# Accounting and management in insurance

## Prof. Alberto Floreani

Module I (Prof. Alberto Floreani)

***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. Introduction to Solvency II

* Introduction to Solvency II;
* The first pillar of Solvency II: Market value balance sheet (MVBS); Basic own funds (BOF) and Eligible own funds (EOF); Solvency Capital requirement (SCR) and Minimum capital requirement (MCR); Solvency Ratios.

1. Technical provisions measurement (Solvency II), Market value balance sheet (MVBS) and basics of Asset Liability Management (ALM)

* Fair value measurement and the IFRS 13;
* Bond measurement. Internal rate of return (IRR), credit spreads, risk-free term structure, bonds duration;
* Technical provisions measurement (Solvency II); Expected cash flows; discounting; Risk margin; TPs duration;
* Basics of Asset Liability Management (ALM)

1. The Financial Statement of a life insurance company (Italian local GAAPs) and the performance measurement of a life insurance company

* Life insurance products vs. non-life insurance products;
* With-profit contracts;
* The financial statement of a life insurance company according to Italian local GAAPs;
* The performance of a life insurance companies. Introduction to embedded value (EV) and value in force (VIF).

***READING LIST***

A. Floreani, *Lecturer notes,* 2022-23, 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 or 4 questions) to assess the knowledge and understanding of the topics.

***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)

*Place and time of consultation hours*

Monday from 11:30 to 13:00.

During the lesson period (12/9/22-5/12/22 and 6/2/23-8/5/23), it will be held in presence. In other periods, students will be received via Teams (to be requested by email).

Notes

Module II (Prof. Alberto Floreani)

***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***

A – IFRS 9 and IFRS 17 and the consolidated financial statement of an insurance company

* Introduction to the International Accounting Standards (IAS), International Financial Reporting Standards (IFRS) and the consolidated financial statement of an insurance company;
* IFRS 9 – Measurement approaches (FVOCI, FVTPL, amortised cost), Business model, SPPI test, Impairment;
* IFRS 17 – Introduction to IFRS 17
* IFRS 17 – The general model (Fulfilment cash flows and Contractual service margin; subsequent measurement);
* IFRS 17 – The variable fee approach applied to unit-linked contracts
* IFRS 17 – The variable fee approach applied to with-profit contracts
* IFRS 17 – The profit and loss and the drivers of profitability

B – Risk measurement in the Solvency II framework and the market risks

* Value at risk and SCR
* The standard formula and the diversification effects
* Markets risks (equity, spread and interest rate) and counterparty default risk in the standard formula.
* Lapse risk in unit-linked and with profit contracts

C – 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;
* Supervisory review process e capital add-on;
* Capital allocation according to the Euler principle and the risk adjusted performance measures.

***READING LIST***

A. Floreani, *Lecturer notes,* 2022-23, Available on course BlackBoard.

***TEACHING METHOD***

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

***ASSESSMENT METHOD AND CRITERIA***

Written examination (50% - 2 numerical problems) to assess the ability of the student in the resolution of some specific problems (e.g. IFRS9/IFRS 17, market risk measurement) and a oral examination (50% - 4 or 5 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, EV and VIF (see also the content of Accounting and Mangement in insurance – Module I)

Notes

*Place and time of consultation hours*

Monday from 11:30 to 13:00.

During the lesson period (12/9/22-5/12/22 and 6/2/23-8/5/23), it will be held in presence. In other periods, students will be received via Teams (to be requested by email).