Liquidity Insurance for Systemic Crises

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The roots of the crisis

- The financial crisis started in the summer of 2007 has its roots in a big collective mistake: *the under-estimation of systemic risk*

- Two important dimensions:

  1. Absence of a macroprudential view
  2. Excessively optimistic judgment on OTD model of banking

- The mistaken view was partly sustained by

  – lack of data and historical experience

  – naïve extrapolations of financial theory

  – disregard of asymmetric information and agency problems

Some clear lessons

- The OTD model of banking involved risks similar in nature to those of the traditional model. But...
  - lack of transparency
  - greater complexity and interconnectedness
  - lack of precautions

  made these risk less well understood & more dangerous

- Clear lesson from the crisis: short-term wholesale liabilities are less stable source of funds than retail deposits
  - Partly because of absence of explicit guarantees similar to deposit insurance
  - Short-term wholesale creditors did not get similar reassurances until very late

A global bank panic

- News about US housing-related losses & fear of uncontrolled spread throughout system produced modern form of global bank panic (in money markets!)
  - Some banks suffered immediate refinancing problems
  - Other suffered second round effects:

Risk of direct losses $\longrightarrow$ fire sales $\rightarrow$ asset price declines ...
... $\longrightarrow$ higher margin calls $\rightarrow$ deleveraging

$\Rightarrow$ Downward spirals (Brunnermeier,2009)

- Presumption MM without explicit government support were liquid (and a source of market discipline) was fundamentally wrong

The need for a new financial architecture

- Difficult political-economy process:

  Late recognition $\longrightarrow$ massive rescue plans ...

  ... $\longrightarrow$ public concern $\longrightarrow$ re-regulatory pressure

  $\Rightarrow$ Urgency to reform financial regulation & supervision

- Beyond short term demand for policy action, the goals are:
  - to correct the excesses perceived as causes of the crisis
  - to minimize the risk and severity of a future crisis

- There is some risk of over-reacting:
  - "killing the messenger" logic
  - there is room for self-correction in the system
  - we should avoid creating new regulatory arbitrage opportunities (rather, make the system more resilient to them)

Focus of the presentation

- The challenges and alternatives are manifold:

  [See recent reports by Brunnermeier et al., The de Larosière Group; G20 Working Group 1 (all 2009) for excellent summaries]

- I will focus this presentation on
  - issues regarding the regulatory treatment of systemic liquidity risk
  - main aspects of my proposal with Enrico Perotti

- The liquidity and capital insurance arrangement at the center of our proposal offers a compact solution to three problems:
  - excessive reliance of banks on short-term (ST) wholesale funding
  - political resistance to assist banks during a systemic crisis
  - coordination problems in the rescue of international megabanks

A compact proposal to deal with systemic liquidity problems

1. Liquidity charges
   - levied on banks' ST wholesale funding
   - would work as a flexible tool to keep the systemic risk associated with ST wholesale funding under control
2. Emergency Liquidity Insurance Fund
   - partly pre-funded with the charges
   - would guarantee the provision of liquidity, guarantees & perhaps capital in systemic crises
3. Pre-agreed multilateral burden sharing arrangement
   - could be naturally proportional to the liquidity charges paid by banks in normal times
   - would solve problems associated with the rescue of international megabanks

Ingredient 1: Liquidity charges (i)

- Potential beneficiaries of the safety net should be subject to a mandatory liquidity charge
  - Like a Pigouvian tax, discouraging strategies that create "financial pollution" (systemic risk)
  - Paid continuously to a supervisor during good times
  - In exchange, the supervisor will provide emergency liquidity (and capital?) in systemic crises
- Supporting logic:
  - Lower cost of ST funding partly reflects ST lenders ability to shift the risk away to others at the first sight of trouble
  - The charge would make ST and LT bank debt financing more comparable in cost, reducing the use of the former

Ingredient 1: Liquidity charges (& ii)

Less ST market funding $\Rightarrow$ Less spreading of panic in a crisis
$\Rightarrow$ Less systemic risk

- Details
  - Proportional to short-term liabilities, increasing in maturity mismatch, perhaps cyclically adjusted, perhaps adjusted for the slope of the yield curve
  - Retail deposits would be excluded from the charge and from ST funding in measure of mismatch

Ingredient 2: Emergency Liquidity Insurance Fund (ELIF)

- Revenues accruing from the charges would go into a fund ("ELIF") that would have legal autonomy and pre-packaged access to
  - central bank liquidity
  - backing of government funds, if required
- A macroprudential supervisor would declare systemic episodes, triggering the extension of *assistance* (liquidity + guarantees + capital?)
  - Assistance might come with attached constraints on management
  - No assistance would be provided in idiosyncratic, isolated episodes
- In this context, liquidity charges would work like insurance premia:
  - Pre-payment for the support received in systemic episodes
  - Emergency intervention would become politically more acceptable

Ingredient 3: Explicit multilateral arrangement

- In order to properly deal with international megabanks, ELIF should ideally be international
  - It would operate in coordination with the relevant macroprudential authority
  - Participating countries should require all their regulated institutions (or the systemically relevant) to join
  - Institutions from non-participating countries should not benefit ex post
- It would serve as an explicit coordination/commitment device for cross-border rescues
- Liquidity charges would provide a mutually agreed metric for systemic risk and an objective basis for burden sharing

  (↑effective than ex post negotiations, ↑flexible than country quotas)

Advantages relative to other proposals (i)

- Plain liquidity requirement
  - Too rigid imposition for banks, impeding them to optimize on a smoother basis (the *price* for increasing maturity mismatch is 0 or ∞ if above or below the required liquidity minimum)
  - To guarantee enough liquidity in an unlikely crisis, the requirement will have to be large $\Rightarrow$ excessive liquidity holding in normal times

- Capital requirements will also have to be large, with obvious *direct* costs and several *more subtle* disadvantages...

  Related to shareholders attitude towards *their* claims:

  - An asset that they want managers to "lever up"
  - A defense against outside interference ($\Rightarrow$ interventions ahead of default $=$ violation of private property)

Advantages relative to other proposals (ii)

- In contrast to its main alternatives, our insurance scheme
  - is *contingent*: arranges for the availability of sufficient liquidity (and, perhaps, capital) in systemic crises *only*
  - is intended to penalize systemic risk creation in a *continuous manner* (especially in normal times): the charges per unit of wholesale ST funding increase smoothly with maturity mismatch
- Systemic risk (i.e. simultaneous realization of correlated tail risk) is hard to estimate...
  - Extreme co-movements are rarely observed, and may be triggered by a different asset class each time
  - But liquidity runs play an important role in the escalating phase of all systemic crises and have a clearly negative amplifying effect

Advantages relative to other proposals (& iii)

Liquidity mismatch = "Proxy" of potential systemic risk

- Finally, relative to the ad hoc ex post liquidity assistance by central banks (CB)...
  - ELIF reduces the uncertainty surrounding the response to systemic episodes
  - Explicit backing from government budgets makes it less compromising for CB independence and the credibility of its price stability objectives

An incentive to create another shadow banking sector?

Skeptics might fear that our liquidity charges might encourage the shift of ST funding activities to another shadow banking sector

- This is a serious risk for all re-regulatory proposals
- But the shift is not likely to be sizeable or too dangerous if unregulated agents enjoy very limited (or strongly penalized) recourse to the regulated ones
  - Our scheme should assign charges increasing in the unregulated borrowers' own mismatch, if verifiable
  - Otherwise, any potentially mismatched asset funding should be fully charged

    (E.g. credit lines to hedge funds should be treated as non-contingent commitments and fully charged)

Conclusions (i)

- The reform of regulation and supervision of the global financial system involves many important challenges

- Our 'Liquidity Insurance for Systemic Crises' mechanism is a response to some of the key challenges, namely

  1. The regulatory treatment of liquidity risk (and its contribution to systemic risk)
  2. The establishment of some form of pre-packaged assistance to banks during systemic crises
  3. The improvement of coordination in the management of crises involving internationally megabanks

Conclusions (& ii)

- How?
  - The liquidity charges imposed by ELIF would discourage the forms of ST funding that create and amplify systemic risk
    - It would make it more expensive for banks to rapidly expand their lending above their deposit base, but without blocking it
    - Banks would react by using a greater fraction of LT funding
    - Residual ST creditors would be less prone to panic
  - The arrangement would provide some prepayment of intervention costs, making early intervention politically more acceptable
  - If international, it would constitute a starting step to ensure effective coordination in the rescue of international megabanks (pre-packaged assistance, natural bruden sharing rules)