# Accounting and management in insurance

## Prof. Alberto Floreani

Module I – Prof. Alberto Floreani (4 cfu)

***COURSE AIMS AND INTENDED LEARNING OUTCOMES***

The course introduces to financial accounting, financial statements, and reporting systems of insurance companies under Local GAAPs, IAS/IFRSs and the Solvency II framework.

At the end of the first module the student will be able to:

* Know and understand the complexity of the insurance reporting system;
* Know and understand the basics of the Solvency II framework;
* Know and understand the IFRS 13 and the fair value measurement approach for bonds and technical provisions;
* Know and understand the Financial Statement of a life insurance company according to Italian local GAAPs;
* Apply its knowledge to solve some specific problems (e.g., bond and technical provisions measurement, asset liability management).

***COURSE CONTENT***

* The complexity of the insurance reporting system (local GAAPs, IAS/IFRSs, Solvency II, MCEV).

1. The financial statement of a life insurance company (local GAAP)
2. Introduction to Solvency II

* Introduction to Solvency II;
* The first pillar of Solvency II
  + the market value balance sheet (MVBS) and own funds
  + introduction to the SCR, MCR and the solvency ratios

1. Assets and liabilities: fair value measurement and asset-liability management

* Fair value, IFRS 13 and basics of fair value measurement for financial instruments and technical provisions
* Plain vanilla financial instruments (bonds, stocks, and financial options)
* Fair value measurement techniques
* Technical provision measurement (Solvency II)
  + Cash flows projection and expected cash flows computation
  + Risk-free interest rate term structure (discounting)
  + Risk margin (risk adjustment)
* Basics of Asset-Lability Management (ALM);

***READING LIST***

A. Floreani, *Lecturer notes,* 2023-24, Available on BlackBoard.

***TEACHING METHOD***

Lectures and numerical exercises.

***ASSESSMENT METHOD AND CRITERIA***

Written examination (50% - 2 exercises) to assess the ability of the student in the resolution of some specific problems (e.g. bonds and insurance contracts fair value mesurement, ALM) and a oral interview (50% - 3 questions) to assess the knowledge and understanding of the topics.

***NOTES AND PREREQUISITES***

Prerequisites

Basics of life and non-life insurance contracts and the financial statement of a non-life insurance company (see also the content of Introduction to Actuarial Mathematics and Risk Theory – Module I)

*Place and time of consultation hours*

Monday from 11:30 to 13:00.

During the lesson period, it will be held in presence (office C1, via Necchi 5). In other periods, students will be received by appointment via Teams or in presence (to be arranged by email).

Notes

Module II – Prof. Alberto Floreani (6 cfu)

***COURSE AIMS AND INTENDED LEARNING OUTCOMES***

The course introduces to financial accounting, financial statements, and reporting systems of insurance companies under Local GAAPs, IAS/IFRSs and the Solvency II framework.

At the end of the second module the student will be able to:

* Know and understand the most relevant IAS/IFRSs for insurance companies (IFRS 9 and IFRS 17);
* Know and understand the Solvency II approach to risk measurement;
* Know the second pillar of Solvency II;
* Apply its knowledge to solve some specific problems (e.g., IFRS 9/IFRS 17 financial statement, market risk measurement).

***COURSE CONTENT***

1. The consolidated financial statement of an insurance company and the IFRS 9

* Introduction to IFRSs and the consolidated financial statement of an insurance company
* The IFRS 9 (financial instruments)

1. The IFRS 17 (insurance contracts)

* Introduction to IFRS 17
* The general model (applied to life protection products)
* The variable-fee approach (applied to IBIPs)
* The premium allocation approach (applied to non-life products)

1. Risk measurement in the Solvency II framework and the market risks

* Risk measures and value at risk
* Solvency Capital Requirement (SCR) and Minimum Capital Requirement (MCR)
* The standard formula and the diversification effects
* Markets risks and counterparty default risk in the standard formula.
* The lapse risk on IBIPs

1. The second pillar of Solvency II and the capital management of an insurance company

* The governance system and the role of key functions;
* The Own Risk and Solvency Assessment (ORSA) process;

***READING LIST***

A. Floreani, *Lecturer notes,* 2023-24, Available on course BlackBoard.

***TEACHING METHOD***

Lectures and numerical exercises. An optional teamwork will be assigned.

***ASSESSMENT METHOD AND CRITERIA***

Written examination (50% - 2/3 numerical problems) to assess the ability of the student in the resolution of some specific problems (e.g. IFRS 17 and market risk measurement) and a oral examination (50% - 4 questions) to assess the knowledge and understanding of the topics. The optional teamwork contributes to the final grade (additional points).

***NOTES AND PREREQUISITES***

Prerequisites

Basics of insurance contracts and the financial statement of a non-life insurance company (see also the content of Introduction to Actuarial Mathematics and Risk Theory – Module I)

The Solvency II framework and the SII Technical provision measurement. The financial statement of a life insurance company, basics of Asset liability management (see also the content of Accounting and Mangement in insurance – Module I)

*Place and time of consultation hours*

Monday from 11:30 to 13:00.

During the lesson period, it will be held in presence (office C1, via Necchi 5). In other periods, students will be received by appointment via Teams or in presence (to be arranged by email).