UNIVERSITÀ
DEGLI STUDI DI MILANO-BICOCCA

COURSE SYLLABUS

Investment Strategies

2122-1-F1601M055

Learning objectives

The objective of the course is to review and analyze recent theoretical and empirical developments in portfolio management, focusing in particular on the issue of tactical asset allocation, the main quantitative models of stock selection, performance evaluation and investment strategies.

The course is an intermediate/advanced asset management course, oriented towards the practical application of investment strategies previously investigated from a theoretical point of view. In this perspective, part of the lessons will be applicative/informatic, based on the use of Matlab® software.

Contents

The course has three main subject areas. A first part that studies the most advanced models of portfolio theory, then Strategic Asset Allocation models. The second part focuses on Equity Portfolio Management, analyzing economic, fundamental and screening models. A third part that then focuses on the current "Trends" in the asset management industry and therefore on more specific investment strategies.

Detailed program

Strategic Asset Allocation

Course Introduction. The framework for Asset Management	McKinsey&Co (2006) Ibbotson and (2003)
The framework for Asset Management, Strategic Asset Allocation	QEPM and Slides (Markowitz, CAPM
Improving Strategic Asset Allocation (1)	Scherer (2002)
Improving Strategic Asset Allocation (2)	Drobetz (2001)
Introduction to Matlab, Improving SAA (Matlab)	QEPM
Introduction to Quantitative Equity Portfolio Management	QEPM

Quantitative Equity Portfolio Management

Improving SAA (Matlab)	QEPM
Stock Screening Models	Harvey at al. (1999) Miller (2005
Fundamental Models	Cavaglia and Moroz (2002)
Economic Models	Miller (2005b) Liodakis (2005)
Screening and fundamental models (Matlab)	QEPM

Economic Models Estimation (Matlab)	QEPM
One-off topics in Portfolio Management	
Portfolio Insurance	Pain and Rand (2008)
Exercise on Portfolio Insurance (Matlab)	
Performance Measurement: stock selection ability, market timing and portfolio polarization	Lazzari and Navone (2004)
Performance Measurement: performance attribution, style analisys	Borsa Italiana Slides
Exchange Rate Models Basics| Currency Investing	Deutsche bank (2006) and Greer (
Revision	

Prerequisites

There are no formal prerequisites to be met for the course, but basic concepts of financial theory such as CAPM, or market efficiency, as well as basic principles of valuation of equities and bonds will be taken for granted.

Students are also expected to know the basic concepts of statistics and in particular those related to models of multiple linear regression. The basic concepts of matrix algebra will also be taken for granted.

Teaching methods

The course is taught in a traditional way, based on frontal teaching. It entails the development of applications and models in the computer lab with the aid of the Matlab® programming language. The development of models, of which some examples are the Black and Littermann model, efficient frontier Resampling, CPPI, etc., is prodromic to the Assignment that is given at the end of the course and that represents a concrete opportunity for the students to make use of and consolidate the knowledge developed throughout the course.

Assessment methods

The examination is mainly written in the form of open questions and is conducted in two different modalities. The first one concerns the attending students who will have carried out the Assignment to be delivered three months after the conclusion of the lessons. The duration of the exam will be approximately 1 hour. The overall grade will be given 50% by the Assignment grade and 50% by the written one. The second option refers to students who are not attending (all those who have not carried out the Assignment) and will last 2 hours. It is advisable to attend the course and choose the attending option, although this is not compulsory.

Textbooks and Reading Materials

The course material is based in part on the text:

- Ludwig B Chincarini, Daehwan Kim, 2006, Quantitative Equity Portfolio Management, McGraw-Hill Library of Investment and Finance.

The relevant chapters of the text range from chapter 1 to chapter 7.

The manual will cover approximately 30% of the topics discussed during the course. The remaining topics will be through sets of slides used during the course and made available to students and articles from scientific journals as listed below:

Drobetz, W., 2001, How to Avoid the Pitfalls in Portfolio Optimization? Putting the Black-Litterman Approach at Work, Swiss Society for Financial Market Research, 15(1), pp. 59-75.

Greer, R. (1997), What is an Asset Class, Anyway? Journal of Portfolio Management, 23(2), pp. 86-91.

Harvey C., D. Achour, G. Hopkins and C. Lang, 1999, Stock Selection in Mexico, Emerging Markets Quarterly 3, Fall, pp. 38-75.

Ibbotson, R. and P. Chen, 2003, Long-Run Stock Returns: Participating in the Real Economy, Financial Analysts Journal, 59(1), pp. 89-98.

Idzorek, T., 2006, Strategic Asset Allocation and Commodities, PIMCO Research Paper.

Lazzari, V. and M. Navone, 2004, The Selection Ability of Italian Mutual Fund Managers, SDA WP N° 100.

McKinsey & Co. 2006, The Asset Management Industry in 2010, mimeo.

Miller, K., 2005a, S&P 500 Industry Group Rotation Model, Citigroup Smith Barney Quantitative Research.

Miller, K., 2005b, The Smith Barney U.S. Equity Risk Attribute Model (RAM), Citigroup Smith Barney Quantitative Research.

Pain, D. and J. Rand, 2008, Recent Developments in Portfolio Insurance, Bank of England Quarterly Bulletin.

Scherer, B., 2002, Portfolio Resampling: Review and Critique, Financial Analysts Journal, 58(6), pp. 98-109

Semester

Second semester

Teaching language

Italian