Debt holder monitoring and implicit guarantees: Did the BRRD improve market discipline?

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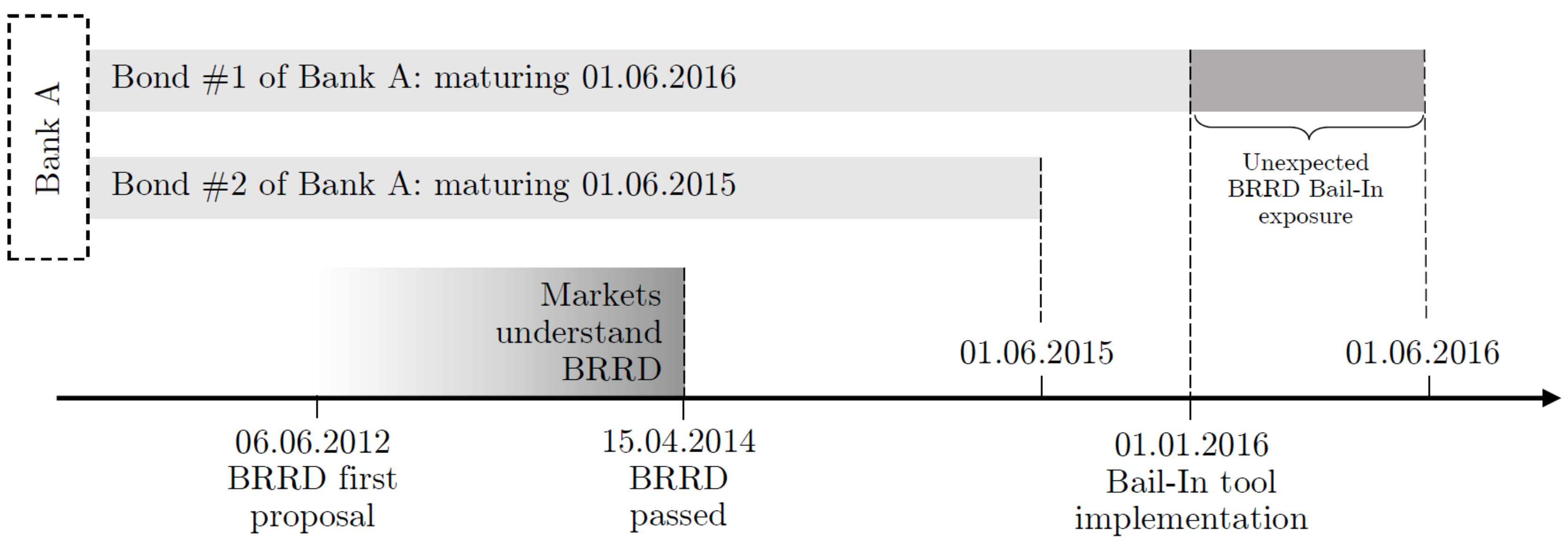
Motivation & research question

- The 2007-2009 financial crisis resulted in unprecented bail-outs
- Two sets of regulation enhanced after the crisis:
  - Capital/Liquidity Provisions (Basel III,...)
  - Bank Resolution Regimes (OLA in the US, BRRD in the EU)
- To avoid future bail-outs supervisors need to be able to force creditors to participate in losses in potential banking failure
- It remains questionable how credible this new resolution regime is:
- Do debt-holders believe the bail-in threat?

Data & Methodology

- Yield of bail-in able euro-denominated bank bonds of European banks from Bloomberg
- Yield Curve Parameter from the ECBs Datawarehouse
- Balance sheet data from SNL
- Identification based on the fact that bonds maturing before 2016 are explicitly protected from BRRD bail-in
- Quasi natural experiment setup. Bonds maturing in 2016 (2015) are the treatment (control) group



- Within bank variation allows for bank × time fixed effects. Therefore, not bank riskiness, but merely the change in enforability of bankcruptcy codes are picked up in the regression.
- Estimate a difference-in-difference regression:

$$\text{YieldSpread}(i,t) = \boldsymbol{\gamma} \cdot \boldsymbol{DiD(i,t)} + FE(i) + FE(j \times t) + \varepsilon_{it}$$

where i is a bond, j is a bank and t is a month.

Results

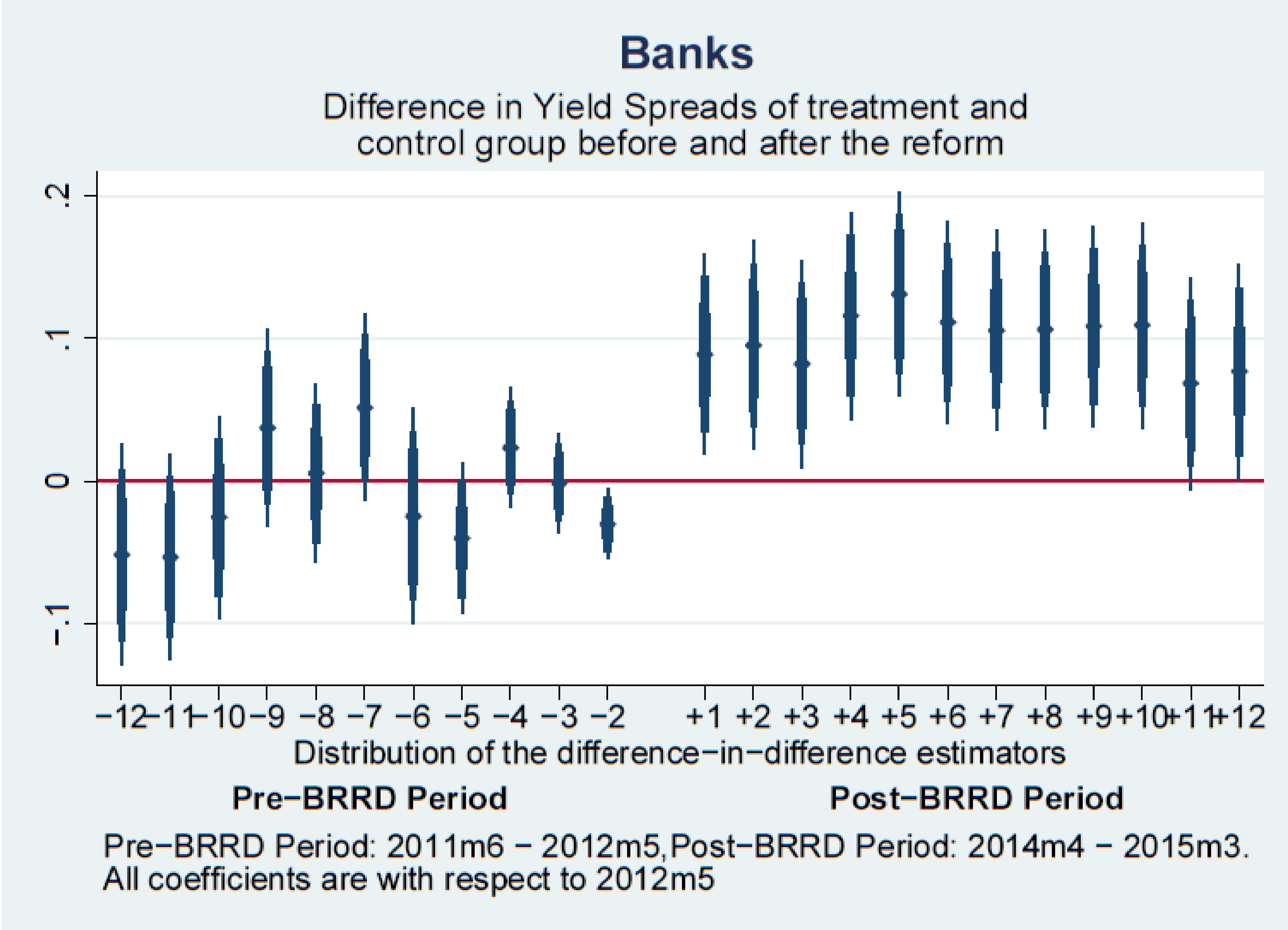
- Statistically significant and economically meaningful bail-in premium across specifications:

	(1) YS	(2) YS	(3) YS	(4) YS
Difference-in-Difference	0.129***	0.119***	0.083	0.105**
	(3.09)	(2.76)	(0.69)	(2.08)
Difference-in-Difference × (–CET1)		0.166***		
		(3.50)		
Difference-in-Difference × non–GSIB			0.051	
			(0.42)	
Difference-in-Difference × GIIPS				0.056
				(0.80)
Observations	26665	24912	26665	26665
Adjusted R^2	0.930	0.929	0.930	0.930
Bond Fixed Effects	Yes	Yes	Yes	Yes
Bank × Month Fixed Effects	Yes	Yes	Yes	Yes
Residual Controls	Yes	Yes	Yes	Yes

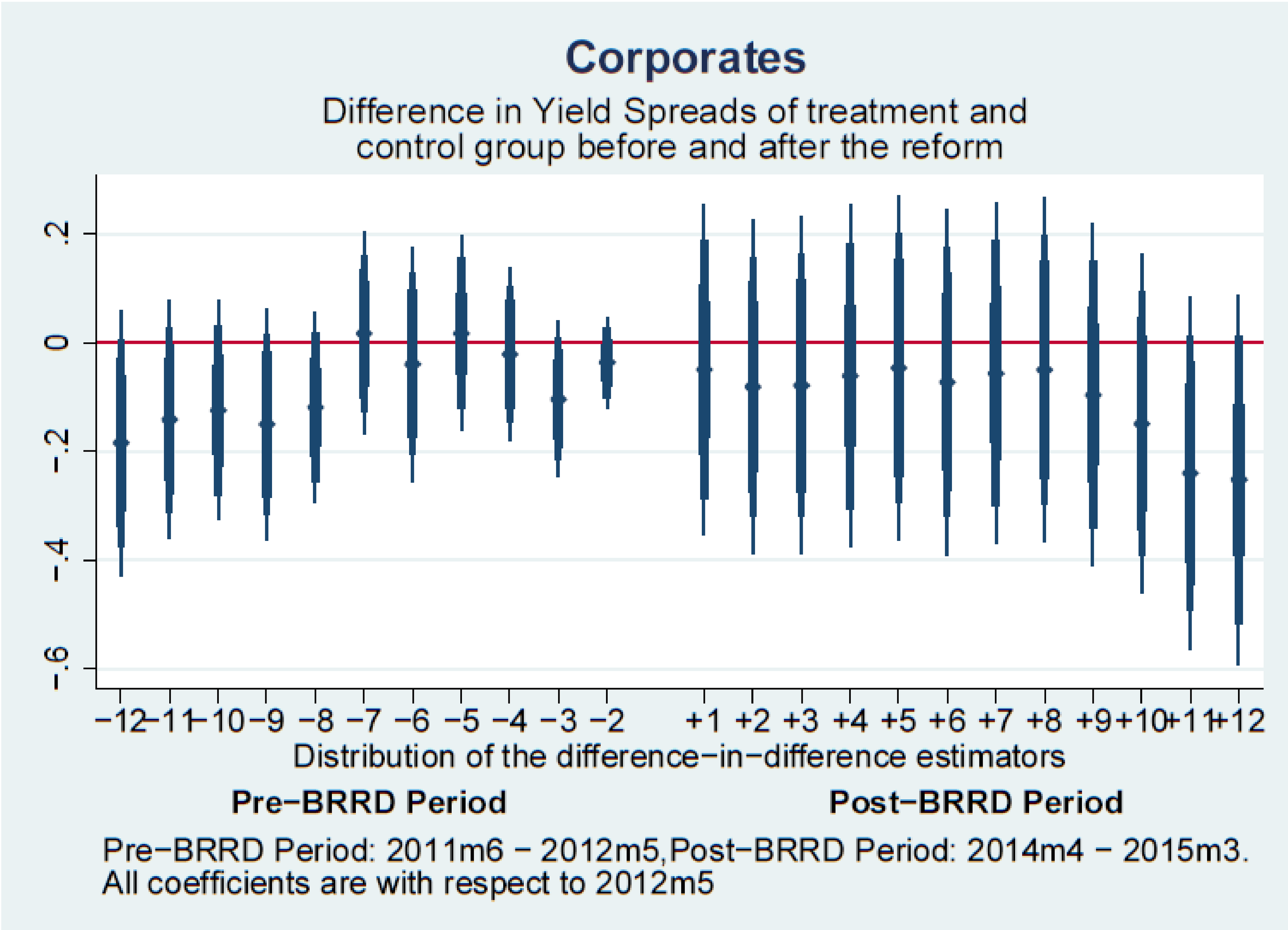
Results (continued)

- Parallel trends test suggest methodology is valid and visualizes the results:

$$\text{Yield Spread}(i,t) = \sum_{\substack{k=\text{June}\\2011}}^{\substack{\text{May}\\2012}} m_k D_{it}(t=k) + \sum_{\substack{k=\text{April}\\2014}}^{\substack{\text{March}\\2015}} p_k D_{it}(t=k) + \beta X_{it} + \gamma_i + \boldsymbol{\mu_t} \times \boldsymbol{\delta_j} + \varepsilon_{it}$$



- A pseudo test on non-bank corporate bonds using otherwise idential specifications finds no effect:



- A pseudo test on bonds maturing in 2015 only finds no effect (as expected).

Conclusion

- The BRRD improved market discipline in the European Banking sector
- Bail-in-able bank bond investor demand a *bail-in-premium* reflecting the increased liklihood of being bailed-in in case of bank failure
- This is most pronounced for weaker capitalized banks

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