

Alternative Investments
NEW YORK UNIVERSITY, STERN SCHOOL

Syllabus

Fall 2012

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Course Description

This course provides both a theoretical and practical look into the world of managing alternative investments, in particular, hedge funds. The course is, however, organized from the perspective of an asset manager (e.g. pension fund, endowment, family office, fund of funds, etc.) having to choose amongst a cross-section of hedge funds.

The long-term goal of the course is for students to put endowment money to work. In order to do this, students need to understand how classic hedge fund strategies are executed, how to evaluate these strategies as well as new ones, how to manage risk, and how to perform due diligence on firms performing these strategies. The course intends to teach students in all of these areas.

While the class is designed as a year-long, full credit (i.e., 6 units) course, it is possible for students to choose just the fall semester course, but not vice versa with respect to the spring semester. Students start from the beginning and are educated about the hedge fund sector, the building blocks of hedge fund strategies, and all the elements underlying due diligence. For the latter, students will have access to a proprietary software program (Focus/Vidrio) that helps them work through and understand the due diligence process. Quickly, the students move onto specific hedge fund strategies, and are provided a combination of lectures and outside industry speakers. This part of the course covers a significant portion of the fall semester. After learning about the various strategies and evaluation techniques, students will form groups and focus on one particular subsector. The groups will collect data, evaluate the funds in this subsector, and narrow themselves down to a meaningful list for further evaluation and due diligence. Throughout the semester, as students are learning about hedge fund strategies, students will also be learning in a complementary way about due diligence, taking practical examples related to each strategy using the software.

Course Materials

The main course material can be broken down into three sets:

First, a collection of presentation slides to be used in each lecture.

Second, a collection of readings, which provide additional discussion of the issues and analysis brought up during the lectures. These materials will be handed throughout the semester.

Third, the required book is *Hedge Fund Strategies* by Lasse H. Pedersen.

Course Requirements

The grading system involves a mixture of assignments based on the strategies, an exam, and a group project related to their hedge fund sector. This latter assignment will be more important in the 2nd semester.

Important Course Timing

The majority of the classes will take place during the day. However, some classes will meet in the evening when an outside speaker can only present during evening hours. This means that students who take the course must be willing to, on occasion, attend a 1½ hour lecture in the evening, most likely at 6pm. On these days, the day portion of the class will be cancelled.

TENTATIVE LIST of TOPICS

Lectures 1-3: The Hedge Fund Sector

This topic will introduce the course, provide an overview of the current state of the hedge fund sector, and introduce the building blocks of active management. Topics will include a brief history of the hedge fund sector, the types of strategies and styles, and the organizational structure of hedge funds. The main topic of these lectures, however, is to describe the fundamentals of active management, including performance measurement (alpha/beta, risk-reward, high water mark, drawdown, illiquidity), backtesting methods (running a backtest, data mining), trading (transactions costs, market liquidity, hedge fund capacity), funding (balance sheet, leverage, margin, funding liquidity), risk management (measuring risk, drawdown control) and asset allocation (top down/bottom up and tactical asset allocation, optimization/risk budgeting, quantitative analysis at the strategy level). A key topic will be ‘finding alpha’ and better understanding the economics of profitable strategies, in particular, breaking it up into information sources versus compensation for liquidity risk.

Lectures 4-6: Due Diligence of Hedge Funds

The purpose of this topic is to introduce the student to the world of due diligence. The lectures will start with an outside speaker from the world of fund-of-funds. This lecture will provide support to the building blocks provided in the previous two lectures. After this introduction, the students will be introduced to the proprietary software and how to use it. The end of the lecture will take one hedge fund as an illustration and work through the entire due diligence process. As a practical matter, this lecture will take place after the introduction of the corresponding hedge fund strategy. In terms of the due diligence process, all aspects will be covered, including:

- Sourcing:
 - Databases (Morningstar, HFR etc...)
 - Prime broker conferences
 - Industry conferences
- Quantitative analysis:
 - Risk reward profile (Sharpe, Sortino etc..)
 - Alpha, Beta etc...
 - Peer group analysis
 - Correlation analysis
 - Drawdown analysis
 - Risk analysis (VaR, CVaR etc...)
- Strategy analysis:
 - Identification of sources of Alpha
 - Identification of sources of risk
 - Evaluation of investment process
 - Evaluation of risk management process
- Organization analysis:
 - Personnel profile
 - Organizational structure
 - Ownership structure
 - Incentive structure
- Operational due diligence
 - Back/middle office review
 - Legal review (docs, regulatory, registration docs, contracts etc...)
 - Compliance review
 - Pricing and valuation policies
 - Systems/IT infrastructure review
 - Service provider review (PB, admin)
 - Background and reference checks
 - Portfolio review (unique to Focus/Vidrio)
- Agreement & Side Letters (OPTIONAL)
 - Agreement negotiation (transparency and reporting terms, fees, MFN clause, key man clause etc...)
 - Side letter (what is a side letter, industry trends with regards to side letters)

The next part of the course works through different hedge fund strategies; for each strategy, we will follow the format: (i) what is the strategy, and how and why might it work?, (ii) stylized facts and quantitative evaluation of the strategy, (iii) due diligence examples from the software and practice, and (iv) an outside speaker.

Lectures 7-10: Fundamental Strategies: Equity Long-Short & Dedicated Short Bias

Stock picking through fundamental analysis of each company's business. This topic will focus on fundamental valuation, including value investing and other forms of stock picking. We will also study the art of uncovering companies with overstated earnings or flawed business plans. *We expect to have two outside speakers because the topic is so broad, e.g., a value investor, a fundamental investor outside of equities, or a recognized short seller.*

Lectures 11-12: Quantitative Equity Strategies: Equity Market Neutral and Stat Arb

Using computer models to go long and short thousands of securities based on fundamentals or on predictions of short-term price movements. *We expect one outside speaker focused on quantitative analysis.*

Lectures 13-18: Arbitrage: Event Driven, Convertible Bonds & Fixed Income

These lectures will cover respectively trading on specific events such as mergers, spin offs, or financial distress; buying cheap illiquid convertible bonds and hedging with stocks; and relative value trades across similar securities such as Treasuries and swaps. *We expect to have three outside speakers from this broad field covering different arbitrage strategies.*

Lectures 19-24: Macro Strategies: Global Macro, Managed Futures and Emerging Markets

These topics include betting on the macro developments in global bond, currency, credit, and equity markets; trend-following trades on fixed-income, commodity, currency, and equity futures/forwards, and finding trading opportunities in new markets. *We expect to have two-three outside speakers covering Macro-based strategies.*

Depending on the timing of the lectures, the course might also involve some lectures on private equity as an important alternative investment. What is private equity, what is different about it, how are these firms structured, etc...?

Note that the syllabus will be updated as outside speakers and dates are confirmed.

Comments on the Second Semester – Practical Analysis

After completing the first semester, teams of students are assigned a strategy and a supervisor at Focus/Vidrio.

Specific login templates will be created by Focus/Vidrio for the students and each one will be assigned a login/password to access the platform.

Training will be performed on the platform and teams will then have to select a manager within their assigned strategy. A due diligence process will then be triggered on the selected managers and the students will be responsible for completing all steps in the process.

Included in the exercise are the following:

- On-site visits to manager's office
 - o Manager presentation (i.e. manager presents his fund, strategy etc...)
 - o Due diligence (strategy analysis, organization analysis, operation due diligence)
 - o Meetings include not just the portfolio manager but also the risk manager, compliance officer, CFO etc...
- Prime broker conference
 - o The class will participate in a hedge fund conference where they will have the opportunity to meet a large number of managers and hedge fund investors (fund of funds, family offices, pension funds etc...)
- Presentation in front of panel (peers, professors, Focus/Vidrio) of their work

Outside speakers will involve not just hedge fund managers (as in the first semester), but also asset allocators (family office, pension fund, endowment and fund of funds) and lawyers involved in particular with due diligence.