Financial Black Holes

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The recent US crisis is a Financial Black hole

It is different than the 3rd-generation financial crises

A **Financial Black hole** occurs when higher credit growth is associated with negative social returns

In 3rd-generation crises financial deepening and associated risk taking lead to higher average growth

We have learned that bailout guarantees are not just a theoretical curiosity. They occur the world over.

Given the presence of guarantees,

Should financial regulation be heavy-handed and aim at ensuring the financial system does not take on any kind of insolvency risk?

Or should it be light-handed and limit itself to ensuring private agents abide to their bilateral financial contracts?

We argue that neither extreme is desirable. While preventing financial black-holes is desirable, over regulating in order to prevent all financial crises is not, as it will drastically reduce access to credit and growth.

We consider an economy where the financial system matters for production and bailout guarantees are present.

We characterize the degree of financial discipline and productivity under alternative regulatory regimes.

Two states of nature next period: a good and a bad state.

Three production technologies:

Safe: positive NPV and never defaults

Risky: positive NPV but sometime defaults

Inferior: negative NPV

Two types of liabilities:

i) **Standard debt**: The borrower must repay next period in all states. If she is unable to repay debt, she defaults
ii) **Catastrophe Bonds**: promise to repay zero in the good state and a large amount in the bad state.

Two Imperfections:

i) contract enforceability problems→borrowing constraints

A borrower can divert if she incurs a diversion cost.

ii) Systemic bailout guarantees: if a majority defaults, a bailout is granted.

Three regulatory regimes.

Restrictive: lenders can only lend to the entrepreneurs with access to the safe production technology, and only the issuance of standard debt is allowed.

Liberalized: it allows lenders to lend to any class of entrepreneur, but only allows the issuance of standard debt.

Anything-goes: It restricts neither the class of borrowers nor the type of liabilities that can be issued.

The financial system performs its **disciplinary role** if lenders fund all entrepreneurs with positive NPV technologies, but fund neither entrepreneurs with a negative NPV technology nor diversion schemes.

R1. Under the restrictive regulatory regime the financial system performs its disciplinary role by imposing borrowing constraints that ensure diversion schemes are not profitable. Furthermore, bailout guarantees are never triggered.

R2. Under the financially liberalized regime--that restricts liabilities to standard debt contracts--the financial system performs its disciplinary role:

- Interest rates and borrowing constraints are such that negative NPV projects are not undertaken, while all entrepreneurs with positive NPV projects are funded and do not divert.
- **Systemic bailout guarantees do not undermine the disciplinary role of the financial system**: under standard debt, guarantees only relax the borrowing conditions of risky borrowers but induce neither the undertaking of negative NPV projects nor diversion.

3rd-generation crises occur under this regime

R3. In an anything-goes regulatory regime, where catastrophe bonds can be issued, **Financial discipline breaks down** if bailout guarantees are generous:

i. negative NPV production technologies are funded;
ii. entrepreneurs that would otherwise have zero likelihood of default, take on insolvency risk via an excessive issuance of catastrophe bonds.

· In the absence of generous bailout guarantees there is financial discipline: (i)only positive NPV technologies are funded; and (ii)all catastrophe bonds issued are repaid for sure by the issuer.

Social efficiency

In the financially constrained economy we have characterized, an increase in expected output comes about with the undertaking of insolvency risk and the consequent bailouts during default episodes. Thus, an appropriate criterion of social efficiency should consider **expected private profits net of expected bailout costs.**

R4.

1. A shift from a repressed to a liberalized regime increases the incidence of financial crises, but it also increases social efficiency.
2. A shift from a liberalized to an anything-goes regime with generous bailout guarantees generates financial black holes as the financial system stops imposing discipline into investment decisions:
    (i) production technologies with negative NPV become funded;
    (ii) entrepreneurs with access to positive NPV technologies--even those that would have never defaulted under other regimes--choose to take on insolvency risk by issuing excessive catastrophe bonds as a means to exploit the bailout guarantee.

Should financial regulation limit itself to the financial sector?

Should real sector “end-users” be exempt of regulation regarding OTC derivatives?

Light regulation of end-users opens the possibility of future **black holes.**

The strategy shift by safe entrepreneurs described above is not simply a theoretical curiosity. It captures the excessive issuance of currency puts by AAA-rated companies in the boom preceding the 2008 crisis, such as Comercial Mexicana and Cemex in Mexico, and Aracruz in Brazil.

Regulation is necessary to prevent future financial black holes