NEW YORK UNIVERSITY STERN SCHOOL OF BUSINESS
Master of Science in Risk Management
Liquidity Risk
November 4, 2015

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Course Description

Liquidity is the ability of a firm to meet its cash obligations from a combination of existing cash reserves, asset sales, and new borrowing. Liquidity risk management is the art of balancing the existential danger of being caught without enough liquidity against the costs of maintaining liquidity.

While liquidity risk management has always been essential for financial firms, the spectacular and fatal losses of liquidity during the financial crisis of '07-'09 have greatly increased the focus of managers, regulators, and even the general public on this important branch of risk management.

This course introduces liquidity management with a case about the challenges posed by mutual fund redemptions. The fatal consequences of losing liquidity are then illustrated through the recent and notorious implosion of several financial institutions. With these building blocks and background, the course moves on to the practice of liquidity management at banks and broker-dealers along with the new liquidity regulatory regime. To conclude, a current practitioner will share experiences with and take questions from students.

Course Outline

I. Introduction and Overview
II. Case: Liquidity, Mutual Fund Flows, and Reflow Management, LLC
III. Recent and Dramatic Losses of Liquidity
- a. Northern Rock
- b. Bear Stearns
- c. MF Global

IV. Liquidity Management and Regulation at Banks and Broker-Dealers
- a. A Simple Example
- b. LIBOR-OIS as a Measure of Liquidity Risk
- c. Deutsche Bank
- c. Lehman Brothers: Reliable Secured Funding Model ('06)
- d. Regulatory Measures: Liquidity Coverage and Net Stable Funding Ratios
    - i. BNY Mellon

V. Guest Speaker (TBD)

Text and Materials

1. Evans, Richard B. and Michael Mills, "Liquidity, Mutual Fund Flows, and Reflow Management, LLC (UVA-F-1600), Darden Business Publishing, 2012.
2. Saunders, Anthony and Marcia Millon Cornett, <u>Financial Institutions Management: A Risk Management Approach</u>, Eighth Edition, McGraw-Hill Education, 2014.
3. Tuckman, Bruce and Angel Serrat, <u>Fixed Income Securities: Tools for Today's Markets</u>, Third Edition, John Wiley & Sons, Inc., 2012.
4. Tuckman, Bruce, <u>Liquidity Risk</u>, slide pack, 2015.

Assignments

1. Please read the following material **<u>before</u>** class:

    Saunders and Cornett (2014), Chapter 12
    Saunders and Cornett (2014), Chapter 18, pp. 538-539, 549-563
    Tuckman and Serrat (2012), Chapter 12, pp. 327-334

2. Please work *independently* and *individually* and submit answers to the following exercises and questions **<u>by the start of class on Wednesday 4 November</u>**:

    i) Saunders and Cornett (2014), p. 379, questions 1-7
    ii) Saunders and Cornett (2014), p. 563, question 6; p. 566, question 18. For both these questions, please include a few words for each asset or liability to explain your ranking.
    iii) Please describe briefly the benefits and risks to a broker-dealer of funding its positions with repurchase agreements.

3. Using the following questions, please **<u>prepare (individually or in small groups) for a class discussion</u>** the case "Liquidity, Mutual Fund Flows, and Reflow Management, LLC."

    i) What are the liquidity issues you, as Madeline Annette, face in managing the Capital Reserve Small Cap Value Fund?
    ii) What is the service offered by Reflow Management and how does it work?
    iii) How would you use the ReFlow service?
    iv) How would you go about quantifying the cost savings from using ReFlow?
    v) How would you use the data given in the case to decide whether to use the ReFlow service or not?
    vi) Would you, in fact, rely on the data given in this case to make this decision?
    Please note that materials you prepare for this case will **NOT** be collected.

4. A homework assignment will be posed at the end of class. Please work individually or in small teams (4 or less) and submit the assignment by the deadline set by the program leadership.

Grading

The grade for the class will be determined as follows:

a. 40% weight on the pre-class, written homework assignment;
b. 60% weight on the after-class assignment;
c. Discretionary bonuses (penalties) for case preparation (or lack thereof).

Optional Readings

Deutsche Bank, Annual Report 2014, pp. 211-225.
Shin, Hyun Song, "Reflections on Northern Rock: The Bank Run that Heralded the Global Financial Crisis," *Journal of Economic Perspectives*, vol. 23(1), 2009.
Skyrm, Scott, The Money Noose—John Crozine and the Collapse of MF Global, Brick Tower Press, 2013.
Tuckman and Serrat (2012), Chapter 12: pp. 334-336; Chapter 15: pp. 401-403, 417-419, 429-432.