature suggests that the timing of elections should matter, for at least two reasons. The further in the future are elections, the more heavily that elected officials discount the benefits of re-election and the less of a constraint the election imposes on current decisions. In addition, Rogoff (1990) suggests that politicians use policy to signal their "competence". If voters constantly update their judgments about candidate competence, as elections draw nearer politicians should be increasingly reluctant to approve policies that have high social costs, since these would signal "incompetence." Consistent with these arguments, Poterba

candidates, multiple parties, and no single party or candidate receives more than 75 percent of the vote.

(1994) finds that both tax increases and spending cuts are much lower in gubernatorial election years in US states. In the case of the financial sector, the nearness of elections could affect government enthusiasm for making transfers to financial sector interests, as well as for cracking down on insolvent institutions. A variable tracking the number of years to the next election, legislative or presidential, counting from the first year of the crisis, has been created from information in the DPI.

Other forces also might condition government responses to crisis. The empirical work presents a series of regressions in which three economic controls are gradually added. One is per capita income. GDP per capita may mitigate the size of bank crises to the extent that richer countries tend to have more diversified economies, facilitating bank efforts to maintain more prudent lending portfolios. Richer countries may be able to support a more intensive regulatory effort, and may be better able to establish particular political institutions or to inform the public about government decisions.

The second economic control is growth in per capita income in the first year of crisis. This may also affect country response to crisis, again in ways that are unlikely to be influenced by country institutions. For example, a country in which financial crisis coincides with recession may have different and fewer responses available to them than other countries. Growth may also capture the extent of distortions in the system: financial systems that exhibit more imprudent practices may also exhibit more volatile growth patterns.

Table 1: Summary statistics

Variable	No. obs.	mean	std. Dev.	min.	max.
Fiscal costs of transfers as percent of GDP	40	12.8	13.4	0.5	55.1
Forbearance (0-1)	40	0.65	0.48	0	1
Checks (average of checks in year of crisis and checks in preceding two years)	40	2.96	1.7	1	7
M2/GDP (one period before crisis)	40	0.5	0.32	0.17	1.9
Years from crisis until next election	40	1.43	2.12	0	10
Real GDP/capita (Summers and Heston)	38	8,008	6,416	937	21,714
Growth in GDP/capita	39	-0.55	4.59	-11.78	5.41
Change in terms of trade	31	-0.04	0.13	-0.59	0.14

Terms of trade shocks are the third control variable that is taken into account. Holding constant the exposure of bank portfolios to foreign currency liabilities, those countries exposed to large negative terms of trade shocks are more likely to experience large crises, and therefore potentially larger transfers. However, government policies affect the incentives of financial sector decision makers to take precautions against such shocks. For example, to the extent that bank portfolios are overexposed to exporters, a negative terms of trade shock would expose banks to losses. But the risks of such exposure are known in advance, since terms of trade volatility is systematically greater in countries that have more concentrated export or import patterns. Terms of trade volatility is therefore a predictable

part of the economic environment in many countries, and therefore a condition against which prudent bankers would take precautions (Caprio and Klingebiel, 1997). The use of terms of trade volatility into the tests below therefore potentially obscures policy errors due to special interest influence (lax oversight of bank precautions against predictable shocks).[18]

Specification and Results

Two tests are conducted, the first explaining fiscal transfers as a function of checks and balances, the second explaining government decisions to exercise forbearance. Table 2 displays results of tests related to fiscal transfers. The linear checks term and the interaction term with M_2/GDP have the correct signs in all specifications and the interaction term is statistically significant in all regressions. The number of years to the next election has the predicted sign in all regressions, though it is statistically significant only in regression 3. The further away are elections, the higher are fiscal transfers.[19]

Regression 1 in the table takes into account only the core institutional variables and none of the three economic controls. It supports the prediction that fiscal transfers decline as the number of checks increases, but the significant positive coefficient on the interaction term with M_2/GDP shows that this effect declines as the rents available from favoring special interests rise. The results are robust to the addition of income per capita and growth in real income per capita as control variables. Neither the coefficient estimates in regression 2 of the core variables nor their significance levels change notably with the addition of these variables. This is a strong test for the institutional variables, since it is well-known that

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[18] The change in terms of trade is calculated as the *ln*[price of exports(*t*)/price of imports(*t*)] – *ln*[price of exports(*t-1*)/price of imports(*t-1*)], where *t* is the first year of crisis. However, because all of the component prices were available for only 24 observations, the variable is supplemented with the percentage change in the prices of imports or exports alone, to create a second measure with 31 observations (the remaining observations lacked even this much data).

[19] It is not the specification in Regression 3, which controls for terms of trade shocks, but rather the particular sub-sample that is responsible for this result, since the election coefficient is even more significant when the

variables related to democracy are highly correlated with income. The *checks* variable is correlated at 0.22 with income per capita. Economic growth has a significant effect, indicating and indicates that rapid economic growth encourages governments to make larger fiscal transfers in the event of crisis.

Table 2: The fiscal costs of banking crises, checks and balances, and rents
(*White-adjusted robust standard errors in parentheses*)

Dependent variable: *Fiscal costs of crises/GDP*	(1)	(2)	(3)
constant	32.9 (*8.07*)	33.35 (*8.11*)	23.2 (*7.8*)
checks	**-9.08 (*2.8*)**	**-8.91 (*2.92*)**	**-6.08 (*2.55*)**
checks * M₂/GDP	**12.78 (*4.35*)**	**12.03 (*4.75*)**	**8.49 (*4.14*)**
M_2/GDP (*year before crisis*)	-29.42 (*10.38*)	-31.85 (*12.24*)	-18.9 (*10.1*)
Years from crisis until next election	1.37 (*1.38*)	1.68 (*1.23*)	2.35 (*1.07*)
GDP growth		0.62 (*0.39*)	0.53 (*0.40*)
GDP/capita		0.02 (*.03*)	-0.027 (*0.3*)
Terms of trade shock			-23.21 (*7.8*)
R^2	0.30	0.33	0.45
N	40	38	30

Note: Regressions 2 and 3 exclude Czechoslovakia (1989) and Poland (1992) because of missing data on income per capita. Observations are "clustered", such that independence is assumed across countries but not between observations from the same country (Argentina, Indonesia, Malaysia, Turkey, and Thailand). The standard errors of *checks* and M_2/GDP are evaluated assuming the interaction term is zero.

The dollar-denominated indices of export and import prices, needed to calculate terms of trade shocks, are missing for many countries in *International Financial Statistics*. The

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terms of trade is omitted in from the regression 3 specification and sample.

addition of terms of trade shocks in the third regression of the two tables therefore reduces the sample size by about 25 percent. Moreover, it does so by removing countries with lower than average values of *checks* and higher than average fiscal costs of crisis.[20] Unsurprisingly, given the selection bias introduced by the variable, the coefficient values on *checks* and the interaction term decline in this regression. Nevertheless, all of the key variables retain the predicted signs and are significant.

The results are economically meaningful, as well. The mean level of fiscal transfers to the financial sector in the event of crisis is 12.8 percent of GDP in the sample. The coefficients from regression 1 in Table 2 indicate that an increase of one political "check" reduces the size of fiscal transfers as a percentage of GDP by approximately 2.7 percentage points when the previous period's M_2/GDP is at the sample mean of 50 percent. Put differently, an increase in the number of veto players from the sample minimum of one to the sample maximum of seven reduces the fiscal costs of bank crisis as a fraction of GDP by more than 15 percentage points, more than the mean fiscal costs in the sample.

Table 3 presents the results of three probit estimations of the institutional determinants of forbearance. The dependent variable is the (1,0) policy decision to forbear or not. As the earlier discussion suggests, because forbearance is approved by a different subset of veto players, generally, it is likely to be a less useful setting to examine the implications of the checks and balances for special interest policies. Nevertheless, regressions 1 and 2 of Table 2 demonstrate that the number of veto players contributes in the predicted way to the probability that governments undertake actions that favor special interests.

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[20] Countries that do not report these data exhibit average *checks* equal to 2.1, and average fiscal costs of crisis equal to 16.1, compared to 2.8 and 11.6 in the countries that do report these data.

Table 3: Checks and balances, rents in the financial sector, and regulatory forbearance

(*Probit estimation; coefficient estimates are marginal effects at mean values of independent variables; p-scores in parentheses; standard errors are White-adjusted*)

Dependent variable: *forbearance*	(1)	(2)	(3)
checks	-0.31 (**0.02**)	-0.32 (**0.03**)	-0.34 (**0.1**)
checks * M_2/GDP	0.45 (**0.05**)	0.55 (**0.05**)	0.55 (**0.08**)
M_2/GDP (*year before crisis*)	-1.08 (*0.04*)	-1.21 (*0.06*)	-1.34 (*0.12*)
Years from crisis until next election	0.17 (*0.005*)	0.18 (*0.01*)	0.19 (*0.18*)
GDP growth		0.005 (*0.79*)	0.04 (*0.31*)
GDP/capita		-0.01 (*.33*)	-0.01 (*0.66*)
Terms of trade shock			-1.33 (*0.23*)
Pseudo-R^2	0.30	0.35	0.34
N	40	38	30

Note: Regressions 2 and 3 exclude Taiwan because income per capita not available for Taiwan from *International Financial Statistics*, IMF. Observations are "clustered", such that independence is assumed across countries but not between observations from the same country (Argentina, Indonesia, Malaysia, Turkey, and Thailand). The standard errors of *checks* and M_2/GDP are evaluated assuming the interaction term is zero.

Although the results are borderline significant, the coefficient estimates in regression 1 indicate that one additional check at the mean level of M_2/GDP reduces the probability of forbearance by 5.5 percentage points; additional checks again limit special interest legislation until M_2/GDP rises above 0.76. The close proximity of elections has a strongly negative effect on the probability of forbearance: one less year till the next election reduces the probability of forbearance by approximately 18 percentage points, suggesting that

governments use intervention in insolvent banks to appeal to voters, but they do this only when elections are near.

Checks and balances and other sources of institutional variation across countries

There are other important sources of constitutional variation across countries, several of which have been studied in recent significant research. It is possible that the checks and balances variable utilized here simply captures these other institutional features of countries and it is these features, rather than the number of veto players *per se*, that drives the results exhibited in Tables 2 and 3. The results presented in this section suggest that is not the case.

One natural alternative hypothesis is that veto players are less likely to respond to special interest influence in countries in which elections are competitive. The construction of the *checks* variables in the Database on Political Institutions takes into account whether legislative elections are competitive or not; if they are not competitive, then the legislature is assumed not to impose a check on executive action. One might therefore conclude that it is this electoral adjustment to the *checks* variable that drives the results in Tables 2 and 3. This is not the case, however.

One way to see this is to re-run the regressions in Tables 2 and 3 looking only at observations in which elections were competitive. There are two possible thresholds of competitiveness that are reasonable to consider. Of the forty crises, nine occurred in countries where competitiveness did not reach the threshold such that multiple parties both contested and won seats in the legislature. In 20 countries where crises occurred, the highest threshold of competitiveness was not met, in which multiple parties contested the elections *and* no party won more than 75 percent of the seats. Using the 31 observations that meet the first threshold, the results from Tables 2 and 3 are little changed, either economically or

statistically. Results are still statistically significant (some at the 10 percent level, and some at the five percent level) using the second, more severe threshold.

The first two rows of Table 4 present a different test of the robustness of the *checks* results to electoral controls. When substituted for the *checks* variables in regression 1 of Tables 2 and 3, electoral competitiveness has a significant impact on the fiscal costs of transfers to the financial sector, and no significant impact on forbearance. When added to these regressions, however, electoral competitiveness has no significant impact on fiscal transfers.[21] More importantly, *checks* remains as economically and statistically significant after controlling for the competitiveness of elections as before.

Two additional institutional features have been prominent in recent literature examining the policy incentives of electoral officials. One is whether a system is presidential or parliamentary, and the other is whether a system is majoritarian or not, where majoritarian is defined as an electoral system with plurality voting and single member districts. Persson, Tabellini and Roland (2000) argue that presidential-congressional systems are more likely to be characterized by redistribution to powerful minorities. Persico and Lizzeri (2001) and Persson and Tabellini (1999) conclude that majoritarian systems are more likely to redistribute to minorities. Looking at spending on public goods, Persson and Tabellini (1999) find some support for these hypotheses, albeit much weaker on the regime-type dimension. It would still be reasonable to conclude from this literature, however, that the *checks* variable could be picking up either of these two constitutional dimensions and that

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[21] In fact, electoral competitiveness has a significant *positive* impact on the probability of forbearance. There are two offsetting effects from elections. Politicians confronting elections would prefer to push difficult regulatory decisions that reflect badly on their competence. This influence is consistent with the positive effect of competitive elections on the probability of forbearance. At the same time, as elections draw nearer, politicians, perhaps driven by challengers, also have an incentive to appeal to voters by cracking down on special interests, particularly those that are insolvent and unable to provide campaign financing in any case. Consistent with this, the coefficient on the variable years to next election is also positive (the closer are elections, the less likely is forbearance). In fact, the effect of this variable is larger in the regression that

these, rather than the number of veto players *per se*, could be driving the results presented

earlier.

Table 4: Robustness of Checks and Checks*M2/GDP to alternative specifications

Alternative institutional variable	Dependent Variable	Checks	Checks* M2/GDP	Alternative institutional variable	
				Added to Checks Regression	**Instead of checks and interaction**
Competitiveness of Legislative Elections (*varies from 1-7, N=40*)	Fiscal costs/ (*Table 2, Regression 1*)	-8.79 (*0.004*)	13.05 (*0.01*)	-.94 (*0.6*)	-2.11 (*0.23*)
	Forbearance/ (*Table 3, Regression 1*)	-0.37 (*0.01*)	0.46 (*0.05*)	0.10 (*0.03*)	0.02 (*0.59*)
System (*0=presidential, 1=semi-presidential, 2=parliamentary; excluding countries with non-competitive elections, N=31*)	Fiscal costs	-5.8 (*0.06*)	9.1 (*0.03*)	-1.7 (*-0.81*)	-2.2 (*0.11*)
	Forbearance	-0.31 (*0.05*)	0.44 (*0.08*)	-0.15 (*0.19*)	-0.24 (*0.04*)
Majoritarian (*0,1 vari-able, N=29*)	Fiscal costs of transfers	-6.4 (*0.02*)	9.25 (*0.02*)	-2.15 (*0.58*)	-3.03 (*0.51*)
	Forbearance	-0.39 (*0.02*)	0.53 (*0.07*)	0.06 (*0.81*)	-.04 (*0.86*)

N.B. The base specification is regression 1 from Table 2 (fiscal costs) or 3 (forbearance). The two checks columns are the coefficient estimate and p-value of the linear and non-linear checks terms after the corresponding institutional variable has been added to the base specification. The column "Added to Checks Regression" presents the coefficient estimate and p-value of the alternative institutional variable in that same estimation. The last column presents the coefficient estimate and p-value of the alternative institutional variable when it replaces the two checks terms in the base regression.

The Database of Political Institutions has variables that bear one each of these

alternative hypotheses. Following Persson and Tabellini (1999) *majoritarian* is a dichotomous

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controls for the competitiveness of elections.

variable that equals 1 if a system exhibits plurality (winner-take-all) voting, and electoral districts containing only one seat.[22] *System* is a variable in DPI that characterizes whether a country is parliamentary (the head of government is selected by and can be removed by the legislature), presidential (the head of government is selected independently of the legislature), or semi-presidential (the head of government is selected by the legislature, but can only be removed by the legislature through presidential-style impeachment procedures requiring super-majority voting).[23]

The effects of these alternative institutional arrangements on policy are predicated on the existence of competitive elections. To examine the effects of *system* and *majoritarian* in samples with competitive elections, therefore, only countries that exhibit elections with multiple parties competing and winning seats are considered.[24] This reduces the sample size by approximately 25 percent, to 31 observations in the case of *system* and 29 observations in the case of *majoritarian*. Within this sample, *checks* and *system* are correlated at 0.39, and *checks* and *majoritarian* at 0.10.

Despite this correlation and the much reduced sample size, the checks results are robust to the inclusion of these alternative institutional variables. In addition, in contrast to earlier research examining the institutional determinants of government spending, the results in Table 4 indicate a stronger role for regime type than for the majoritarian dimension. Fiscal transfers are five percentage points of GDP higher in presidential than in parliamentary regimes, and forbearance is 50 percentage points more likely (though these

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[22] DPI does not have an explicit majoritarian variable, but does track whether systems are plurality and the district magnitudes. Of the forty crises, 11 either had no data on electoral systems, or no competitive elections. Of the remaining 29, 17 were non-majoritarian, 11 were majoritarian, and in one country (Senegal), exactly half of the legislative seats were elected with majoritarian rules, and the other half were not.

[23] Of the forty crises, 21 took place in presidential systems, 5 in semi-presidential and 14 in parliamentary systems.

[24] Results are stronger than in Table 4 if the sample size is not restricted in this fashion.

results, in the last column of Table 4, are not robust to the inclusion of the checks variables).

Results for the *majoritarian* variable are economically large in the case of fiscal transfers

(about half as large as the regime effect) and in the expected direction, but not statistically

significant. *Majoritarian* seems to have no effect on forbearance.

Discussion and robustness of results

The results on *checks* are robust to alternative institutional specifications, but there are

additional puzzles that are potentially raised by Tables 2 and 3. One of these is that the net

effect of checks and balances, taking into account both the linear and non-linear terms, can

be negative for some values of $M2/GDP$, which is not predicted by the model. This

possibility was foreshadowed earlier, however, by the observation that veto player

constituencies may become more narrow as the number of veto players rises, so that more

numerous veto players have incentives both to discourage special interest advances, as

modeled earlier, but also to encourage them in the style of the pork barrel analyses found

elsewhere in the literature. The results from Tables 2 – 4 demonstrate that the previously

unidentified positive effects of *checks* on policy making often outweigh these negative effects.

It might also be argued that political institutions affect the ability of well-meaning

governments to react to crisis. In the tradition of the analyses of Alesina and Drazen,

governments with checks and balances would delay their response to crisis and allow the

magnitude of insolvencies to grow, thereby raising the necessary amount of recapitalization.

This argument would predict a positive relationship between checks and balances and the

magnitude of fiscal transfers or the probability of forbearance. The results from Tables 2 –

4 do not exclude this effect, but the negative signs on the linear checks and balances

coefficients and the significance of the interaction terms are not predicted by this literature,

suggesting at least that additional forces are at work.

There is a well-identified relationship between financial liberalization and the probability of financial crisis which, however, is not controlled for in the earlier regressions (Demirgüç-Kunt and Detragiache 2000). When ceilings on interest rates are removed, banks with a tendency to imprudence are free to bid up deposit rates to finance loans to high-risk, high-interest borrowers, laying the groundwork for crisis down the road. It might be the case, then, that special interest influence operates through financial liberalization rather than through government decision making regarding the response to crisis, *per se*. This story is certainly consistent with the model being tested here: to the extent that special interest influence is significant, prudential regulation following interest rate liberalization is weak, the magnitude of crisis – the quantity of bad loans extended by the financial sector – grows, with corresponding implications for government bailouts and incentives to forbear. In fact, the few observations noted earlier for which we have evidence on both the value of assets or deposits in insolvent banks and for the fiscal costs of transfers to the financial sector show little relationship between these magnitude of crisis and government response to crisis. However, it is still worth considering whether financial liberalization explains crisis response independent of the institutional variables.

It is possible to examine directly, albeit quite crudely, whether the results above are robust to controls for financial liberalization. Demirgüç-Kunt and Detragiache (2000) have data on a group of countries that experienced banking crises and identify which of these countries had liberalized financial markets. Their data covers 23 of the countries used in this paper. All but two of the 23 are counted as liberalized at the time of crisis. If the remaining 17 were also liberalized, such that 38 of 40 countries in the sample used in this paper were liberalized, then one could not plausibly argue that liberalization is responsible for the results here. The contrasting hypothetical case is that all 17 were *not* liberalized. Strong differences

emerge in the government response to crisis in the liberalized and the, hypothetically non-liberalized countries. Fiscal transfers in the 21 countries recorded as liberalized averaged 9.3 percent of GDP and exhibited a probability of forbearance averaging 52 percent. In contrast, the 19 countries recorded either as not liberalized (two) or for which there was no information (17), exhibited significantly higher averages of both: 16.7 percent of GDP, and a 79 percent probability of forbearance. This suggests that, on average, liberalized countries made *smaller* transfers and were *more* likely to intervene than hypothetically non-liberalized countries. At the same time, though, if a liberalization variable is constructed in which the 17 countries are counted as not liberalized, and the variable is added to the base regressions in Tables 2 and 3, the results on the *checks* variables are little changed.

While exogenous with respect to most policy decisions, political institutions may be endogenous to social characteristics of countries that might simultaneously influence country responses to financial crisis. Social polarization and ethno-linguistic fractionalization are two such characteristics. The coefficient estimates on the checks variables in the base regressions of Tables 2 and 3 are not strongly affected, however, by the addition of two different polarization variables. Ethnic fractionalization (taken from Taylor and Jodice 1983) is the probability that two individuals randomly selected from a country do *not* belong to the same ethnic or linguistic group. To make it an appropriate measure of social polarization, it is transformed so that both high and low values of fractionalization equal low values of polarization.[25] Sullivan (1991) records the fraction of the population coming from the same ethnic or linguistic group from Sullivan (1991), which is transformed in the same way. These variables themselves are never significant when added to the base regressions. In addition, although the sample size drops substantially (nearly 25 percent)

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[25] See Keefer and Knack, forthcoming, for a discussion of polarization and this transformation.

after the inclusion of these variables, the coefficient magnitudes and significance of the checks variables in Tables 2 and 3 are only slightly changed.

The results are robust to two additional modifications. First, they do not depend on the use of $M2/GDP$ to capture rents in the financial sector. Beck, Demirgüç-Kunt and Levine (forthcoming) suggest two measures other than $M2/GDP$: liquid liabilities of the financial system and private credits extended by deposit banks. Regressions 1 of Tables 2 and 3 are robust to the use of the first instead of $M2/GDP$. Results using the second alternative, private credit, are significant for Regression 1 of Table 2, and of the right sign, though not significant, for Regression 1 of Table 3. Second, all the results in Tables 2 – 4 assume that country observations are not independent of each other (observations are clustered by country). In some years, however, there were crises in several countries. It turns out, though, that the results are robust to re-estimation, clustering the observations by year.

Conclusions and policy implications

The findings in this paper have implications both for the academic debate on the role of special interests and for the policy debate regarding financial sector regulation. The theoretical conclusion of the paper is that the number of veto players, in and of itself, can reduce favors to special interests, abstracting from constituency and other institutional features of a political system. The empirical results suggest that this effect is strong even when other institutional features are controlled for. These results also provide evidence linking political institutions and policy outcomes in a setting other than fiscal policy. They suggest that, in contrast to previous work looking at government spending decisions, presidentialism has a stronger effect and majoritarianism a weaker effect on government responses to financial crisis. On the other hand, like previous work that has found evidence

that the timing of elections affects incentives of politicians to impose fiscal discipline, the results here find that the sooner are elections following a crisis, the more likely politicians are to act in the "public" interest in response to that crisis.

The results illuminate two important issues for policy. First, they suggest that divided government – one indicator of multiple checks and balances – may not be as detrimental to a country's ability to respond to crisis as has been suggested. The net effect of checks and balances reported here, not controlling for constituency effects (that is, whether different checks represent different interests in society). For most levels of checks and balances and for most values of rents available to policy makers, more checks lead to lower fiscal costs of crisis and more active and rapid intervention in insolvent financial institutions.

Second, the results suggest that advice to countries looking to reform their financial sectors needs to be sensitive to the institutional framework in quite specific ways. In particular, it may be more difficult to design regulatory institutions that deal efficiently and rapidly with insolvent banks when checks and balances are few (and when elections are distant) than when countries exhibit multiple political checks and balances.

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