

Press Points for Chapter Two:

How to Address the Systemic Part of Liquidity Risk

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Key Points

- Establish a macroprudential framework that mitigates systemic liquidity risk.
- Proposes three ways to measure systemic liquidity risk that are used to construct associated macroprudential tools to capture individual institutions contribution to systemic liquidity risk, thus helping to minimize the tendency for financial institutions to collectively underprice liquidity risk.
- However, policymakers will need to be conscious of the interactive effects of multiple approaches to mitigate systemic risks. Capital surcharges or other tools to control systemic *solvency* risk could help mitigate systemic *liquidity* risk.
- Strengthen disclosure practices on liquidity risk. This would help investors and policymakers assess the robustness of liquidity management practices and identify emerging liquidity strains early on.
- Targeted tools and enhanced information should allow official emergency liquidity support to be more effectively provided.
- Follow up on our October 2010 GFSR recommendations to strengthen market infrastructures and market practices in the secured funding markets and introduce more oversight over nonbank financial institutions that contribute to systemic liquidity risk.

Systemic liquidity risk was at the heart of the recent crisis—funding markets for financial institutions dried up and central banks had to intervene in unprecedented amounts using untried methods. The chapter stresses why more needs to be done to develop macroprudential techniques to measure and mitigate systemic liquidity risks and offers some initial thoughts about how to do it.

The new Basel III global quantitative liquidity standards for liquidity risk management should enhance the stability of the banking sector and indirectly help mitigate systemic liquidity risk. But at their core the Basel III rules are “microprudential”—that is they seek to

limit each bank's individual liquidity risk-taking. They are not intended or designed to mitigate *systemic* liquidity risks.

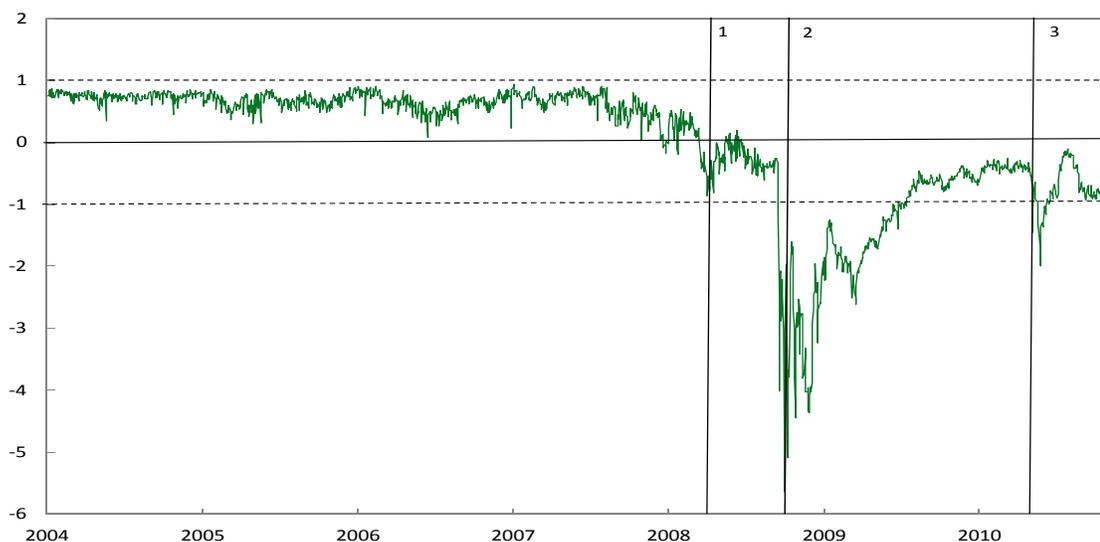
For this reason, the chapter stresses the need to establish a macroprudential framework aimed at mitigating system-wide, or *systemic*, liquidity risk. A priority should be to design some type of assessment capturing the negative affect that one institution's liquidity risk management decisions could inflict on the rest of the financial system. This would allow financial institutions to bear more of the burden they place on central banks and governments. This can be achieved through a macroprudential tool that could be in the form of a capital surcharge, a fee, a tax, or an insurance premium.

But such a tool presupposes that policymakers have a robust methodology for measuring systemic liquidity risk and each institution's contribution to this risk on which to base it. A problem so far has been the lack of analysis of how to measure systemic liquidity risk and the extent to which individual institutions contribute to this risk.

The chapter proposes three different approaches to measure systemic liquidity risk and macroprudential tools to mitigate it. The three methods proposed are:

- a market-based systemic liquidity risk index (SLRI). It captures the widening of normal spreads that can arise during periods of stress. For the particular set of investment strategies examined, investors can take offsetting positions so as to keep the spreads narrow (making them nearly risk-free trades) in normal times, but are unable to do so in stressed times as they may not have the funding to do so.. The figure below shows that global market and funding liquidity conditions tightened sharply (visible in a sharp decline) during the financial crisis, with extreme periods of systemic liquidity stress defined as more than 2 standard deviations from zero.
- a systemic risk-adjusted liquidity (SRL) model which combines financial balance sheet and market data to generate a forward-looking, risk-based liquidity risk measure for financial institutions. Using this measure, an options pricing model, and general statistics, the chances of a joint expected shortfall (or a systemic liquidity event) across a number of institutions can be calculated as well as an individual institutions' contribution to such a shortfall.
- a macro stress-testing (ST) model which gauges the effects of an adverse macroeconomic or financial environment on the liquidity risk of a set of institutions by determining how close they are to insolvency and thus an inability to fund themselves.

All three methods capture the risks across time and across institutions. The methodologies are sufficiently flexible to be used for nonbank institutions that contribute to systemic liquidity risk. A critical finding of one of the models is that the joint probability of system-wide liquidity shortfalls by banks was higher during the recent crisis than if one just added the liquidity risks associated with each individual bank. This illustrates the importance of incorporating the systemic nature of liquidity risk in macroprudential frameworks.

Figure. Systemic Liquidity Risk Index

Sources: Bloomberg L.P.; Datastream; and IMF staff estimates.

Note: The dotted band depicts +/- standard deviation around the zero line. Dates of vertical lines are as follows:

1—March 14, 2008, Bear Stearns rescue; 2—September 14, 2008, Lehman Brothers failure; and 3—April 27, 2010, Greek debt crisis.

The proposed three methods along with the macroprudential tools should accomplish two goals: (1) measure the extent to which an institution contributes to systemic liquidity risk; (2) use this to indirectly price the liquidity assistance that an institution would receive from a central bank. Proper pricing of this assistance would help lower the scale of support warranted by a central bank in times of stress and help assure that systemic liquidity shortfalls do not morph into large-scale solvency problems and undermine financial intermediation and the real economy.

The chapter further emphasizes that the regulatory approach to addressing systemic liquidity risk should be multipronged and include:

- Measures to make funding markets work better by strengthening the infrastructure underpinning them, for instance by having collateral behind repurchase agreements registered in central counterparties as we recommended in the October 2010 GFSR.
- Requiring greater oversight and regulation of nonbank financial institutions that contribute to systemic liquidity risk through the so-called “shadow banks” representing institutions that do some bank-like activities but are subject to lighter regulations than banks (e.g., hedge funds and money market mutual funds).
- Closer international coordination and greater disclosure of financial information on relevant funding markets and the maturity of assets and liabilities allowing for an adequate assessment of buildup of liquidity risks in the financial system.
- Better evaluation the overall cost effectiveness of various macroprudential tools. For instance, taxes or add-on capital surcharges to control systemic *solvency* risk among SIFIs may also help lower systemic *liquidity* risk. If the case, this would help lessen the need to rely on systemic liquidity risk mitigation techniques.