The Real Effects of Financial Sector Interventions During Crises

Luc Laeven and Fabián Valencia
IMF, Research Department

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Motivation and Contribution

- Scarce evidence on relative effectiveness of policies employed to resolve banking crises.
- Evidence of real-financial linkages, but quantitative importance and relative importance of channels still under debate.
- This paper uses the crisis as a shock to the supply of credit and measures the real effects of financial sector policy intervention during the crisis.

Methodology

- We exploit an exogenous variation in the degree to which industries depend on external finance (i.e. fraction of investment not funded with operating cash flow) and assess the differential effects of government policies on firms' value added growth.

$$g_{i,k} = \alpha_j + \alpha_k + \beta_1 ED_j \cdot G_k + \beta_2 X_{i,k} + \varepsilon_{i,k}$$

$g_{i,k}$: Real value added growth of firm *i* in country *k* during 2009.

ED_j: External finance dependence in industry j.

G_k: Policy intervention variables

$X_{i,k}$: Firm characteristics.

α_j, α_k: Country and industry fixed effects.

Policy intervention variables

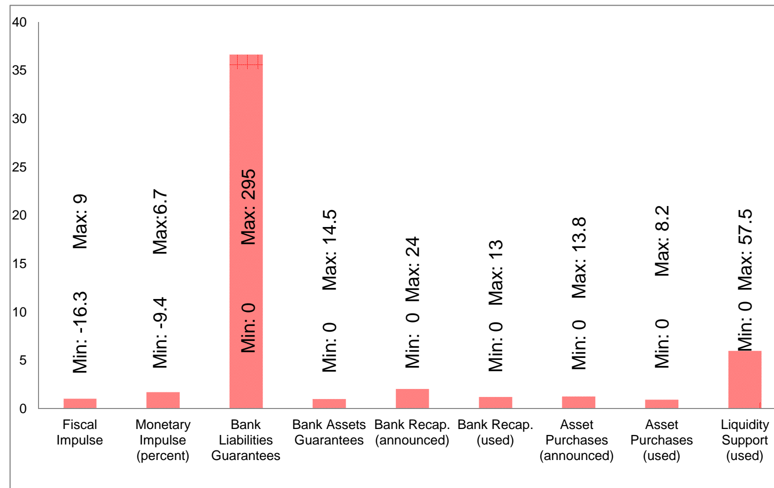
In our baseline specification we use policies announced during September-2008 and March-2009:

- Public bank recapitalization packages.
- Guarantees on bank assets and liabilities.
- Asset purchases.

While our focus is on financial sector support, we control for macro policies as well:

- Discretionary fiscal policy (excluding financial sector support).
- Monetary policy (change in short-term interest rates).

Policy intervention variables



Empirical Results

VARIABLES	(1) growth	(2) Growth	(3) growth	(4) growth
size	1.333***	1.331***	1.329***	1.329***
	(0.291)	(0.292)	(0.292)	(0.338)
exf *fiscal1	1.280**	1.291**	1.357***	1.357***
	(0.516)	(0.513)	(0.516)	(0.441)
exf * monpol	-0.0737	-0.0522	0.0660	0.0660
	(0.937)	(0.942)	(0.956)	(1.074)
exf * recapa	1.336**	1.348**	1.290**	1.290***
	(0.603)	(0.601)	(0.605)	(0.373)
exf * bg		0.00539	0.00841	0.00841
		(0.0190)	(0.0195)	(0.00926)
exf * asseta			0.509	0.509
			(0.614)	(0.446)
Constant	-3.531	-3.595	-3.690	-3.690
	(2.626)	(2.621)	(2.626)	(2.685)
Clustering	No	No	No	Country
Observations	2,903	2,903	2,903	2,903
R-squared	0.140	0.140	0.141	0.141

Dependent variable is the firm's real growth in value added during 2009 (in percentages). Standard errors are corrected for clustering at the country level. ***, **, and * denote significance at the 1%, 5%, and 10% level, respectively.

Quantitative importance

- A one standard deviation increase in bank recapitalization would result in additional real value added of 2.3 percentage points.
- A 1.1 percent increase in recapitalization generates a differentiated real value growth of 1.1 percent between firms in industries at the 75th and 25th percentiles of financial dependence respectively.

Robustness Checks

- Additional firm characteristics: firm leverage and tangibility of firm assets.
- Different definition of variables: realized values of intervention instead of announcements, change in money base. Results stronger for recapitalization.
- Including liquidity support to the financial system. Results unaltered, but liquidity support is insignificant.
- Other country and industry characteristics: openness, fiscal space, financial development, short-term financing needs.

Concluding Remarks

- Bank recapitalization policies boost the value added growth of financially dependent firms.
- Quantitative effects of discretionary fiscal policy and bank recapitalization are similar.
- Monetary policy and other bank intervention measures turn out insignificant once we control for the effects of fiscal policy and bank recapitalization.
- These results emphasize the importance of supply-side financial frictions in influencing real economic activity and provide new insights in the relative effectiveness of government interventions in managing financial crises.