

Press Points for Chapter 3: *Detecting Systemic Risk*
Global Financial Stability Report (GFSR), April 2009

Key points

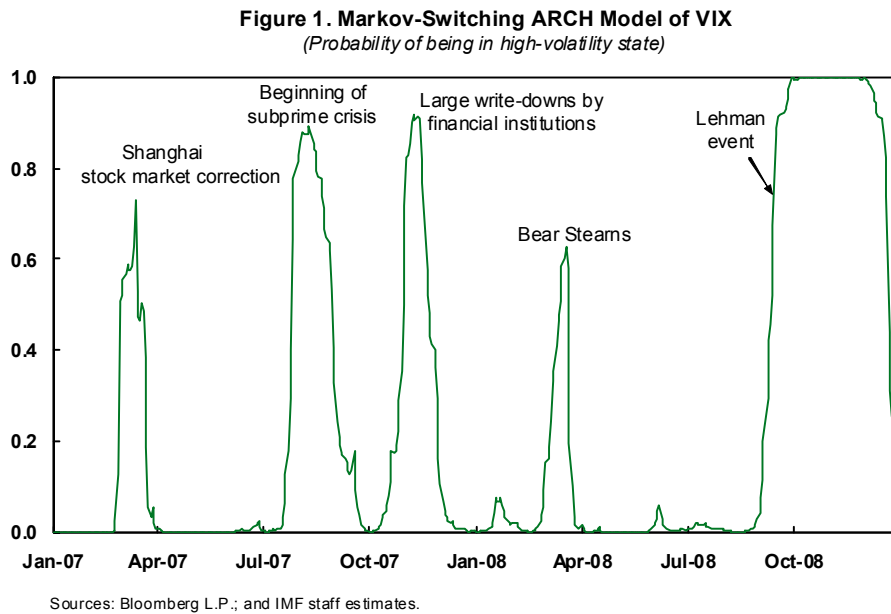
- As the latest G-20 Communiqué emphasized, further progress is needed to identify and address systemic risks—those risks that are above and beyond the summation of those arising from individual financial institutions or markets. This chapter deals with the identification and measurement of systemic events, focusing on the current crisis but also extending the analysis to earlier episodes of financial stress.
- Being able to identify systemic events at an early stage enhances policymakers’ ability to take necessary exceptional steps to contain the crisis. Also, being able to detect when those pressures may be easing would help to determine when to initiate exit strategies.
- Given that there are many facets and causes of systemic risks, this chapter presents a range of measures that can be used to discern when events become systemic and thus help policymakers in their detection.
- Macro-prudential regulation should aim to require institutions to enhance their stress tests and hold additional capital to take account of the build-up of systemic risk and their contribution to it. The analysis presented could be a starting point to calibrate the contribution of a financial institution to systemic risk, and perhaps lay the basis for additional regulatory capital that would help to encourage behavior that mitigates systemic risk.

The chapter first reviews the basic information typically used to identify a financial institution’s vulnerability. These standard “financial soundness indicators,” are examined to see if they could identify which financial institutions proved vulnerable in the current crisis. For the sample of global financial institutions examined, leverage ratios and return on assets proved the most reliable indicators, while capital asset ratios and non-performing loan data lacked predictive power.

Several techniques analyze forward-looking market data for groups of financial institutions in order to detect whether and when systemic risks became apparent. Market-based measures that are able to capture joint tail risks—the risk that multiple financial institutions become distressed simultaneously—seem to have given prior indications of impending stress for the overall financial system.

Proxies for “market conditions,” such as variables used to measure investors’ risk appetite, which influence (and reflect) the risks facing financial institutions are examined to capture the bigger picture of system-wide stress. The signaling capacity of these indicators is examined by observing whether and when they moved from low, to medium, and to high volatility “states,” with the high state associated with systemic crisis. Several measures suggest that letting Lehman Brothers collapse in September 15, 2008 aggravated what appeared to be a global systemic

financial crisis already in the making. For example, Figure 1 summarizes the various volatility states derived from the index of implied volatilities on S&P 500 options contracts (VIX).



The various techniques used in the chapter clearly identify major stress events, such as those associated with the assisted merger of Bear Stearns and JPMorgan, as well as the failure of Lehman Brothers, as systemic. Some indicators, as early as February 2007, also signaled rising systemic pressures. However, advance notice of systemic stress using market-based data was relatively brief.

In sum, the policy implications drawn from the analysis are:

- Although systemic events are difficult to predict, and may only become apparent concurrently in some cases, policymakers should monitor a wide range of market indicators tuned to systemic risk and combine these indicators with more thorough information from financial institutions.
- More public information on key data, especially on off-balance derivative exposures and measures of market liquidity, is needed.
- Due to the difficulties in predicting systemic events, policy makers should develop comprehensive crisis plans that can be implemented quickly if needed. Having such a scheme in place before a crisis erupts may help diminish uncertainty, which is often a key factor in the transition of a “contained” financial crisis to one that is systemic.