

Growth Commission
Panel on Growth Theory
Implications for Fiscal and Monetary Policy

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Financial Crises

- Market booms are often followed by dramatic falls
 - equilibrium asset price fluctuations (Greenwood and Jovanovic, 1999, Boldrin and Levine, 2001)
 - bubbles (Shleifer, 2000, Brunenrmeier, 2001)
 - episodes of "flight to quality" (Caballero and Krishnamurthy, 2008),
- The ensuing financial crises often have large output and fiscal costs (Honohan and Klingebiel, 2000)

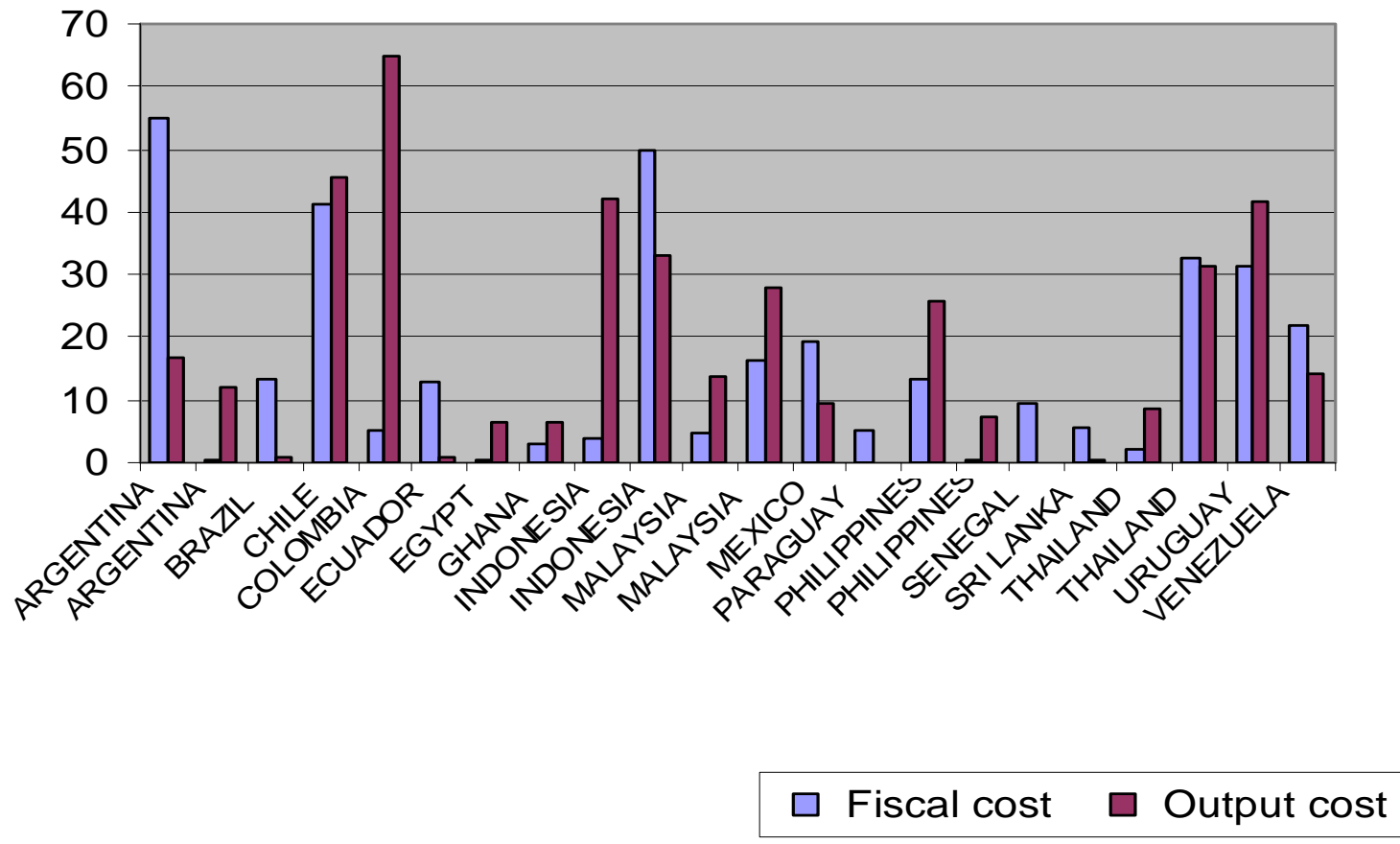
The Costs of Banking Crises (% GDP)

| | <i>output cost</i> | <i>fiscal cost</i> |
|-------------------------|--------------------|--------------------|
| Sweden (1991-94) | 4.0 | 6.5 |
| United States (1981-91) | 3,2 | 5,4 |
| South Korea (1997-00) | 26,5 | 16,5 |
| France (1994-85) | 0,7 | 0,0 |
| Japan (1992-00) | 20,0 | 27,7 |
| Argentina (1980-82) | 55,1 | 16,6 |
| Indonesia (1997-00) | 33,0 | 50,0 |

Output cost: cumulated deviation from potential growth attributed to the crisis

Fiscal cost: government outlays directly related to the crisis (revenue from possible subsequent asset sales is not counted)

**Fiscal Cost of Banking Crises (% GDP, DVP C.) Source:
Honohan and Klingebiel, 2000**



**averages 1980-00:
(% GDP)**

**Fiscal cost 15.8
Output cost 18.6**

Public provision of liquidity is central feature of financial crises. Are bailouts efficient?

- in the absence of complete markets it may be preferable to address the problems created by rare and extreme events (Barro, 2008) using the balance sheet of the government rather than have the private sector prepare to survive on its own by storing away large amounts of *idle capital*

- key idea (Holmstrom and Tirole, *JPE*, 1998, Gorton and Huang, *AER*, 2004)
 - liquidity is socially expensive: the cost for the private sector to hoard all the resources needed to be prepared to buy the assets in short notice would be too large
 - it is not optimal to rule out the possibility of using $\sum_i \tau_{t+i}$ to add collateral to the economy, *i.e.* give up the power governments have to “commit” agents that otherwise wouldn’t be able to

Insufficient private liquidity

- investors: moral hazard problem: entrepreneurs' effort not observed
- *demand for liquidity*: firms are subject to unexpected liquidity shocks
- *aggregate supply of liquidity*: the amount of resources standing ready to purchase the claims on projects at some date between initiation and final payoff

Efficient bailouts

- if shocks are iid across firms
- in the presence of macro shocks

iid shocks

- surplus of the healthy firms exceeds the losses of the distressed for the investor, *i.e.* *gross inside liquidity* exceeds the net refiancing needs
- efficient solution can be implemented in the absence of outside stores of value without the need for the corporate sector to create inefficient stores of value
- in practice it is very difficult—short of having a very tightly controlled conglomerate—to aggregate liquidity perfectly
- waste derives from the liquidity held *ex-post* by low-shock firms, which have no *ex-post* incentive to invest in distressed firms

Macro (perfectly correlated) shocks

- resources cannot be moved across states of nature because investors are unable to commit to transfer the profits from the good state of nature to subsidize firms in the bad state of nature
- solutions:
 - outside store of value (*idle capital*)
 - *government-produced collateral*: if government can tax entrepreneurs with high returns and subsidize entrepreneurs with low returns, it can improve efficiency (taxes are a way to commit investors's unpledgeable income in the bad aggregate state)

Inefficient bailouts

- in practice liquidity is hard to distinguish from solvency
- some inefficiency is unavoidable

.The U.S. Experience

- Penn Central default 1970s
- Crash of 1987
- Emerging markets crises and LTCM in 1998
- Events following 9/11
- Subprime Fall 2007

In each case the Fed/U.S. government stood ready to intervene as much as needed to prevent a meltdown

It is fiscal, not monetary policy

From a letter of Treasury Secretary Paulson to NY Fed President Geithner.

If there are losses on the Bear Stearns loan, the NY Fed can treat this *"as an expense that may reduce the net earnings transferred ... to the Treasury general fund."*

This is explicitly fiscal policy.

Open questions

- to what extent do fiscal bailouts reduce the output cost of crises?
- what is the tradeoff between moral hazard and a lower output cost?
- what is the tradeoff between efficient and inefficient bailouts?
- can ex-ante regulation substitute for ex-post efficient bailouts?