Supplementary Materials: Financialization, Wealth, and the Changing Aftermaths of Banking Crises

Marginal effect plots from the analysis below offer confirmation of our argument.   These plots are available from authors on request.

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Household Leverage in Emerging Markets and Developing Countries

Long-run data on household borrowing in emerging and developing countries is not available.   However, based on data available since 2000 we can gain a reasonable sense of the depth and breadth of recent housing finance and household borrowing in most emerging and developing countries. In general, emerging market and developing countries have far smaller housing finance systems than advanced economies. Warnock and Warnock report that the average mortgage debt-to-GDP ratio for 24 advanced economies was 55 percent of GDP for the 2001-2005 period, compared to an average of 10 percent for 38 emerging economies (Warnock and Warnock 2008). Based on a larger sample of 118 countries over the 2006-2010 period, another study reports slightly lower ratios, roughly 35 percent in high income countries, five percent in upper-middle income countries, three percent in lower-middle income, and less than one percent in low income countries (Badev et al. 2014). Housing finance systems are most developed in East Asia and Eastern Europe and least developed in South Asia and Sub-Saharan Africa. In both studies, those upper-middle income democracies with the largest housing finance systems, ranging between roughly 20 and 40 percent of GDP (Taiwan, Estonia, Korea, Latvia, South Africa, Latvia, Panama, Thailand, and Lithuania), were roughly equivalent, and in some cases exceeded, levels found in some advanced democracies, including Austria, Belgium, France, Greece, and Italy.

Cross-national data on mortgage loan penetration – the share of the adult population with a mortgage from a financial institution – are only available from a 2014 World Bank household survey. Mortgage loan penetration is considerably higher in advanced democracies than elsewhere, reaching nearly 30 percent as compared to 13 percent in emerging market democracies and roughly 8 percent in developing country democracies. Within countries, mortgages tend to be held by the richest 60 percent of adults, reaching nearly 33 percent of such adults in advanced countries, 15 percent in emerging markets, and 10 percent in developing countries. Among the poorest 40 percent of adults, mortgage loan penetration fell to 27 percent, 11 percent, and 6 percent in these respective groups. While there is considerable cross-country variation, ranging from 1.4 percent of adults in Burundi to almost 50 percent of adults in Norway, these data suggest some degree of exposure to mortgage lending even among the poorest groups in less advanced economies.
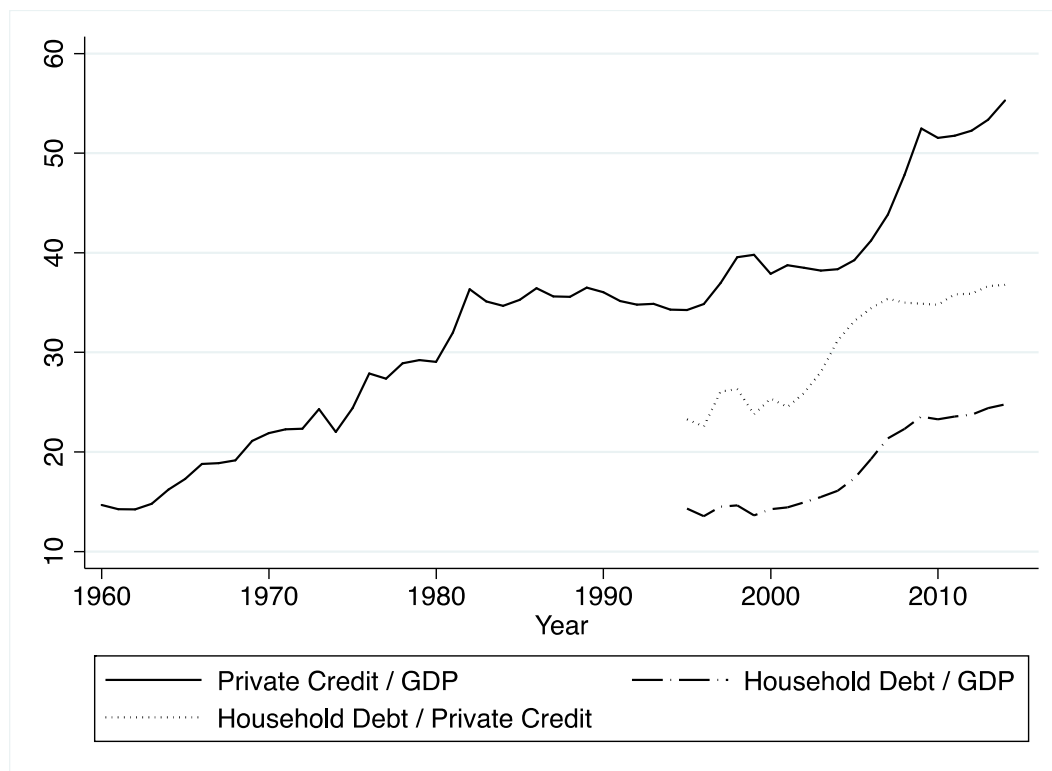
The size of the housing finance system and mortgage loan penetration are closely correlated with private credit as a proportion of GDP (Badev et al. 2014). More importantly, mortgage lending as a share of overall lending increases with higher levels of private credit to GDP, as does household credit as a share of overall lending (T. Beck et al. 2012).   Figures A.1 and A.2 show that household debt in emerging markets and developing countries largely follow this pattern in the post-1995 period. Assuming this pattern held in earlier years, in the 1980s and early 1990s similar levels of household borrowing in emerging markets and developing countries that resembled those observed from the mid-1990s to early 2000s probably prevailed. Household borrowing was almost certainly lower in these countries prior to the 1980s.

Notwithstanding the data limitations, we can conclude with confidence that household borrowing in emerging markets and developing countries in recent decades is considerably higher than in the past, most notably in emerging markets, and that the upward trend likely began in early to mid-1990s.[1] Household leverage in emerging

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[1] See also (International Monetary Fund 2017c, chap. 2).

markets and developing countries recently reached levels last observed in advanced countries in the early 1970s and after the First World War respectively.[2] Taken together, this evidence suggests that rising household leverage accounts for a significant proportion of the credit growth we observe in emerging and developing democracies over the five decades shown in Figures A.1 and A.2, and in some cases in recent years it likely represents the predominant share. Jordà, Schularick, and Taylor refer to the trend toward greater household borrowing in advanced countries as the "democratization of leverage", underlining the deepening connection between the interests of the financial and household sectors. The data we have examined suggests this "democratization" process is also underway in emerging and developing country democracies, though at a much less advanced stage.

Figure A.1. *Private Sector Credit and Household Debt in Emerging Markets, 1960 – 2015.*

Source: (Bank for International Settlements, 2017b; Léon, 2017; World Bank 2017).

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[2] (Badev et al. 2014) also find that the size of housing finance system, as well as the share of the adult population with a housing loan, tend to increase with countries' income level in a convex manner; that is, it increases slowly with income across developing countries and rapidly with income in emerging and advanced countries.

Figure A.2. *Private Sector Credit and Household Debt in Developing Countries, 1960 – 2015.*
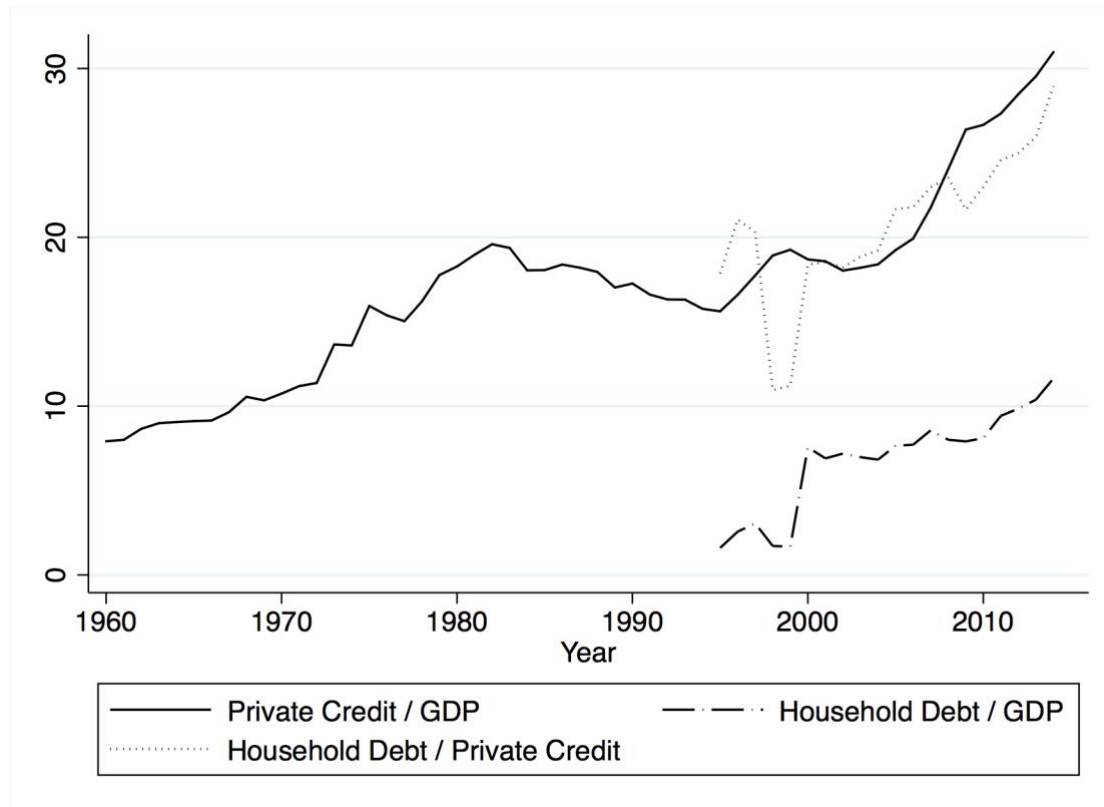
Source: (Bank for International Settlements, 2017b; Léon, 2017; World Bank 2017).

Partisan Spell Coding and Data Sources

We identify the chief executive by cross-checking information from Archigos (Chiozza, Gleditsch, & Goemans, 2015) and rulers.org, a website that lists heads of state and government since the early 18th century.[3] In systems with both a prime minister and a president or monarch, we identify the chief executive by

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[3] Left-censoring does not compromise our analysis since these sources contain information about partisan survival prior to 1831 that we include in our partisan spell indicator.

using the coding rules provided in the Database of Political Institutions. These rules code a system as presidential if the president can veto legislation and the parliament needs a supermajority to override the veto, or if the president can appoint and dismiss the prime minister and dissolve parliament and call for new elections. We adapt this scheme to identify the chief executive in settings where a monarch is present, using information provided in the Comparative Constitutions Project, a cross-national historical dataset of written constitutions (Elkins, Ginsburg, & Melton, 2012).[4]

To identify partisan affiliation, government vote share, and voting systems we use information from a number of sources.[5] The measurement of partisan spells is often fairly straightforward for both parliamentary and democratic executive-dominated systems. However, in parliamentary systems we code partisan spells as ending when the composition of governing coalitions changes even if the chief executive remains unchanged, such as Britain in 1931 and West Germany in 1966.

Asset Prices, Banking Crises and Macro-Disasters.

We compare the impact of modern banking crises and macro-disasters on household wealth by carrying out a simple empirical test using available data on real house price changes[6] and real stock market returns since 1970.[7] We focus only on the modern era because it is during this time period when the middle classes held far greater housing and financial assets, and thus would likely react more negatively to asset price downturns. We estimate a fixed effects OLS model where each of the variables is regressed on our post-crisis or post-macro-disaster indicator, controlling for GDP per capita. The results, presented in Table A.1, are consistent with our argument: housing and stock market wealth tend to contract sharply after modern banking crises but not after macro-disasters.[8] The former clashes with the great expectations of modern voters, but the latter may seem less threatening.

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[4] In cases where there was uncertainty or no clear institutional framework, we also cross-checked our coding by consulting with country experts.
[5] (Döring & Manow, 2018; Mackie & Rose, 1991; Nohlen, 2005; Nohlen, Grotz, & Hartman, 2001; Nohlen & Stöver, 2010; Vanhanen, 2000).

[6] Bank for International Settlements 2017.
[7] Dimson, Marsh, and Staunton 2016.
[8] We find similar results for both R&R and L&V crisis definitions.

Table A.1. *Asset Prices, Banking Crises and Macro-Disasters, 1970 – 2010.*

VARIABLES	House Prices	House Prices	Stock Market Valuations	Stock Market Valuations
	(1)	(2)	(3)	(4)
Crisis	-7.258***		-11.92***	
	(1.015)		(3.796)	
Macro-disaster		2.287		0.69
		(2.251)		(7.366)
GDP per capita (ln)	2.29	1.678	3.559	-0.0631
	(2.008)	(2.098)	(4.187)	(4.063)
Constant	-19.77	-14.77	-26.32	9.749
	(20.47)	(21.4)	(2.86)	(41.69)
Observations	462	452	824	824
R-squared	0.108	0.004	0.012	0
Number of Countries	36	35	21	21

Standard errors in parentheses   *** p<0.01, ** p<0.05, * p<0.1

Country fixed effects included.

Laeven and Valencia Crises

Table A.2. *Banking Crises and Incumbency Survival, 1970 – 2010.*

VARIABLES	(1)
Crisis	-0.588
	(0.642)
Veto Players	-0.274
	(0.544)
Crisis x Veto Players	2.381**
	(1.159)
Boix Age	-0.00160
	(0.00294)
Degree of Democracy - Polity	-0.0979**
	(0.0411)
GDP Per Capita (ln)	0.0163
	(0.154)
Growth	-0.0215
	(0.0224)
Cumulative Crises	-0.252*
	(0.151)
Observations	1,743

*** p<0.01, ** p<0.05, * p<0.1

Table A.3. *Banking Crises and Incumbent Party Vote Share, 1970 – 2013.*

VARIABLES	(1)
Crisis	9.403
	(7.001)
Veto Players	-17.87***
	(5.812)
Crisis x Veto Players	-28.47*
	(15.68)
Boix Age	-0.00657
	(0.0175)
Degree of Democracy - Polity	-0.799**
	(0.354)
GDP Per Capita (ln)	-0.965
	(1.554)
Growth	0.935***
	(0.242)
Cumulative Crises	1.899*
	(0.982)
Constant	59.42***
	(15.16)
R-squared	0.188
Observations	320

*** p<0.01, ** p<0.05, * p<0.1

Polity IV Democracies

Table A.4. *Sample of Polity Democracies*.

Country	Pre-1939 Survival	Pre-1939 Vote	Post-1970 Survival	Post-1970 Vote
Argentina			X	X
Australia	X	X	X	X
Austria	X	X	X	X
Belgium	X	X	X	X
Bolivia			X	X
Brazil			X	X
Bulgaria			X	X
Canada	X	X	X	X
Chile			X	X
Colombia			X	X
Costa Rica			X	X
Denmark	X	X	X	X
Dominican Republic			X	
Ecuador			X	X
El Salvador			X	
Finland	X	X	X	X
France	X	X	X	X
Germany			X	X
Ghana			X	X
Greece	X	X	X	X
Guatemala			X	
Honduras			X	
Hungary			X	
India			X	
Indonesia			X	

Ireland	X	X	X	X
Italy			X	X
Japan			X	X
Kenya			X	
Mauritius			X	
Mexico			X	X
Netherlands	X	X	X	X
New Zealand			X	X
Nicaragua	X	X	X	
Nigeria			X	
Norway	X	X	X	X
Panama			X	
Paraguay			X	X
Peru			X	X
Philippines			X	
Poland			X	
Portugal	X	X	X	X
Romania			X	
South Africa			X	
South Korea			X	
Spain	X	X	X	X
Sri Lanka			X	
Sweden	X	X	X	X
Switzerland	X	X	X	X
Taiwan			X	
Thailand			X	
Turkey			X	
United Kingdom	X	X	X	X
United States	X	X	X	X
Uruguay			X	X

Venezuela	X	X
Zambia	X	

Table A.5. *Summary Statistics.*

Survival Data

Variable	Pre-1939 (N=611)			Post-1970 (N=1580)			
	SD	Min	Max	Mean	SD	Min	Max
Crisis	0.4774376	0	1	0.1588608	0.3656619	0	1
Veto Players	0.0965876	0	0.664	0.4150639	0.1368757	0	0.72
Democracy Age - Boix	29.76519	0	129	44.41013	43.10461	0	201
Degree of Democracy - Polity	1.475281	-6	10	9.061392	1.714788	-8	10
GDP Per Capita - ln	0.3947049	7.113142	9.063695	9.653961	0.8298021	7.046113	11.34353
Growth	6.078453	-22.27282	37.33724	2.973127	3.222817	-14.04075	18.11947
Cumulative Crises	3.213319	0	13	4.392405	3.223834	0	14

Vote Share Data

Variable	Pre-1939 (N=153)			Post-1970 (N=316)			
	SD	Min	Max	Mean	SD	Min	Max
Crisis	0.4655301	0	1	0.152381	0.3599616	0	1
Veto Players	0.0845579	0.193343	0.664	0.4433615	0.1263556	0.096	0.708
Democracy Age	29.93431	0	127	60.23734	44.05809	1	203
Degree of Democracy - Polity	1.250696	3	10	9.639241	0.8064687	6	10
GDP Per Capita - ln	0.3541707	7.222566	9.04688	10.05088	0.5841444	8.125737	11.33576
Growth	6.06868	-21.09752	21.99477	2.581321	2.666052	-12.22651	13.06506
Cumulative Crises	3.206568	0	13	5.481013	3.091661	0	14

Table A.6 provides the results in the form of coefficients for different models of incumbent survival and party vote share using an alternative sample of democracies based on the Policy IV measure. Our focus on democratic countries leads us to restrict our analysis to those governments that Marshall, Gurr and Jaggers (Marshall, Gurr, & Jaggers, 2017) define as "coherent democracies;" that is, where the Polity IV measure of democracy is above 6 for the full incumbent spell.

Table A.6. *Banking Crises and Incumbency Survival – Polity Democracies, 1822 – 2013.*

	Survival	Survival	Survival	Survival	Vote	Vote	Vote	Vote
	RR 1822 - 1938 / 1970 - 2013	RR 1822 - 1938	RR 1970 - 2013	LV 1970 - 2013	RR 1822 - 1938 / 1970 - 2013	RR 1822 - 1938	RR 1970 - 2013	LV 1970 - 2013
Variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Crisis	-0.071	3.02	-0.34	-0.393	22.81***	19.68**	17.08**	9.955
	(0.571)	(2.391)	(0.578)	(0.708)	(6.056)	(9.007)	(7.945)	(7.541)
Veto Players	-0.471	2.539*	-0.532	-0.454	-23.53***	-79.82***	-10.94*	-15.51***
	(0.615)	(1.296)	(0.673)	(0.552)	(6.637)	(13.060)	(6.080)	(5.804)
Crisis x Veto Players	1.214	-9.154*	1.958*	2.216*	-58.35***	-44.41**	-49.23***	-30.22*
	(1.179)	(4.982)	(1.178)	(1.269)	(12.990)	(20.520)	(17.270)	(16.870)
Polity Age	-0.0035	-0.0064	-0.00443	-0.00452	0.0317*	-1.486*	-2.500**	-1.636
	(0.0029)	(0.00924)	(0.00299)	(0.00299)	(0.01750)	(0.87500)	(1.13900)	(1.31000)
Degree of Democracy - Polity	-0.063**	0.0526	-0.107***	-0.105**	-1.794**	0.134***	0.0429***	0.0415***
	(0.026)	(0.0483)	(0.0389)	(0.0424)	(0.7190)	(0.0362)	(0.0145)	(0.0148)
GDP Per Capita (ln)	-0.258**	-0.113	0.173	0.111	-0.763	2.98	-2.570*	-2.218
	(0.119)	(0.408)	(0.154)	(0.178)	(0.954)	(2.632)	(1.426)	(1.392)
Growth	-0.002	-0.0495**	-0.0253	-0.0390*	0.544***	0.471***	1.045***	0.938***
	(0.014)	(0.020)	(0.022)	(0.021)	(0.132)	(0.156)	(0.191)	(0.235)
Cumulative Crises	0.032	-0.244***	-0.00188	-0.314**	0.217	-1.013***	0.413**	1.682
	(0.031)	(0.0700)	(0.0296)	(0.1570)	(0.2040)	(0.3280)	(0.1900)	(1.0320)
Constant					67.53***	61.13***	84.29***	76.24***
					(9.611)	(22.320)	(13.630)	(15.300)
Observations	2,151	614	1,695	1,695	439	154	318	316
R-squared					0.206	0.452	0.203	0.186

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Austerity Policies

Tables A.7 and A.8 provides the results in the form of coefficients for different models of incumbent survival and party vote share in the post-1970 period. Measuring austerity is not straightforward, since there is no set definition of the term. As a result, we opt for three separate operationalizations: (1) real government expenditure changes as proportion of GDP; (2) a dummy variable capturing the presence of "large" expenditure cuts greater than five percent in real terms; (3) changes in the primary budget balance. The data are from (Mauro, Romeu, Binder, & Zaman, 2013).

Table A.7. *Banking Crises and Partisan Spell Termination, 1970 – 2013 – Austerity Policies.*

	RR 1970 - 2013	LV 1970 - 2013	RR 1970 - 2013	LV 1970 - 2013	RR 1970 - 2013	LV 1970 - 2013	RR 1970 - 2013	LV 1970 - 2013	RR 1970 - 2013	LV 1970 - 2013	RR 1970 - 2013	LV 1970 - 2013
	Boix	Boix	Polity	Polity	Boix	Boix	Polity	Polity	Boix	Boix	Polity	Polity
VARIABLES	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Crisis	-0.676	-0.343	-0.755	-0.673	-0.545	-0.240	-0.788	-0.757	-0.708	-0.0774	-0.708	-0.708
	(0.808)	(1.055)	(0.886)	(1.263)	(0.816)	(1.126)	(0.881)	(1.290)	(0.734)	(0.979)	(0.806)	(0.806)
Veto Players	-0.294	-0.0287	-0.883	-0.625	-0.229	0.0477	-0.885	-0.634	-0.279	0.00378	-0.858	-0.858
	(0.878)	(0.752)	(0.852)	(0.734)	(0.859)	(0.741)	(0.845)	(0.724)	(0.899)	(0.795)	(0.878)	(0.878)
Crisis x Veto Players	2.919*	2.121	2.819	2.537	2.602	1.806	2.828	2.623	3.040*	2.002	2.790*	2.790*
	(1.752)	(1.912)	(1.788)	(2.312)	(1.754)	(2.024)	(1.782)	(2.354)	(1.613)	(1.839)	(1.643)	(1.643)
Democracy Age	0.000900	-0.000455	-0.00435	-0.00442	0.000542	-0.000828	-0.00432	-0.00440	0.000512	-0.00106	-0.00427	-0.00427
	(0.00285)	(0.00290)	(0.00346)	(0.00369)	(0.00295)	(0.00303)	(0.00341)	(0.00359)	(0.00290)	(0.00307)	(0.00346)	(0.00346)
Degree of Democracy - Polity	-0.247***	-0.251***	-0.149***	-0.166***	-0.248***	-0.252***	-0.157***	-0.171***	-0.234***	-0.235***	-0.147***	-0.147***
	(0.0488)	(0.0541)	(0.0494)	(0.0541)	(0.0478)	(0.0548)	(0.0501)	(0.0542)	(0.0463)	(0.0490)	(0.0502)	(0.0502)
GDP Per Capita (ln)	0.0129**	0.0171**	0.0145**	0.0156**	0.0131*	0.0173**	0.0156**	0.0167**	0.0120*	0.0161**	0.0143**	0.0143**
	(0.00590)	(0.00690)	(0.00667)	(0.00734)	(0.00712)	(0.00845)	(0.00706)	(0.00782)	(0.00630)	(0.00773)	(0.00677)	(0.00677)
Growth	0.0242	0.0124	-0.00505	-0.0239	0.0141	0.00242	-0.0152	-0.0342	0.0232	0.0169	-0.00379	-0.00379
	(0.0228)	(0.0215)	(0.0226)	(0.0238)	(0.0228)	(0.0237)	(0.0224)	(0.0250)	(0.0232)	(0.0210)	(0.0223)	(0.0223)
Cumulative Crises	-0.0182	-0.343	0.00702	-0.268*	-0.0177	-0.240	0.00593	-0.757	-0.0209	-0.0774	0.00276	0.00276
	(0.0301)	(1.055)	(0.0332)	(0.156)	(0.0298)	(1.126)	(0.0330)	(1.290)	(0.0284)	(0.979)	(0.0325)	(0.0325)
Gov Expenditure Change	-0.0377	-0.0456	-0.0207	-0.0277								
	(0.0284)	(0.0312)	(0.0266)	(0.0287)								
Large Gov Expenditure Change					-0.548	-0.607	-0.576	-0.636				
					(0.389)	(0.403)	(0.383)	(0.392)				
Primary Balance Change									0.0494	0.0582	0.0480	0.0480
									(0.0359)	(0.0380)	(0.0324)	(0.0324)
Observations	1,498	1,498	1,458	1,458	1,498	1,498	1,458	1,458	1,497	1,497	1,472	1,472

Robust standard errors in parentheses:*** p<0.01, ** p<0.05, * p<0.1

Table A.8. *Banking Crises and Incumbent Party Vote Share, 1970 – 2013 – Austerity Policies.*

	RR 1970 - 2013	LV 1970 - 2013	RR 1970 - 2013	LV 1970 - 2013	RR 1970 - 2013	LV 1970 - 2013	RR 1970 - 2013	LV 1970 - 2013	RR 1970 - 2013	LV 1970 - 2013	RR 1970 - 2013	LV 1970 - 2013
	Boix	Boix	Polity	Polity	Boix	Boix	Polity	Polity	Boix	Boix	Polity	Polity
VARIABLES	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Crisis	12.12	8.219	11.16	5.488	11.96	8.145	10.83	5.601	17.16*	10.94	15.65*	8.560
	(9.023)	(8.376)	(8.889)	(8.141)	(9.184)	(8.628)	(9.138)	(8.479)	(9.254)	(8.658)	(8.892)	(8.583)
Veto Players	-18.61***	-20.25***	-16.88***	-18.47***	-18.33***	-19.80***	-16.58***	-18.12***	-18.28***	-20.68***	-17.37***	-19.58***
	(6.149)	(6.111)	(6.033)	(6.094)	(6.169)	(6.123)	(6.074)	(6.126)	(6.235)	(6.269)	(6.133)	(6.221)
Crisis x Veto Players	-37.30**	-26.71	-35.87*	-22.18	-37.42*	-26.71	-35.88*	-22.62	-51.01***	-34.29*	-48.35**	-30.23
	(18.88)	(17.89)	(18.67)	(17.58)	(19.19)	(18.39)	(19.20)	(18.28)	(19.60)	(18.73)	(19.04)	(18.78)
Democracy Age	-0.0285*	-0.0201	0.0340**	0.0362**	-0.0301*	-0.0223	0.0312**	0.0326**	-0.0241	-0.0165	0.0340**	0.0345**
	(0.0167)	(0.0180)	(0.0144)	(0.0152)	(0.0168)	(0.0181)	(0.0145)	(0.0154)	(0.0168)	(0.0180)	(0.0145)	(0.0152)
Degree of Democracy - Polity	-0.994**	-0.810**	-2.650**	-2.096*	-0.987**	-0.809**	-2.583**	-1.984	-1.019**	-0.745**	-2.432**	-1.514
	(0.396)	(0.334)	(1.126)	(1.261)	(0.391)	(0.336)	(1.134)	(1.294)	(0.410)	(0.347)	(1.120)	(1.299)
GDP Per Capita (ln)	-2.021	-0.660	-3.100**	-2.134	-2.108	-0.814	-3.299**	-2.363	-2.081	-0.763	-3.006**	-2.178
	(1.607)	(1.604)	(1.460)	(1.436)	(1.622)	(1.629)	(1.484)	(1.465)	(1.624)	(1.644)	(1.443)	(1.428)
Growth	78.58***	74.59***	88.54***	73.49***	77.74***	73.53***	86.21***	73.21***	80.48***	76.90***	88.45***	76.35***
	(22.33)	(23.51)	(20.48)	(23.26)	(23.00)	(24.78)	(21.23)	(24.67)	(22.48)	(24.78)	(20.07)	(24.78)
Cumulative Crises	0.468**	2.138**	0.421**	1.850*	0.477**	1.985*	0.433**	1.726	0.420**	2.209**	0.373**	2.113*
	(0.208)	(1.030)	(0.182)	(1.068)	(0.210)	(1.044)	(0.185)	(1.093)	(0.212)	(1.046)	(0.189)	(1.104)
Gov Expenditure Change	0.207	0.356	0.302	0.455								
	(0.275)	(0.279)	(0.268)	(0.278)								
Large Gov Expenditure Change					-0.528	-0.271	-0.0334	0.843				
					(3.477)	(3.166)	(3.389)	(3.207)				
Primary Balance Change									-0.576**	-0.610***	-0.634***	-0.664***
									(0.242)	(0.234)	(0.235)	(0.225)
Constant	73.01***	59.31***	95.11***	82.45***	73.94***	61.08***	96.68***	83.95***	73.71***	59.63***	92.60***	77.70***
	(15.67)	(15.63)	(14.06)	(15.37)	(15.79)	(15.90)	(14.14)	(15.85)	(15.87)	(16.31)	(13.90)	(15.96)
Observations	306	307	305	305	306	307	305	305	306	307	307	307
R-squared	0.203	0.186	0.207	0.187	0.201	0.179	0.202	0.176	0.226	0.198	0.227	0.196

Robust standard errors in parentheses:*** p<0.01, ** p<0.05, * p<0.1

IMF Programs and Eurozone Membership

We control for IMF conditionality and Eurozone membership as potential external constraints on governments. Tables A.9 and A.10 provides the results in the form of coefficients for different models of incumbent survival and party vote share in the post-1970 period. The IMF program data are from Dreher (Dreher, 2006) and updated from the IMF (International Monetary Fund, 2018).

Table A.9. *Banking Crises and Partisan Spell Termination, 1970 – 2013 – IMF Conditionality and Eurozone Membership.*

VARIABLES	RR 1970 - 2010 Boix (1)	LV 1970 - 2010 Boix (2)	RR 1970 - 2013 Polity (3)	LV 1970 - 2013 Polity (4)	RR 1970 - 2010 Boix (5)	LV 1970 - 2010 Boix (6)	RR 1970 - 2013 Polity (7)	LV 1970 - 2013 Polity (8)
Crisis	-0.387	-0.632	-0.778	-1.188	-0.583	-0.668	-1.175*	-1.298
	(0.598)	(0.689)	(0.672)	(0.895)	(0.541)	(0.656)	(0.610)	(0.864)
Veto Players	-0.847	-0.562	-0.906	-0.689	-0.490	-0.202	-0.566	-0.290
	(0.744)	(0.614)	(0.791)	(0.652)	(0.723)	(0.608)	(0.816)	(0.694)
Crisis x Veto Players	2.303*	2.588**	2.775**	3.660**	2.516**	2.618**	3.315**	3.854**
	(1.264)	(1.251)	(1.383)	(1.600)	(1.188)	(1.231)	(1.288)	(1.550)
Democracy Age	-0.00197	-0.00347	-0.00436	-0.00482	-0.00170	-0.00336	-0.00415	-0.00455
	(0.00327)	(0.00351)	(0.00447)	(0.00474)	(0.00310)	(0.00321)	(0.00410)	(0.00421)
Degree of Democracy - Polity	-0.0991**	-0.0969**	-0.159**	-0.161**	-0.107**	-0.106**	-0.146***	-0.151***
	(0.0444)	(0.0442)	(0.0624)	(0.0638)	(0.0418)	(0.0422)	(0.0500)	(0.0544)
GDP Per Capita (ln)	0.00767	0.0111	0.0103	0.0116	0.00868	0.011	0.0123	0.0123
	0.00717	0.00847	0.0093	0.0102	0.00615	0.00734	0.00765	0.00898
Growth	-0.00567	-0.0151	-0.00592	-0.0171	-0.0105	-0.0210	0.000420	-0.0142
	(0.0239)	(0.0234)	(0.0206)	(0.0218)	(0.0237)	(0.0228)	(0.0222)	(0.0213)
Cumulative Crises	-0.0175	-0.234*	-0.00514	-0.221	-0.0212	-0.267**	-0.00595	-0.295**
	(0.0251)	(0.134)	(0.0284)	(0.154)	(0.0264)	(0.135)	(0.0279)	(0.147)
IMF Program	-0.399*	-0.271	-0.699***	-0.580**				
	(0.216)	(0.206)	(0.259)	(0.258)				
Eurozone					-0.223	-0.312	-0.183	-0.330
					(0.360)	(0.375)	(0.385)	(0.430)
Observations	1,728	1,728	1,561	1,561	1,743	1,743	1,580	1,580

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Table A.10. *Banking Crises and Incumbent Party Vote Share, 1970 – 2013 – IMF Conditionality and Eurozone Membership.*

	RR 1970 - 2013	LV 1970 - 2013	RR 1970 - 2013	LV 1970 - 2013	RR 1970 - 2013	LV 1970 - 2013	RR 1970 - 2013	LV 1970 - 2013
	Boix	Boix	Polity	Polity	Boix	Boix	Polity	Polity
VARIABLES	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Crisis	16.32**	9.512	14.77*	9.512	18.25**	9.637	16.82**	9.889
	(8.013)	(7.305)	(8.105)	(7.305)	-8.038	-6.968	-8.003	-7.583
Veto Players	-13.94**	-17.56***	-11.64**	-28.80*	-13.42**	-17.72***	-11.07*	-15.53***
	(6.013)	(5.735)	(5.886)	(5.735)	-6.161	-5.793	-6.094	-5.811
Crisis x Veto Players	-45.95***	-28.80*	-43.68**	-28.80*	-50.81***	-28.57*	-49.24***	-30.17*
	(17.50)	(16.34)	(17.81)	(16.34)	-17.43	-15.59	-17.38	-16.91
Democracy Age	-1.236***	-0.858**	-3.063**	-0.858**	-0.0157	-0.00984	0.0455***	0.0420***
	(0.421)	(0.340)	(1.188)	(0.340)	-0.0176	-0.0187	-0.0149	-0.0155
Degree of Democracy - Polity	-0.0165	-0.00794	0.0443***	-0.00794	-1.157***	-0.786**	-2.545**	-1.647
	(0.0165)	(0.0174)	(0.0146)	(0.0174)	-0.379	-0.359	-1.152	-1.337
GDP Per Capita (ln)	-2.194	-1.518	-3.096**	-1.518	-1.356	-0.591	-2.877**	-2.272
	(1.576)	(1.588)	(1.422)	(1.588)	-1.696	-1.674	-1.449	-1.396
Growth	0.894***	0.820***	0.937***	0.820***	1.025***	0.928***	1.057***	0.939***
	(0.232)	(0.237)	(0.203)	(0.237)	-0.222	-0.239	-0.193	-0.235
Cumulative Crises	0.454**	2.477**	0.396**	2.477**	0.460**	1.914*	0.424**	1.674
	(0.208)	(1.015)	(0.183)	(1.015)	-0.214	-0.981	-0.192	-1.04
IMF Program	-7.023*	-7.698**	-7.792**	-7.698**				
	(3.805)	(3.611)	(3.753)	(3.611)				
Eurozone					-0.332	-1.246	1.376	0.251
					(2.155)	(2.195)	(2.160)	(2.186)
Constant	73.81***	65.95***	96.01***	65.95***				
	(15.35)	(15.46)	(14.10)	(15.46)				
Observations	321	320	318	320	321	320	318	316
R-squared	0.215	0.205	0.222	0.205	0.199	0.189	0.204	0.186

Robust standard errors in parentheses.
*** p<0.01, ** p<0.05, * p<0.1

Residualization

We use residualization to address the high degree of collinearity between veto players and democracy. The coefficient for veto player residuals provides an unbiased estimate of the effect of veto players; that is, the component uncorrelated with democracy. Table A.11 reports the results.

Table A.11. *Banking Crises and Incumbency Survival, 1822 - 2013 – Veto Player Residuals.*

Variables	Survival R&R 1822-1938 Boix	Survival R&R1970-2010 Boix	Survival L&V 1970-2010 Boix	Survival R&R 1822-1938 Polity	Survival R&R1970-2013 Polity	Survival L&V 1970-2013 Polity	Vote R&R 1872-1938 Boix	Vote R&R1970-2013 Boix	Vote L&V 1970-2013 Boix	Vote R&R 1872-1938 Polity	Vote R&R1970-2013 Polity	Vote L&V 1970-2013 Polity
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Crisis	-0.283	0.273	0.219	-0.335	0.387	0.457	-2.826	-1.894	-0.887	2.029	-2.376	-1.238
	(0.495)	(0.205)	(0.328)	(0.431)	(0.246)	(0.320)	(3.533)	(1.800)	(2.065)	(1.867)	(1.724)	(1.991)
Residuals	1.03	-0.989	-0.603	3.237**	-0.699	-0.567	-77.38***	-13.48**	-14.40*	-81.02***	-10.14*	-11.74*
	(1.108)	(0.799)	(0.654)	(1.409)	(0.751)	(0.628)	(11.720)	(5.954)	(5.917)	(13.350)	(5.851)	(5.928)
Crisis x Residuals	0.666	4.011**	3.622*	-15.61***	1.935	1.902	-2.213	50.79***	-31.71*	-40.45*	52.95***	-32.41*
	(3.427)	(1.616)	(1.933)	(5.086)	(1.431)	(1.561)	(27.170)	(16.540)	(16.550)	(21.680)	(15.910)	(17.010)
Democracy Age	-0.0319***	-0.00151	0.00311	0.000664	-0.00544	0.00553	0.106***	-0.0148	0.00742	0.135***	0.0432*	0.0437***
	(0.01110)	(0.00313)	(0.00345)	(0.00781)	(0.00337)	(0.00342)	(0.03990)	(0.01660)	(0.01780)	(0.03620)	(0.01460)	(0.01510)
Degree of Democracy - Polity	0.0129	-0.114***	0.107**	0.101***	-0.116***	-0.120**	-1.557***	-1.563**	-1.318**	-3.847**	-3.147***	-2.278*
	(0.0373)	(0.0373)	(0.0373)	(0.0373)	(0.0373)	(0.0373)	(0.0373)	(0.0373)	(0.0373)	(0.0373)	(0.0373)	(0.0373)
GDP Per Capita (ln)	-0.605	0.0105	0.0126	-0.484	0.0137**	0.0125*	0.201	-1.661	-0.513	3.01	-2.551*	-1.78
	(0.41000)	(0.00661)	(0.00811)	(0.51000)	(0.00640)	(0.00714)	(3.07400)	(1.55300)	(1.55800)	(2.67500)	(1.42500)	(1.39600)
Growth	-0.0701**	-0.00427	-0.0147	-0.0486**	-0.0247	-0.0361	0.398***	1.059**	1.014**	0.491***	1.086**	1.011**
	(0.0308)	(0.0233)	(0.0222)	(0.0203)	(0.0232)	(0.0225)	(0.1270)	(0.2230)	(0.2460)	(0.1600)	(0.1900)	(0.2410)
Cumulative Crises	-0.0623	-0.02	-0.252*	-0.250***	0.000561	-0.310*	-0.687*	0.469**	1.372	-1.035**	0.416**	1.115
	(0.0976)	(0.0260)	(0.1360)	(0.0666)	(0.0295)	(0.1460)	(0.3630)	(0.2100)	(0.9950)	(0.3310)	(0.1890)	(1.0370)
Constant							53.12**	64.93***	52.25***	51.41**	85.74***	71.22***
							(21.91)	(15.08)	(15.26)	(22.12)	(13.38)	(15.18)
Observations	727	1743	1743	614	1695	1695	190	321	322	154	318	318
R-squared							0.346	0.205	0.169	0.449	0.211	0.168

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Alternative Indicators of the Domestic Structure of Political Competition

We consider alternative measures of the domestic structure of political competition, including "All House" from the Database of Political Institutions, a dummy variable coded "1" if the executive's party has a majority in the lawmaking houses of the legislature, and the "Effective Number of Parties" in the legislature (ENPP) from (Gallagher & Mitchell, 2005; Golder, 2005). We fail to find a significant conditional effect for any of these alternative measures in the different models of incumbent survival (Table A.12.) and party vote share (Table A.13.) in the post-1970 period.

Table A.12. *Banking Crises and Partisan Spell Termination, 1970 – 2013 - Alternative Indicators of the Domestic Structure*

of Political Competition

VARIABLES	RR 1970 - 2010	RR 1970 - 2010	RR 1970 - 2010	LV 1970 - 2010	LV 1970 - 2010	LV 1970 - 2010	RR 1970 - 2013	RR 1970 - 2013	RR 1970 - 2013	LV 1970 - 2013	LV 1970 - 2013	LV 1970 - 2013
	Boix	Boix	Boix	Boix	Boix	Boix	Polity	Polity	Polity	Polity	Polity	Polity
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Crisis	0.436**	0.0950	0.135	0.465	0.0639	0.112	0.260	-0.496	-0.496	0.436	0.162	0.150
	(0.222)	(0.492)	(0.500)	(0.319)	(0.512)	(0.515)	(0.246)	(0.548)	(0.548)	(0.294)	(0.453)	(0.441)
All House	-0.444*			-0.354			0.523**			0.505**		
	(0.238)			(0.218)			(0.262)			(0.219)		
Crisis x All House	0.466			-0.259			0.271			0.268		
	(0.351)			(0.409)			(0.436)			(0.413)		
Effective Parties		-0.00244			0.0118			-0.0847			-0.0405	
		(0.0581)			(0.0517)			(0.0656)			(0.0605)	
Crisis * Effective Parties		0.0870			0.0626			0.193			0.108	
		(0.110)			(0.110)			(0.119)			(0.0988)	
Democracy Age	-0.00271	-0.00293	-0.00244	-0.00224	-0.00279	-0.00244	-0.00500	-0.00552	-0.00552	-0.00478*	-0.00522*	-0.00524*
	(0.00288)	(0.00290)	(0.00280)	(0.00255)	(0.00274)	(0.00267)	(0.00362)	(0.00364)	(0.00364)	(0.00263)	(0.00295)	(0.00293)
Degree of Democracy - Polity	-0.0204	-0.105***	-0.123***	-0.0101	0.0957***	0.115***	-0.00374	-0.171***	-0.171***	-0.0580	-0.170***	-0.170***
	(0.0462)	(0.0389)	(0.0343)	(0.0474)	(0.0371)	(0.0331)	(0.0817)	(0.0474)	(0.0474)	(0.0400)	(0.0511)	(0.0510)
GDP Per Capita (ln)	2.39e-05	0.00730	0.00822	-0.175	0.00651	0.0428	-0.176	0.0305	0.0305	-0.0393	0.136	0.136
	(0.00833)	(0.00568)	(0.00535)	(0.150)	(0.150)	(0.154)	(0.164)	(0.182)	(0.182)	(0.157)	(0.173)	(0.174)
Growth	-1.201	0.909	1.173	-0.0263	-0.00509	0.00243	-0.0113	0.0172	0.0172	-0.0505**	-0.0203	-0.0197
	(2.414)	(2.232)	(2.246)	(0.0243)	(0.0238)	(0.0237)	(0.0252)	(0.0210)	(0.0210)	(0.0252)	(0.0233)	(0.0235)
Cumulative Crises	0.00158	-0.00952	-0.0106	-0.173	-0.202	-0.209	0.0197	0.0246	0.0246	-0.268*	-0.321**	-0.318**
	(0.0248)	(0.0285)	(0.0287)	(0.164)	(0.143)	(0.140)	(0.0253)	(0.0294)	(0.0294)	(0.158)	(0.141)	(0.141)
Observations	1,534	1,589	1,581	1,534	1,589	1,581	1,408	1,456	1,456	1,521	1,558	1,558

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Table A.13. *Banking Crises and Incumbent Party Vote Share, 1970 – 2013 - Alternative Indicators of the Domestic Structure of Political Competition*

VARIABLES	RR	RR	RR	LV	LV	LV	RR	RR	RR	LV	LV	LV
	1970 - 2010	1970 - 2010	1970 - 2010	1970 - 2010	1970 - 2010	1970 - 2010	1970 - 2013	1970 - 2013	1970 - 2013	1970 - 2013	1970 - 2013	1970 - 2013
	Boix	Boix	Boix	Boix	Boix	Boix	Polity	Polity	Polity	Polity	Polity	Polity
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Crisis	-7.573***	-6.102	-5.968	-3.616	-8.297	-8.926	-7.045***	-6.118	-6.011	-3.849	-8.072	-8.681
	(2.424)	(6.204)	(6.214)	(2.607)	(6.293)	(6.290)	(2.376)	(6.280)	(6.290)	(2.573)	(6.278)	(6.252)
All House	5.121***			5.008***			4.602***			4.668***		
	(1.357)			(1.423)			(1.404)			(1.452)		
Crisis x All House	3.771			2.100			3.960			2.472		
	(3.372)			(3.137)			(3.237)			(3.066)		
Effective Parties		-2.858***			-2.889***			-2.765***			-2.723***	
		(0.543)			(0.574)			(0.539)			(0.577)	
Crisis * Effective Parties		-0.0607			1.509			-0.236			1.302	
		(1.861)			(1.796)			(1.849)			(1.832)	
Democracy Age	-0.0213	-0.0167	-0.0164	-0.0134	0.00454	0.00436	0.0260*	0.0247*	0.0253*	0.0284*	0.0281*	0.0284*
	(0.0173)	(0.0151)	(0.0152)	(0.0184)	(0.0159)	(0.0159)	(0.0149)	(0.0146)	(0.0147)	(0.0157)	(0.0149)	(0.0149)
Degree of Democracy - Polity	-1.167	-1.974***	-1.975***	-0.761	-1.701***	-1.693***	-1.081	-3.798***	-3.831***	-0.662	-2.713*	-2.693*
	(1.133)	(0.530)	(0.533)	(1.318)	(0.358)	(0.356)	(1.368)	(1.402)	(1.407)	(1.568)	(1.589)	(1.589)
GDP Per Capita (ln)	-1.389	-1.668	-1.688	-0.750	0.00559	-0.0238	-3.012*	-1.735	-1.739	-2.276	-0.618	-0.644
	(1.804)	(1.469)	(1.474)	(1.736)	(1.471)	(1.472)	(1.625)	(1.418)	(1.420)	(1.513)	(1.379)	(1.383)
Growth	102.4***	93.45***	93.71***	108.3***	99.13***	99.32***	107.0***	100.2***	100.5***	105.7***	96.70***	96.97***
	(29.46)	(25.76)	(25.77)	(30.10)	(27.00)	(26.95)	(24.86)	(23.11)	(23.13)	(29.52)	(26.87)	(26.82)
Cumulative Crises	0.361	0.611***	0.605***	0.734	2.013**	2.030**	0.341	0.587***	0.582***	0.690	1.599	1.620
	(0.241)	(0.224)	(0.225)	(1.079)	(0.961)	(0.961)	(0.222)	(0.210)	(0.210)	(1.020)	(1.020)	(1.019)
Constant	58.64***	79.00***	79.06***	48.71***	60.78***	60.86***	71.07***	94.27***	94.48***	60.59***	74.38***	74.42***
	(16.88)	(14.24)	(14.28)	(17.96)	(14.40)	(14.39)	(15.00)	(14.20)	(14.24)	(16.85)	(15.82)	(15.80)
Observations	283	303	303	283	304	304	283	300	300	282	300	300
R-squared	0.181	0.260	0.257	0.141	0.227	0.226	0.178	0.260	0.258	0.141	0.218	0.217

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Entropy Balancing

Using the vote share data we find imbalance to exist for one covariate – growth, for the R&R measure in the pre-1939 Polity sample, two covariates – age and degree of democracy, for the R&R measure in the post-1970 Boix sample, four covariates – degree of democracy, GDP per capita, growth, GDP per capita, and cumulative crises – for the L&V measure in the post-1970 Boix sample, two covariates - degree of democracy and cumulative crises – for the R&R measure in the post-1970 Polity sample, and three covariates - degree of democracy, growth and cumulative crises – for the L&V measure in the post-1970 Polity sample.

The values for crisis versus tranquil spells are as follows: (1) Growth 0.90 and 2.72 percent (p<.10) using R&R in the pre-1939 Polity sample; 2.09 and 3.06 percent (p<.05) using L&V in the post-1970 Boix sample; 2.14 and 3.02 (p<.10) using L&V in the post-1970 Polity sample (2) Democracy Age 53.9 and 70.53 years (p<.05) using R&R in the post-1970 Boix sample; (3) Degree of Democracy 9.31 and 9.59 (p<.010) using R&R in the post-1970 Boix sample; 9.04 and 9.64 (p<.01) using L&V in the post-1970 Boix sample; 9.25 and 9.66 (p<.01) using R&R in the post-1970 Polity sample; 9.28 and 9.66 (p<.01) using L&V in the post-1970 Polity sample; (4) GDP per capita (ln) 9.87 and 10.04 (p<.10) using L&V in the post-1970 Boix sample; (5) Cumulative Crises 0.66 and 0.43 (p<.10) using L&V in the post-1970 Boix sample; 4.53 and 5.43 (p<.10) using R&R in the post-1970 Polity sample; 0.69 and 0.43 (p<.05) using L&V in the post-1970 Polity sample. We use entropy balancing since it has been shown to outperform other data pre-processing procedures, while also requiring fewer assumptions and possessing more attractive statistical properties (Hainmueller, 2012).

Table A.14 provides summary statistics of the balance between the "treated" (banking crisis) and "control" (tranquil) units in the pre-weighted data set, and then in the post-weighted data set. The reduction of the imbalance between treatment and control units is substantively large. Since the difference in means for all covariates is essentially eliminated in the weighted data set, we conclude that the balancing procedure produced greater covariate balance.

Table A.14. *Balance Statistics – Vote Share Data.*

Variables	Data	Weighting	Treatment Mean	Treatment Variance	Treatment Skewness	Control Mean	Control Variance	Control Skewness
Growth	R&R Pre-1939 Polity	Pre	1.282	45.02	-15.87	3.101	28.38	0.2198
Growth	R&R Pre-1939 Polity	Post	1.282	45.02	-15.87	1.29	27.78	-0.05043
Democracy Age	R&R Post-1970 Boix	Pre	61.54	2411	0.9385	71.34	2091	0.6024
Degree of Democracy	R&R Post-1970 Boix	Pre	9.134	1.542	-1.261	9.642	2.133	-9.237
Democracy Age	R&R Post-1970 Boix	Post	61.54	2411	0.9385	61.57	21931	0.7213
Degree of Democracy	R&R Post-1970 Boix	Post	9.134	1.542	-1.261	9.642	9.642	-5.221
Degree of Democracy	L&V Post-1970 Boix	Pre	8.98	1.77	-1.035	9.613	1.996	-9.138
GDP per capita	L&V Post-1970 Boix	Pre	9.836	0.593	-0.3104	10.06	0.3053	-0.8857
Growth	L&V Post-1970 Boix	Pre	1.568	14.25	-1.031	2.774	5.869	-0.4679
Cumulative crises	L&V Post-1970 Boix	Pre	1.204	0.5825	1.064	0.3066	0.4185	2.535
Degree of Democracy	L&V Post-1970 Boix	Post	8.98	1.77	-1.035	8.98	5.555	-5.926
GDP per capita (ln)	L&V Post-1970 Boix	Post	9.836	0.593	-0.3104	9.837	0.4063	-0.3458
Growth	L&V Post-1970 Boix	Post	1.568	14.25	-1.031	1.568	17.71	-0.8798
Cumulative crises	L&V Post-1970 Boix	Post	1.204	0.5825	1.064	1.204	1.448	0.9649
Degree of Democracy	R&R Post-1970 Polity	Pre	9.215	1.297	-1.133	9.742	0.5956	-4.205
Cumulative crises	R&R Post-1970 Polity	Pre	5.415	12.78	0.2604	5.389	8.724	0.209
Degree of Democracy	R&R Post-1970 Polity	Post	9.215	1.297	-1.133	9.216	2.802	-2.691
Cumulative crises	R&R Post-1970 Polity	Post	5.415	12.78	0.2604	5.414	10	0.1637
Degree of Democracy	L&V Post-1970 Polity	Pre	9.215	1.297	-1.133	9.742	0.5956	-4.205
Cumulative crises	L&V Post-1970 Polity	Pre	5.415	12.78	0.2604	5.389	8.724	0.209
Degree of Democracy	L&V Post-1970 Polity	Pre	9.063	1.464	-0.8486	9.708	0.6147	-3.781
GDP per capita (ln)	L&V Post-1970 Polity	Pre	1.476	14.13	-1.027	2.757	5.906	-0.4528
Cumulative crises	L&V Post-1970 Polity	Pre	1.188	0.5811	1.132	0.3026	0.4118	2.577
Degree of Democracy	L&V Post-1970 Polity	Post	9.063	1.464	-0.8486	9.063	1.515	-1.714
GDP per capita (ln)	L&V Post-1970 Polity	Post	1.476	14.13	-1.027	1.476	17.69	-0.8128
Cumulative crises	L&V Post-1970 Polity	Post	1.188	0.5811	1.132	1.187	1.428	0.992

Table A.15. *Banking Crises and Incumbent Party Vote Share Using Entropy Balancing*

VARIABLES	RR 1872 -1938 Polity (1)	R&R 1970 - 2010 Boix (2)	L&V 1970 - 2010 Boix (3)	R&R 1970 - 2013 Polity (4)	L&V 1970 - 2013 Polity (5)
Crisis	21.59**	14.92*	10.13	14.89*	9.190
	(9.356)	(8.044)	(7.456)	(7.897)	(7.837)
Veto Players	-71.76***	-10.76	-3.622	-8.979	0.752
	(13.28)	(8.250)	(10.67)	(8.151)	(10.98)
Crisis x Veto Players	-47.07**	-42.67**	-31.45*	-44.04***	-31.57*
	(20.93)	(17.28)	(16.81)	(16.80)	(17.31)
Democracy Age	0.130***	-0.0118	0.0397	0.00258	0.0859***
	(0.0374)	(0.0204)	(0.0245)	(0.0206)	(0.0230)
Degree of Democracy	-2.095**	-1.177***	-1.572***	-2.779**	-4.591**
	(0.860)	(0.293)	(0.492)	(1.306)	(1.845)
GDP per capita (ln)	1.851	-1.161	-1.806	-0.652	-0.594
	(2.695)	(1.648)	(2.112)	(1.795)	(1.695)
Growth	0.497***	1.025***	1.278***	0.972***	1.197***
	(0.175)	(0.239)	(0.297)	(0.239)	(0.262)
Cumulative Crises	-1.118***	0.494**	1.650*	0.546**	0.566
	(0.338)	(0.250)	(0.902)	(0.248)	(1.048)
Constant	73.20***	60.93***	66.32***	69.38***	79.78***
	(23.44)	(15.64)	(20.49)	(16.92)	(20.56)
Observations	145	311	313	307	309
R-squared	0.493	0.289	0.357	0.257	0.382

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Testing the U-Shaped Relationship

MacIntyre's (MacIntyre, 2003) argument suggests a U-shaped relationship between the number of veto players and the costs of financial crises. If this argument holds, then one would expect that environments with an intermediate number of constraints on the chief executive would be most conducive to incumbent survival in the aftermath of a banking crisis. Marginal effect plots should reveal a U-shaped relationship for the survival data, and an inverted U-shaped relationship for the vote share data. As per other subsequent quantitative tests of MacIntyre's hypothesis (Angkinand & Willett, 2008; Hicken, Satyanath, & Sergenti, 2005), we include a quadratic term of Veto Players and interact it with our banking crisis measures. Tables A.16 reports the results using the survival and vote share data, respectively. Marginal effect plots fail to confirm a significant U-shaped relationship in a manner consistent with MacIntyre's argument.

Table A.16. *Banking Crises and Incumbency Survival Using Quadratic Term.*

Variables	Survival R&R 1970-2010 Boix (1)	Survival L&V 1970-2010 Polity (2)	Survival R&R 1970-2013 Boix (3)	Survival L&V 1970-2013 Polity (4)	Vote R&R 1970-2011 Boix (5)	Vote L&V 1970-2011 Polity (6)	Vote R&R 1970-2014 Boix (7)	Vote L&V 1970-2014 Polity (8)
Crisis	-0.0978	0.262	0.0579	0.229	33.97**	31.97***	33.08**	40.44***
	(0.787)	(1.191)	(0.790)	(1.303)	(15.380)	(10.240)	(15.650)	(11.140)
Veto Players	0.386	1.183	1.515	1.996	131.4***	128.9***	129.9***	129.4***
	(1.904)	(1.855)	(2.179)	(2.315)	(24.230)	(24.310)	(24.950)	(24.600)
Veto Players Squared	-1.295	-1.997	-2.711	-3.224	-179.0***	-177.1***	-174.2***	-175.3***
	(2.618)	(2.540)	(3.025)	(3.107)	(27.970)	(27.970)	(28.910)	(28.260)
Crisis x Veto Players	-0.286	-2.675	-0.512	-1.378	-148.1**	-152.0***	-142.6**	-188.2***
	(4.343)	(6.596)	(4.120)	(6.057)	(68.020)	(54.030)	(69.690)	(58.010)
Crisis x Veto Players Squared	3.589	6.414	3.212	4.523	123.5	150.9**	116.2	188.2**
	(5.799)	(8.332)	(5.270)	(6.952)	(77.190)	(72.880)	(79.660)	(77.250)
Democracy Age	-0.000476	-0.00175	-0.00464	-0.00467	-0.0101	0.00202	0.0263**	0.0280**
	(0.00293)	(0.00299)	(0.00295)	(0.00296)	(0.01460)	(0.01560)	(0.01320)	(0.01350)
Degee of Democracy - Polity	-0.104**	-0.104**	-0.123***	-0.129**	-2.560***	-2.147***	-3.107**	-1.781
	(0.0444)	(0.0444)	(0.0440)	(0.0520)	(0.4370)	(0.4940)	(1.2050)	(1.3450)
GDP per capita (ln)	0.0367	0.0404	0.194	0.155	-0.981	0.47	-1.831	-0.611
	(0.151)	(0.165)	(0.146)	(0.179)	(1.414)	(1.442)	(1.338)	(1.321)
Growth	-0.0108	-0.021	-0.0258	-0.0382*	1.019***	0.962***	1.054***	0.980***
	(0.0236)	(0.0230)	(0.0220)	(0.0216)	(0.2280)	(0.2560)	(0.1990)	(0.2480)
Cumulative Crises	-0.0199	-0.232	0.00136	-0.304*	0.653***	1.677*	0.639***	1.719*
	(0.0271)	(0.1530)	(0.0312)	(0.1550)	(0.1960)	(0.9720)	(0.1850)	(1.0190)
Constant					46.12***	29.87**	57.24***	34.96**
					(14.67)	(14.84)	(15.08)	(16.38)
Observations	1743	1743	1695	1695	321	322	318	318
R-squared					0.311	0.275	0.307	0.272

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Assessing Causal Mechanisms

Our argument also suggests that higher veto player environments should be associated with policy delays; that is, an increase in the time elapsed between the initial build-up of financial stress and government policy intervention to contain it, resulting in longer policy delays.[9] Gandrud and Hallerberg's index, available at monthly intervals since 2003, provides the most comprehensive granular data available on financial market stress. For each crisis we identify the initial build-up of financial stress as the date when a smoothed line of this index first begins its upward trajectory prior the onset of the crisis. Figure A.3 provides an illustration for the United States and Hungary; the former being a case of a gradual build-up of stress, the latter one of a more sudden onset of stress from a higher initial level.

With the exception of Laeven and Valencia's dating of the announcement of blanket bank liability guarantees, available sources provide limited information on the timing of particular interventions. When credible, blanket guarantees can prove vital in restoring confidence and thus provide an indicator of the type of government response necessary to stabilize the financial system. Yet guarantees are rarely implemented as soon as financial stress is felt because of political conflict over their fiscal implications and potential side effects; in most cases, they are made only when a full-blown systemic crisis is already unfolding. Our argument suggests that veto players are one leading cause of this delay.

We calculate as our measure of delay the time elapsed between the initial financial stress onset date and the guarantee announcement date. This provides us with 19 observations (see Table A.17). We estimate a Cox proportional hazards model where we regress our measure of delay on the average veto player score over the delay period, controlling for the change in FinStress over the delay period.[10] The results in column one of Table A.18 support our argument: higher veto player environments are associated with longer crisis intervention delays. We also find in additional tests that veto players and longer crisis intervention delays are associated with larger increases in financial stress over the electoral cycle (columns two and three), which in turn are linked to lower vote shares for the incumbent party following a crisis (column four).[11]

Separately, we also investigated the extent to which polarized veto players induce post-crisis legislative gridlock in the United States using the DW-NOMINATE measure and data from Binder. Binder captures legislative gridlock by identifying the set of salient legislative measures on the agenda and determining a ratio of failed measures to all measures for each Congress. Binder also identifies the policy topic of each legislative measure using the codes from the Comparative Agendas Project (CAP). We use these codes to create a gridlock ratio of relevant legislative measures , specifically from the CAP policy topics identified as "Macroeconomics" and "Domestic Commerce." These include many areas relevant to post-crisis policy interventions, including interest rates, unemployment, monetary policy, national budget (Macroeconomics), banking, securities and commodities, and financial regulation (Domestic Commerce). Following Binder, we estimate a grouped logit model to account for the variation in the size of the legislative agenda. Positive coefficient values suggest an *increase* in gridlock (i.e. fewer legislative measures are passed). Our model includes the post-crisis variable, the DW-NOMINATE measure of Congressional polarization (defined as the difference between party means on the liberal-conservative dimension), and their interaction, controlling for the presence of divided government.[12] The results, reported in Table A.19, are supportive of our hypothesized causal mechanism.

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[9] Policy delay may place greater pressure on central banks to take action, but such measures are at best an imperfect substitute for government action because they typically lack the capacity or authority to undertake unilateral guarantees, recapitalizations, and other fiscal-related measures needed to contain and resolve crises in the modern era of high financialization.

[10] Diagnostic tests do not reveal any violation of the proportional hazards assumption.

[11] Financial stress may reach more elevated levels in higher veto environments because pre-crisis regulation is more lax (Satyanath 2006). This is less likely in our European Union-dominated sample because of harmonized bank regulation.

[12] Mayhew 2005.

Figure A.3 *Financial Stress and Crises in United States and Hungary, 2003 – 2011.*
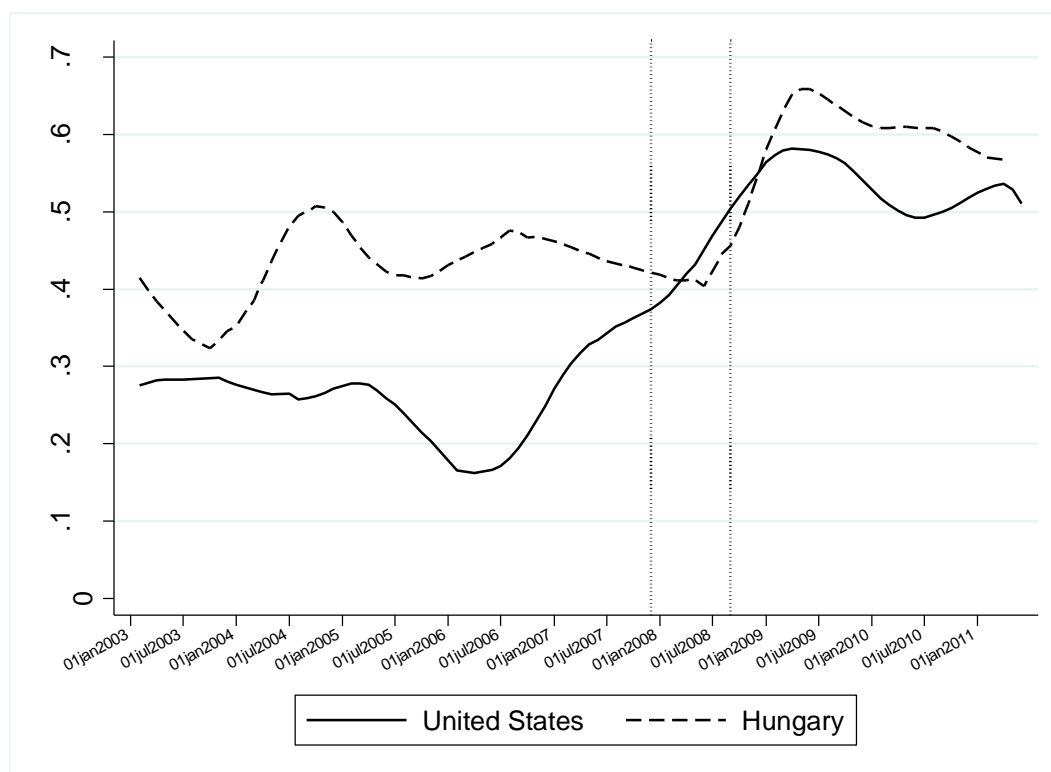
Note: Lines represent a loess smoother of the FinStress series. Vertical dotted lines indicate L&V crisis onset dating (1 December 2007 for United States; 1 September 2008 for Hungary).

Table A.17 *Sample of Crisis Intervention Delays*

Country	Initial Build-Up	Guarantee Announcement	Delay (Months)
Austria	01/06/2008	01/12/2008	6
Belgium	01/08/2007	01/10/2008	14
Denmark	01/11/2007	01/02/2009	15
France	01/03/2007	01/10/2008	19
Germany	01/12/2007	01/10/2008	10
Greece	01/02/2008	01/10/2008	8
Hungary	01/08/2008	01/10/2008	2
Iceland	01/06/2008	01/10/2008	4
Ireland	01/05/2007	01/09/2008	16
Italy	01/12/2007	01/11/2008	11
Latvia	01/06/2007	01/12/2008	18
Luxembourg	01/09/2007	01/10/2008	13

Netherlands	01/02/2007	01/10/2008	20
Portugal	01/01/2008	01/10/2008	9
Slovenia	01/11/2008	01/12/2008	1
Spain	01/08/2007	01/10/2008	14
Sweden	01/04/2008	01/10/2008	6
United Kingdom	01/02/2008	01/10/2008	8
United States	01/06/2006	01/10/2008	28

Table A.18. *Crisis Intervention Delays, Financial Stress, and Incumbent Party Vote Share*

	Delay	FinStress over Electoral Cycle	FinStress over Electoral Cycle	Incumbent Party Vote Share
VARIABLES	(1)	(2)	(3)	(4)
Veto Players	-0.569**	0.609**		
	(0.242)	(0.271)		
FinStress Change	-0.507**			
	(0.256)			
Growth		0.209	0.224	3.99*
		(0.232)	(0.202)	(2.05)
Delay			0.101**	
			(0.045)	
FinStress over Electoral Cycle				-2.34**
				(1.07)
Constant		-0.297	1.440*	33.38***
		(1.62)	(0.719)	(2.76)
Observations	19	16	16	16
R-squared		0.215	0.227	0.256

Robust standard errors in parentheses: *** $p<0.01$, ** $p<0.05$, * $p<0.1$

Table A.19. *Banking Crises and Policy Gridlock in the United States, 1947 – 2014*

VARIABLES	(1)
Crisis	-2.238
	(1.842)
Polarization	2.098**
	(0.883)
Crisis x Polarization	1.99
	(2.21)
Divided Government	0.487*
	(0.269)
Constant	-1.945**
	(0.559)
Observations	25
F (4,20)	3.17**

Coefficients are weighted least squares logit estimates for group data. Standard errors in parentheses.

*** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$

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