FINANCIAL INSTITUTIONS AND MARKETS
GBUS 8490
Winter 2010

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Description:

This course highlights the importance of institutions and markets. Markets do not exist in a vacuum; participants interact in organized markets that are set up to promote efficient exchange of funds from buyers to sellers. Institutions, such as banks, hedge funds, sovereign wealth funds etc., are key players in the capital markets looking for arbitrage opportunities; with their insights and volume of trading, any arbitrage opportunities are usually eliminated quickly pushing markets to become more efficient. Markets that have existed for some time are generally efficient but that may not always be true for newer markets, such as some emerging markets. Trading in the markets takes place in the form of instruments, the most common of which are stocks and bonds. Constant innovation on the part of banks has created a large number of alternative securities; to the extent that these new instruments facilitate trading (or help in the execution of arbitrage trading strategies), they can have a long life (such as for example, stock options) and earn banks fees. Financial engineering (structured products) can provide a solution to clients' problems often in a cost-effective way. Arbitrage and Financial engineering both entail risks; sometimes these risks are not clearly seen and evaluated properly which can cause (and has caused) problems among banks and even for the entire market-based system (just think of the recent sub-prime mortgage crisis as one such example). Risk management is a key function that firms use to understand their exposures and manage them. Recent moves by banks have elevated its stature; only time will tell whether these new measures will be sufficient to avert new crises. The government plays a big role in the creation and evolution of the markets, most commonly, via regulation. Regulation can also change the rules of the game altogether and create a new class of winners and losers. Understanding its implications is therefore critical to continued innovation and growth on the part of market participants.

Who the course is for:

The course is important for students pursuing careers in Investment Banking, Private Equity, Sales and Trading, Hedge Funds, Investment Management, and Financial Services, more broadly. The course is also important for those seeking a career in Corporate Treasuries seeking to understand markets, as well as for financial consultants (such as asset management consultants). The course has linkages with several courses in the MBA curriculum, such as Valuation, Investments, M&A, Financial Trading, and Fixed Income. With the exception of Valuation, none of the other courses listed here are requirements for taking or successfully completing the course.

Below is an outline of how the course is organized. The course contains the following three modules:

- The first module (sessions 2-5) concentrates on financial institutions. Specifically, session 2 analyses a bank, its role, and how it is valued; session 3 examines the way banks use capital strategically to grow (here via a bank M&A case); session 4 examines bank risk management (identification, measurement and management of the various risks that banks face); session 5 discusses new leaders in financial giants (Citi and Merrill), and the problems they have faced regarding risk and capital raising, as they were caught embroiled in the subprime crisis and the solutions/plans that they have put forth to deal with the crisis.

- The second module (sessions 6-10) examines specific markets and specific innovations in the capital markets. Although some of this survey of markets and instruments may have a historical view, the messages drawn from these cases are ever-present. Specifically, sessions 6 and 7 cover the Treasury Market, its function, the auction process in the issuance of Treasury securities, and an early case of arbitrage in this market; session 8 discusses CDOs, a more recent innovation linked to the current financial crisis; session 9 covers the high-yield market and provides an opportunity to discuss the credit rating process, and how securities are designed to fit investor appetite in the context of a refinancing deal. Session 10 examines the commercial paper and the CDS markets and the impact that the Lehman bankruptcy had on them.

- The third module (sessions 11-15) covers the creation of new markets, such as the carbon markets and the emerging equity and bond markets, and key players such as the sovereign wealth funds and the infrastructure funds. It concludes with lessons learned from the current financial crisis – why it happened and how it can be prevented from happening again. Specifically, session 11 discusses carbon markets; session 12 discusses sovereign wealth funds, their motivation and role in the capital markets; session 13 discusses infrastructure funds and an important Toll Road project (Athens Ring Road) in southeastern Europe; session 14 discusses how Chile created a deep bond and equity market via the privatization of its social security; and session 15 concludes with a discussion on the current financial crisis, its causes, and its consequences for the markets.

Session one, which serves as the opener for the course examines Warren Buffett, the legendary investor in the capital markets, and his decision to invest in particular securities/industries (such as Swiss Re), start his own reinsurance company, while at the same time avoiding any large investment in financial institutions (the case is set during January of 2008). No matter how much one studies Buffett it is hard to replicate his success; but now he is looking for the “new Buffett” and what he is looking for in that new person is quite telling: among other things, “…(he/she) would be genetically programmed to avoid serious risks, including those never before encountered.”

Requirements:

Students are expected to be prepared for each class. Grading will be based on class participation (50%), and an exam (50%). For some sessions, preparation involves reading technical notes and applying techniques to specific problems. Other sessions tackle comprehensive cases while others discuss conceptual issues surrounding capital markets and the role of institutions.

Optional readings are from Capital Markets: Institutions and Instruments, Frank J. Fabozzi and Franco Modigliani, *fourth edition*, Pearson (*FM)*. These readings provide general background material and the book is a good reference book to have on capital markets. You are not responsible for the readings from the FM book.

By the end of the class the students should have an understanding of:

- Structure of Markets
- Institutions
- Valuation Methodologies
- Financial Engineering and Innovation
- Risk and Risk Management
- Key Players in the Markets
- New Markets

Winter 2010
FINANCIAL INSTITUTIONS AND MARKETS
COURSE OUTLINE

1. Monday, January 11

Intro to Institutions and Markets
Case: *Warren Buffett, 2008 [UVA-F-1550]*
- Intro to Markets; characteristics of markets; liquidity
- Legendary investor; investment style characteristics; thinking behind a major market player
- Subprime mortgage crisis; a market in crisis
- Key players

Optional Reading: FM, Ch 2

2. Tuesday, January 12

Institutions: Banks
Case: *Comerica Incorporated: The Valuation Dilemma [UVA-F-1581]*
Technical Note: *Bank Valuation Issues [UVA-F-1582]*
- What Banks do; Importance in Economy
- How they differ from say, manufacturing companies
- Bank Valuation

Optional Reading: FM, Ch 3

3. Wednesday, January 13

Importance of Bank Capital; Strategic use
Case: *SunTrust Inc. Acquisition of National [UVA- F-1554]*
Technical Note: *Bank Capital Structure: A Primer [UVA-F-1555]*
- Importance of Capital for a Bank
- Capital as a Constraint/Facilitator of Growth
- Understanding Tier 1/Capital Ratios/Basel
- Bank M&A

4. Tuesday, January 19

Bank Risk Management

Case: *Risk Exposure and Risk Management at Korea First Bank [UVA-F-1386]*

- Identifying and measuring Market, Liquidity, IR, Currency, and Operating Risk
- Why Risk Management is so difficult
- The Value of Risk Management

5. Wednesday, January 20

Subprime Crisis and Banks

Case: *New Leaders of Financial Giants: The Case of John Thain (Merrill) and Vikram Pandit (Citi) [UVA-F-1551]*

- How to Fix Risk Management and other key problems banks face today
- Raising Capital via Sovereign Funds
- The role of government

6. Monday, January 25

Treasury Market

Case: *Salomon and the Treasury Securities Auction [9-292-114]*

- Short Selling
- Repo Market
- Auctions

Optional Reading: FM, Ch 20, 21

7. Tuesday, January 26

Arbitrage

Case: *Arbitrage in the Government Bond Market? [9-293-093]*

- Arbitrage
- Short Selling
- Trading and Traded Instruments

8. Monday, February 1

CDOs

Case: *Western Asset Arbitrage [UVA-F-1577]*

- What CDOs are
- How does it work
- Securitization
- SPVs

Optional Reading: FM, Ch 26, 28, 32

9. Tuesday, February 2

High Yield
Case: *Metromedia [9-286-044]*
- Security Design
- Corporate Debt Rating
- What's in a name

Optional Reading: Ch 22, 23

10. Monday, February 8

Commercial Paper; CDS
Case: *The Weekend That Changed Wall Street [UVA-F-1587]*
Technical Note: *Credit Default Swaps: An Introduction [UVA-F-XXXX]* (to be distributed)
- Commercial Paper
- CDS
- Lehman Bankruptcy
- Too-big-to fail

11. Tuesday, February 9

Carbon Credit Markets
Case: *CO2 Australia – The Case for Carbon Credits [UVA-F-1585]*
Technical Note: *Carbon Credit Markets [UVA-F-1583]*
- What Carbon Markets are
- Who the players are
- How carbon credits get created and traded
- Factors influencing carbon credit valuation

12. Monday, February 15

Sovereign Wealth Funds
Case: *The Case of Sovereign Wealth Funds: A New (Old) Force in the Capital Markets, [UVA-F-1564]*
- What Sovereign Funds are
- What they do and why should we care
- Corporate Governance and Investment

13. Tuesday, February 16	**Infrastructure Funds** Case: *Athens Ring Road (ATTIKI ODOS), [UVA-F-1576]* o What Infrastructure Assets/Funds are o What makes infrastructure investment work o The role of Leverage and Government o Risk Sharing
14. Monday, February 22	**The Creation of a Market** Case: *Chile and the Tequila Effect [UVA-F-1113]* o How a market is created / Designing a market o The privatization of social security o Market forces, rules and regulations
15. Tuesday, February 23	**Lessons from the Financial Crisis** Case: *The Financial Crisis of 2007-2009: The Road to Systemic Risk [UVA-F-1590]* o Causes and Consequences of the Financial Crisis of 07-09 o Role of Banks o How to prevent it from happening again

FINANCIAL INSTITUTIONS AND MARKETS DAILY ASSIGNMENTS

Class #1:

Date Monday, January 11

Topic: **Intro to Institutions and Markets**

Read: Case: *Warren Buffett, 2008 [UVA-F-1550]*

Assignment:

1. Who is Warren Buffett? What are some of his characteristics? What are the lessons that he offers as a leader? How does he react to change?
2. What are Buffett's main problems? How could he resolve them?
3. Why is he investing in Swiss Re? How does the market react to the announcement? How does Buffett react to the subprime crisis and why? Discuss his investment in BHAC and his decision not to invest in the banking sector. Do these decisions make sense?
4. In what ways could Buffett influence your thinking and your leadership style? What things would you change about your way of leading people and organizations?
5. What are the lessons learned from Buffett on the capital markets?

Class #2:

Date Tuesday, January 12

Topic: **Institutions: Banks**
Read: Case: *Comerica Incorporated: The Valuation Dilemma [UVA-F-1581]*
Technical Note: *Bank Valuation Issues [UVA-F-1582]*
Network File: CMA Student file.xls

Assignment:

1. What do banks do and how do they make money? What is their importance for the capital markets?
2. Describe (as data allows) how some of the key characteristics for CMA's financial health are calculated in case Exhibit 5 and what story they tell regarding CMA's potential as an investment in Jack Wilson's portfolio.
3. Should Jack Wilson go long CMA in his portfolio? Or might a short on CMA be a better strategy now? Justify your answers based on your valuation estimates (use case Exhibit 7 as a starting point but use other methodologies as appropriate).
4. How do you see the bank model evolve going forward given the 2007-2008 financial crisis? What are the implications for bank valuations going forward?

Class #3:

Date Wednesday, January 13

Topic: **Importance of Bank Capital; Strategic use**

Read: Case: *SunTrust Inc. Acquisition of National [UVA- F-1554]*
Technical Note: *Bank Capital Structure: A Primer [UVA-F-1555]*

Network File: UVA-S-F-1554.xls

Assignment:

1. What is the rationale behind the merger between SunTrust and National Commerce? Does it make sense for SunTrust?
2. What are the trade-offs faced by SunTrust as it pursues this acquisition? What level of TCE would be reasonable for SunTrust, postmerger? Why? What is the role of capital for a bank and what levers can a bank use to arrive at an "optimal" capital ratio?
3. If SunTrust were to merge with National Commerce, what would be your recommendation regarding the split between cash and stock in the consideration? Why? What is the impact on its TCE? How accretive is the deal at the recommended level of cash and stock?
4. How would your answer to question 3 change if the total consideration for the deal were $7.5 billion?

   Support your answers with data from the relevant case figures, where appropriate.

Class #4:

Date Tuesday, January 19

Topic: **Bank Risk Management**

Read: Case: *Risk Exposure and Risk Management at Korea First Bank [UVA-F-1386]*

Assignment:

1. How did Korea First Bank (KFB) perform in 1997–98?
2. Identify, explain, and quantify (where possible) the credit, market, interest-rate, foreign-exchange, liquidity, and operational risks for KFB. Which ones are the most important risks that KFB faced in 1997–98?
3. How could KFB have managed these risks? Which ones should it manage going forward? Suggest ways/tools to Dong-Hyun Kim that KFB could use to manage its main risks.
4. What could KFB have done differently to avoid the crisis? What risk-management tools could KFB have used?

   [As an example, use a variant of the KMV model to estimate KFB's credit risk before the crisis. What do these estimates suggest KFB should have done? State explicitly and justify the assumptions you make to produce your estimates. What are the potential limitations of the model? Also, what does the model suggest regarding KFB's credit risk in 1997–98?]

   Not responsible to answer the question in [] in advance. We will cover this together in class; please take a look at the EDF overview at *www.moodyskmv.com/newevents/files/EDF_overview.pdf*

5. What should the Korean government or the international regulators have done differently to ensure KFB's survival during the crisis?

Support your arguments using data from the relevant case exhibits and figures, where appropriate.

Class #5:

Date Wednesday, January 20

Topic: **Subprime Crisis and Banks**

Read: Case: *New Leaders of Financial Giants: The Case of John Thain (Merrill) and Vikram Pandit (Citi) [UVA-F-1551]*

Assignment:

1. How has the subprime crisis affected Citi and Merrill? Why? What are the key issues that need to be addressed immediately?
2. What is the focus of Vikram Pandit and John Thain in their first three months on the job? Why? What solutions do you see on the horizon?
3. What are the sovereign funds? Why are they investing in Citi and Merrill? In your opinion, were Citi and Merrill correct in accepting their investments? Was it a good deal for them?
4. How would you characterize Pandit and Thain as leaders? What lessons can be learned from the way they deal with adversity?

Class #6:

Date Monday, January 25

Topic: **Treasury Market**

Read: Case: *Salomon and the Treasury Securities Auction [9-292-114]*

Assignment:

1. What role does a primary dealer play in the Treasury market? Why does a firm want to be a primary dealer?
2. How do firms prepare for an auction? How can Salomon make money in the Treasury auction and market?
3. How should Salomon have dealt with the Mozer situation?

Class #7:

Date Tuesday, January 26

Topic: **Arbitrage**

Read: Case: *Arbitrage in the Government Bond Market? [9-293-093]*

Assignment:

1. Create the synthetic bond described in the case. How should their price relate to the callable bonds?
2. How would Thompson exploit the pricing anomaly?
3. What might cause the odd pricing?

Class #8:

Date Monday, February 1

Topic: **CDOs**

Read: Case: *Western Asset Arbitrage, [UVA-F-1577]*

Assignment:

1. What is a CDO? Where does its value come from? Explain how it works.
2. Who are the typical investors in it? How would Western Asset make money? What is the role of the rating agencies in this process?
3. What is the SPV's balance sheet? What is the expected return to the unrated tranche (equity)? Are equity holders adequately compensated for the risks they bear in this deal?
4. Describe the advantages and disadvantages of a securitization. What kinds of assets can be securitized and why? What are the limits to securitization?

Class #9:

Date Tuesday, February 2

Topic: **High Yield**

Read: Case: *Metromedia [9-286-044]*

Assignment:

1. Why does Kluge want to issue debt?
2. Who are likely buyers of the various instruments?
3. What is the basis for underwriting debt that even the prospectus suggests is highly speculative?

Class #10:

Date Monday, February 8

Topic: **Commercial Paper; CDS**

Read: Case: *The Weekend That Changed Wall Street [UVA-F-1587]*
Technical Note: *Credit Default Swaps: An Introduction [UVA-F-XXXX]*
(To be distributed)

Assignment:

1. Why did Lehman Brothers fail? What are the consequences of Lehman Brothers' failure for the investment banking sector and the markets in a broader context? Explain.
2. What is the importance of the commercial paper market? Why did Lehman Brothers' failure have an impact on it?
3. What is a CDS? Why do funds invest in them? How do they create value?
4. What is counterparty risk? How might investment in CDS lead to systemic risk?

Class #11:

Date Tuesday, February 9

Topic: **Carbon Credit Markets**

Read: Case: *CO2 Australia – The Case for Carbon Credits [UVA-F-1585]*
Technical Note: *Carbon Credit Markets [UVA-F-1583]*

Assignment:

1. What is cap-and-trade? What are key issues surrounding emissions credits so that they can work?

2. What is the role of the carbon markets in solving the Green House Gas Emission problem? Why? How are carbon markets structured? Who are the players and what factors affect carbon credit pricing and why? How do carbon funds make money? What are the risks in this market?

3. How is CO2 Australia making money? What is their business model? Why are they focused on Mallee trees?

4. Propose an example of a project that in your opinion would qualify for CER; why?

Class #12:

Date Monday, February 15

Topic: **Sovereign Wealth Funds**

Read: Case: *The Case of Sovereign Wealth Funds: A New (Old) Force in the Capital Markets, [UVA-F-1564]*

Assignment:

1. Who are the SWFs? What is their role in the capital markets? Why is there so much debate about them?
2. What are the similarities/differences between SWFs and other institutional investors (such as pension funds) in terms of investment objectives/orientation and organizational structure?

3. Why are SWFs investing in the U.S. financial sector at this point in time? Was this a good deal for Merrill Lynch? For Korean Investment Corporation? Analyze and explain the terms included in the mandatory convertible-preferred stock issued by Merrill Lynch.

4. Why have corporate governance/transparency issues of SWFs become a major concern for U.S. policymakers? What measures would you propose to allow investment in U.S. companies by foreign SWFs? Are there some assets that should be off limits to them regardless of any corporate government improvements/regulation?

Class #13:

Date Tuesday, February 16

Topic: **Infrastructure Funds**

Read: Case: *Athens Ring Road (ATTIKI ODOS), [UVA-F-1576]*

Network File: Student File (Exh. 10)

Assignment:

1. What are the main characteristics of project finance and public-private partnerships? Please comment on the characteristics of infrastructure as an asset class. Who would be interested in investing in infrastructure and why?

2. What are the risks associated with the Athens ring-road project? Do you believe that the concession structure proposed by Mr. Papadopoulos, as shown in case Exhibit 8, can ensure mitigation of those risks? Would you recommend any modifications to the concession structure, and if so, what would those be?

3. How do the cash flows and the structure differ from a conventional project evaluation? What are the financial returns to the private and public sectors? What are the key drivers of the returns? If you were a fund manager would you invest in the project? (Assume a long-run inflation of 3%)

4. What are your concerns with your IRR estimate from the previous question? If it was an all equity investment (assume that no debt is used and that in lieu of debt all funding is provided by equity sponsors), what would the project's IRR be? Does it make it more or less attractive?

5. Assume again the base case that you estimated in question 3. Would the project be attractive for the equity sponsors if the cost of debt were 10%? What would the government's options be in such a scenario? What if the government could push the DSCR down to 1.5?

Class #14:

Date Monday, February 22

Topic: **The Creation of a Market**

Read: Case: *Chile and the Tequila Effect [UVA-F-1113]*

Assignment:

1. Is Chile different from Argentina, Brazil, and Mexico? How?
2. What role has the privatization of the Social Security System played in Chile?
3. Evaluate the performance of the pension funds. Compared with the performance of the U.S. equity market (say, the S&P 500 index), have Chilean citizens gotten a good deal?
4. How different is the U.S? What are the implications of Chile's case for the US? How has the current financial crisis affected your thoughts on the issue? (i.e, whether to privatize or not social security and potential solutions)

Class #15:

Date Tuesday, February 23

Topic: **Lessons from the Financial Crisis**

Read: Case: *The Financial Crisis of 2007-2009: The Road to Systemic Risk [UVA-F-1590]*

Assignment:

1. What are the main causes of the financial crisis per Professor Corcoran? How would he rank them and why? Do you agree with him?
2. Who are the key players in the crisis and how might their behavior have contributed to it?
3. What can be learned from other crises, including Japan's "lost decade"? How similar is the situation here?
4. What suggestions does Professor Corcoran offer to help get out of the crisis? Why? What suggestions can you add in the list? Explain your reasoning.