

# UNIVERSITÀ DEGLI STUDI DI MILANO-BICOCCA

## **COURSE SYLLABUS**

# **Theory of Risk and Insurance Markets**

2122-3-E1803M108

#### Learning objectives

The course, divided into two modules, aims to provide the knowledge base of the Italian insurance and social security industry as a whole. The first module entitled "Economics and technique of insurance companies" aims to describe the functioning of life and non-life insurance companies in their main aspects of technical operation and the relevant regulations. The second module, entitled "Social security", aims to provide an overview of the public social security system and the private system of pension funds and their functioning, also from the point of view of financial management.

#### **Contents**

The course is divided into two parts, the first entitled "Economics and Technique of Insurance Companies" and the second entitled "Social Security".

### **Economics and Technique of Insurance Companies**

This course provides the fundamentals of insurance business, the market and the economics of insurance companies. After an overview of the peculiarities of the industry and the concepts of risk management, the course explores the basic principles of insurance activities, the characteristics of supply and demand, the life and non-life businesses, the structure and operation of companies, the value creation process, the balance sheet, capital and governance requirements and the most relevant aspects of supervisory regulations. Risk and capital management.

#### **Social security**

The module focuses on outlining the characteristics of the Italian social security system, with a focus on the regulatory evolution that has determined its current structure. After the overview of the system, the pension funds system in Italy is analysed in more detail, focusing on closed pension funds, open pension funds and individual insurance pension products, analysing their regulations, structure and functioning. In the final part of the module the focus is on the financial management of pension funds, with hints at the basic principles of portfolio theory and particular attention to the evaluation and measurement of fund performance.

Detailed program
Economics and Technique of Insurance Companies
3. Forms of complementary social security (ref. chapter 2th)
4. Forms and organisational models of pension funds (ref. textbook appendix)
5. Fiscal profiles of pension funds (ref. chapter 4th)
6. Negotiated funds - (ref. chapter 2th - 2.6)
8. The financial management of pension funds (Slides)
8.1 basic principles of portfolio theory (Markowitz, CAPM) with Excel applications 8.2 passive management and benchmarking

8.3 the construction, types and selection of benchmarks8.4 basic principles of performance measurement

8.5 risk-adjusted performance measures

### **Prerequisites**

### **Teaching methods**

#### **Assessment methods**

The exams are held in written form.

For each module, the examination consists of two parts and lasts 1 hour 30 minutes (3 hours in total).

The first part consists of 10 closed or multiple-choice questions; the second part consists of 2 traditional open questions (a total of 20 closed and 4 open questions). The following rules apply to the assessment of the exam: for the first part, each question is assessed, if positive, 3 points; if negative or no answer, 0 points. For the second part, each question is assessed over a range from 12 (no answer) to 30.

The module marks are calculated as a simple average of the marks obtained in the first part and each of the two questions in the second part.

The final mark is the simple average of the marks awarded in the two modules.

It is possible to take the two modules in two separate appeals, but it is not permissible to maintain a module mark beyond one subsequent appeal.

### Textbooks and Reading Materials

Textbooks and Reading Materials						
Economics and technique of insurance						

Normal Mark		

# Semester

First half

# Teaching language

Italian