

IMF – Joint Vienna Institute (JVI)

**Course on Systemic Macro Financial Risk
Analysis (JVI.18.09)**

April 16 – 27, 2018

FINAL READING LIST

Monday, April 16, L–1: Causes and Stages of the Financial Crises; Financial Sector Surveillance

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>

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

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).

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

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/index.htm>

———, 2013. *Fact sheet: The Financial Sector Assessment Program*.

<http://www.imf.org/external/np/exr/facts/fsap.htm>

———, *Global Financial Stability Report*, various issues.

<http://www.imf.org/external/pubs/ft/gfsr/>

Supplementary Reading

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

Andrew Sorkin 2010 *Too Big to Fail*

Monday, April 16, L-2: Systemic Risk Monitoring

European Systemic Risk Board (2018), “ESRB risk dashboard”, March.

<https://www.esrb.europa.eu/pub/rd/html/index.en.html>

Basel Committee of Banking Supervision (BCBS), (2012), “Models and Tools for Macroprudential Analysis,” May.

https://www.bis.org/publ/bcbs_wp21.htm

Blancher, N., Mitra, S., Morsy, H., Otani, A., Severo, T., and L. Valderrama (2013), “Systemic Risk Monitoring (“SysMo”) Toolkit – A User Guide

<https://www.imf.org/external/pubs/cat/longres.aspx?sk=40791>

European Central Bank (2012), “CISS – A Composite Indicator of Systemic Stress in the Financial System”, Working Paper No. 1426, March.

<https://www.ecb.europa.eu/pub/pdf/scpwps/ecbwp1426.pdf>

Supplementary Reading:

Tarullo, D. K, 2011, “Regulating Systemic Risk,” Speech, (2011) *Credit Markets Symposium*, North Carolina, Charlotte, March 31, 2011, Board of Governors of the Federal Reserve System

<http://www.federalreserve.gov/newsevents/speech/tarullo20110331a.htm>

Monday, April 16 L-3: Extracting Information from Market Prices and CCA

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

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

Monday, April 16, L-4: Systemic Risk Models – CoVaR and related models

Adrian, T. and M. Brunnermeier, (2016), “CoVaR”, *American Economic Review* 106 (7), pp. 1705–1741.

Bisias, D., Flood, M., Lo, A., and Stavros Valavanis (2012), “A Survey of Systemic Risk Analytics”, *Office of Financial Research (OFR) Working Paper* 01, January 5.

European Banking Authority (2014), “Guidelines on criteria for the assessment of O-SIIs”, EBA/GL/2014/10.

[https://www.eba.europa.eu/.../EBA-GL-2014-10+\(Guidelines+on+O-SIIs+Assessment\)](https://www.eba.europa.eu/.../EBA-GL-2014-10+(Guidelines+on+O-SIIs+Assessment))

European Systemic Risk Board (2016), “The ESRB risk dashboard: an overview”, Issue 18, December 22.

<https://www.esrb.europa.eu/pub/rd/html/index.en.html>

European Systemic Risk Board (2016), “Annex I to the ESRB risk dashboard – Methodological Annex”, December.

https://www.esrb.europa.eu/pub/pdf/dashboard/20160630_annex1.en.pdf

European Systemic Risk Board (2016), “Annex II to the ESRB risk dashboard – Description of the indicators”, December.

https://www.esrb.europa.eu/pub/pdf/dashboard/140925_dashboard_annex2.pdf

International Monetary Fund (2018), “Belgium: Financial System Stability Assessment— Technical Note - Stress Testing the Banking and Insurance Sectors”, IMF Country Report No. 18/69

<https://www.imf.org/en/Publications/CR/Issues/2018/03/08/Belgium-Financial-System-Stability-Assessment-Technical-Note-Stress-Testing-the-Banking-and-45705>

López-Espinosa, G, A. Moreno, A. Rubia, and L. Valderrama, (2012), “Short-term wholesale funding and systemic risk: A global CoVaR approach”, *Journal of Banking and Finance*, vol. 36, pp. 3150-3162

Supplementary Reading:

Acharya, V, R Engle and M Richardson (2012): “Capital shortfall: a new approach to rankings and regulating systemic risks”, *American Economic Review*, vol. 102, no 3, pp 59–64.

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.

<https://vlab.stern.nyu.edu/en/welcome/risk/>

López-Espinosa, G, Valderrama L., and M. Anton (2013), “Good for one, bad for all: Determinants of individual versus systemic risk”, *Journal of Financial Stability*, vol. 9, pp. 287-299.

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

<https://www.imf.org/external/pubs/ft/wp/2009/wp0904.pdf>

Tuesday, April 17, L-5 and Wednesday April 18, L-9: Risk-Adjusted Balance Sheets and Contingent Claims Analysis (CCA) for Risk Analysis with Applications

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. and S. Malone, 2012, “Sovereign and Financial Sector Risk: Measurement and Interactions” *Annual Review of Financial Economics*, 4:9.

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->

Tuesday, April 17, L–6/7: Overview and Developments in Solvency Stress Testing

International Monetary Fund (2016), “Solvency Stress Testing Framework: User Guide. Version 2.0”.

Hard copies will be distributed in class.

Supplementary Reading:

Basel Committee on Banking Supervision (2009): Principles for sound stress testing practices and supervision, May.

<https://www.bis.org/publ/bcbs155.pdf>

CEPR Press (2016), “Stress Testing and Macroprudential Regulation - A Transatlantic Assessment”, edited by Ronald W. Anderson.

https://risk.econ.queensu.ca/wp-content/uploads/.../Anderson-Stress_testing_eBook-2016.pdf

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>

———, (2012). *Macrofinancial Stress Testing—Principles and Practices*.

www.imf.org/external/np/pp/eng/2012/082212.pdf

Tarullo D. K., (2014), “Stress Testing after Five Years”, June.

<https://www.federalreserve.gov/newsevents/speech/tarullo20140625a.htm>

Tuesday, April 17, L-8: Insurance Stress Testing

Jobst, A., N. Sugimoto, T. Broszeit, 2014, *Macroprudential solvency stress testing of the insurance sector*, IMF WP/14/133

<http://www.imf.org/external/pubs/ft/wp/2014/wp14133.pdf>

EIOPA, 2016a, *Insurance Stress Test 2016 – Technical Specifications*

<https://eiopa.europa.eu/Publications/Surveys/EIOPA-BoS-16-109%20Insurance%20ST2016%20Technical%20Specifications.pdf>

EIOPA, 2016b, *EIOPA 2016 Insurance Stress Test Report*

<https://eiopa.europa.eu/Publications/Surveys/EIOPA-BOS-16-302%20Insurance%20stress%20test%202016%20report.pdf>

EIOPA, 2018, *EIOPA Risk Dashboard 2017-Q3*

<https://eiopa.europa.eu/Publications/Standards/EIOPA-BoS-18-037%202017Q3%20.pdf>

ESRB, 2015, *Report on systemic risks in the EU insurance sector*

https://www.esrb.europa.eu/pub/pdf/other/2015-12-16-esrb_report_systemic_risks_EU_insurance_sector.en.pdf (plus annexes)

Geneva Association, 2010, *Systemic risk in insurance: An analysis of insurance and financial stability*

https://www.genevaassociation.org/media/99228/ga2010-systemic_risk_in_insurance.pdf

IAIS, 2013, *Macroprudential policy and surveillance in insurance*
<http://www.iaisweb.org/page/supervisory-material/financial-stability-and-macroprudential-policy-and-surveillance/file/34258/mps-report-18-july-2013>

Supplementary Reading:

Columbia Business School Center for Excellence in Accounting and Security Analysis, 2010, *Analysis and valuation of insurance companies*
<http://www.columbia.edu/~dn75/Analysis%20and%20Valuation%20of%20Insurance%20Companies%20-%20Final.pdf>

Wednesday, April 12 L–9: Sovereign Risk Analysis and Banking-Sovereign-Macro 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>

Gray, D. F., and A. A. Jobst, 2013, “Systemic Contingent Claims Analysis –Estimating Market-Implied Systemic Risk” IMF Working Paper 13/54 (Washington: International Monetary Fund).

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

Wednesday, April 18, L–11: Modeling Contagion and Graph Representation

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. <http://financialconnectedness.org/indices.html>

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/>

Supplementary Reading:

Acemoglu, D, A Ozdaglar and A Tahbaz-Salehi (2015): “Systemic risk and stability in financial networks”, *American Economic Review*, vol 105, no 2, pp 564–608.

Chen, Q., D. Gray, P. N'Diaye, and H. Oura, (2010) “International Transmission of Bank and Corporate Distress” IMF Working Paper No. 10/124.

<http://www.imf.org/external/pubs/ft/wp/2010/wp10124.pdf>

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, April 18, L–12: Modeling Interconnections and Feedbacks in Stress Testing and Systemic Risk Analysis

Basel Committee of Banking Supervision (2015), “Making supervisory stress tests more macroprudential: Considering liquidity and solvency interactions and systemic risk”, Working Paper 29, November.

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.

European Central Bank (2017), “STAMP€ Stress-Test Analytics for Macroprudential Purposes in the euro area”, edited by Stéphane Dees, Jérôme Henry and Reiner Martin, February.

<https://www.ecb.europa.eu/pub/pdf/other/stampe201702.en.pdf>

Friday, April 20, C–2: ECB’s Sensitivity Analysis of Interest Rate Risk in the Banking Book

European Central Bank (2017), “Sensitivity Analysis of IRRBB – Stress test 2017”, October.

https://www.bankingsupervision.europa.eu/about/ssmexplained/html/2017_stress_test_FAQ.en.html

Supplementary Reading:

Swiss National Bank (2016), “Financial Stability Report”

https://www.snb.ch/en/i/about/pub/oecpub/id/pub_oecpub_stabrep

Moody’s (2017), “Europe’s largest banks can deal with rising rates, but 17 are “vulnerable”, October.

Illes, A., Lombardi, M., and P. Mizen (2015). “Why did bank lending rates diverge from policy rates after the financial crisis?”, BIS Working Papers No. 486, February.

<https://www.bis.org/publ/work486.htm>

Friday, April 20, C–3: Bank of England’ Stress Testing Framework

Bank of England (2015), “The Bank of England’s approach to stress testing the UK banking system”, October.

<https://www.bankofengland.co.uk/financialstability/Documents/.../2015/approach.pdf>

Bank of England (2018), “Key Elements of the 2018 Stress Test”.

<https://www.bankofengland.co.uk/news/2018/march/key-elements-of-the-2018-stress-test>

Friday, April 20, C–4: Stress Testing Toolbox (Practical Application)

International Monetary Fund (2016), “Solvency Stress Testing Framework: User Guide. Version 2.0”.

Hard copies will be distributed in class.

Monday, April 23, L-17: Agent-based Models of Financial Stability

Valderrama, L. (2018), “Agent-Based Modeling for Stress Testing”, IMF Working Paper (forthcoming).

Aymanns, C., Farmer, D., Kleinnijenhuis, A., and T. Wetzler (2018), “Models of Financial Stability and Their Application in Stress Tests”,

https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3022752

Bookstaber, R (2012): “Using agent-based models for analyzing threats to financial stability”, Office of Financial Research Working Paper No. 03, December.

Supplementary Reading:

CRISIS Project for Financial Stability (2014).

<http://www.crisis-economics.eu/>