

Discussion of “A Survey of Systemic Risk Analytics” by Bisias, Flood, Lo, and Valavanis

Nellie Liang
December 2, 2011
FSOC / OFR Conference

* The views presented here are my own and do not necessarily reflect those of the Board of Governors or its staff.



What we learned about systemic risk

- Risk monitoring and controls were built around safety and soundness of individual firms
- Distress of a single firm or other shock can be transmitted and amplified in a complex financial system
- Externalities – fire sales, contagion and complexity
 - (Bernanke and Gertler, 1989; Allen and Gale, 2005; Brunnermeier and Pederson, 2008; Caballero and Krishnamurthy, 2008)
- Shadow banking and runs on shadow banks – broker-dealers, securitization, ABCP, repo market
 - (Pozsar et al, 2010; Adrian and Shin, 2008; Gorton and Metrick, 2011; Covitz, Liang, Suarez, 2009)
- Gaps in regulation, data, and measurement



New legislation often follows a major crisis

- DFA - Strong focus on pre-emptive policies to increase the resilience of the financial system
- Largely maintains the current structure of the financial system
- Proposes to increase resilience of FIs and markets
 - Enhanced prudential standards
 - New resolution mechanisms
 - Increased data, standardization, and disclosure requirements
- Expanded financial stability mandate for the regulatory agencies
- Created FSOC and OFR



Systemic Risk Assessment

- Systemic risk arises when firms or markets have the potential to propagate shocks and inflict significant damage on the financial system and broader economy
- Pre-emptive framework:
 - Assess vulnerabilities that could transmit and amplify possible shocks
 - Evaluate how shocks could disrupt financial intermediation and impair real economic activity
- Need good measures of possible shocks, propagation mechanisms, and effects on real activity to monitor and mitigate systemic risks



Sources of Systemic Risks

- Structural risks present under all macro conditions
 - Interconnections, common exposures
 - Shadow banking, money market fund model
- Cyclical risks vary over time with financial and economic conditions
 - Financial conditions of FIs
 - Asset valuations and market functioning
 - Leverage of FIs, households, businesses, governments
 - Maturity transformation and other risk transformation
 - New innovations – products and activities
 - More emphasis on tail risks



Survey Paper

- Paper has 30 + measures with definitions, inputs and outputs, and code
- Comprehensive survey that recognizes many different dimensions of systemic risk
- Reflects “can’t manage what you don’t measure”
- Significant progress on network measures and tail risks
- Could add some evaluation criteria, such as out of sample performance
- Need more on fragility of short-term funding markets and maturity transformation



Data Challenges

- OFR plays a critical role
 - Collect data from institutions and markets outside regulatory boundaries
 - Promote greater standardization, necessary for aggregation and effective monitoring and analysis
- Data are costly to collect, organize, and can impose burdens on reporting participants
 - Data should be user-driven, collected by supervisors who have incentives to collect the data that are most valuable to their analysis, and who are responsible for assessing the conditions of firms.
 - Separation of data collection and supervision could dilute accountability
 - Should enhance risk management by the firms



Risk Measurement Challenges

- Not all potential systemic risks can be quantified in a measure
 - Developing innovations in risk transformations
 - Layer qualitative information onto the quantitative balance sheet and market data
- Measures likely better for assessing vulnerabilities than predicting crises
 - Hard to predict when asset bubbles will burst
- Measurement and policies can alter behavior
 - Lucas critique – firms and markets may adapt and evolve in response to systemic measurement
 - Goodhart’s law – “any observed statistical regularity will collapse once pressure is place upon it for control purposes”



Stress Tests as a Systemic Risk Measure

- Data- and analytically-intensive forward-looking systemic risk measure
- Will collect better data for all the largest firms, such as significant credit exposures
- Help to better assess common exposures and inter-linkages, and build more complex models of counterparty networks
- Subject to Lucas critique: firms will adjust behavior if scenarios are predictable
- Potential conflicts between micro and macroprudential objectives:
 - In a weak economy, may want to also promote lending
 - But in post-DFA with greater focus on pre-emptive, may favor greater resilience



Conclusion

- Strong focus on pre-emptive policies to mitigate systemic risks
- Corresponding need for better data and systemic risk measures, and enhanced disclosures
- Recognize limitations of measures to predict crises and that measurement may alter behavior
- Regulators need the broader community to continue to develop risk measures and policy alternatives

