

## IMF – Singapore Regional Training Institute (STI)

### Seminar on Systemic Macro Financial Risk Analysis (ST17.02)

February 13 – 17, 2017

#### READING LIST

---

#### Monday, February 13, L–1: Causes and Stages of the Financial Crises; Overview of Macrofinancial Risk Analysis; Systemic Risk Monitoring

Acharya, V. 2013, “Understanding Financial Crisis: Theory and Evidence from the Crisis of 2007-08”, NBER report No.1.

<http://www.nber.org/reporter/2013number1/acharya.html>

Brunnermeier, Markus K., 2009, “Deciphering the Liquidity and Credit Crunch 2007-2008,” *Journal of Economic Perspectives* 23(1), 77-100.

[http://www.princeton.edu/~markus/research/papers/liquidity\\_credit\\_crunch.pdf](http://www.princeton.edu/~markus/research/papers/liquidity_credit_crunch.pdf)

Claessens, Stijn, and others, 2010, “Lessons and Policy Implications from the Global Financial Crisis,” IMF Working Paper WP10/49 (Washington: International Monetary Fund).

<http://www.imf.org/external/pubs/ft/wp/2010/wp1044.pdf>

Tobias Adrian and Adam B. Ashcraft, “Shadow Banking: A Review of the Literature” *Federal Reserve Bank of New York Staff Reports*, no. 580, October 2012.

[http://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=2175144](http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2175144)

Gray, Dale. F., R.C. Merton, and Z. Bodie, 2008, “A New Framework for Measuring and Managing Macrofinancial Risk and Financial Stability,” Harvard Business School Working Paper No. 09/15 (Cambridge).

#### ***Supplementary Reading:***

Raghuram Rajan, 2010, *Fault Lines* (Princeton University Press).

Carmen Reinhart and Kenneth Rogoff, 2009, *This Time Is Different* (Princeton University Press).

Hyun Song Shin, 2010, *Risk and Liquidity* (Oxford University Press).

---

#### Monday, February 13, L–2: Financial Sector Surveillance

International Monetary Fund, 2012, “The IMF Financial Sector Surveillance Work Agenda”.

[www.imf.org/external/np/pp/eng/2012/041012.pdf](http://www.imf.org/external/np/pp/eng/2012/041012.pdf)

International Monetary Fund, *Financial Sector Assessment Program: Frequent Ask Questions*.

<http://www.imf.org/external/np/fsap/faq/>

———, 2003. *Financial Soundness Indicators—Background Paper*.

<https://www.imf.org/external/np/sta/fsi/eng/2003/051403bp.pdf>

———, 2010. *The IMF-FSB Early Warning Exercise: Design and Methodological Toolkit*  
<http://www.imf.org/external/np/pp/eng/2010/090110.pdf>

———, 2013. *Fact sheet: The Financial Sector Assessment Program*.  
<https://www.imf.org/external/np/exr/facts/fsap.htm>

———, Global Financial Stability Report, various issues.  
<http://www.imf.org/external/pubs/ft/gfsr/2016/01/>

---

## **Monday, February 13, L-4: Extracting Information from Market Prices; Systemic Risk Monitoring**

Blancher, Nicolas, and others, 2013, “Systemic Risk Monitoring “Sysmo” Tool Kit - A User Guide”, IMF Working Paper 13/168.  
<http://www.imf.org/external/pubs/cat/longres.aspx?sk=40791>

Gray, Dale, and Samuel Malone, 2008, *Macrofinancial Risk Analysis*, Chapter 2 (London: Wiley Finance).

Gray, Dale F., 2009, “Modeling Financial Crises and Sovereign Risk” in Annual Review of Financial Economics, ed. by Robert Merton and Andrew Lo, *Annual Reviews*, (Palo Alto: California), Vol 1, pp. 117–144.

Gray, Dale F., and Samuel Malone, 2008, *Macrofinancial Risk Analysis*, Chapters 4 and 5 (London: Wiley Finance).

Gray, Dale, A. Jobst, 2011, “Modeling Systemic Financial Sector and Sovereign Risk,” Sveriges Riksbank Economic Review, September.

Macrofinancial Modeling Group  
<https://bfi.uchicago.edu/research/working-paper/analyzing-real-estate-financial-sector-and-sovereign-risks-and-economic>

---

## **Tuesday, February 14, L-5 & 8: Overview and Developments in Solvency and Liquidity Stress Testing**

Alfaro, Rodrigo, and Mathias Drehmann, 2009, “Macro Stress Tests and Crises: What Can We Learn?” BIS Quarterly Review, December.  
<http://www.bis.org/publ/work369.pdf>

Basel Committee on Banking Supervision, 2009, “Principles for Sound Stress Testing Practices and Supervision,” Final Paper, May  
<http://www.bis.org/publ/bcbs155.htm>

Barnhill, T. and L., Schumacher, 2011, “Modeling Correlated Systemic Liquidity and Solvency Risks in a Financial Environment with Incomplete Information”, IMF Working Paper 11/263.

Čihák, Martin, 2007, “Introduction to Applied Stress Testing,” IMF Working Paper 07/59.

Hardy, Daniel C., and Christian Schmieder, 2013, “Rules of Thumb for Bank Solvency Stress Testing,” IMF Working Paper 13/232  
<http://www.imf.org/external/pubs/cat/longres.aspx?sk=41047.0>

International Monetary Fund, Monetary and Capital Markets Department, Guidance Notes on Stress Testing: Note 1-12 will be provided in class.

———, 2012. *Macrofinancial Stress Testing—Principles and Practices*.  
[www.imf.org/external/np/pp/eng/2012/082212.pdf](http://www.imf.org/external/np/pp/eng/2012/082212.pdf)

———, 2014. *A guide to IMF stress testing: Methods and Models* / Editor, Li Lian Ong. —  
[http://www.elibrary.imf.org/doc/IMF071/20952-9781484368589/20952-9781484368589/Other\\_formats/Source\\_PDF/20952-9781475551297.pdf](http://www.elibrary.imf.org/doc/IMF071/20952-9781484368589/20952-9781484368589/Other_formats/Source_PDF/20952-9781475551297.pdf)  
Ancillary Material: <http://www.elibrary.imf.org/page/stress-test-toolkit?redirect=true>

Jobst A. and Dale, Gray, 2013, “Systemic Contingent Claims Analysis - Estimating Market-Implied Systemic Risk”, IMF Working Paper 13/54.

Schmieder et al (2012): “Next generation” balance sheet based framework, which provides stress testers with (i) more flexibility to simulate bank runs, and a fully-fledged cash flow module; includes (ii) maturity mismatch analyses and (iii) a (simplified) integrated liquidity/solvency framework

Systemic Liquidity Risk: Global Financial Stability Report, 2011

### **Supplementary Reading:**

Bank for International Settlements Committee on Banking Supervision, 2009, “International Framework for Liquidity Risk Measurement, Standards and Monitoring,” Consultative Document, December.  
<http://www.bis.org/publ/bcbs165.pdf>

---

## **Tuesday, February 14, L–6 & 7: Risk-Adjusted Balance Sheets and Contingent Claims Analysis (CCA) for Risk Analysis with Applications**

Gray, Dale, and Samuel Malone, 2008, *Macrofinancial Risk Analysis*, Chapter 2 (London: Wiley Finance).

Gray, Dale F., 2009, “Modeling Financial Crises and Sovereign Risk” in Annual Review of Financial Economics, ed. by Robert Merton and Andrew Lo, *Annual Reviews*, (Palo Alto: California), Vol 1, pp. 117–144.

Gray, Dale F., and Samuel Malone, 2008, *Macrofinancial Risk Analysis*, Chapters 4 and 5 (London: Wiley Finance).

Gray, D., A. Jobst, 2011, “Modeling Systemic Financial Sector and Sovereign Risk,” Sveriges Riksbank Economic Review, September.

Macrofinancial Modeling Group

<https://bfi.uchicago.edu/research/working-paper/analyzing-real-estate-financial-sector-and-sovereign-risks-and-economic>

---

## **Wednesday, February 15, L–9: Sovereign Risk Analysis and Sovereign Banking Interactions**

Gray, Dale F., 2009, “Modeling Financial Crises and Sovereign Risk” in Annual Review of Financial Economics, ed. by Robert Merton and Andrew Lo, *Annual Reviews*, (Palo Alto: California), Vol 1, pp. 117–144.

Gray, Dale F., and Samuel Malone, 2008, *Macrofinancial Risk Analysis*, Chapters 13 and 14 (London: Wiley Finance).

Gray, Gross, Paredes, Sydow, “Modeling Banking, Sovereign, and Macro Risk in a CCA Global VAR” IMF WP 13/218.

<http://www.imf.org/external/pubs/ft/wp/2013/wp13218.pdf>

### **Supplementary Reading:**

Gray, Dale F., A. A. Jobst, and S. Malone, 2010, “Quantifying Systemic Risk and Reconceptualizing the Role of Finance for Economic Growth,” *Journal of Investment Management*, Vol. 8, No. 2, pp. 90–110

The European Systemic Risk Board, *Annual Report*, 2012.

<http://www.esrb.europa.eu/>

Charles W. Calomiris, 2011, “An Incentive-Robust Program for Financial Reforms”, available at:

<http://www.cato.org/pubs/journal/cj31n3/cj31n3-10.pdf>

Zhou, J., V. Rutledge, W. Bossu, M. Dobler, N. Jassaud, and M. Moore, 2012, “From Bail-out to Bail-in: Mandatory Debt Restructuring of Systemic Financial Institutions”.

<http://www.imf.org/external/pubs/ft/sdn/2012/sdn1203.pdf>

Pazarbasioglu, C, J. Zhou, V. Le Leslé, and M. Moore, 2011, “Contingent Capital: Economic rationale and Design Features”, IMF Staff Discussion Notes No.11/1.

<http://www.imf.org/external/pubs/cat/longres.aspx?sk=24504.0>

Financial Stability Board, 2010, “Reducing the Moral Hazard of Systemically-Important Financial Institutions,” in FSB Recommendations and Times Lines, October 20 (Basel: Switzerland).

[http://www.financialstabilityboard.org/publications/r\\_101111a.pdf](http://www.financialstabilityboard.org/publications/r_101111a.pdf)

---

### **Wednesday, February 15, L–10: Systemic Risk Overview**

A Survey of Systemic Risk Analytics, Office of Financial Research Paper #1 2012 Bisias, Flood, Lo, and Valavanis (summary, skim first part).

[http://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=1983602](http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1983602)

Adrian, Tobias, and Markus K. Brunnermeier, 2008, “CoVaR,” Staff Reports 348, Federal Reserve Bank of New York.

Brownlees, Christian T., and Robert F. Engle, 2011, “Volatility, Correlation and Tails for Systemic Risk Measurement,” Working Paper (24 May), NYU Stern School of Business. Useful link with more information: <https://vlab.stern.nyu.edu/en/welcome/risk/>

Diebold, Francis X., and Kamil Yilmaz (2014), “On the network topology of variance decompositions: Measuring the connectedness of financial firms”, *Journal of Econometrics* 182, No. 1: 119-134.

Diebold, Francis X., Liu, L. and Kamil Yilmaz (2015), “Estimating Global Bank Network Connectedness”, Koç University-TUSIAD Economic Research Forum, Working Paper No: 1512, July. Useful link with more information: <http://financialconnectedness.org/indices.html>

Espinosa-Vega, Marco A., and Juan Solé, 2011, “Cross-border Financial Surveillance: A Network Perspective,” *Journal of Financial Economic Policy*, Vol. 3, No. 3, pp. 182–205.

Hamilton, David T., Hughes, Tony, and Samuel W. Malone, 2005, “Measuring Systemic Risk in Southeast Asian Financial System,” Moody’s Analytics. Useful link with more information:  
<https://www.economy.com/systemic-risk>

Jobst, Andreas A., and Dale F. Gray, 2013, “Systemic Contingent Claims Analysis – Estimating Market-Implied Systemic Risk,” IMF Working Paper No. 13/54

Segoviano, Miguel A., and Charles A. E. Goodhart, 2009, “Banking Stability Measures,” IMF Working Paper No. 09/04

---

### **Wednesday, February 15, L-11: Modeling Interconnections and Systemic Risk**

Chen, Q., D. Gray, P. N’Diaye, and H. Oura, “International Transmission of Bank and Corporate Distress” IMF Working Paper No. 10/124.  
<http://www.imf.org/external/pubs/ft/wp/2010/wp10124.pdf>

Gephi: The Open Graph Viz Platform. *Gephi is the leading visualization and exploration software for all kinds of graphs and networks. Gephi is open-source and free.*  
<https://gephi.org/>

Node XL: NodeXL Basic is a free, open-source template for Microsoft® Excel® 2007, 2010, 2013 and 2016 that makes it easy to explore network graphs.  
<https://nodexl.codeplex.com/>

---

### **Wednesday, February 15, L-9: Country Case Studies**

Handouts

#### ***Supplementary Reading:***

Garcia, C., Dale F. Gray, L. Luna, and J. Restrepo, 2011, “Incorporating Financial Sector Risk into Monetary Policy Models: Application to Chile”, IMF Working Paper  
<http://www.imf.org/external/pubs/ft/wp/2011/wp11228.pdf>

---

### **Thursday, February 16, C-2: Presentation by Selected Participants: Own Country Experiences**

No reading required.

---

### **Thursday, February 16, Guest Lecture: Outlook for Asian Banks and Corporates (Guest Lecturer, Handouts will be distributed before the lecture)**

No reading required.