

## **Structure and Outline of the Course**

*The syllabus embedded on the front page of the Canvas website for our class provides up-to-date details about readings, assignments, and due dates.*

### **FNCE 2320/7320: International Banking**

The Wharton School  
University of Pennsylvania  
Spring Semester 2023

**Richard J. Herring**

#### **Office Hours**

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### **Course Objectives, Requirements and Grading**

This course focuses on international financial institutions, especially the activities of global, systemically important banks. We will examine how current and historical events are reshaping the industry and highlight the basic analytics of managing a financial institution's exposures to liquidity, credit, market, operational and reputational risk. Most classes will begin with a discussion of a current event related to course topics, usually based on news articles or a blog. I will post these brief articles along with some points to consider as you read the article in the Announcements section of Canvas at least 24 hours before the relevant class. Throughout the semester, we will discuss public policy issues facing the international financial system. The objective of this course is to provide you with a broad overview of the forces shaping international banking and a framework for understanding continuing changes.

The class format includes lectures and class discussions. I welcome your questions and comments. Indeed, your constructive classroom participation **will help boost your grade** if your final score is at a breakpoint in the distribution. More importantly, you will find that the more actively you participate in class discussions, the more easily you will master the material. To facilitate discussion, please display your name tent each class and take the seat you indicate on the seating chart we will establish when we meet in person.

The home page of Canvas brings together the reading list, lecture notes and other class materials with direct links to the underlying files or material on the web. Some readings and assignments will undoubtedly change over the semester as events warrant. You should regard the syllabus embedded in the home page as definitive regarding assignments, readings, and deadlines.

We will use excerpts from the latest edition of Financial Institutions Management: A Risk Management Approach 10/e (2021) by Anthony Saunders, Marcia Cornett, and Otgo Erhemajants (Text) as a basic reference largely for the last half of the course. I've arranged with the publisher for the relevant excerpts to be available from the UPENN bookstore in a printed

book: International Banking, FNCE-2320/7320 (Text), ISBN # 9781307871951. Or, if you're comfortable with the eBook you can purchase it at the following URL: [www.mcgrawhillcreate.com/shop](http://www.mcgrawhillcreate.com/shop) by entering ISBN # 9781307871968 in the Search box. If you encounter any issues purchasing the eBook, technical assistance is available at McGraw-Hill's support line 1-800-331-5094, press 2, press 2( Create), press 1 or <https://www.mheducation.com/highered/contact.html>

McGraw-Hill has assembled this book specifically for our class to provide you with a much cheaper alternative to the full textbook. If you have had no prior experience with the financial services industry or if you plan to build your career in the sector, however, you may want to acquire the complete, recently revised edition of S&C. It has become the industry standard.

### Assignments

I have provided several problem sets to help you think more deeply about the course material and enable you to gauge your progress. These will not be graded and thus should not be turned in, but you will have access to the correct answers alongside the assigned problems

Three team projects will be assigned to give you deeper exposure to analytic techniques related to the course. These projects will be graded. Please use Canvas to form teams **no larger than five** to work on these projects and to submit the completed projects. Undergraduates and MBA candidates may form teams together although differences in calendars may create practical difficulties.

The first project will involve using accounting and market data to compare the performance of two internationally active banks. This project will also take you into some of the more subtle details of understanding annual reports. The second project will require you to compute value at risk (VaR) measures for a bank portfolio. The third project involves evaluating a bank's balance sheet and income statement under alternative stress scenarios. This has become a fundamental technique of risk analysis and regulation.

International banking is an especially dynamic sector of the financial services industry and so I urge you to follow current developments in the *Financial Times*, *Wall Street Journal*, or *The New York Times*. Under the university's new interpretation of the fair use exemption to the copyright law, I will no longer be able to attach pdfs of articles from these sources. I will, however, be able to link the assignments directly to the websites of these newspapers. Fortunately, the university has arranged for free student subscriptions to the following newspapers:

- [Financial Times](#)
- [New York Times](#)
- [Wall Street Journal](#)
- [Washington Post](#).

Please subscribe now so that you will be able to follow the links when I assign them as background for our current events assignments. In addition, you will undoubtedly want to sample some of the ever-growing numbers of blogs, some of which are collected and linked on Canvas. A glossary of some of the more esoteric terms is also included. I regard both these resources as a collaborative project, so if you have found something useful that is not on the list (or a web link that is broken), please let me know, and we will update the list.

To encourage you to follow current events, every two weeks, you will be asked to submit an article (or blog) you have read that relates to concepts we have discussed in class, along with your critical evaluation of the implications of the article. Your choice may illustrate a concept we have discussed in class, or it may raise questions about conclusions reached in class. In either case, you should **type two concise paragraphs** explaining the relationship between the article and the course material and your evaluation of its implications. This exercise must be undertaken individually (not in teams) and must be turned in on Canvas by the date specified. Some of the most interesting articles will be posted in the Current Events folder on Canvas and discussed in class. Please note I have designed this exercise to sharpen your writing skills as well as to enhance your understanding of current developments. The folder **Current Events Writing Assignment Guidelines and Examples** contains the rules you should follow to improve the clarity of your writing as well as a sample submission. These rules may seem to be an annoying constraint at first, but by the end of the course, students generally feel that they have improved their ability to write concise, effective memos.

Given the size of our class, direct participation in class discussions can be challenging and so I want to provide an additional way for you to demonstrate your participation in class. Most days you will take a five-minute, automated quiz on Canvas during class. The quiz will usually consist of three straightforward multiple choice or True/False questions. In addition to providing you with a way to demonstrate your participation in class, it will give me immediate feedback about whether I need to clarify a topic or explain it in a different way. Each quiz will be based on material presented in class that day. When I compute your final grade, I will discard your lowest four scores. The remaining scores will receive a weight of 15% in the determination of your aggregate final score.

I will administer two mid-term exams through Canvas. You will be given 2 hours over a designated 24-hour period to complete the exam. You may choose to take the exam at any time over that period, but once you start the exam you must complete it within the 2-hour limit. The exams will require brief answers and critical thinking and will be open book. You may consult your notes and readings, **but not other people**. The University Honor Code applies.

The first mid-term examination will be available on **Tuesday, February 28, during a two-hour interval of your choosing from 12:00 am to 11:59 pm.** The second mid-term exam, **which will not** be cumulative, will be available on **Tuesday, April 25, over a two-hour interval of your choosing from 12:00 am to 11:59 pm EST.** Each mid-term exam will receive a weight of 25% in the determination of your aggregate final score. We will not have a final exam.

A Canvas folder contains mid-term exams (along with answers) for the past two years. I have posted them for two reasons: (1) These exams can help you judge quickly whether this course fits your needs and interests. If you find these concepts do not interest you, this course is not a good fit. (2) These exams also indicate the *kind* of questions I am likely to pose. Please be aware, however, that the course does change from year to year regarding concepts covered, emphases on topics, and current events covered, and so the questions on the exam you take will be different. Resist the temptation to study for the exams by focusing mainly on the sample exams rather than reviewing what we do in class. Note these exams emphasize *critical thinking*, not memorization or computation.

## Grading

Your grade will depend on your final score weighted as follows:

**27%** for the combined three team projects

**8%** for your analyses of current events

**25%** for your grade on the first mid-term exam

**25%** for your grade on the second mid-term exam

**15%** for class participation based on your performance on the brief in-class quizzes  
(I will drop the lowest four scores on your quizzes in computing your average.)

If your weighted final score falls on a borderline, it will be adjusted upward if you have participated actively and effectively in class discussions. Please note that even though undergraduates and MBAs will take the same exams and quizzes, they must be graded on separate scales. The Graduate Division requires that final grades adhere to a prescribed distribution. There is no prescribed distribution for undergraduates.

The Student Lunch Program has provided me with the opportunity to meet students informally, outside class. Not only do I enjoy getting to know you better, but it has proven to be an invaluable feedback mechanism for me as the course progresses. I will post sign-up lists on Canvas at several points in the semester to enable you to participate in the Program if you would like to do so.

## **I. OVERVIEW OF THE BUSINESS OF BANKING**

### **I.A. Introduction**

**Class note:** Overview of Banking

#### **Readings**

"Overview of the Banking Industry"

#### **Assignment**

Complete Questionnaire

Please make sure to answer all questions, **including question 8**

#### ***Additional Resources***

For a recent overview of the state of global banking see this excerpt from McKinsey's Global Banking Annual Review, December 21, 2022, pp.15-21.

### **I.B. How Banks Make Money (usually)**

**Class note:** How Banks Make Money (usually)

## Readings

Text, pp. 5 & 7-20

"Banks--the Basics" This is an excerpt (pp. 3-20) from a monograph, *Banking 101, Second Edition*, by Matt O'Connor, Robert Placet, Bernard von-Gizycki and Ricky Dodds, Deutsche Bank, 25 May 2017. (Hereafter, excerpts from this publication are designated DB.) This monograph, written by a leading bank security analyst and his team, remains the best practical guide linking bank decision-making to the balance sheet and income statement. The data are a bit stale, so focus on the concepts, not the statistics.

DB, "Credit"

DB, "Liquidity"

R.J. Herring, "Notes on Bank Accounting & Ratio Analysis"

## Additional Resources

If your recollection of accounting fundamentals is hazy, you may find it useful to watch a very basic review of income statement and balance sheet relationships on YouTube at: <http://www.youtube.com/watch?v=h3IMANILkw0>

The FDIC provides a compact summary of some accounting policies and links to resources dealing with several accounting issues in *Banker Resource Center: Accounting*, <https://www.fdic.gov/resources/bankers/accounting/>

If you want to dig into the details of OCI, see CFA Institute, "Analyzing Bank Performance: Role of Comprehensive Income"

If you have a particular interest in CECL, the Fed has published a brief note analyzing the impact of the adoption of CECL during the pandemic, "The New Accounting Framework Faces Its First Test/CECL During the Pandemic"

## I.C. Financial Analysis of Banks

Class note: Financial Ratio Analysis

## Readings

Text, "Financial Statement Analysis Using a Return on Equity (ROE) Framework" pp. 3-4 and 25-36.

DB, "Bank Stock Valuations"

## Additional Resources

DB, "Banks Stocks: How they are Valued"

(This reading is somewhat redundant with the prior reading, but it is interesting to see the different issues highlighted in valuing European stocks.)

FitchRatings, "Bank Rating Process," excerpt from Criteria Report: Bank Rating Methodology

Provisions and the allowance for loan loss are unique to banks. If you would like some extra help in mastering this concept, see this video produced by Breaking Into Wall Street: "The Loan Loss Allowance for Banks" FIG (22.17), which works through the accounting entries in detail: <https://breakingintowallstreet.com/kb/bank-modeling/allowance-for-loan-losses-for-banks-fig/>

The accounting rules for recording provisions and loan losses changed markedly in 2020-2021. The ABA, the bank lobbying organization, has posted a video on the new approach to establishing provisions and loan loss reserves, called Current Expected Credit Loss Standards (CECL). The video reflects the ABA's skepticism about the new accounting policy, but it is clear and informative:

<https://www.aba.com/advocacy/ourissues/cecl-implementation-challenges>

### **Assignment**

Financial Analysis of Banks

Answers to Financial Analysis of Banks

### **I.D. Regulatory Capital and the G-SIB Designation**

**Class note:** Regulatory Capital and the G-SIB Designation

#### **Readings**

"Bank Capital and Liquidity," M. Farag, D. Harland, and D. Nixon

DB, "Capital"

FDIC, "Definition of Regulatory Capital"

"2022 list of global systemically important banks (G-SIBs)," Financial Stability Board, November 2022

The Office of Financial Research has created an interactive chart to decompose the G-SIB score for each G-SIB and show how it has changed over the past three years: <https://www.financialresearch.gov/gsib-scores-chart/>. Please explore the interactive features.

#### **Additional Resources**

If you would like to examine a proposal to simplify regulatory capital, see: "The Evolving Complexity of Capital Regulation," R. Herring

Investopedia has posted a compact summary, *Risk-Based Capital Requirement: Definition, Calculation, Tiers* with links to other posts that provide a deeper explanation:

<https://www.investopedia.com/terms/r/risk-based-capital-requirement.asp>

BNPParibas/Fortis has produced a very simple video overview of Basel III that describes risk weights and liquidity requirements that we will study in the second half of the semester: [Basel III in 10 minutes](#)

## I.E. Optimal Capital and the Cost of Equity Capital

**Class note:** [Conceptual Issues: The Role of Capital & Cost of Equity](#)

### Readings

A. Berger, R. Herring and G. Szegö, 1995, "[The Role of Capital in Financial Institutions.](#)" Reprinted in The Regulation and Supervision of Banks, edited by Maximilian J.B. Hall, The International Library of Critical Writings in Economics, Edward Elgar Publishing Limited

["On the Relevancy of Modigliani and Miller to Banking: A Parable and Some Observations."](#) P. Pfleiderer

["What do the banks' target returns on equity tell us?"](#) Martin Wolf, Financial Times, September 25, 2011

### Additional Resources

NYU Prof. Damodaran posts frequently up-dated estimates of the cost of capital by sector in the U.S. He breaks out estimates for Regional Banks and for Money Center Banks based on the standard CAPM model:

[http://people.stern.nyu.edu/adamodar/New\\_Home\\_Page/datafile/wacc.htm](http://people.stern.nyu.edu/adamodar/New_Home_Page/datafile/wacc.htm)

["The Parade of the Bankers' New Clothes Continues: 23 Flawed Claims Debunked,"](#) A. Admati and M. Helwig

R.J. Herring, 2011, "[Fair Value Accounting and Financial Instability](#), Reprinted from Encyclopedia of Financial Globalization

## II. RISK MEASUREMENT AND MANAGEMENT

### II.A. VaR, the New Paradigm in Risk Management for Managing Market Risk

**Class Note:** [Managing and Regulating Market Risk](#)

### Readings

Text, pp. 38-63 & 69-73

G. Guill, 2007, "[Bankers Trust and the Birth of Modern Risk Management](#)"

R.J. Herring and T. Schuermann, "Capital Regulation for Position Risk in Banks, Securities Firms, and Insurance Companies," pp. 84-100

### **Additional Resources**

If you are comfortable with calculus and basic probability theory, you may find a series of lectures by Prof. Olivier Scaillet at the University of Geneva in *Coursera* useful.

"Defining the Value-at-Risk": <https://www.coursera.org/lecture/portfolio-risk-management/defining-the-value-at-risk-GY7jB>

"Computing the Value-at-Risk": <https://www.coursera.org/lecture/portfolio-risk-management/computing-the-value-at-risk-TPHQj>

"Defining the Expected Shortfall": <https://www.coursera.org/lecture/portfolio-risk-management/defining-the-expected-shortfall-4SsNo>

### **Assignment**

Text, pp.74-75, do problems 5, 6, & 18

[ANSWERS TO ASSIGNED MARKET RISK PROBLEMS](#)

## **II.B. Managing Interest Rate Risk**

**Class note:** The Treasury Function Part I: Funding the Bank Subject to Interest Rate Risk Constraints

### **Readings**

Text, pp. 80-95 & 123-153

### **Additional Resources**

Optional, but recommended for yield curve review, pp.104-110

Optional, but recommended for incorporating convexity into the Duration Model, pp.173-184

### **Assignment**

pp. 153-156, do problems 3,4, 16, 17, and 22.

[Answers to Assigned Interest Rate Risk Problems](#)

## **II.C. Managing Liquidity Risk**

**Class Note:** Liquidity Risk Management

### **Readings**

Text, pp. 186-211



“Bank Liquidity Requirements: An Introduction and Overview,” by Douglas Elliott, The Brookings Institution, June 23, 2014, read pp. 22-30, sample the rest according to your interest

### **Additional Resources**

Optional for those with advanced training in economics or a special interest in liquidity, a survey by Jean Tirole, the second French winner of the Nobel Prize in Economics:

J. Tirole, 2011, “Illiquidity and All Its Friends,” Journal of Economic Literature 49(2): pp.287-325

## **II.D. Managing Credit Risk**

**Class note:** Managing Credit Risk

### **Readings**

Text, pp. 224-265

### **Assignment**

Text, pp.266-270, do problems 20, 25, 27 & 38

[Answers to Assigned Credit Risk Problems](#)

## **III. FINANCIAL CRISES AND BANK REGULATION**

### **III.A. Real Estate Booms & Banking Busts**

**Class note:** Real Estate Booms and Banking Busts

### **Readings**

R. Herring and S. Wachter, “Real Estate Booms and Banking Busts: An International Perspective”

UBS Global Real Estate Bubble Index 2022 read "Key results," pp.4-6, scan "Methodology and Data," pp.22-25, and read detailed results according to your interest.

### **Additional Resources**

“Popping property bubbles: Choosing the right pin,” The Economist, August 30, 2014 (skim according to interest)

“Location, location, location: Global house prices” The Economist, October 7, 2015 (skim according to interest)

DBE, “Case study: the Celtic Tiger” (skim according to interest)

### **III.B. The Safety Net in Principle**

**Class note:** The Safety Net in Principle: An International Comparative Perspective

### Readings

P. Tucker, "The lender of last resort and modern central banking: principles and reconstruction," in BIS Papers, No. 79, pp. 10-42

### Additional Resources

Keoun and P. Kuntz, "Wall Street Aristocracy Got \$1.2 Trillion from Fed," Bloomberg.com, 22 August 2011

DBE, "The Lender of Last Resort: the ECB"

T. Humphrey, "Lender of Last Resort: What it is, whence it came and why the Fed isn't it," Cato Journal, Spring 2010, pp. 333-364.

### Assignment

The Safety Net

## III.C. Evolution of the Regulation of Credit Risk: Basel I, II & III

**Class Note:** Basel I, II, & III: the RWA Denominator

### Readings

"Bank Regulatory Capital: Why We Need It," Breaking into Wall Street

"Standardized Approach," FDIC, pp. 21-35.

DavisPolk interactive risk-weight tool. This tool enables you to specify a particular exposure and it will provide the relevant Basel III Standardized Risk Weight

### Additional Resources

Sample according to your interest

For a glimpse at the politics of adopting the Basel framework, see R.J. Herring, "The Rocky Road to Implementation of Basel II in the United States"

The Basel Committee on Banking Supervision has posted a short video that provides an overview and guide to the consolidated Basel Framework with links to all of the key documents: <https://www.bis.org/bcbs/publ/d462.htm>

For a detailed overview, you may want to watch a lecture at BTRM by Chris Westcott, a banker with decades of experience at Nat West and RBS, *Basel III Final Form -- A Concise Guide:* <https://www.youtube.com/watch?v=2qSwUek1peQ>

## III.D. The Regulatory Assault on Too Big to Fail: Living Wills, TLAC & Resolution Policy

**Class Notes:** The Regulatory Assault on Too Big To Fail: Living Wills, TLAC & Resolution Policy

## Readings

**“Safe to Fail,”** T. Huertas, May 2013

Resolution Plan Assessment Framework and Firm Determinations (2016)

“The Cross-Border Challenge in Resolving Global Systemically Important Banks,” J. Carmassi and R. Herring,” 2015

## Additional Resources

“TLAC, and Then Some....A preliminary assessment of the Federal Reserve’s NPR,” Morrison|Foerster, November 1, 2015

## IV. SHADOW BANKING AND DECENTRALIZED FINANCIAL INTERMEDIATION

### IV.A. Overview of Shadow Banking: Securitization

**Class Note:** Shadow Banking

#### Readings

S. Claessens, Z. Pozsar, L. Ratnovski, and M. Singh, “Shadow Banking: Economic and Policy,” pp. 1-36

D. Tarullo, “Thinking Critically About Non-Bank Financial Intermediation,” pp. 1-13, November 17, 2015

S. Fischer, “Financial Stability and Shadow Banks: What We Don't Know Could Hurt Us,” pp. 1-11, December 3, 2015

Financial Stability Board, “Global Shadow Banking Monitoring Report 2021,” December 16, 2021.

#### Additional Resources

For background on the relationship between regulation and the non-bank financial intermediation see:

P. Olson, “Regulation’s Role in Bank Changes,” pp. 13-20

N. Cetorelli, B. Mandel, and L. Mollineaux, “The Evolution of Banks & Financial Intermediation: Framing the Analysis,” pp. 1-12.

For more information about securitization see:

V. Bod and J. Santos, “The Rise of the Originate-To-Distribute Model and the Role of Banks in Financial Intermediation,” pp. 21-34

N. Cetorelli and S. Peristiani, “The Role of Banks in Asset Securitization,” pp. 47-63

For a comprehensive overview of RePo and Securities lending see:

Baklanova, Copeland, and McCaughrin, "Reference Guide to U.S. RePo and Securities Lending Markets," OFR, September 9, 2015

For shadow banking development in other domains see:

"Bringing Light Upon the Shadow, A Review of the Chinese Shadow Banking Sector, Andrew Sheng, Christian Edelmann, Cliff Sheng, and Jodie Hu, Oliver Wyamn/Fung Global Institute, 2015

"Non-banks Shake-up Dutch mortgages," The Economist, December 27, 2016

"Peer-to-peer lending, From the people, for the people," The Economist, May 9, 2015

"Virtual Currencies: Emerging Regulatory, Law Enforcement, and Consumer Protection Challenges," GAO Report, May 2014

*For those who enjoy learning by watching videos, two useful videos on Shadow Banking appear on YouTube: [http://www.youtube.com/watch?v=\\_mq1Nh1hIXk](http://www.youtube.com/watch?v=_mq1Nh1hIXk) and <http://www.youtube.com/watch?v=v3rfgkTAlho>*

*In addition, you may enjoy these videos on securitization by bionicturtledotcom:*

<http://www.youtube.com/watch?v=iTehIK4nF6w>

<http://www.youtube.com/watch?v=cuG4kcGu6tA>

[http://www.youtube.com/watch?v=Sac-qiZoU\\_0](http://www.youtube.com/watch?v=Sac-qiZoU_0)

<http://www.youtube.com/watch?v=KvG3X7KPb3M>

<http://www.youtube.com/watch?v=oWGY-NYzz0g>

*And just for fun (and for the amazing foresight of two comedians in the fall of 2007) watch: <http://www.youtube.com/watch?v=z-oIMJMGd1Q>*

## **IV.B. FinTech**

**Class Notes:** *FinTech Overview*

### **Readings**

#### **The FT crypto glossary**

*From Concept to Reality: How blockchain will reshape the financial services industry, The Economist Intelligence Unit for the UK Department for International Trade*  
*Cryptocurrencies and Public Policy: Key Questions and Answers, by Douglas Elliott, Oliver Wyman*

*"Regulating Digital Currencies: A Welcome First Step," Realtime Economic Issues Watch,*

*Peterson Institute for International Economics, by David Heller & Edwin Truman*  
*Assessment of Risks to Financial Stability from Crypto-assets, Financial Stability Board, February 2022*

FT video: *Can Crypto Currencies be Controlled?*

