

Bank resolution regimes and systemic risk

Thorsten Beck

Deyan Radev

Isabel Schnabel

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Bank resolution and systemic risk

- Experience of the Global Financial Crisis has led to a major overhaul of bank resolution frameworks across the globe
 - Dodd-Frank Act; BRRD
- Objective: no more taxpayer bail-outs; minimising negative effects of bank failure on rest of financial system and the real economy
- These frameworks have been used successfully for idiosyncratic bank failures (e.g., Banco Espirito Santo, 2014)
- Have they passed the test in 2023?
- BUT: Can they be used during systemic stress situations?

An attempt at a conceptual framework

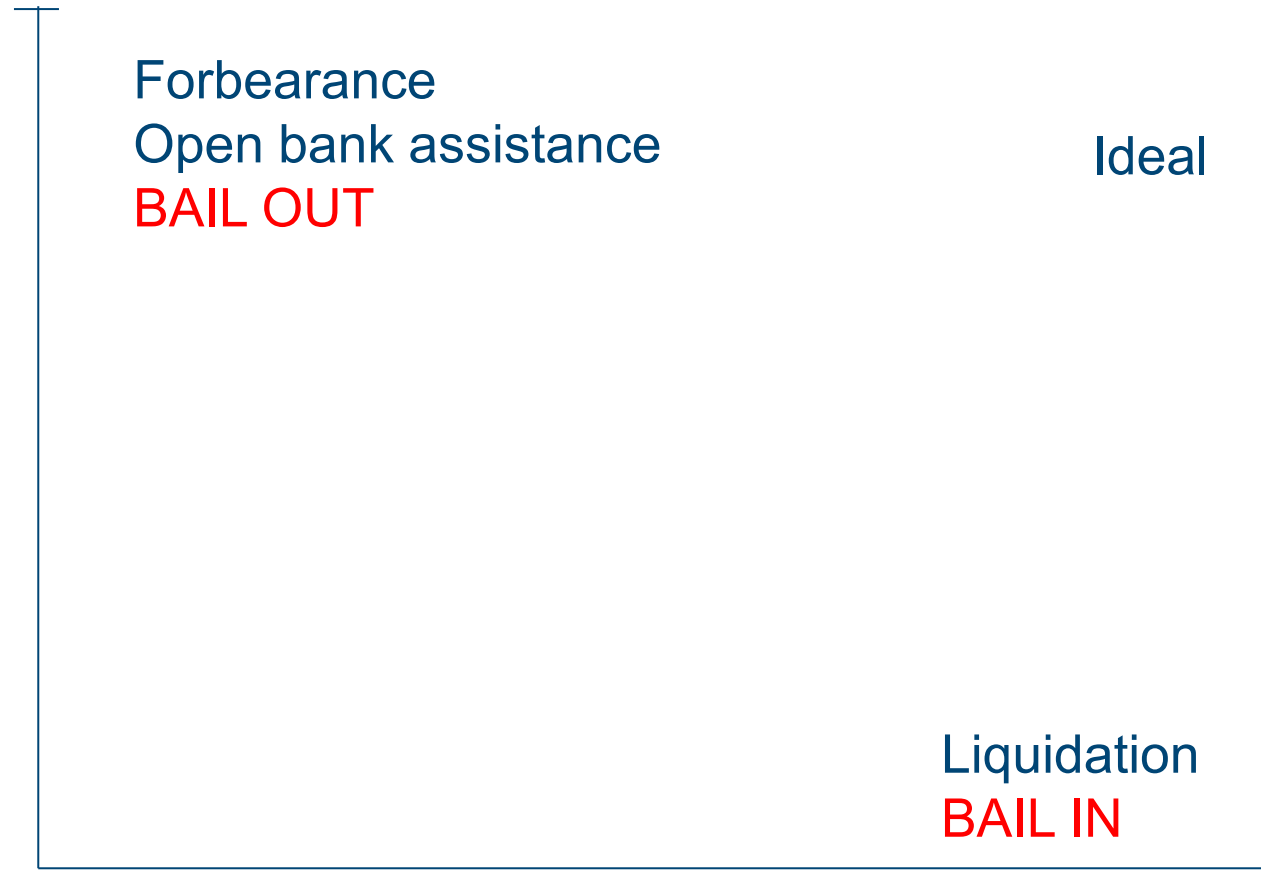
External costs of bank failure – or why do we need bank resolution?

- Domino problem
 - Network, interconnectedness
- Hostage problem
 - Depositors panic
 - Contagion through payment system
- Fridge problem
 - Destruction of lending relationship, soft information
- How to overcome them?
- And how to avoid moral hazard?



The basic trade-off

Minimizing external costs

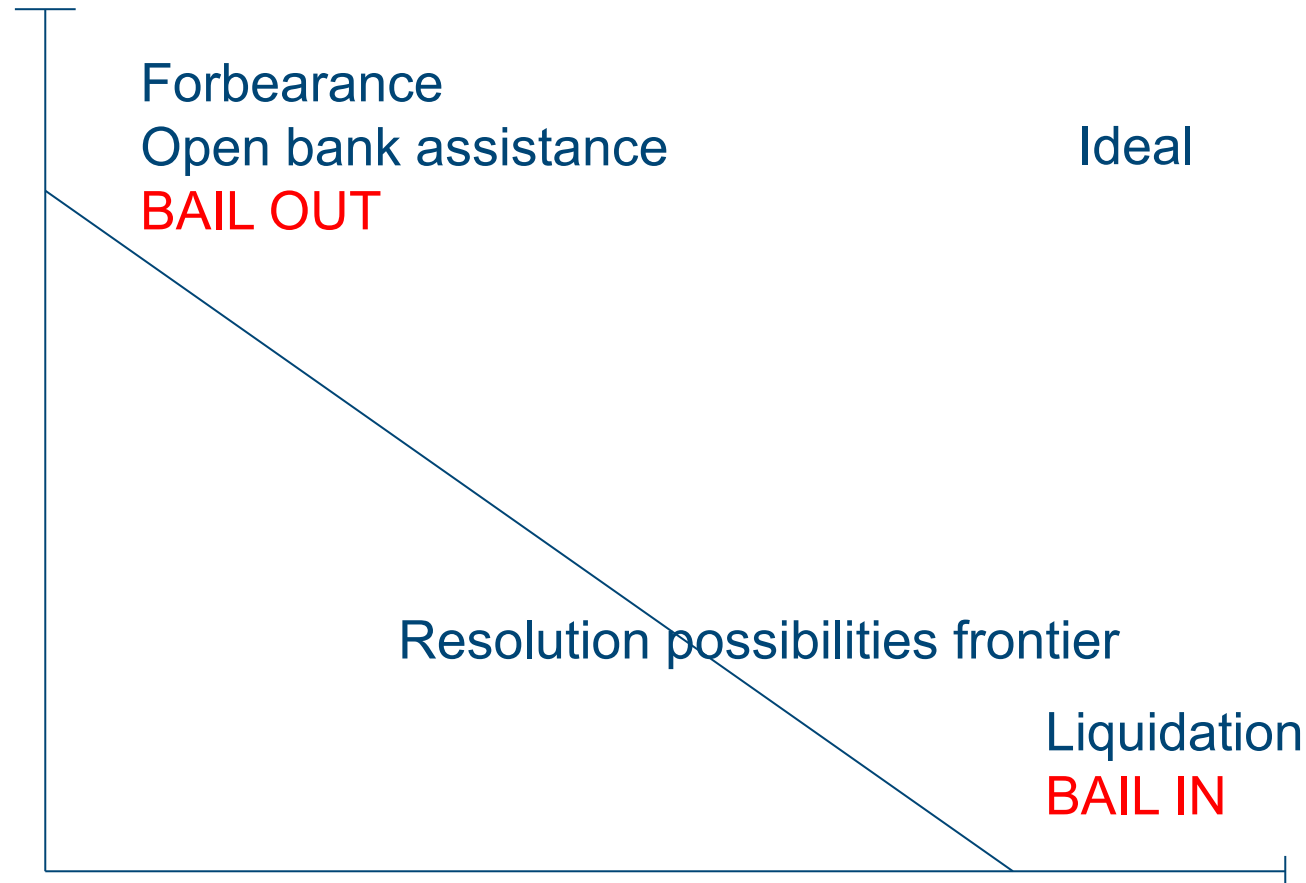


Enforcing discipline



The basic trade-off

Minimizing external costs

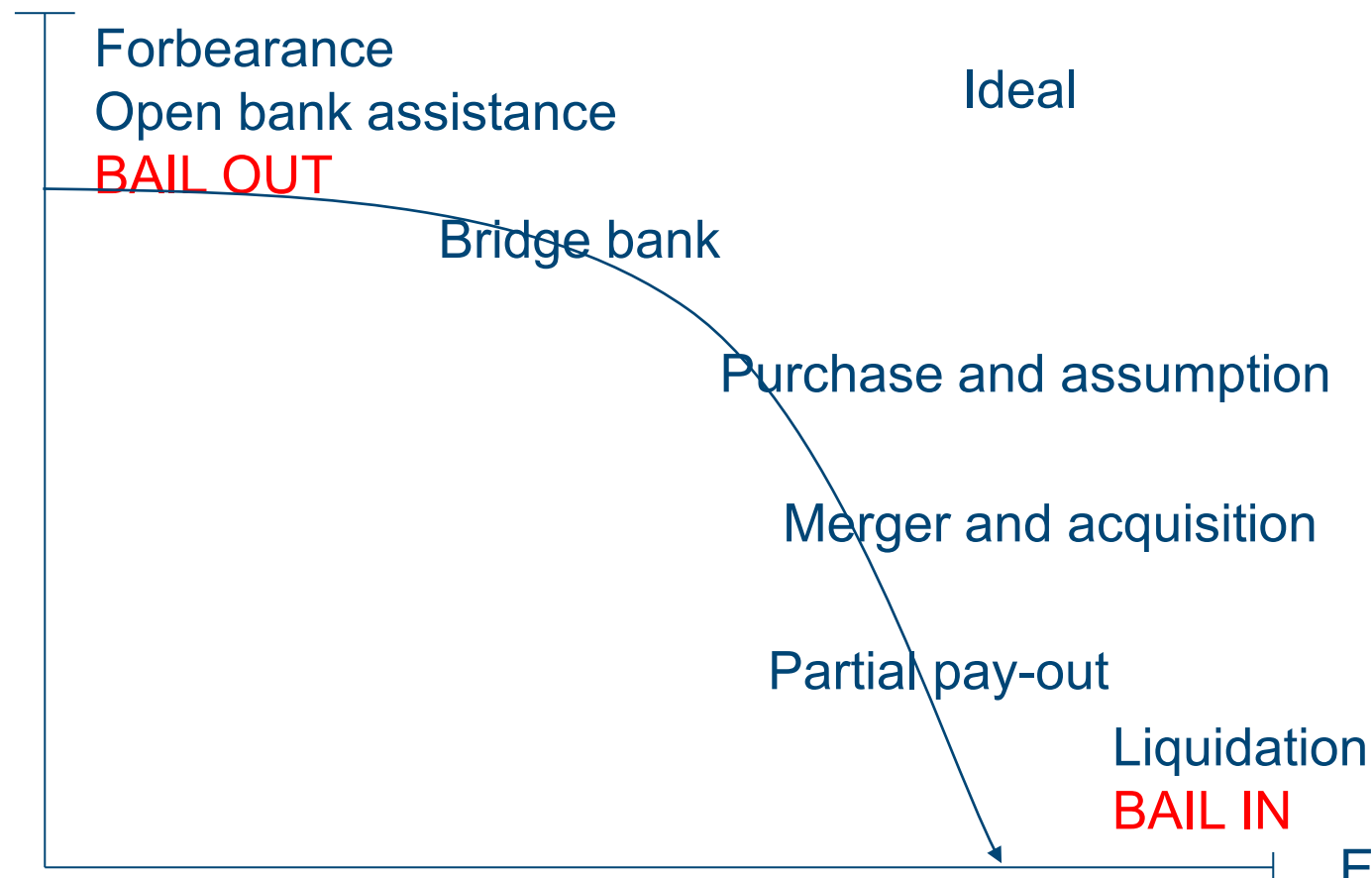


Enforcing discipline



Expanding the resolution possibilities frontier

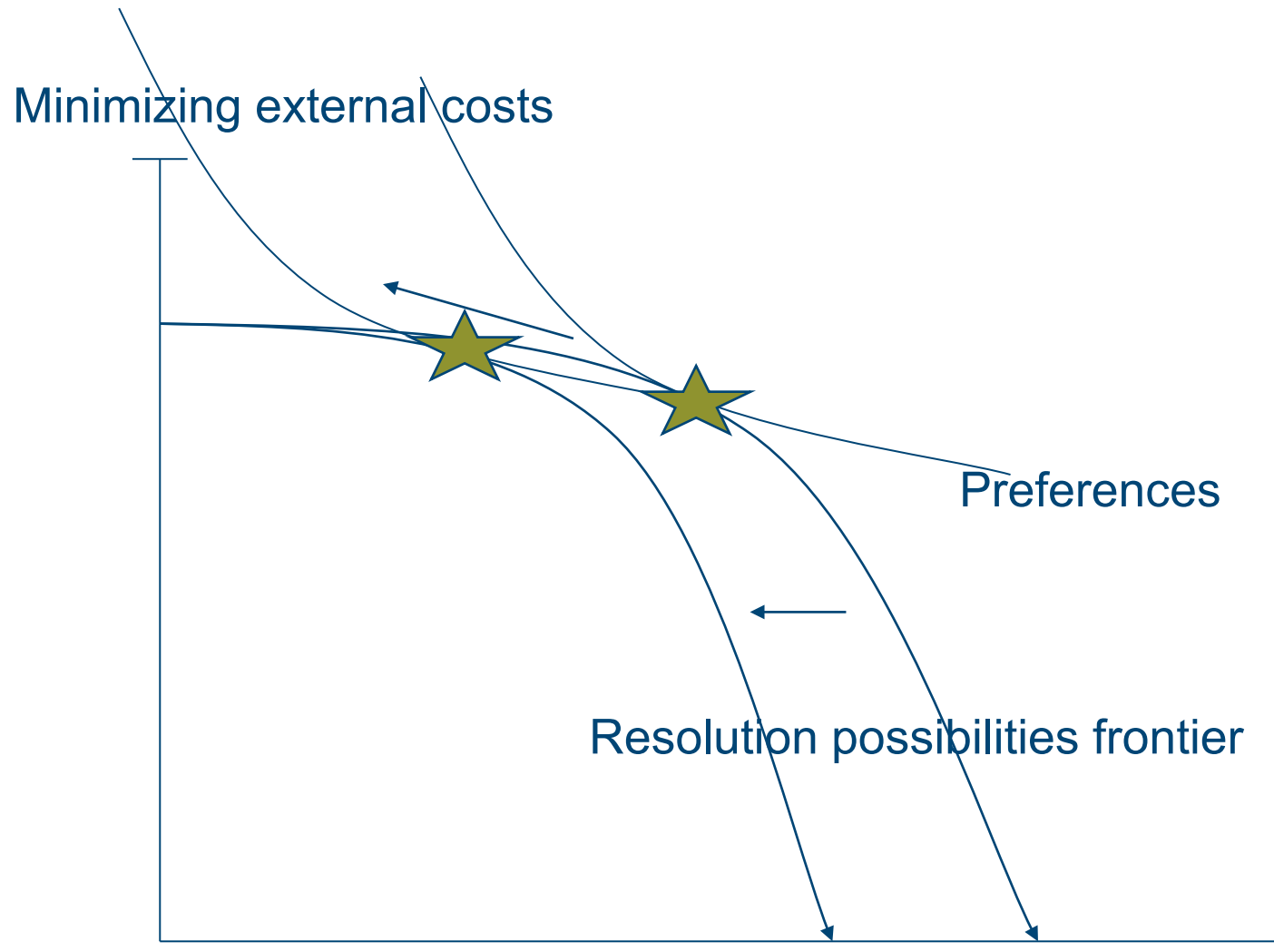
Minimizing external costs



Enforcing discipline



Challenges in a systemic crisis



Enforcing discipline



Our approach

- Analyse the relationship between systemic risk and bank resolution regimes around “exogenous” crisis events (“shocks”)
- Focus on market perceptions about systemic risk of individual banks: ΔCoVaR
- How do these market perceptions change after system-wide shocks across countries with different bank resolution frameworks?
- Capture differences of resolution regimes, while controlling for other differences across banks/countries
- Use an event-study/difference-in-differences estimation framework

What does theory tell us?

- A comprehensive framework, allowing early intervention, and providing ample tools for resolution of failing banks (including bail-ins):
 - reduces moral hazard risk and increases incentives of banks to differentiate themselves in their risk profile
 - reduces incentives for too high leverage on banks' balance sheets
 - reduces uncertainty and limits the negative economic effects of bank failure for the broader economy
- BUT:
 - A rule-based system that ties regulators' hands can result in suboptimal decisions if regulators have private information about bank performance
 - Rule-based bail-ins might make banks more vulnerable to adverse events and thus destabilize the financial system in the middle of a crisis, through direct interlinkages of banks holding each others' claims, as well as information effects and a sudden reassessment of bank risk;
 - If bailouts of failing banks protect other banks from contagion, they can provide incentives to reduce risk-taking
 - Economic costs of too rigid an application of rules



The FSB's key attributes for an effective bank resolution regime

(served as blueprint for BRRDC in EU)

KA 1	Scope	Resolution regimes should apply to all potentially systemically important financial institutions, i. e., banks, financial holding and insurance companies, non-regulated entities within conglomerates, branches of foreign firms and financial market infrastructures.
KA 2	Resolution authority	Each country should designate an entity responsible for resolution that is operationally independent. If several agencies are responsible for resolution (e. g., for different sectors), roles and cooperation mechanisms should be clearly stated.
KA 3	Resolution powers	RAs should have a broad set of resolution tools available, including powers to replace the management, the transfer of assets, the establishment of a bridge bank or an asset management company or bail-in powers.
KA 4	Set-off, netting, collateralization, segregation of client assets	Provisions shall remain in place and entry into resolution should not trigger set-off or early termination rights.
KA 5	Safeguards	Creditors should never be worse off than in liquidation and the RA may need to compensate creditors if it departs from the general hierarchy of claims. The pari passu principle should apply, i. e. creditors within the same class should be treated equally and without preferences, provisions of public funds only being used after a bail-in. Actions should be subject to legal review.
KA 6	Funding of firms in resolution	The use of public funds for resolution should be kept to a minimum and respective mechanisms must be in place.
KA 7	Legal framework conditions for cross-border cooperation	Cooperation should be encouraged and facilitated. Automatic initiation of resolution activities in other countries should be avoided and creditors from different jurisdictions should be treated equally. Branches should be subjected to host country law.
KA 8	Crisis Management Groups (CMGs)	RAs in home and host countries of G-SIFIs should ensure preparedness for crises and resolution via CMGs that comprise representatives of institutions involved in resolution such as of the respective supervisory and resolution authority, the central bank, the finance ministry and the deposit insurance scheme.
KA 9	Institution-specific cross-border cooperation agreements	Agreements should be made for all G-SIFIs, regarding inter alia the establishment of CMGs as well as responsibilities for the different actors involved and information sharing.
KA 10	Resolvability assessments	RAs should assess the feasibility of resolution strategies for G-SIFIs on a regular basis. They may require changes to business practices or structures.
KA 11	Recovery and resolution planning	Recovery plans, entailing recovery options to mitigate possible shocks, are to be developed by the banks, while the competent resolution authority shall develop resolution plans for banks under its radar to familiarize with legal and operating structures.
KA 12	Access to information and information sharing	Legal impediments to information sharing should be dismantled. Firms should be required to introduce Information Management Systems that provide information on regular basis.



Components of bank resolution index

Subindex 1. General framework

- 1.1. Specific bank resolution framework
- 1.2. Specifically designated bank resolution authority
- 1.3. Another authority has powers to restructure/resolve banks

Subindex 2. The resolution authority has the power to...

- 2.1. Remove and replace management
- 2.2. Appoint an administrator
- 2.3. Operate and resolve the firm
- 2.4. Ensure continuity of essential services and functions
- 2.5. Override rights of shareholders when applying resolution powers
- 2.6. Temporarily stay the exercise of early termination rights
- 2.7. Impose a moratorium with a suspension of payments to unsecured, creditors and customers plus creditor stay
- 2.8. Liquidate the bank without the need of court decision

Subindex 3. Resolution tools available to the resolution authority

- 3.1. Transfer or sell assets and liabilities, legal rights and obligations
- 3.2. Establishment of a bridge institution
- 3.3. Establishment of an asset management vehicle
- 3.4. Bail-in tool

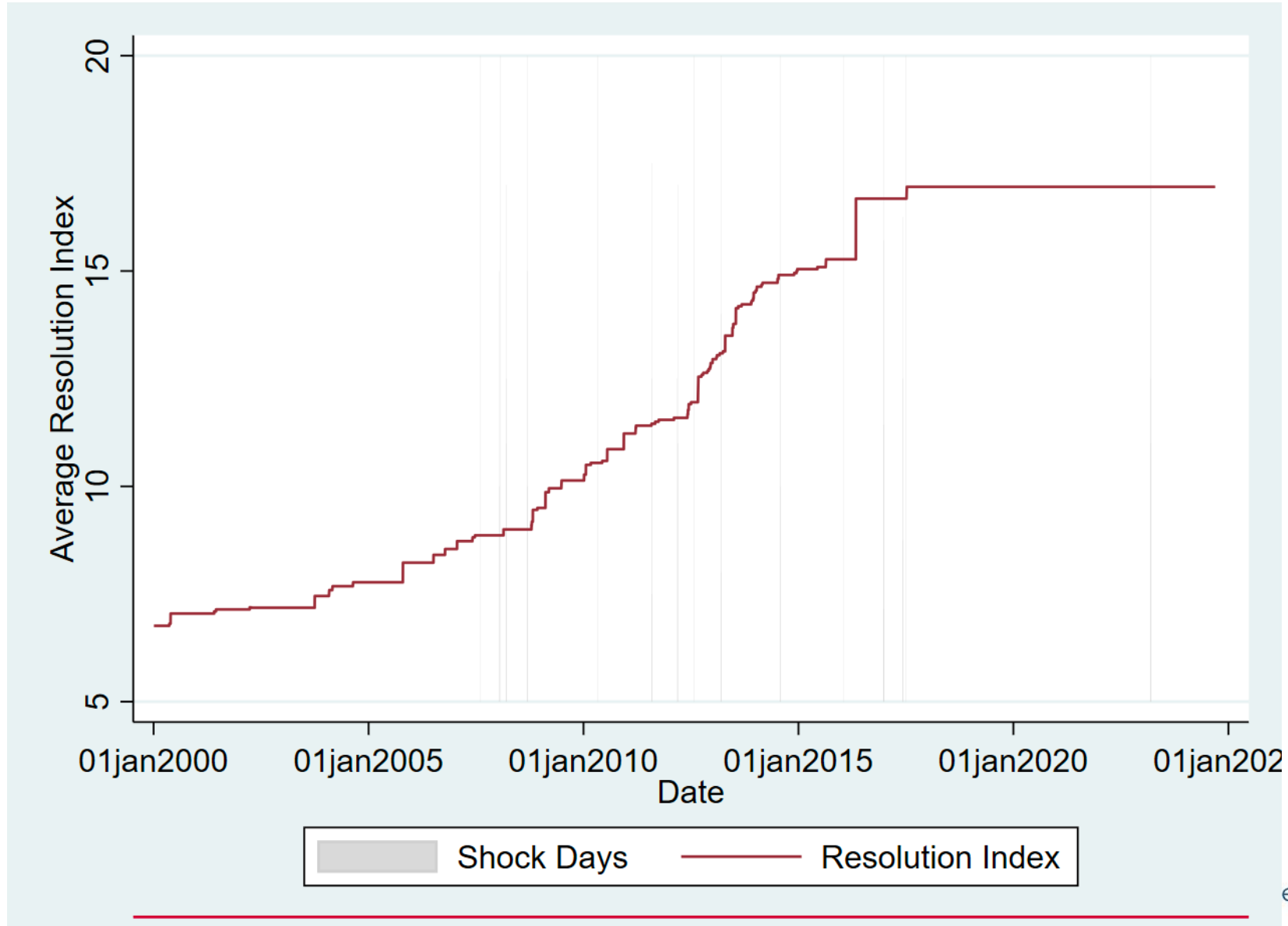
Subindex 4. The bail-in framework includes...

- 4.1. A minimum requirement of eligible liabilities (i. e., bail-inable debt)
- 4.2. Provisions to respect the hierarchy of claims while providing flexibility to depart from the general principle of equal (pari passu) treatment of creditors of the same class
- 4.3. Provisions constituting that public resources may only be used if private ones are not available and a bail-in was conducted

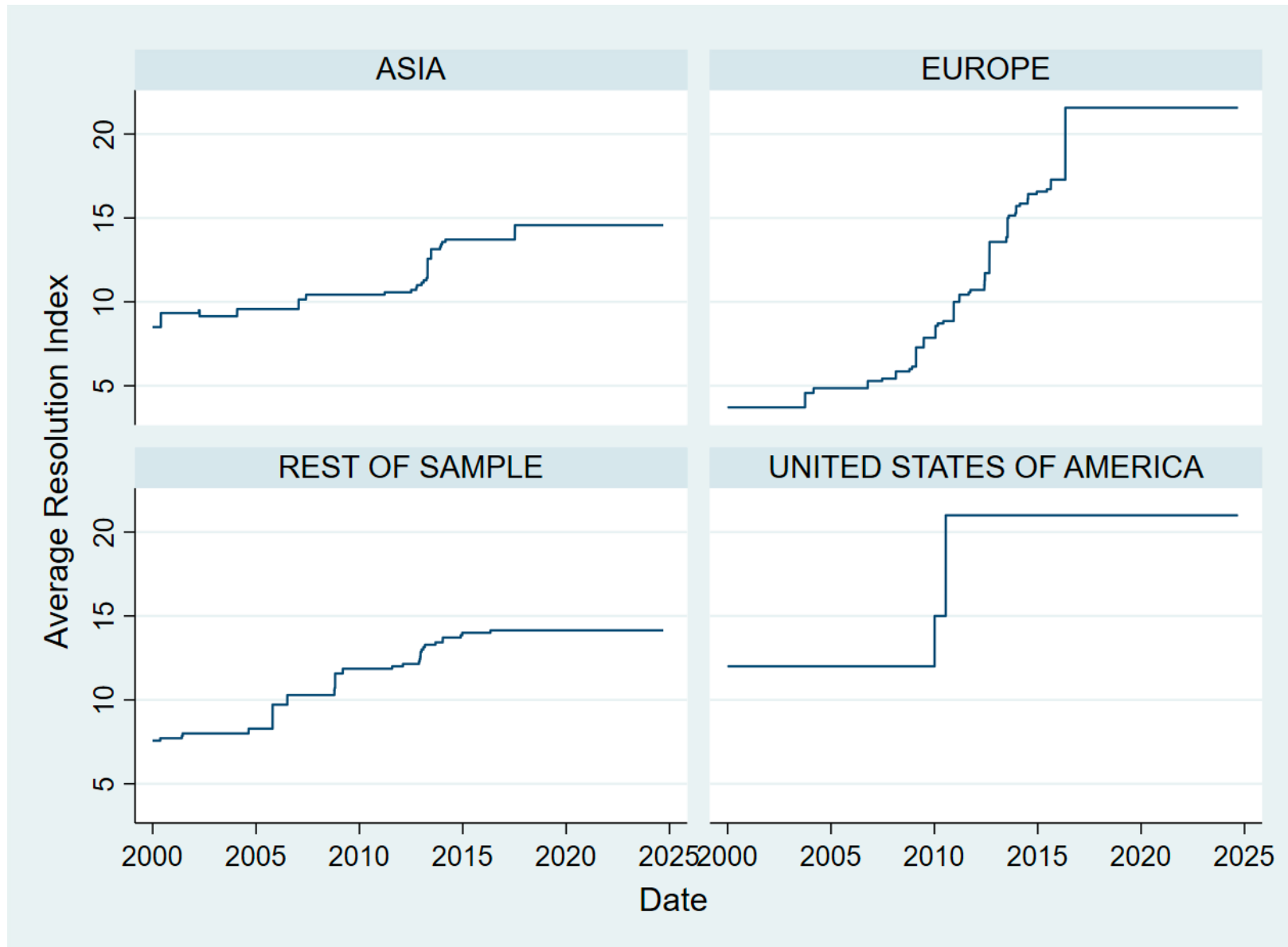
Subindex 5. The following supporting measures/features exist:

- 5.1. Implementation of Basel III
- 5.2. Resolution powers/tools can be used fast and flexibly. Proxy: court decision needed or not? (1 = No court decision needed)
- 5.3. Mandatory development of resolution and recovery plans
- 5.4. Resolution fund (publicly and privately financed)

Bank resolution index across 22 countries



Bank resolution index across regions

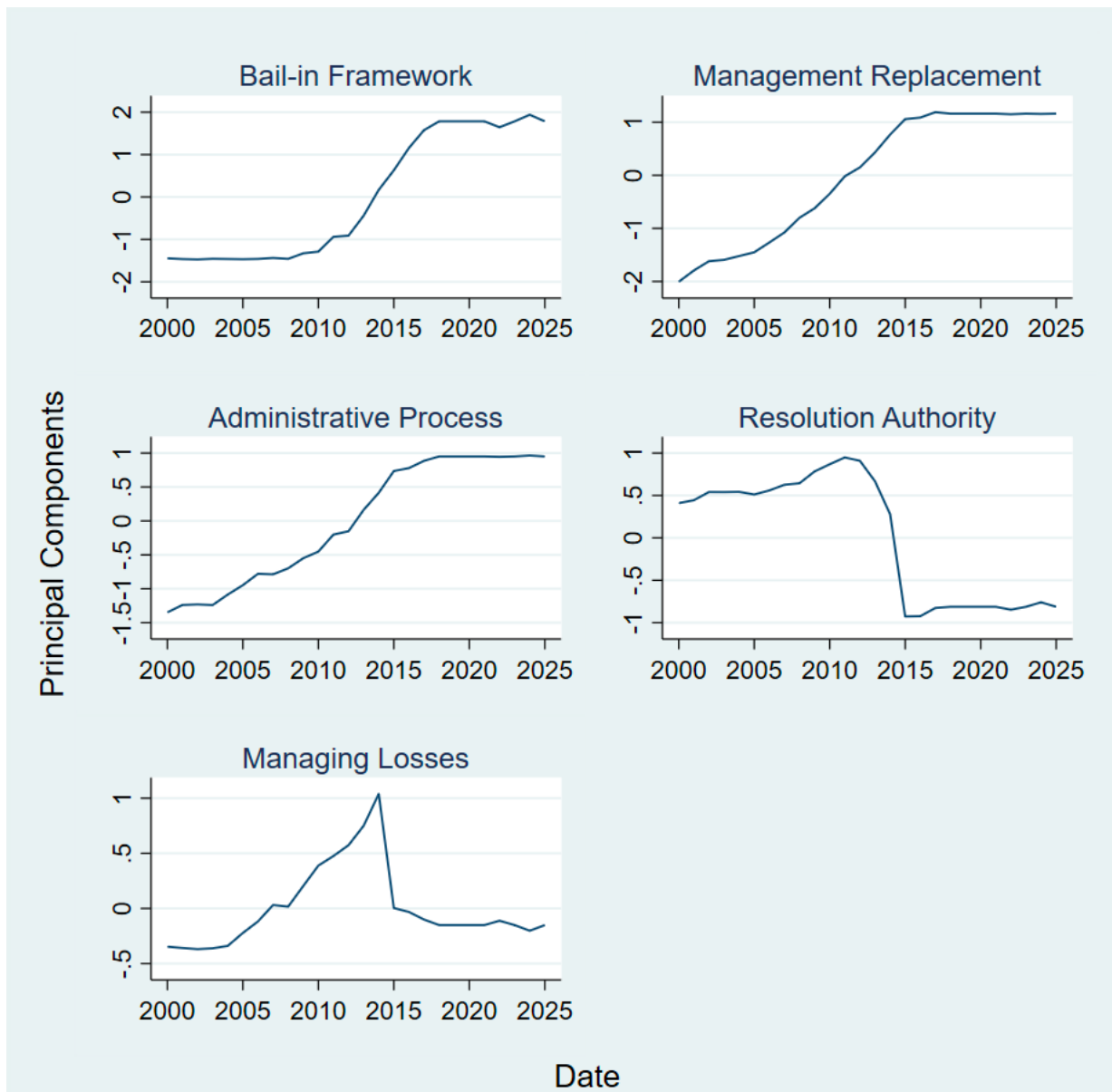


Going into more detail...

- Use principal component analysis to identify independent components of the resolution framework:
 - **Bail-in framework:** (i) the existence of a bail-in tool, (ii) a minimum requirement of eligible liabilities that can be bailed in, and (iii) the provision that public resources may only be used after a bail-in was conducted.
 - **Management replacement:** resolution authority has the authority to (i) remove and replace bank management and (ii) appoint an administrator.
 - **Administrative process:** (i) no court process needed for resolution; resolution authority has the power to (ii) operate and resolve the firm and (iii) ensure the continuity of essential services and functions.
 - **Resolution authority**
 - **Managing losses:** (i) a bank can be liquidated without a court procedure, (ii) there is a resolution fund and (iii) the resolution authority can establish an asset management company.



Principle Components over time



How to measure systemic risk contributions

- ΔCoVar is difference between the value at risk (VaR) of the financial system conditional on a particular institution experiencing extreme losses and the value at risk of the financial system conditional on the same institution's asset returns being at their median level.
- ΔCoVaR represents the marginal contribution of a specific bank to the total risk of the financial system
- This measure captures not only risk spill-overs within the financial system due to individually systemic financial intermediaries but also of institutions that are systemic as a part of a herd
- Based on stock market data and quantile regressions



- VaR_q^i is defined as the $q\%$ -quantile of X^i where X^i is the growth rate of the market value of a bank's assets, i. e.,

$$Pr \left(X^i \leq VaR_q^i \right) = q\%$$

- $CoVaR_q^{j|i}$ is the VaR of institution j , conditional on $X^i = VaR_q^i$ of institution i :

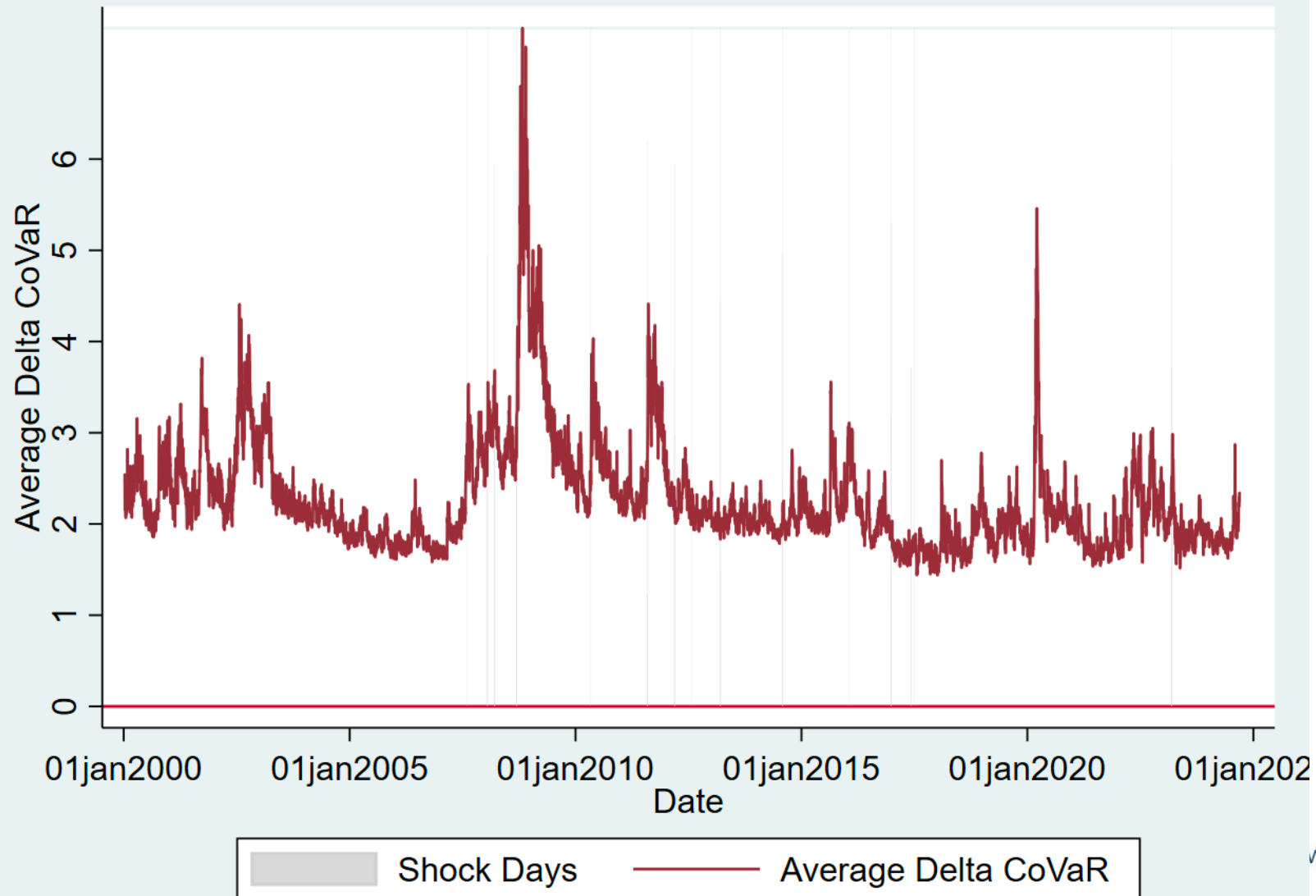
$$Pr \left(X^j \leq CoVaR_q^{j|i} | X^i = VaR_q^i \right) = q\%$$

- Institution i 's contribution to the risk of the **system** is defined as

$$\Delta CoVaR_q^{system|i} = CoVaR_q^{system|X^i=VaR_q^i} - CoVaR_q^{system|X^i=median^i}$$

- Intuitively, the $\Delta CoVaR$ represents the *marginal addition* of a specific bank to the total risk of the financial system.

ΔCoVar over time



System-wide Shocks

- Outbreak of the subprime crisis: August 9-11, 2007
- Lehman Brothers' collapse: September 15, 2008
- Greece's bailout: May 5, 2010 - Announcement of the 1st Bailout Package and the 3rd Austerity Package (followed by riots in Greece)
- US Government Rating Downgrade by Standard & Poor's : August 5, 2011
- Greece's sovereign debt swap (PSI): March 9, 2012
- Draghi's "Whatever it takes" announcement: July 26, 2012
- Cyprus' bail-in: March 18, 2013.



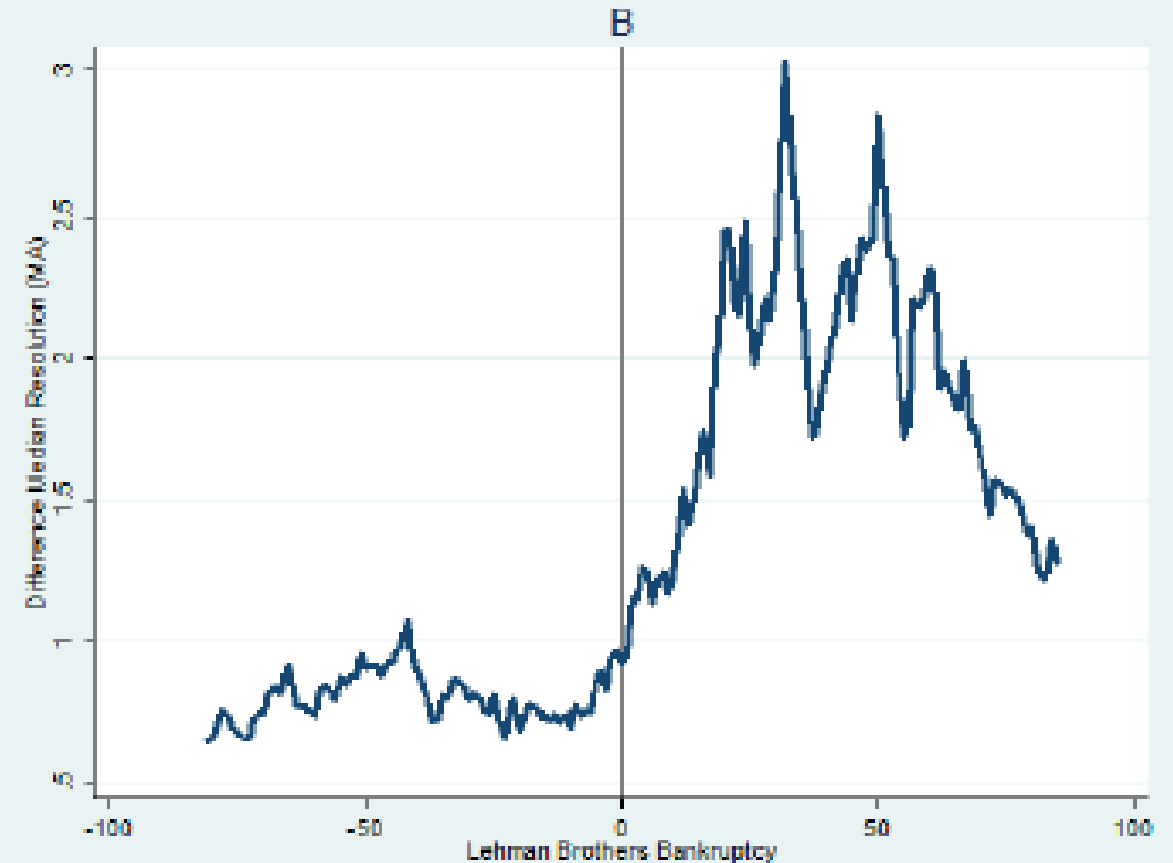
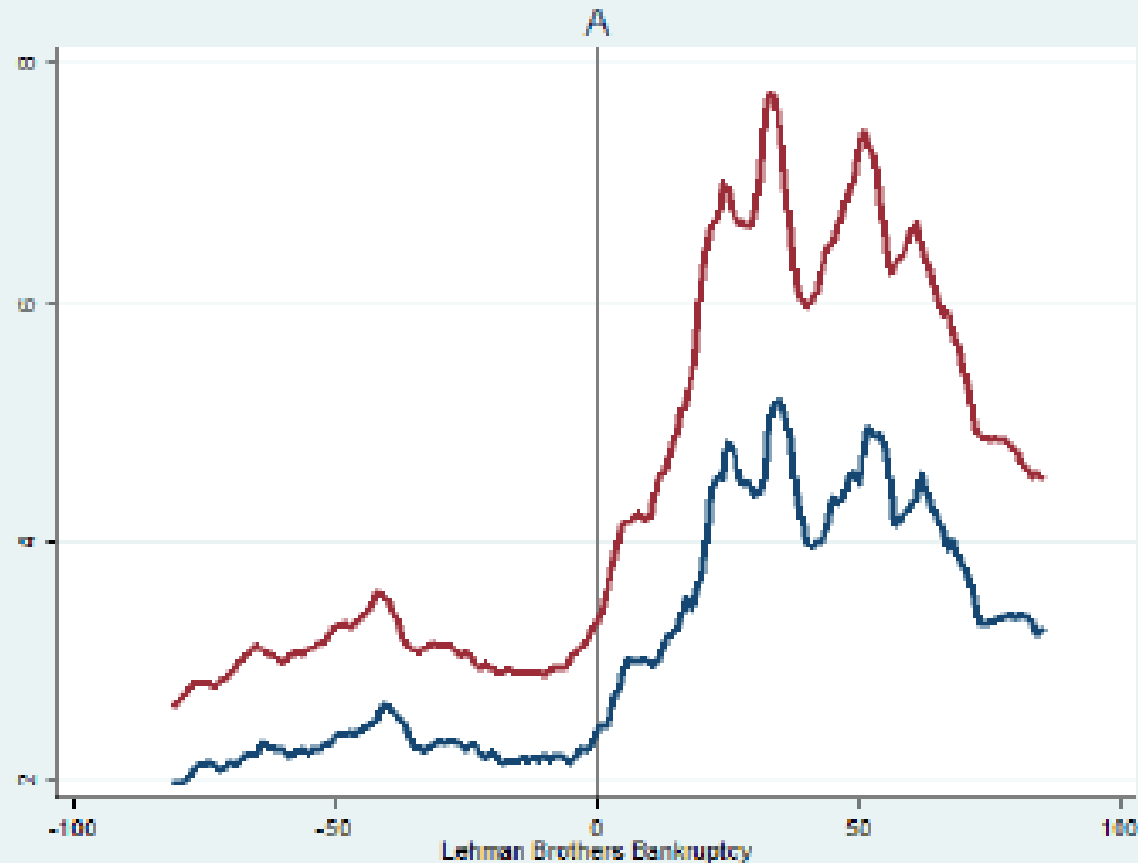
Methodology

$$\begin{aligned}\Delta CoVaR_{i,c,t} = & \gamma_i + \beta_1 \cdot Event_t \\ & + \beta_2 \cdot Resolution\ Index_{c,pre-estimation\ period} * Event_t \\ & + \beta_3 \cdot Bank\ Controls_{i,c,year-1} * Event_t \\ & + \beta_4 \cdot Macro\ Controls_{i,c,year-1} * Event_t + \epsilon_{i,c,t},\end{aligned}$$

- Focus on a period of 80 days before the event (“normal times”) and 7 days after the event
- Two-way clustering at day and bank-level

ΔCoVar after lehman shock

(Red: above median, blue: below median, resolution index)



Panel A: Negative Shocks

	7 days after the shock				
	Subprime (1)	Lehman (2)	Greek Bailout (3)	US Downgrade (4)	Panel (5)
Shock	0.8378*** (0.000)	0.7453*** (0.000)	0.6286*** (0.000)	1.1990*** (0.000)	0.8559*** (0.000)
Shock * Resolution	0.0227** (0.011)	0.0340*** (0.000)	0.0540*** (0.000)	0.1258*** (0.000)	0.0665*** (0.000)
Shock * Size	0.1774*** (0.000)	0.1655*** (0.000)	0.1304*** (0.000)	0.2473*** (0.000)	0.1793*** (0.000)
Shock * Leverage	-0.0177*** (0.000)	-0.0131*** (0.000)	-0.0136*** (0.000)	-0.0249*** (0.000)	-0.0180*** (0.000)
Shock * GDP Growth	-0.0709*** (0.000)	-0.0915*** (0.002)	-0.0138 (0.143)	-0.0593*** (0.008)	-0.0515*** (0.000)
Shock * Inflation	0.0425*** (0.003)	0.1258*** (0.001)	-0.0078 (0.506)	0.0109 (0.426)	0.0261** (0.046)
Shock * Fin. Dev.	-0.0010 (0.579)	0.0016 (0.611)	0.0013** (0.026)	0.0022** (0.013)	0.0015 (0.124)
Observations	63008	64944	64504	66968	259424
R-squared	0.9048	0.9254	0.9263	0.9113	0.8406
Within R-squared	0.2671	0.1531	0.1830	0.4187	0.1500
Number of Banks	716	738	733	761	864

Panel B					
	7 days after the shock			30 days after	7 days after
	Greek Restructuring (1)	Draghi (2)	Cypriot Bail-in (3)	Draghi (30 days) (4)	Panel (5)
Shock	-0.3963*** (0.000)	-0.0593 (0.131)	-0.1324*** (0.000)	-0.1999*** (0.000)	-0.1989*** (0.000)
Shock * Resolution	-0.0448*** (0.000)	-0.0088** (0.026)	-0.0081*** (0.003)	-0.0220*** (0.000)	-0.0208*** (0.000)
Shock * Size	-0.0808*** (0.000)	-0.0099 (0.234)	-0.0256*** (0.000)	-0.0364*** (0.000)	-0.0384*** (0.000)
Shock * Leverage	0.0084*** (0.000)	0.0008 (0.347)	0.0037*** (0.000)	0.0037*** (0.000)	0.0047*** (0.000)
Shock * GDP Growth	0.0203** (0.017)	0.0102* (0.082)	-0.0002 (0.969)	0.0204** (0.030)	0.0120** (0.014)
Shock * Inflation	-0.0054 (0.287)	-0.0103** (0.032)	-0.0022 (0.659)	-0.0221*** (0.001)	-0.0041 (0.428)
Shock * Fin. Dev.	-0.0004 (0.338)	-0.0000 (0.995)	-0.0002* (0.094)	-0.0002 (0.321)	-0.0001 (0.391)
Observations	65912	66880	67320	84360	190991
R-squared	0.8993	0.9488	0.9591	0.9477	0.8831
Within R-squared	0.0647	0.0047	0.0281	0.1011	0.0298
Number of Banks	749	760	765	760	790

Summary of results

- After a negative system-wide shock, systemic risk increases, and it increases more in the presence of a more comprehensive resolution regime (after controlling for bank and country characteristics).
- After a positive system-wide shock, systemic risk decreases, and it decreases more in the presence of a more comprehensive resolution regime.
- Results suggest that bank resolution regimes have amplifying effects for system-wide events: they increase rather than dampen the swings in systemic risk in response to financial shocks.
- Results are thus consistent with theories focusing on the destabilising effects of bank resolution framework during system-wide distress situations.

Robustness tests

- Weighted regressions (each observation weighted by inverse of number of banks in respective country)
- Exclude the Global Systemically Important Banks (G-SIBs) to mitigate concern that some of the larger banks in our sample have significant presence in several countries and therefore more than one resolution framework would apply
- Bank resolution frameworks can only help address systemic risk if all the key attributes identified by the FSB are in place, but no evidence that our main findings would not hold at very high levels of the resolution index, if anything the results become stronger at very high levels of the resolution index.
- More comprehensive regimes may have been implemented in countries with higher levels of systemic risk. Therefore, we add an interaction of the shock with initial ΔCoVaR



Robustness tests

Panel A: Negative Shocks					
	(1)	(2)	7 days after the shock		(5)
			(3)	(4)	
Shock	0.8130*** (0.000)	0.8244*** (0.000)	0.7052*** (0.000)	0.8573*** (0.000)	0.8278*** (0.000)
Shock * Resolution	0.0340*** (0.001)	0.0683*** (0.000)	0.0831*** (0.000)	0.0538*** (0.000)	0.0666*** (0.000)
Shock * <i>Resolution</i> ²			0.0107*** (0.000)		
Shock * Initial dCoVaR				0.2441*** (0.000)	
Shock * Dep. Insurance					0.1746*** (0.000)
Shock * Size	0.1655*** (0.000)	0.1514*** (0.000)	0.1779*** (0.000)	0.1308*** (0.000)	0.1546*** (0.000)
Shock * Leverage	-0.0118*** (0.000)	-0.0178*** (0.000)	-0.0158*** (0.000)	-0.0143*** (0.000)	-0.0178*** (0.000)
Shock * GDP Growth	-0.0496*** (0.000)	-0.0366*** (0.002)	-0.0378*** (0.003)	-0.0771*** (0.000)	-0.0374*** (0.002)
Shock * Inflation	0.0185 (0.200)	0.0132 (0.305)	0.0350*** (0.003)	-0.0138 (0.240)	0.0139 (0.281)
Shock * Fin. Dev.	0.0007 (0.467)	0.0012 (0.198)	0.0021** (0.050)	0.0018* (0.089)	0.0012 (0.200)
Observations	259424	247896	259424	259424	248600
R-squared	0.8591	0.8487	0.8417	0.8429	0.8480
Within R-squared	0.1107	0.1365	0.1554	0.1618	0.1368
Number of Banks	864	830	864	864	827

Panel B: Positive Shocks					
	(1)	(2)	7 days after the shock		(5)
			(3)	(4)	
Shock	-0.2204*** (0.000)	-0.1920*** (0.000)	-0.1834*** (0.000)	-0.1994*** (0.000)	-0.2087*** (0.000)
Shock * Resolution	-0.0109*** (0.001)	-0.0209*** (0.000)	-0.0171*** (0.000)	-0.0200*** (0.000)	-0.0222*** (0.000)
Shock * <i>Resolution</i> ²			-0.0011** (0.019)		
Shock * Initial dCoVaR				-0.0559*** (0.000)	
Shock * Dep. Insurance					-0.0175* (0.068)
Shock * Size	-0.0399*** (0.000)	-0.0327*** (0.000)	-0.0371*** (0.000)	-0.0229*** (0.009)	-0.0454*** (0.000)
Shock * Leverage	0.0040*** (0.001)	0.0046*** (0.000)	0.0044*** (0.000)	0.0035*** (0.002)	0.0048*** (0.000)
Shock * GDP Growth	0.0155** (0.012)	0.0048 (0.277)	0.0110** (0.019)	0.0173*** (0.002)	-0.0081 (0.169)
Shock * Inflation	-0.0039 (0.577)	0.0002 (0.971)	-0.0061 (0.245)	0.0047 (0.436)	-0.0017 (0.765)
Shock * Fin. Dev.	0.0002 (0.375)	-0.0001 (0.572)	-0.0002 (0.252)	-0.0003* (0.090)	-0.0005** (0.012)
Observations	190991	182423	190991	190991	180973
R-squared	0.9006	0.8970	0.8831	0.8832	0.8787
Within R-squared	0.0376	0.0326	0.0299	0.0314	0.0329
Number of Banks	790	756	790	790	746

Other robustness tests

- Alternative definitions of leverage: Tier 1 capital ratio and Tier 1 capital to total assets
- Instrumental variables for bank resolution (Laeven and Valencia, 2018):
 - Ratio between bailout-related fiscal costs and the overall output loss in the latest crisis in a country
 - Number of banking crises over past 40 years



Components of bank resolution framework

- Designation of a resolution authority is a beneficial contribution to resolution frameworks even during system-wide shocks. In contrast, the bail-in framework and specific powers for the resolution authority seem to drive the amplifying effect of resolution framework in times of system-wide shocks
- BUT: bail-in rules came into force only after most of our system-wide shocks
 - absence of a bail-in framework does not seem to be associated with an amplification of negative system-wide shocks

Components of resolution framework

Panel A: Negative Shocks

	7 days after the shock				
	Subprime (1)	Lehman (2)	Greek Bailout (3)	US Downgrade (4)	Panel (5)
Bailin Framework	0.6678***	0.3766**	0.3609***	0.1986***	0.2435***
Management Replacement	0.0468**	0.0484	0.0712***	0.2044***	0.0760***
Administrative Process	0.0200	0.0190	0.0002	0.0870**	0.0061
Resolution Authority	-0.1466***	-0.0878*	-0.1694***	0.0454	-0.1218***
Managing Losses	-0.0900**	-0.0656*	-0.0228	-0.1833***	-0.0367

Panel B: Positive Shocks

	7 days after the shock			30 days after	7 days after
	Greek Restructuring (1)	Draghi (2)	Cypriot Bail-in (3)	Draghi (4)	Panel (5)
Bailin Framework	-0.0726***	-0.0159*	-0.0124**	-0.0349***	-0.0317***
Management Replacement	-0.0759***	0.0038	-0.0302***	-0.0133	-0.0439***
Administrative Process	-0.0287**	0.0085	-0.0238***	0.0036	-0.0253***
Resolution Authority	-0.0206	0.0064	-0.0003	0.0194	-0.0043
Managing Losses	0.0651***	-0.0074	0.0168**	0.0033	0.0254***

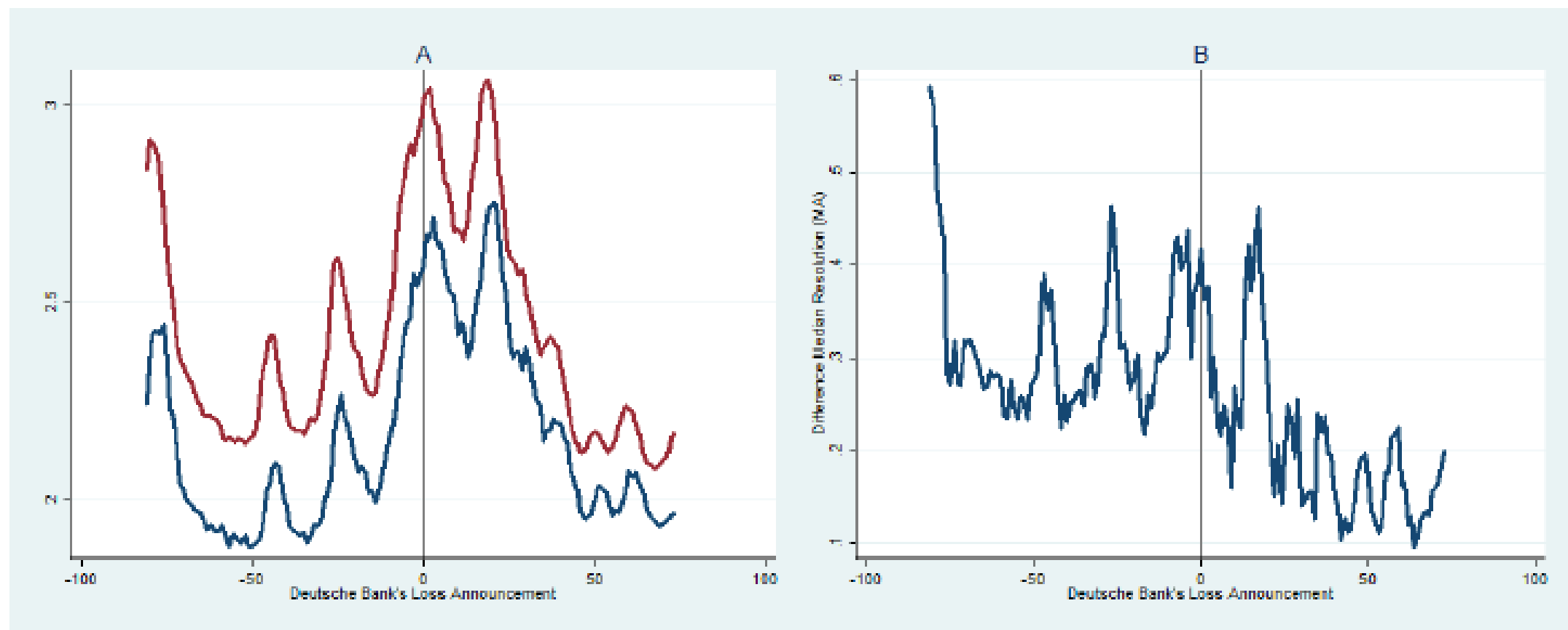
Bank-specific events

- Société Générale's admission to 4.9 billion euro rogue trading losses: January 21, 2008
- Bear Stearns' collapse: March 14-17, 2008
- Start of resolution of Portuguese Banco Espirito Santo: August 4, 2014
- Deutsche Bank's announcement of AC6.8 billion losses: January 21, 2016
- The bailout of Banca Monte dei Paschi di Siena: January 26 -28, 2013



ΔCoVar after Deutsche Bank announcement

(Red: above median, blue: below median, resolution index)



7 days after the shock

	European Banks	All Banks	European Banks		
	Société Générale (1)	Bear Stearns (2)	Monte dei Paschi (3)	B. Esp. Santo (4)	D. Bank (5)
Shock	0.2343** (0.030)	0.3991*** (0.000)	-0.1443*** (0.002)	0.3396*** (0.000)	0.7118*** (0.000)
Shock * Resolution	-0.0091* (0.097)	0.0042 (0.498)	0.0004 (0.887)	0.0130 (0.206)	-0.0192* (0.094)
Shock * Size	0.0709*** (0.000)	0.0577*** (0.000)	-0.0291*** (0.000)	0.0483*** (0.000)	0.1065*** (0.000)
Shock * Leverage	-0.0027* (0.052)	-0.0056*** (0.004)	0.0020** (0.029)	-0.0035** (0.023)	-0.0056 (0.313)
Shock * GDP Growth	-0.0776* (0.096)	-0.0017 (0.882)	-0.0036 (0.747)	0.0041 (0.727)	0.0413 (0.124)
Shock * Inflation	0.0618 (0.116)	0.0052 (0.646)	-0.0189** (0.029)	0.0728*** (0.000)	0.0479 (0.392)
Shock * Fin. Dev.	0.0028* (0.061)	-0.0040*** (0.001)	-0.0005 (0.462)	0.0005 (0.465)	-0.0021 (0.326)
Bank FE	Yes	Yes	Yes	Yes	Yes
Observations	22088	62920	21560	21296	15928
Adjusted R-squared	0.8718	0.9279	0.9463	0.9557	0.8673
Within R-squared	0.0995	0.0564	0.0550	0.1749	0.1305
Number of Banks	251	715	245	242	181



More recent turmoil

- Monte de Paschi di Sienna asks for a new bailout in the form of precautionary recapitalization by Italian state: December 23, 2016
- The resolution of Banco Popular: June 6, 2017
- The recapitalization of Monte de Paschi di Sienna takes place:, with bail-in, July 5, 2017
- Silicon Valley Bank's collapse: March 10, 2023
- The Saudi National Bank announces that it will not recapitalize Credit Suisse: March 15, 2024



More recent turmoil

	7 days after the shock			3 days after the shock	7 days after the shock	
	European Banks			All Banks	European Banks	
	Monte dei Paschi 2016 (1)	Monte dei Paschi 2017 (2)	Banco Popular 2017 (3)	Silicon Valley Bank (4)	Silicon Valley Bank (5)	Credit Suisse (6)
Shock	-0.1496** (0.012)	0.0886** (0.010)	0.0715 (0.193)	0.0843*** (0.001)	0.1179*** (0.000)	0.4014*** (0.000)
Shock * Resolution	0.0286** (0.021)	-0.0273** (0.011)	-0.0352** (0.031)	-0.0180*** (0.001)	-0.0104 (0.116)	-0.0981*** (0.000)
Shock * Size	-0.0085*** (0.002)	0.0019 (0.191)	0.0012 (0.599)	-0.0032 (0.649)	0.0045 (0.462)	0.0189*** (0.007)
Shock * Leverage	-0.0009 (0.150)	0.0015** (0.025)	0.0018** (0.033)	-0.0070 (0.132)	-0.0036 (0.254)	0.0000 (0.997)
Shock * GDP Growth	-0.0040 (0.339)	-0.0003 (0.940)	0.0017 (0.730)	-0.0176** (0.030)	-0.0147** (0.015)	-0.0083 (0.264)
Shock * Inflation	-0.0137 (0.210)	-0.0109 (0.375)	-0.0391** (0.012)	0.0068 (0.510)	0.0036 (0.602)	-0.0165 (0.436)
Shock * Fin. Dev.	0.0001 (0.789)	-0.0001 (0.552)	-0.0005 (0.126)	0.0005 (0.252)	0.0003 (0.436)	-0.0011** (0.019)
Bank FE	Yes	Yes	Yes	Yes	Yes	Yes
Observations	6248	6336	6248	30796	32264	6424
Adjusted R-squared	0.8899	0.9102	0.9147	0.9421	0.9394	0.7862
Within R-squared	0.1079	0.0236	0.0896	0.0151	0.0262	0.0853
Number of Banks	71	72	71	367	367	73



Summarising the bank-specific results

- A more comprehensive bank resolution regime has either no effect, or it even reduces systemic risk for negative idiosyncratic events, controlling for bank and country characteristics.
- Thus, opposite effects from system-wide shocks

Policy implications

- Bank resolution raised systemic risk in response to system-wide shocks (but not for idiosyncratic shocks)
- Results warn against too high expectations of the power of resolution regimes in system-wide crises
- Need for additional instruments:
 - introduce a strictly defined financial stability exemption for bail-in rules during systemic distress periods (IMF, FSAP, 2018)
 - systemic crisis preparation and crisis management have to take a more prominent role within financial safety nets

Conclusions

- Significant changes in how we think and go about bank resolution over past 10 years
- Bail-in with specific resolution measures works in case of bank-specific failures
- Limitations of bank resolution for systemic distress very clear!
- Bail-in vs. bail-out?



Thank you

ROBERT SCHUMAN CENTRE

Thorsten Beck

www.thorstenbeck.com

[@tl-beck.bsky.social](https://t.me/tl-beck)

