

**RPRD 802 Financial Institution Theory and Practice**  
**Draft: August 11, 2017**

**Fall 2017**

**Frank Milne**

**Overview:**

This course provides an overview of the banking, insurance and financial institution literature which has attempted to understand the recent financial crisis. The post crisis literature is voluminous and of varied quality. It is easy to become confused by the plethora of arguments, models and evidence covered in the large number of articles, reports and books. Any such course must be very selective and requires judgment in selecting what is important, especially given the time constraints of a one semester course. I have included good recent survey papers or books on important areas, so that the student can explore topics in greater depth. As our understanding of various aspects of the crisis is evolving, the good student should read the surveys to understand the depth and subtlety of some of the issues.

To understand the essential issues, we will spend the first half of the course exploring key ideas from the microeconomics of banking, insurance and financial institutions that is surveyed in the graduate text, Freixas and Rochet, the insightful monograph by Shin, the banking surveys in Berger, Molyneaux and Wilson, Thakor and Boot, and the shrewd observations on insurance by Plantin and Rochet. Without this background, the recent literature can be understood only at a superficial level. Much of the recent, careful analysis builds on theory and empirical observation from this earlier literature.

The second half of the course surveys key articles and books attempting to understand the causes and implications for the real and financial sectors. As our understanding evolves through research, various mechanisms and events can be viewed in different ways, highlighting various incentives, market reactions, etc.

This course complements the Risk Management Theory and Applications RPR 801 course in providing an overview of how the banking and financial intermediation industry is embedded in a market system. Therefore it provides a solid foundation for analyzing systemic risks, a risk that lies outside the traditional analysis of financial risk management.

The Financial Regulation RPR 803 course draws on the Financial Institutions literature to address market failures and regulatory responses.

I will assume that you have read the book by Mervyn King, *The End of Alchemy: Money, Banking, and the Future of the Global Economy* (2016) (2017:pbk) for a Bank of England Governor's view of the Crisis and Regulation.

**Basic Texts:**

Freixas and Rochet, *Microeconomics of Banking*. MIT Press (Second Edition) 2008.

Shin, *Risk and Liquidity* Oxford University Press 2010.

**Other References that will be cited (extracts will be posted as pdfs on our website):**

Berger, Molyneux, and Wilson,(eds.) *The Oxford Handbook of Banking*, (Second Edition), OUP, 2015.

Dionne, *Handbook of Insurance*, (Second Edition) Springer, 2014.

Greenbaum, Thakor and Boot, *Contemporary Financial Intermediation*, (Third Edition) Academic Press, 2016.

Plantin, Rochet, *When Insurers Go Bust: An Economic Analysis of the Role and Design of Prudential Regulation*, Princeton University Press, 2007.

Thakor, Boot, (eds.) *Handbook of Financial intermediation and Banking*, North-Holland 2008.

Zweifel and Eisen, *Insurance Economics*, Springer, 2012.

**Assessment: There are three components:**

- 1. 30% For a Midterm exam.**
- 2. 30% class presentation/lecture in the second half of the term on one topic on the reading list.**
- 3. 40% Final Examination.**

### **A. Pre-Crisis Analysis of Banking, Finance and Insurance:**

Contrary to popular discussion, long before the 2007-9 crisis, there existed a voluminous literature that explored the various functions of financial institutions, their interaction with the real economy and financial crises. For a deep understanding of the history, evolution and characteristics of financial intermediation and systemic financial risks, the basics of this literature are essential.

#### **Topics:**

##### **1. Structure of the US and Canadian Financial Systems:**

Greenbaum, Thakor and Boot (2016) Ch.2

McKeown, "An Overview of the Canadian Banking System: 1996 to 2015", WP 2017.

##### **2. Conventional Asset Pricing Models have a Redundant Financial Sector:**

F&R Ch.1

Allen, Carletti and Gu, "The Role of Banks in Financial Systems" Ch.2 in Berger, Molyneux and Wilson (eds.), 2015.

Greenbaum, Thakor and Boot (2016) Ch.3

##### **3. Financial Institutions as Economizers of "Transaction Costs": FI's and the Coexistence of Financial Markets**

F&R Ch.2

Allen, Carletti and Gu, "The Role of Banks in Financial Systems" Ch.2 in Berger, Molyneux and Wilson (eds.), 2015

Boot and Thakor, "Commercial Banking and Shadow Banking: The Accelerating Integration of Banks and Markets and its Implications for Regulation", Ch.3 in Berger, Molyneux and Wilson (eds.), 2015

##### **4. The Industrial Organization Approach to Banking:**

F&R Ch.3

Hughes and Mester, "Measuring the Performance of Banks: Theory, Practice and Evidence", Ch. 10 in Berger, Molyneux and Wilson (eds.) 2015

Anderson and Joeveer, "Bankers and Bank Investors: Reconsidering the Economies of Scale in Banking", LSE working paper, July 2013.

Degryse, Avecedo and Ongena, "Competition in Banking", Ch.25 in Berger, Molyneux and Wilson (eds.) 2015.

Van Hoose, D. *The Industrial Organization of Banking: Bank Behavior, Market Structure, and Regulation*, Springer, 2010. (This is a good basic textbook on IO, Banking and Regulation, assuming an MA level in micro theory.)

5. **The Borrower-Lending Relationship: Debt Contracts, Default Risk and Incentives.**
  - A. **Overview of Corporate Finance:**  
Tirole, *The Theory of Corporate Finance*, Princeton Univ. Press, 2006. Cs.1 & 2.
  - B. **Why is Credit Structured the Way it Is?:**  
Roberts and Sufi “Financial Contracting: A Survey of Empirical Research and Future Directions”, *Annual Review of Financial Economics*, 2009
  - C. **Theory:**  
F&R Ch. 4.  
Fulghieri and Goldman, “The Design of Debt Contracts” Ch.1 in Thakor and Boot eds. 2008
  - D. **Empirical Literature on Bankruptcy:**  
Hotchkiss, John, Mooradian, Thorburn, “Bankruptcy and the Resolution of Financial Distress”, in Eckbo (ed.) *Handbook of Empirical Corporate Finance*, Vol. 2 Elsevier 2008.
  
6. **The Macroeconomic Consequences of Financial Imperfections:**  
F&R Ch.6 (This is classic material and has dated since the crisis – we will explore more recent material in class and in Section C.3 below.)  
(Stephen Snudden’s lecture will provide a survey of recent empirical macro models used by government agencies for policy and forecasting.)
  
7. **Individual Bank Runs, Systemic Risk and the Lender of Last Resort:**  
F&R Ch.7  
Freixas and Parigi “Lender of Last Resort and Bank Closure Policy: A Post Crisis Perspective” Ch.20 in Berger, Molyneux and Wilson (eds.) 2015  
Caprio and Honohan, “Banking Crises: Those Hardy Perennials”, Ch.28 in Berger, Molyneux and Wilson (eds.) 2015
  
8. **The Basics of Insurance Companies and Risks of Failure:**  
Beneplane and Rochet, *Risk Management in Turbulent Times*, OUP 2011, Ch.5.  
Plantin and Rochet, (An excellent introduction to the financial risks for an Insurance Company. It covers key issues that should be of concern to regulators.)  
Zweifel and Eisen, *Insurance Economics*, Springer, 2012. (This is a very good survey of Insurance Economics that covers a broader range of topics than P&R.)  
Dionne, *Handbook of Insurance*, (Second Edition) Springer, 2014.(This handbook provides an excellent overview of classic and recent issues in Insurance.
  
9. **Insurance and Systemic Risks:**  
“The Insurance Industry – Trends and Systemic Risk Implications” Ch.3 in IMF Financial Stability Report, April 2016.  
Thimann, “How Insurers Differ from Banks: A Primer on Systemic Regulation,SRC Special Paper No.3 2014.

## **B. The Crisis: First Views:**

### **1. The Popular View: Economists Did Not See it Coming :**

Krugman, "How Did Economists Get it So Wrong?" New York Times, Sept 6, 2009.

### **2. The Reality: Some Did See the Risks:**

Hellwig (1998), "Banks, Markets and the Allocation of Risks in an Economy" *Journal of Institutional and Theoretical Economics*.

White, "Procyclicality in the financial system: do we need a new macrofinancial stabilization framework?" BIS WP 193. 2006

Rajan "Has Financial Development Made the World Riskier?" Kansas City Federal Reserve, 2005.

### **3. Early Discussions of the Crisis:**

Milne "Anatomy of the Credit Crisis: The Role of Faulty Risk Management Systems," C.D. Howe Institute Commentary, No. 269, July 2008.

Hellwig, "Systemic Risk in the Financial Sector: An Analysis of the Subprime-Mortgage Financial Crisis", Max Planck Inst, 2008.

Brunnermeier, "Deciphering the Liquidity and Credit Crunch 2007-2008", *Journal of Economic Perspectives*", Winter 2009.

### **4. Canada's Asset Backed Commercial Paper Crisis:**

Chant "The ABCP Crisis in Canada: The Implications for the Regulation of Financial Markets" Research Study Prepared for the Expert Panel on Securities Regulation, 2009.

Halpern, Cakebread, Nicholls and Puri, *Back from the Brink*, University of Toronto Press. 2016. Chs.1&12.

(This is a more detailed discussion of the Canadian ABCP crisis.)

## **C. More Considered Views of the Crisis:**

### **C.1 Asset Market Frictions and Asset Bubbles: What We Know and Do Not Know:**

#### **A. Surveys:**

Brunnermeier and Oehmke "Bubbles, Financial Crises, and Systemic Risk" in Constantinides and Harris (eds.) *Handbook of the Economics of Finance*, Amsterdam, (2013)

Xiong, "Bubbles, Crises and Heterogeneous Beliefs" Ch.24 in Fouque and Langsam (eds.), *Handbook of Systemic Risk*, CUP 2013.

Scheinkman, *Speculation, Trading and Bubbles*, Columbia University Press, 2014. (This short book and comments complements the Xiong (2013) survey.)

## **B. Market Frictions, Inefficiencies and the Second Best: Old Theory Rediscovered:**

Hart, (1975) “On the Optimality of Equilibrium when Market Structures are Incomplete”, *Journal of Economic Theory*, 11, 418-443.

Milne and Shefrin (1987), “Information and Securities: A Note on Pareto Dominance and the Second Best”, *Journal of Economic Theory*, 43. 314-328.

## **C. The '87 Stock Market Crash and Theories of Asset Prices: Some Lessons: Gennotte and Leland (1990),”Market Liquidity, Hedging and Crashes” *American Economic Review*, December, 999-1021.**

### **1. Early Warning Indicators of Financial Stress.**

Chamon and Crowe, “Predictive Indicators of Financial Crises” Ch. 34 in Caprio (ed.) *The Evidence and Impact of Financial Globalization* Academic Press 2013  
Shin “Procyclicality and the Search for Early Warning Indicators”, IMF Working Paper, 2013.

Drehmann and Juselius “Evaluating Early Warning Indicators of Banking Crises: Satisfying Policy Requirements”, BIS WP No, 412, 2013.

### **2. Meditations on the US Housing Crisis: The Role of Credit:**

Levitan and Wachter “Explaining the Housing Bubble” MPRA Working Paper, 2012.

Mian and Sufi, *House of Debt*, University of Chicago Press. 2014 (A readable summary of recent empirical research on regional US Real Estate markets, their interaction with the wider economy, and related topics.) Chs. 1,2,3 & 8.

Calomiris and Haber, *Fragile by Design: The Political Origins of Banking Crises and Scarce Credit*, Princeton University Press.2014. (A history of banking, banking crises and the interaction with politics and regulation. It explains the redistributive forces that drive regulatory capture and incentives for bailouts.) Ch.2 for a summary of their argument.

### **3. Sovereign Risk:**

Bulow and Rogoff, “Why sovereigns repay debts to external creditors and why it matters” (2015) <http://www.voxeu.org/article/why-sovereigns-repay-debts-external-creditors-and-why-it-matters>.

Bulow and Rogoff, “The Modern Greek Tragedy” (2015) <http://www.voxeu.org/article/modern-greek-tragedy>.

Udaibir S. Das, Michael G. Papaioannou, and Christoph Trebesch, “Sovereign Debt Restructurings 1950–2010: Literature Survey, Data, and Stylized Facts” IMF WP 2012.

## **C.2 The Financial Crisis and Shadow Banking:**

### **1. Securitized Banking and the Run on the Repo:**

Casu and Sarkisyan, “Securitization”, Ch. 15 in Berger, Molyneux and Wilson (eds.) 2015.

Adrian, Ashcraft and Cetorelli, “Shadow Bank Monitoring”, Ch.16 in Berger, Molyneux and Wilson (eds.) 2015

Gorton and Metrick, “Securitized Banking and the Run on the Repo” *Journal of Financial Economics*, 2012.

Gennaiolia, Shleifer, Vishny “Neglected risks, financial innovation, and financial fragility” *Journal of Financial Economics*, 2012.

### **2. General Reflections on Crises: Solvency and Liquidity:**

Goldstein and Razin “Three Branches of Theories of Financial Crises” NBER WP 18670, 2013.

Goldstein “Empirical Literature on Financial Crises: Fundamentals vs Panics” Ch.36 in Caprio (ed.) *The Evidence and Impact of Financial Globalization* Academic Press 2013.

Pierret, “Systemic Risk and the Solvency-Liquidity Nexus of Banks” *International Journal of Central Banking*, June 2015.

Adrian, Discussion of “Systemic Risk and the Solvency-Liquidity Nexus of Banks”, *International Journal of Central Banking*, June 2015.

### **3. Recent reflections on Liquidity, Interactions with Insolvency and Regulation:**

Li, Milne and Qiu, “Uncertainty in an Interconnected Financial System, Contagion and Market Freezes”, *Journal of Money, Credit and Banking*, Vol.48, No.6 Sept. 2016.

Morris and Shin, “Illiquidity Component of Credit Risk”, *International Economic Review*, November 2016.

Bank of International Settlements, “Literature Review on Integration of Regulatory Capital and Liquidity Instruments” WP. 30 March 2016.

## **C.3 Financial Institutions and Systemic Risks in Macroeconomic Models:**

### **Theory:**

Brunnermeier, Eisenbach, and Sannikov “Macroeconomics with Financial Frictions: A Survey” in *Advances in Economics and Econometrics, Tenth World Congress of the Econometric Society*, New York, (2013). (A thorough survey of recent attempts to put financial institutions and their behavior into macro models.)

Gertler, Kiyotaki and Prestipino,” Wholesale Banking and Bank Runs in Macroeconomic Modeling of Financial Crises”” International Finance Discussion Papers 1156, 2016.

**Empirical Evidence:**

Taylor, “Credit, Financial Stability, and the Macroeconomy”, *Annual Review of Economics*, 2015.

**C.4 Central Banking Reactions to the Crisis:**

*Fundamentals of Central Banking: Lessons from the Crisis*, Group of Thirty, 2015.

**C.5 An Introduction to Network Models of Banking and Systemic Risks:**

Shin (2010) Ch.6, 7.

Elsinger, Lehar and Summer, “Network Models and Systemic Risk Assessment”, Oesterreichische Nationalbank April 2012

Upper, “Simulation Methods to Assess the Danger of Contagion in Interbank Markets” *Journal of Financial Stability*, 7, 2012, pp. 111-125.

Gai, *Systemic Risk: The Dynamics of Modern Financial Systems*, OUP, 2013, (A survey of recent network models and systemic risk from the Fin Stab group at the Bank of England.)

Haubrich and Lo (eds) *Quantifying Systemic Risks*, NBER 2013.

(Note: Both Gai and HL exploit the technology of large computational network models to track contagion through the system of interbank lending.)

**C.5 After the Crisis: Bank Resolution Issues**

**1. Too Big, Too Complex or Too Interconnected to Fail:**

Morrison, “Systemic Risks and the ‘Too Big to Fail’ Problem” *Oxford Review of Economic Policy*, 2011. (A good survey of the issues up to 2011.)

Stern and Feldman, *Too Big to Fail: the Hazards of Bank Bailouts*, Brookings Inst. 2004. (An early and readable summary of TBTF problems that was ignored at the time.)

Bath, Brummer, Li and Nolle, “Systemically Important Banks (SIBS) in the Post-Crisis Era”, Ch.26 in Berger, Molyneux and Wilson (eds.) 2015

**2. Resolution Regimes and Bank Strategies:**

DeYoung, Kowalik and Reidhill, “A Theory of Failed Bank Resolution: Technological Change and Political Economics”, *Journal of Financial Stability*, 9, pp. 612-627, 2013.

Ignatowski and Korte, “Wishful Thinking or Effective Threat? Tightening Bank Resolution Regimes and Bank Risk-Taking”, *European Central Bank*, Working paper series No.1659.2014

**3. Implicit Subsidies for Banks:**



Hoenig “Avoiding Taxpayer Funded Bailouts by Returning to Free Enterprise and Progrowth Bank Regulatory Policies” FDIC speech 2013. (See the attached bibliography and commentary of studies computing TBTF bank subsidies.)  
Noss and Sowerbutts, “The Implicit Subsidy of Banks” Bank of England, WP 2012 (An example of the methodology and discussion.)  
“How big is the Implicit Subsidy for Banks Considered Too Important to Fail?”  
Ch.3 *Global Financial Stability Report, IMF, 2014.*  
Acharya, Anginer, Warburton, “The End of Market Discipline? Investor Expectations of Implicit Government Guarantees”, WP 2014.