Discussion of "A Pyrrhic Victory? Bank Bailouts and Sovereign Credit Risk"

Viral Acharya, Itamar Drechsler, and Philipp Schnabl

Ralph S.J. Koijen

University of Chicago and NBER

BFI Conference on Macroeconomic Fragility, 2012

- Main objective: Understand the interaction between credit risk of the financial sector and countries, and bailouts

- Clearly an important question

- This paper:

  - Simple and tractable general-equilibrium model to understand basic trade-offs

  - First empirical evidence on the joint dynamics of credit risk of the financial sector and sovereigns

- Moral hazard is not the only cost of bailouts, also impact on sovereign's credit risk, deadweight costs of government defaults, and underinvestment due to future taxation

- Main mechanism:

  - Debt overhang problem banks

  - Bailouts alleviate debt overhang, but financed by taxing firms

    $\Rightarrow$ Reduces the incentive to invest, thereby lowering output and future tax revenues

  - Increases the credit risk of the government

    . . . , but banks hold large positions in sovereign debt which in turn weakens their balance sheets

Summary: Empirical Evidence

- During bailouts, a negative correlation between country-level CDS rates and average CDS rate of financial sector

- Following bailouts, the CDS spreads of countries and the financial sector co-move positively, even after controlling for large set of instruments $\Rightarrow$ Consistent with two-way feedback
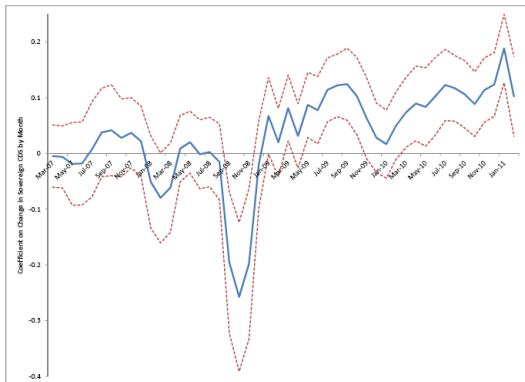
Financial Sector and Non-Financial Sector

Banks maximize:

$$\max_{s_0} E_0 \left[\left(w_s s_0 - L_1 + \tilde{A}_1 + A_G + T_0 \right) \times I_{\{-L_1 + \tilde{A}_1 + A_G + T_0\}} \right] - c(s_0)$$

- Costs paid at $t = 0$
- Benefits received at $t = 1$, but do not help to pay liabilities

Why not:

$$\max_{s_0} E_0 \left[\left(w_s s_0 - L_1 + \tilde{A}_1 + A_G + T_0 \right) \times I_{\{w_s s_0 - L_1 + \tilde{A}_1 + A_G + T_0\}} \right] - c(s_0)$$

Firms maximize:

$$\max E_0 \left[f(K_0, s_0) - w_s s_0 - I_1 + (1 - \theta_0) \tilde{V}(K_1) \right]$$

Firms only taxed in period 2, not in period 1

Financial Sector and Non-Financial Sector

Equilibrium for financial services:

$$\underbrace{p_{solv}}_{\text{Debt overhang problem}} w_s = c'(s_0)$$

$$w_s = f_s$$

Alternative specification:

$$\underbrace{p_{solv}}_{\text{Debt overhang problem}} w_s + w_s s_0 p'_{solv} = c'(s_0)$$

$$w_s = f_s$$

Generally, why this structure of transfers?

- T_0 unconditional on future shocks
- Firms only taxed in period 2, not period 1 $\Rightarrow$ underinvestment problem of firms goes away if taxation also in period 1
- In this model, subsidizing financial transactions may be more efficient:

$$(1 + \sigma)p_{solv} w_s = c'(s_0)$$

Government, Default, and Taxation

- Governments issue bonds to finance the transfer: $T_0 = N_T P_0$

- Governments default if $N_D + N_T > \theta_0 V_1(K_1)$

- θ_0 fixed in advance, assuming governments can credibly commit to stick to tax policy

- May be hard to enforce, see government turnovers in Greece, France, Ireland, the Netherlands, . . .

- For the default of countries in Europe, the role of the IMF and EU and its interaction with country size may be worth modeling explicitly

Government and Pyrrhic Victory?

- More broadly, the government's objective is to maximize the expected utility of the representative consumer

- In this way, by assumption, bailouts are welfare improving

- In the context of the model, bailouts are never a Pyrrhic victory

- Interesting question is why bailouts could be Pyrrhic victories to begin with?

- Related, when do we evaluate welfare? Where does L_1 come from? Why does this require government intervention?

- The evidence of shifting risk from banks to the government is striking and very convincing
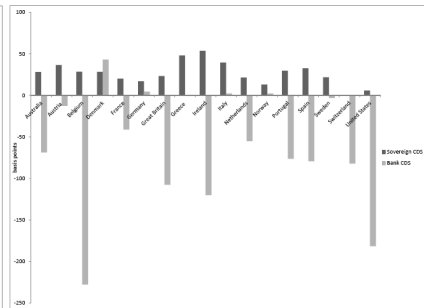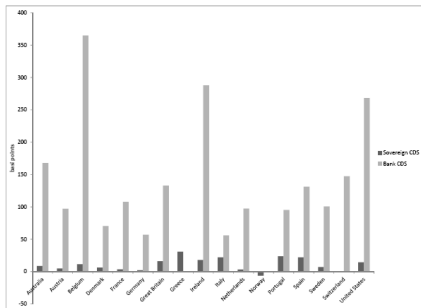
- For the evidence on the two-way feedback, the evidence is consistent but it is very hard to make causal statements

					Δ Log(Bank CDS)				
	Pre-Bailout			Bailout			Post-Bailout		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Δ Log(Sovereign CDS)	0.014	0.003	0.004	0.449**	-0.691**	-1.020	0.197**	0.153**	0.146**
	(0.010)	(0.016)	(0.018)	(0.164)	(0.257)	(1.034)	(0.028)	(0.036)	(0.033)
Equity Return	-0.306*	-0.211		-0.194	-0.104		-0.145**	-0.095**	
	(0.142)	(0.140)		(0.185)	(0.181)		(0.030)	(0.030)	
Δ Log(CDS Market Index)	0.932**			0.753**			0.688**		
	(0.048)			(0.200)			(0.031)		
Δ Volatility Index	0.429**			-1.100**			-0.027		
	(0.134)			(0.207)			(0.052)		
Week FE	N	Y	Y	N	Y	Y	N	Y	Y
Interactions	N	N	Y	N	N	Y	N	N	Y
Observations	2,891	2,891	2,891	254	254	254	6,500	6,500	6,500
Banks	62	62	62	53	53	53	59	59	59
R-squared	0.271	0.347	0.517	0.126	0.259	0.854	0.349	0.417	0.495

- It seems hard to rule out that common shocks drive both bank and country-level CDS changes

- Country-specific shocks may drive the correlation in the post bailout period

- In the model, guarantees favor debt holders not equity holders

- Controlling for equity returns controls for bank-specific credit risk

- The remaining piece of bank-level CDS changes are "bailouts"

- However, many government interventions also favor equity holders

  See for instance Kelly, Lustig, and Van Nieuwerburgh (2011)

Conclusion

- Interesting and important paper on a key issue

- Model clarifies some of the basic trade-offs in thinking about bailouts, sovereign credit risk, and credit risk of the financial sector

- Are bailouts a Pyrrhic victory?

  - Theory: No

  - Empirical results: Consistent, but maybe also with other explanations?

- This paper is sure to attract a following that will further help us to understand the costs and benefits of bailouts