Instructor: Fabio Savoldelli
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General Course Information:

This class uses a combination of instructor lectures, class discussions and guest lectures to teach students the methodologies of hedge fund analysis and investments from the perspective of portfolio managers running actual hedge funds, as well as investors considering investing into hedge funds. The course will focus on the investment techniques employed by managers involved in a broad range of strategies: Directional Investing (equity and macro), Event Driven Strategies, Arbitrage and various Relative Value Strategies will be considered. Exposure to basis risk and hedging strategies will also be reviewed. Most importantly, however, emphasis is always given on identifying the broad characteristics of HF trades, and how current experience in non-finance industry can be of use in an HF environment. An equal focus through the course is best practice for every facet of the hedge fund process: marketing, investment, liquidation and infrastructure selection and management. The role of every member of the "hedge fund ecosystem," and their obligations, are also reviewed as an important building block. We generally also review more sophisticated investment tools, including collateralized instruments and simple and complex swaps, and do not shy away from studying hedge fund failures, their causes and the manager's actions.
Course participants will be exposed to some Wall Street best practices for hedge fund investing and fund portfolio construction, with guest lecturers ranging from active investors, prime broker/capital raising experts, hedge fund portfolio managers and others (depending on class interest) in the field. Given recent events special focus will be given to the market melt-down of 2008, and to review the risks presented by both operations (Madoff) and market liquidity. The course is "free flowing". While there are defined lectures, students should also expect current, live, market conditions to form an important part of the class discussion. The topics in the syllabus will be covered, though the order may vary if "live market" conditions allow for teaching from a current example, or to accommodate guest speakers.

Who should take this course?

Hedge funds are moving from the fringes of investments to the core. Anyone who is heading into an asset management related activity will find themselves interacting with hedge funds, either as investors, marketers, counterparties or potential hedge fund managers. Although covered, the focus is not only on classic "value equity" investing, but covers the broad range of other hedge fund strategies, including special situations, arbitrage based and macro investment styles.

Who Should NOT take this course:

This course will be taught to a broad range of students. Some (usually very few) students may find the level of expected market knowledge a challenge. There is NEVER a penalty for asking a question: please do so. I also welcome questions during the break on any concepts or terms you are unfamiliar with. Some students, perhaps coming out of trading or investment banking programs, may instead find some sections of the material familiar. For them, the instructor is happy, on a time available basis, to go into greater depth on concepts with them, letting the class know this is an "extra". Nevertheless, if you find a digression to help a student with differing knowledge frustrating, this will not be an easy class to attend. The class accommodates a broad range of students.

The class "format" is one of an "Investment Committee Meeting" with the Instructor as quasi-Chief Investment Officer, who will (as happens in virtually all investment environments) ask the students (quasi-hedge fund analysts) questions throughout the session. Questions (and student answers) are fundamental to how this course is taught. If you are uncomfortable with "cold call" questions, this is simply not the course for you.

The class tries, as much as possible, to draw on current events. EVERY class starts with a section on current markets, and how a hedge fund manager, as opposed to long-only investor, might seek to profit from the current, live, market situation. You WILL be called on at some point. This does NOT require students to know about upcoming IBM earnings expectations to the penny. Nevertheless, students are expected to be sufficiently knowledgeable of current financial event "headlines" so they can participate. Watch Bloomberg TV, CNBC, skim/read the Wall Street Journal, Financial Times or the business periodical of your choice and be able to come to class with at least one thing of note that struck you as a potentially "investable/market moving" financial development. Students can raise almost any situation (from macro political events to individual company news) as an item of interest. If a student is comfortable being ignorant (even at the very basic 'first paragraph of a Wall Street Journal article' level) of *any* and *all* current financial developments it is likely this course for NOT them. Issues raised can be in almost any area: Fed taper end, a development in the European situation, changes in Chinese growth, activity in the oil market, a major take-over announcement that week, almost anything can be raised. The answer to "so, what interesting thing happened this week?" in global financial markets is almost NEVER "Nothing, Professor". You are *not* expected to know the resultant investment opportunity, or how to structure an investment to profit from it, but you are expected to have sufficient currency with financial markets to participate in the thought processes that follows.

Finally, the thirteen lectures in this course will not fully prepare students to either launch a fund, or invest in one, the week they graduate.

Grading

20% Class participation
10% Presentations
70% final project, fund review and assignments

Presentations will be given weekly by small teams. During these they will gain experience in "pitching" a hedge fund trade to investors, and eventually presenting a sample hedge fund consistent with that strategy.

For the final project student teams will visit one of a choice of actual (New York Area) hedge funds and perform a mock due diligence on the fund and their investments, culminating in a review of the source of manager competitive advantage, and a "buy sell or hold" on the fund recommendation on the fund. For those unable to visit *any* fund a take-home option will also be available.

About me:

Mr. Savoldelli most recently served as Chief Investment Officer for Optima Fund Management. The organization was awarded InvestHedge awards for performance during his tenure there. He is also a Contributing Editor on Bloomberg Television, commenting on developments from a hedge fund perspective. Previously, Mr. Savoldelli was Managing Director & Chief Investment Officer at Merrill Lynch Investment Managers Alternative Strategies. At Merrill Lynch, Mr. Savoldelli chaired the Investment and Asset Committee and oversaw investments into hedge funds and managed futures funds, a position he held for over ten years. At Merrill, his group managed assets through commingled and customized hedge fund of fund vehicles. Prior to that, Mr. Savoldelli was CIO for the Americas at the Chase Manhattan Private Bank, where he was responsible for managers investing assets in international and domestic institutional, private client and ERISA funds. Previously, he was Deputy CIO & Head of Fixed Income and Foreign Exchange at Swiss Bank Corp. Mr. Savoldelli received a DBS from the London School of Economics and a BA in Economics from the University of Windsor in Canada.

He has been a prominent critic of Madoff and is widely quoted in the industry on hedge fund investment and related issues.
http://search1.bloomberg.com/search/?content_type=all&page=1&q=savoldelli

Every session:

We always open with a 15 to 20 minutes review of the week's events, looking at how managers might, employing hedge fund strategies, seek to profit from resultant market movements. After that, class teams will, on a rotating basis, pitch a "fictional" individual trade opportunities from the perspective of Directional, Event Driven, Arbitrage and Relative Value Strategies.

Lap Tops/Cell phones: Any student needing to use these during class should inform me PRIOR to the start of class, and request will be reviewed on a case-by-case basis.

NOTE: The class structure will certainly vary from the outline below, reflecting time restrictions, time dedicated to reviewing (unpredictable) market events and availability of guest speakers.

Class progression:

Lecture topics are wide ranging. Beyond hedge fund "trade ideas" they include:

- The role and obligations of the Manager, Administrator, Fund Accountant, Evaluation Agent, Prime Broker, Placement Agent, Distributor, Investment Advisor, Consultants etc.
- Fiduciary Duty: Mangers, Marketers, Prime Brokers, Administrators, Auditors, Registered Investment Advisors, Directors and Investors: who owes what to whom? What is "disclosure?" What is industry best practice?
- Staying in front of the building blocks: from simple traded swaps and forwards to complex custom swaps. Evolving products, evolving rules, evolving venues. Best use, and best practice?

- When things go wrong… Side pockets, discretionary liquidity restrictions, forced liquidations and "fair value." Impact and costs of hard decisions.
- Hedge Fund Due Diligence: Questions to Ask and Expect
- Investor Criteria for Fund Investment and Retention
- "Delivering Alpha" Alpha drivers, categories and styles
- Quantitative Return Measures
- Hedge Fund Leverage
- *Short Selling. Mechanics of short selling, risk and returns*
- *Hedge fund "core investment philosophy" and "residual trade risk"*
- *Merger Arbitrage as a "classic arbitrage strategy" with parallels to written options. M&A cyclicality and the basis for Merger Arbitrage Profitability*
- *Fixed Income Arbitrage: key concepts and Risks*
- *Long Term Capital: Lesson in Risk Control. Some learned, some not…*
- *Equity Investing From a Hedge Fund Perspective*
- *Macro Investing From a Hedge Fund Perspective*

- *"Delivering Alpha"* Alpha drivers, categories and styles

Hedge fund classification and strategy, a brief review

Potential Readings:

Hedge Funds with Style Stephen J. Brown, William N. Goetzmann, NBER Working Paper No. 8173* Issued in March 2001

Asset-Based Style Factors for Hedge Funds *Financial Analysts Journal* William Fung, David A. Hsieh September/October 2002, Vol. 58, No. 5: 16-27

The Statistical Properties of Hedge Fund Index Returns and Their Implications for Investors C Brooks, H Kat - Journal of Alternative Investments

Generalised style analysis of hedge funds: Agarwal, V; Naik, NY; Journal of Asset Management, Volume 1, Number 1, 1 July 2000, pp. 93-109(17)

The Brave New World of Hedge Fund Indices N Amenc, L Martellini; Edhec/Misys, 2003

- *Quantitative Return Measures:*

Performance metrics, (Sharpe, Traynor. Sortino Jensen ratio etc.) will be reviewed, with a focus on the application of each

Potential Readings:
Performance Metrics for Hedge Funds Les Gulko The Journal of Alternative Investments **Spring 2003, Vol. 5, No. 4: pp. 88-95**
DOI: 10.3905/jai.2003.319075

Does the choice of performance measure influence the evaluation of hedge funds? Martin Eling Frank Schuhmacher [a] Institute of Insurance Economics, University of St. Gallen, Kirchlistrasse 2, 9010 St. Gallen, Switzerland

- *Prime Brokers,*

Their role as market intermediaries, and selection criteria

- *Hedge Fund Leverage:*

"Too much of a good thing?" Sources of leverage, and the impact on risk vs. return characteristics. Use of leverage to decrease risk.

Potential Readings:
Hedge fund leverage Andrew Ang, Sergiy Gorovyy Gregory B. van Inwegen **Journal of Financial Economics Volume 102, Issue 1**, October 2011, Pages 102–126

- *Short Selling. Mechanics of short selling, risk and returns*

Potential Reading:
Securities lending, shorting, and pricing D Duffie, N Garleanu, LH Pedersen *Journal of Financial Economics,* http://faculty.haas.berkeley.edu/garleanu/DGP2_published.pdf

- *Hedge Fund Industry Overview: evolution of the industry, and current investor allocations and flows.*

Overview and historical analysis of returns. Merely being a "hedge" fund does not mean one is, in fact, immune to market movements. Quantitative review of major strategies to review historical performance, particularly in time of market stress

Potential Reading:
Systemic Risk and Hedge Funds, Nicholas Chan, Mila Getmansky, Shane M. Haas, Andrew Lo NBER Working Paper No. 11200, Issued in March 2005

- *Hedge fund "core investment philosophy" and "residual trade risk"*

The return characteristics and risks of prominent investment styles will be reviewed. These will include George Soros "Theory of Reflexivity" Richard Dennis "Turtle Trading", David Shaw "Granular Correlations" Paul Tudor Jones "The Rules" and others, with an attempt to summarize the role of "residual risk", a key concept in this course.

Potential Readings:
Reflexivity in social systems: the theories of George Soros, Stuart Umpleby, Journal of Systems Research and Behavioral Science, Volume 24, Issue 5, pages 515–522, September 2007 http://onlinelibrary.wiley.com/doi/10.1002/sres.852/abstract

A Risk-Return Measure of Hedging Effectiveness Charles T. Howard, Louis J. D'Antonio *The Journal of Financial and Quantitative Analysis*, Vol. 19, No. 1 (Mar., 1984)

Taking A Peek Inside The Turtle's Shell, John A Anderson
School of Economics and Finance Queensland University of Technology
http://e-m-h.org/Ande.pdf

Are "market neutral" hedge funds really market neutral, AJ Patton; London School of Economics

- *Merger Arbitrage as a "classic arbitrage strategy" with parallels to written options. M&A cyclicality and the basis for Merger Arbitrage Profitability.*

Potential Readings:
Risk Arbitrage in Takeovers Francesca Cornelli, David D. Li
The Review of Financial Studies, Vol. 15, No. 3 (Summer, 2002), pp. 837-868
Characteristics of Risk and Return in Risk Arbitrage Mark Mitchell, Todd Pulvino (2001) The Journal of Finance 56 (6), 2135–2175.

- *Fixed Income Arbitrage: key concepts and Risks*

Potential Readings:
Ross, S.. 1976. "The Arbitrage Theory of Capital Asset Pricing."
Journal of Economic Theory. 13

The Limits of Arbitrage Andrei Shleifer, Robert W. Vishny;
The Journal of Finance, Vol. 52, No. 1 (Mar., 1997), pp. 35-55

A simple approach to arbitrage pricing theory, Gur Huberman;
Graduate School of Business, University of Chicago, Chicago, Illinois 60637, USA
Risk and return in fixed income arbitrage: Nickels in front of a steamroller?
J Duarte, FA Longstaff, F Yu; Review of Financial Studies, 2006 - Soc Financial Studies

Duration and the Measurement of Basis Risk John C. Cox, Jonathan E. Ingersoll, Jr., Stephen A. Ross*The Journal of Business*, Vol. 52, No. 1 (Jan., 1979), pp. 51-61

- *Other Strategy Review, depending on time and class interest.*

Potential Readings:
Risks in Hedge Fund Strategies: Case of Convertible Arbitrage V Agarwal, WH Fung, YC Loon, NY Naik - cfr-cologne.de nomics, Working Paper, 2004

Neutrality of market neutral funds D Capocci - Global Finance Journal, 2005
Statistical Arbitrage and Securities Prices O Bondarenko; Review of Financial Studies
Hedge Funds and the Technology Bubble MK Brunnermeier, S Nagel; The Journal of Finance, 2004

- *Long Term Capital: Lesson in Risk Control. Some learned, some not…*

Potential Readings:
Sifting Through the Wreckage: Lessons from Recent Hedge-Fund Liquidations M Getmansky, AW Lo, SX Mei - Journal of Investment Management, 2

- *Fiduciary Duty: Mangers, Marketers, Prime Brokers, Administrators, Auditors, Directors and Investors: who owes what to whom? What is "disclosure?" What is industry best practice for in the hedge fu world?*

Potential Readings:
I've Been Sued for What? Fiduciary Duty Claims Against Hedge Fund Managers and How to Avoid Them Zachary G. Newman and Jonathan M. Proman
https://www.hedgeco.net/whitepapers/files/Fiduciary-Duty-Claims-Against-Hedge-Fund-Managers-and-How-to-Avoid-Them-White-Paper.pdf

- *When things go wrong… Side pockets, discretionary liquidity restrictions, forced liquidations and "fair value." Impact and costs of hard decisions.*

The Essential Guide to Third Party Valuations for Hedge Fund Investors Erin Faccone, NEPC Press
https://cdn2.hubspot.net/hubfs/2529352/files/Third%20Party%20Valuations-%20White%20Paper-1.pdf
Forced liquidations, fire sales, and the cost of illiquidity Lindsey, Richard R., and Andrew B. Weisman. Journal of Portfolio Management Winter 2016: 43+. Business Insights: Essentials. Web. 8 Mar. 2018.
http://bi.galegroup.com.ezproxy.cul.columbia.edu/essentials/article/GALE|A443458405?u=columbiau&sid=summon
Liquidity risk and the cross-section of hedge-fund returns Ronnie Sadka, Journal of Financial Economics Volume 98, Issue 1, October 2010, Pages 54-71