

BUSFIN 7260 - FINANCIAL INSTITUTIONS Professor Isil Erel Spring 2022 - Term 2

Meeting Location and Times: Gerlach Hall Section 1 (4367): MW 1:00PM - 2:30PM; Section 2 (4569): MW 2:45PM - 4:15PM.

Professor: Isil Erel, David A. Rismiller Chair in Finance, Academic Director of the Risk Institute

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Email: erel@fisher.osu.edu

Office Hours on Zoom: by appointment

Course Webpage: on CarmenCanvas (Note: you might be seeing a different section number than your

registered one as both sections are combined on Carmen).

Course Description

This course is concerned with key problems that managers of financial institutions face, with a special focus on risk management. We will begin with an overview of financial institutions – how major types of institutions are structured, how this structure relates to their functions, and some industry trends. Next, we will focus on managing different types of risks: interest-rate risk, credit risk, and off-balance-sheet risk; emphasizing basic ideas, tools, and business applications. Then we will have a case discussion on bank mergers. We will also discuss the evolution of the financial services industry, causes and consequences of credit crises, and the response of the regulators. The course is essential to anyone planning a career in financial services or in an area such as consulting or corporate treasury that works closely with financial institutions.

Prerequisites

Students are expected to have a basic knowledge of finance, accounting, and statistics. Assignments will involve the use of personal computers (especially MS EXCEL) and/or calculators. For the final exam, *only non-programmable functions of your calculator* are allowed (no need to buy a new calculator if you have a financial one; please use the simple functions only!)

Required Reading

Course Packet [referred to as "CP" below], available at HBS Publishing. Please follow this link https://hbsp.harvard.edu/import/914606 and follow the instructions.

Recommended Reading

Saunders and Cornett [referred to as "SC" below], Financial Institutions Management: A Risk Management Approach, 10th edition, McGraw-Hill. The textbook is highly recommended even though it is not required. Please visit the McGraw Hill website below to view a selection of options available for rent or purchase:

 $\frac{https://www.mheducation.com/highered/product/financial-institutions-management-risk-management-approach-saunders-cornett/M9781260013825.html$

Supplemental Readings

Articles are available on the course webpage [referred to as "CW" below]. Please see the tentative course outline below for a list. Also, note that these readings are OPTIONAL. Students are strongly encouraged to read financial press to reinforce the applicability of the topics that we cover in class.

Mode of Delivery

The plan is to meet in the classroom for every lecture. I will post my PowerPoint slides on the course website before each class to help you follow the lectures and take notes. *Please remember that slides are not complete*. For completeness, you should attend the lectures/watch videos, which will also be posted on Canvas, and read the required readings.

Tayfun Tuzun (CFO, BMO Financial Group) and Helga Houston (CRO, Huntington Bank) will be our inperson guest speakers on April 18th and April 25th, respectively.

Grading

The final course grade will be allocated as follows:

Individual Class Participation 10%

Two Case Write-ups (in Groups) 30% (15% each)
Online Quizzes 20% (10% each)

Final Exam 40%

Attendance and participation requirements: I encourage you to speak up during classes and ask questions/make comments. Please, also let me know your questions in class, through email, or by participating in office hours.

Case Write-ups: Four cases ("GE and the Shadow Banking Landscape," "Deutsche Bank and the Road to Basel III," "Chase Manhattan Corporation: The Making of America's Largest Bank," and "Banc One Corporation: Asset and Liability Management") are available in the course packet and last two, as specified in the tentative course outline below, will be assigned for formal write-up. Detailed instructions on each case write-up will be available on the course website at Canvas.

Students are strongly encouraged (*but not required this year*) to form study groups to work on the cases that are assigned in the course. A study group may consist of *3 to 5 students*. You must email me a list of your group members by the beginning of the second week of classes, and groups may not be changed without my permission. You will have the opportunity (OPTIONAL!) to evaluate your team members at the end of the quarter. An evaluation sheet with a detailed explanation is posted on Canvas.

Optional Assignments: There will be problem sets, which will *not* be graded. They will be posted (with solutions) on the course website on Canvas. It is very important that you complete the homework problems in preparation for the exam. I will also post sample problems from the textbook and from old exams with solutions on Canvas.

Exams: There will be a final exam, which will be comprehensive in scope, including materials from every part of the course and two short online quizzes throughout the course. The exams will be closed book. You will need a calculator. You will be allowed one double-sided page of formulas (please see Canvas for an example) for the final. I will provide you the formula sheet with the exam.

Absences and Late Assignments

Absence from the exam or assignments will not be excused, except for the most serious circumstances. Such circumstances must be validated in writing by an appropriately accredited professional (e.g.,

medical doctor). Any unexcused absence from an exam will result in a grade of zero. Late assignments will not be accepted for credit, except for the most serious reasons as described above. As a matter of professional courtesy, please notify me in advance if you are unable to attend a particular class.

Regrading Policy

Grading errors will be corrected. All regrade appeals must be submitted within *one week after the graded test or assignment is returned*.

CarmenCanvas Access

You will need to use <u>BuckeyePass</u> (buckeyepass.osu.edu) multi-factor authentication to access your courses in Carmen. To ensure that you are able to connect to Carmen at all times, it is recommended that you do each of the following:

Register multiple devices in case something happens to your primary device. Visit the <u>BuckeyePass</u> - <u>Adding a Device</u> (go.osu.edu/add-device) help article for step-by-step instructions.

Request passcodes to keep as a backup authentication option. When you see the Duo login screen on your computer, click **Enter a Passcode** and then click the **Text me new codes** button that appears. This will text you ten passcodes good for 365 days that can each be used once.

<u>Install the Duo Mobile application</u> (go.osu.edu/install-duo) on all of your registered devices for the ability to generate one-time codes in the event that you lose cell, data, or Wi-Fi service.

If none of these options will meet the needs of your situation, you can contact the IT Service Desk at <u>614-688-4357 (HELP)</u> and IT support staff will work out a solution with you.

Technology Skills Needed for This Course

Basic computer and web-browsing skills

Navigating CarmenCanvas (go.osu.edu/canvasstudent)

CarmenZoom virtual meetings (go.osu.edu/zoom-meetings)

Academic Integrity Policy

All students are expected to abide by the Ohio State's Academic Integrity Policy:

Academic integrity is essential to maintaining an environment that fosters excellence in teaching, research, and other educational and scholarly activities. Thus, The Ohio State University and the Committee on Academic Misconduct (COAM) expect that all students have read and understood the university's Code of Student Conduct (studentconduct.osu.edu), and that all students will complete all academic and scholarly assignments with fairness and honesty. Students must recognize that failure to follow the rules and guidelines established in the university's Conduct and this syllabus may constitute "Academic Misconduct."

The Ohio State University's *Code of Student Conduct* (Section 3335-23-04) defines academic misconduct as: "Any activity that tends to compromise the academic integrity of the university or subvert the educational process." Examples of academic misconduct include (but are not limited to) plagiarism, collusion (unauthorized collaboration), copying the work of another student, and possession of unauthorized materials during an examination. Ignorance of the university's *Code of Student Conduct* is never considered an excuse for academic misconduct, so I recommend that you review the *Code of Student Conduct* and, specifically, the sections dealing with academic misconduct.

If I suspect that a student has committed academic misconduct in this course, I am obligated by university rules to report my suspicions to the Committee on Academic Misconduct. If COAM determines that you have violated the university's Code of Student Conduct (i.e., committed academic misconduct), the sanctions for the misconduct could include a failing grade in this course and suspension or dismissal from the university.

If you have any questions about the above policy or what constitutes academic misconduct in this course, please contact me.

Other sources of information on academic misconduct (integrity) to which you can refer include:

Committee on Academic Misconduct (go.osu.edu/coam)

Ten Suggestions for Preserving Academic Integrity (go.osu.edu/ten-suggestions)

Eight Cardinal Rules of Academic Integrity (go.osu.edu/cardinal-rules)

Copyright for Instructional Materials

The materials used in connection with this course may be subject to copyright protection and are only for the use of students officially enrolled in the course for the educational purposes associated with the course. Copyright law must be considered before copying, retaining, or disseminating materials outside of the course.

Creating an Environment Free from Harassment, Discrimination, and Sexual Misconduct

The Ohio State University is committed to building and maintaining a community to reflect diversity and to improve opportunities for all. All Buckeyes have the right to be free from harassment, discrimination, and sexual misconduct. Ohio State does not discriminate on the basis of age, ancestry, color, disability, ethnicity, gender, gender identity or expression, genetic information, HIV/AIDS status, military status, national origin, pregnancy (childbirth, false pregnancy, termination of pregnancy, or recovery therefrom), race, religion, sex, sexual orientation, or protected veteran status, or any other bases under the law, in its activities, academic programs, admission, and employment. Members of the university community also have the right to be free from all forms of sexual misconduct: sexual harassment, sexual assault, relationship violence, stalking, and sexual exploitation.

To report harassment, discrimination, sexual misconduct, or retaliation and/or seek confidential and non-confidential resources and supportive measures, contact the Office of Institutional Equity:

Online reporting form at <u>equity.osu.edu</u>, Call 614-247-5838 or TTY 614-688-8605, Or email <u>equity@osu.edu</u>

The university is committed to stopping sexual misconduct, preventing its recurrence, eliminating any hostile environment, and remedying its discriminatory effects. All university employees have reporting responsibilities to the Office of Institutional Equity to ensure the university can take appropriate action:

All university employees, except those exempted by legal privilege of confidentiality or expressly identified as a confidential reporter, have an obligation to report incidents of sexual assault immediately. The following employees have an obligation to report all other forms of sexual misconduct as soon as practicable but at most within five workdays of becoming aware of such information: 1. Any human resource professional (HRP); 2. Anyone who supervises faculty, staff, students, or volunteers; 3. Chair/director; and 4. Faculty member.

Your Mental Health

As a student you may experience a range of issues that can cause barriers to learning, such as strained relationships, increased anxiety, alcohol/drug problems, feeling down, difficulty concentrating and/or lack of motivation. These mental health concerns or stressful events may lead to diminished academic performance or reduce a student's ability to participate in daily activities. No matter where you are engaged in distance learning, The Ohio State University's Student Life Counseling and Consultation

Service (CCS) is here to support you. If you find yourself feeling isolated, anxious, or overwhelmed, <u>ondemand mental health resources</u> (go.osu.edu/ccsondemand) are available. You can reach an on-call counselor when CCS is closed at <u>614-292-5766</u>. **24-hour emergency help** is available through the <u>National Suicide Prevention Lifeline website</u> (suicidepreventionlifeline.org) or by calling <u>1-800-273-8255(TALK)</u>. The Ohio State Wellness app (go.osu.edu/wellnessapp) is also a great resource.

Student COVID-related Accommodation Process

The university is committed to supporting students and program participants with COVID-19 based risk factors. Student Life Disability Services, in conjunction with the Office of Institutional Equity, will work with students who are vulnerable to complications from COVID-19 to ensure that they have the necessary resources to participate in university life as safely as possible. Ohio State students from any campus may submit a COVID-related accommodation request. Students registered with Student Life Disability Services can work directly with their assigned Access Specialist to modify their accommodations or make additional COVID-based accommodation requests.

Disability Services:

The university strives to make all learning experiences as accessible as possible. In light of the current pandemic, students seeking to request COVID-related accommodations may do so through the university's request process, managed by Student Life Disability Services. If you anticipate or experience academic barriers based on your disability (including mental health, chronic, or temporary medical conditions), please let me know immediately so that we can privately discuss options. To establish reasonable accommodations, you should register with Student Life Disability Services. After registration, make arrangements with me as soon as possible to discuss your accommodations so that they may be implemented in a timely fashion.

SLDS contact information: slds@osu.edu; 614-292-3307; slds.osu.edu; 098 Baker Hall, 113 W. 12th Avenue.

Tentative Course Outline

This outline is tentative and subject to changes. Please refer to the course website on Carmen for updates on readings, sample problems, and case assignments. It is the students' responsibility to check the course website for updates and announcements.

Classes 1&2 Course Overview and Introduction to Financial Institutions March 2&7

March 2&/

Topics: Course Organization and Requirements

Commercial Banks Savings Institutions Finance Companies

Recommended Readings:

Saunders & Cornett ("S&C") Ch. 2, Appendix 2A, 2B

Supplemental Readings:

Financial Intermediation as Delegated Monitoring: A Simple Example (Diamond), RFB of Richmond Economic Quarterly, 1996 [Link at Course Website (referred to as "CW" below)]

Lessons from the Great Credit Crisis, S&P [CW]

Corporate Governance and Banks: What Have We Learned from the Financial Crisis? (Hamid Mehran, Alan Morrison, Joel Shapiro), 2011, Federal Reserve Bank of New York Working Paper.

For Some Examples of Recent Academic Research:

Does Fintech Substitute for Banks? Evidence from the Paycheck Protection Program (Isil Erel and Jack Liebersohn), 2020. NBER Working Paper.

A Theory of Risk Capital (Isil Erel, Stewart Myers, and James Read, Jr.), 2015, Journal of Financial Economics, 118/3, 620-635.

Why did Holdings of Highly-Rated Securitization Tranches Differ So Much Across Banks?, 2014, (Isil Erel, Taylor Nadauld, and Rene Stulz), Review of Financial Studies, 27/2, pages 404-453.

Governance, Risk Management, and Risk-Taking in Banks (Rene Stulz), 2014, Ohio State University Working Paper.

Class 3 Shadow Banking & Off-Balance-Sheet Banking

March 9

Topics: Shadow Banking

Off-Balance-Sheet Assets/Liabilities

Loan Commitments

Loan Sales

Required Reading: Case: GE and the Shadow Banking Landscape [CP]

Recommended Readings:

S&C Ch. 16, 18, and 26

Supplemental Readings:

Why Do Firms Borrow Directly from Nonbanks? (Chernenko, Sergey and Erel, Isil and Prilmeier, Robert), 2020, Fisher College of Business Working Paper.

Thinking Critically about Nonbank Financial Intermediation (Tarullo), The Brookings Institution, 2015 [CW]

The Economics of Structured Finance (Coval, Jurek, and Stafford), 2009 [CW]

Understanding the Securitization of Subprime Mortgage Credit (Ashcraft and Schuermann), 2008 [CW] Fussing and Fuming over Fannie and Freddie: How Much Smoke, How Much Fire? (Frame and White), 2005 [CW]

Classes 4&5 Banking Regulation

March 21&23

Optional Problem Set 1 is due on March 23!

Topics: Deposit Insurance

Capital Requirements (Basel Capital Accords)

Recommended Readings:

S&C Ch. 20 and Ch. 21

Supplemental Readings:

Basel "IV": What's next for banks? *McKinsey & Company Global Risk Practice, April* 2017 [CW] Savings and Loan Crisis (Ely), The Concise Encyclopedia of Economics [CW]

Class 6 A Case on Basel III

March 28

Required Reading: Case: Deutsche Bank and the Road to Basel III [CP]

Supplemental Readings:

Deutsche Bank: Still Struggling on Capital, WSJ [CW]

Deutsche Bank: What to Know, WSJ [CW]

Classes 7&8 Measuring Credit Risk

March 30 & April 4

ONLINE QUIZ (~30 minutes) - To be taken anytime 12noon-11:00pm on March 30!

Topics: Calculating Return on a Loan

CreditMetrics of JP Morgan (VaR)

RAROC Models

Recommended Readings:

S&C Ch. 10 and Appendix 11A

Recommended Reading:

Loan Primer, S&P /CW/

Cycles and the Credit Culture (Henry Mueller) [CW]

Dodd-Frank Stress Test Results [CW]

Optional Reading: If you want to learn about Moody's KMV, which is not covered in this class:

Modeling Default Risk (Crosbie and Bohn), *Moody's KMV*, 2003 [CW]

Class 9 Case: Chase Manhattan Corporation

April 6

Note: Case write-up is due!

Topics: Bank Mergers

Value Creation in Corporate Restructurings

Required Reading:

Case: Chase Manhattan Corporation: The Making of America's Largest Bank [CP]

Classes 10 Measuring Interest Rate Risk

April 11

Optional Problem Set 2 is due on April 11th!

Topics: The Case of Homeside Lending

Repricing GAP

Duration and Convexity

Recommended Readings:

S&C Ch. 8, Ch. 9, and Appendix 9B

Supplemental Readings:

NAB Lesson in How to Burn \$3 billion (Hooper), Radio National, 2001 [CW]

Classes 11 Hedging Interest Rate Risk

April 13

ONLINE QUIZ (~30 minutes) - To be taken anytime 12noon-11:00pm on April 13!

Topics: Duration GAP

Hedging with Interest Rate Futures Hedging with Interest Rate Swaps

Recommended Readings:

S&C Ch. 23 (pg.736-752) and Ch. 25 (pg.811-820)

Interest Rate Derivatives (Tufano and Headley), HBS Publishing, 1994 [CP]

Class 12 Guest Lecture: Tayfun Tuzun (CFO, BMO Financial Group)

April 18

Class 13 Case: Banc One Corporation

April 20

Note: Case write-up is due!

Topics: How Banks Measure and Control Their Interest-Rate Exposure

Interest Rate Derivatives

Required Reading:

HBS Case: Banc One Corporation: Asset and Liability Management [CP]

Recommended Reading:

Interest Rate Derivatives (Tufano and Headley), HBS Publishing, 1994 [CP]

Class 14 Guest Lecture: Helga Houston (CRO, Huntington Bank)

April 25

FINAL EXAM: Friday Apr 29 (4:00pm-5:45pm) or Monday May 2 (2:00pm-3:45pm)