ECON 423: Topics in Financial Economics

Frank Milne

Office:	Mackintosh-Corry Hall A517
Email:	milnef@econ.queensu.ca
Phone #:	(613) 533-6494

Banking, the Real Economy and Financial Crises:

<u>Outline</u>:

This course considers how the banking industry works, the benefits it provides the economy, the way it interacts with the real economy, and possible problems and economic inefficiencies that can result in financial crises. To understand the causes of banking crises, you will require a battery of skills that we will introduce in this course. This will provide you with insights into the working of traditional commercial banking, the relatively recent role of investment banking and financial trading, and the constructive role of careful government prudential supervision.

Note: This course is an introductory course on banking and crises. The literature in this area is huge, some of it is accessible; and some of it is mathematically sophisticated, graduate material. I have included some reading that is beyond what I will cover in class, but it delves deeper into key topics.

I have tried to give you a useful, current survey without covering all aspects of the field. The literature is evolving with a number of controversial, unresolved issues. I will try to give you a flavour of that material.

<u>Prerequisites</u>:

We will assume knowledge of investment theory at the Econ 322 level.

<u>Weekly Exercises</u>:

There will be weekly practice exercises that will be discussed in tutorials.

<u>Examinations</u>:

Midterm (in class)	50%
Final	50%

Text: Greenbaum, Thakor and Boot, (eds.), ***Contemporary Financial Intermediation*** (4th Edition) Academic Press, 2019.

Apart from the text, class reading will be made available as pdf files during the term.

<u>Advanced References (Graduate Material)</u>:

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

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

Altman, Hotchkiss and Wang, ***Corporate Financial Distress, Restructuring and Bankruptcy.*** (Fourth edition), Wiley, 2019.

VanHoose, ***The Industrial Organisation of Banking.*** (Second Edition) Springer, 2017.

Milne, ***Finance Theory and Asset Pricing.*** (Second Edition), OUP 2003.

Federal Deposit Insurance Corporation (FDIC), 2017. ***Crisis and Response: An FDIC History, 2008–2013.*** Washington, DC: FDIC

Gjerstad and Smith, *Rethinking Housing Bubbles: The Role of Household and Bank Balance Sheets in Modeling Economic Cycles,* Cambridge University Press, 2014.

<u>Topics</u>:

1. **Introduction to the US and Canadian Banking Systems**:
   Greenbaum, Thakor and Boot Chapter 2.
   McKeown, "An Overview of the Canadian Banking System: 1996 to 2015", WP 2017.
   CIBC Bank Primer 2018.

2. **Basic banking theory and empirical Evidence**:
   Greenbaum, Thakor and Boot: Chapters 1, 3, 4.

3. **Interest Rate risk**:
Greenbaum, Thakor and Boot: Chapter 5.

4. **Liquidity Risk**:
Greenbaum, Thakor and Boot: Chapter 6.
Pedersen, *Efficiently Inefficient: How Smart Money Invests & Market Prices are Determined*, Princeton University Press, 2015. (A fascinating discussion of real-world security trading. Summer reading.)

5. **An Introduction to Lending, Credit Modelling by Banks and Rating Agencies**:

   (a) **Basics**:
   Greenbaum, Thakor and Boot: Chapter 7.

   (b) **Further Issues in Bank Lending**:
   Greenbaum, Thakor and Boot: Chapter 8

   (c) **Classic Credit Analysis: Cash Flows and Holding to Maturity**:
   Crean, (2012) Notes to Lectures 3, 6, 7.
   This traditional analysis is crucial for understanding bank lending to major corporations. Statistical Models provide a useful first pass, but traditional analysis is necessary to understand the sources of credit risks arising from the firm, industry and corporate financial structure.
   Altman, Hotchkiss and Wang, 2019. Chapters 1-4.

   (d) **Basic Corporate Credit models**:
   (Grad material) Chatterjee, "Modelling credit risk", Bank of England, 2015.
   https://www.bankofengland.co.uk/-/media/boe/files/ccbs/resources/modelling-credit-risk.pdf?la=en&hash=53B7332226FB2FB1B280B3D643DBB8AFF1FA5F32

   (e) **Limitations of Corporate Credit Models**:
   Altman, "Default Recovery Rates and LGD in Credit Risk Modelling and Practice" in Lipton and Rennie, *The Oxford Handbook of Credit Derivatives*, OUP 2011, (An excellent critique of the structural and reduced form credit models.

6. **<u>Funding Banks</u>**:

   (a) **Bank Funding, Bank Runs and Lender of Last Resort:**
   Greenbaum, Thakor and Boot Chapter 12.
   Freixas and Parigi "Lender of Last Resort and Bank Closure Policy: A Post Crisis Perspective" Ch.20 in Berger, Molyneux and Wilson (eds.) 2015

(b) **Bank Capital Structure**:
Greenbaum, Thakor and Boot: Chapter 13.
Miller, Merton H. (1995), "Does the M&M Proposition Apply to Banks?" *Journal of Banking and Finance*, 19, 483-489.
Anat R. Admati / Peter M. DeMarzo / Martin F. Hellwig / Paul Pfleiderer "Fallacies, Irrelevant Facts, and Myths in the Discussion of Capital Regulation: Why Bank Equity is Not Socially Expensive" WP. 2013.
http://homepage.coll.mpg.de/pdf_dat/2013_23online.pdf

7. **Stress Testing Banks**:

(a) **Basic Methodology**:
"Stress testing of Banks: an introduction", Bank of England, Quarterly Bulletin, 2016, Q3.
"Supervisory and bank stress testing: range of practices" BIS working paper Dec. 2017.

(b) **Limitations of the Methodology**:
Dowd, *Math Gone Mad: Regulatory Risk Modelling by the Federal Reserve,* Cato Institute, 2014. Pp.1-22.
Dowd, *No Stress: The Flaws in the Bank of England's Stress Testing Programme,* Adam Smith Institute. 2016.
(Dowd's provocative papers should be seen as a complement to the BIS discussion above.)

8. **Some Examples of Previous Crises**:
Greenbaum, Thakor and Boot: Chapter 12
Milne (overheads 2019)
Crean and Milne manuscript (2019) **(**Advanced)
Gjerstad and Smith, *Rethinking Housing Bubbles,* Ch.4. (This is an excellent analysis of the role of the 1920's real estate bubble and its collapse, leading into the Great Depression.)

9. **Real Sector Risks Creating Financial Risks:**

Milne (overheads for the Crean and Milne model)
Crean and Milne manuscript (2019) (Advanced)
Gjerstad and Smith, *Rethinking Housing Bubbles*, Ch.6-8. (This analysis complements Crean-Milne, but concentrates on real estate as the principal driver of major crises in Western economies.)

10. The 2007-2010 Financial Crisis and its Aftermath:

(a) **The Basics of the 2007-10 Crisis:**

Greenbaum, Thakor and Boot: Chapter 14
FDIC (2018) Chapter 1.
Mian and Sufi, *House of Debt*, University of Chicago Press. 2014 Chs. 1, 2, 3 & 8. (A readable summary of recent empirical research on regional US Real Estate markets.)
Mather and Sanchez, "The Unequal Recovery: Measuring Financial Distress by ZIP Code" 2019.
https://www.stlouisfed.org/publications/regional-economist/first-quarter-2019/unequal-recovery-measuring-financial-distress
Gjerstad and Smith, *Rethinking Housing Bubbles*, Ch.3. (An excellent account of the real estate bubble and crash and its impact on household and bank balance sheets.)

(b) **Failures of Risk Management Models and Systemic Risks**:

Milne "Anatomy of the Credit Crisis: The Role of Faulty Risk Management Systems," C.D. Howe Institute Commentary, No. 269, July 2008.
Milne, "The Complexities of Financial Risk Management and Systemic Risks", *Bank of Canada Review*, Summer, 2009.
Dowd, *Math Gone Mad: Regulatory Risk Modelling by the Federal Reserve*, Cato Institute, 2014.

11. Financial regulation before and after the Crisis:

(a) **Regulation**:

Greenbaum, Thakor and Boot: Chapters 15, 16.
FDIC (2018) Chapter 4.

(b) **Bank Resolutions and Receiverships:**

FDIC (2018) Chapter 6.