

CORPORATE FINANCE AND ASSET VALUATION**Hugues Pirotte**

Hugues Pirotte is Professor of finance at Solvay Brussels School of Economics and Management. He previously taught at the University of Lausanne. He is co-founder and CEO of FinMetrics, a firm based in Switzerland developing dashboard solutions, providing financial management advice and training practitioners in risk management in the wider sense. He is a member of the BEL20 Committee and co-founder of the Finance Club of Brussels, a dedicated club to the financial community in Brussels.

Course Outline

This course provides Participants with principles, tools, techniques and approaches to assess advanced investment and financing decisions of a firm. In the light of the financial asset-liability view of the firm, the course will start with the valuation of projects, financial assets and the firm globally.

A second part will be devoted to financing and the operations related to it: the sources of financing, the composition of the capital structure, advanced notions of fixed income, to then move to the assessment of credit risk and the design of financing contracts.

Throughout the course, we will show how the principles of the valuation paradigm used by financial markets are inherent to any financial decision: the no-arbitrage principle, the liquidity requirement and the problems related to illiquidity, the need of a certain degree of market freedom, the probabilistic approaches to asset pricing, etc... This course will involve teamwork in preparing case studies in class, in small groups.

This course builds on the course of Principles of Finance and assumes familiarity with the concepts of present value, the term structure of interest rates, bonds valuation, and basic stock valuation; financial statements analysis; capital budgeting (Net Present Value and Internal Rate of Return) and the Free Cash Flow Model (FCFM); as well as the portfolio theory and the Capital Asset Pricing Model (CAPM).

Participants use Excel in class and will be provided with complementary Excel teaching notes. Mini case studies and exercises are also made available.

Course Structure**The Asset Side**

- I. Introduction**
 - a. Presentation of the outline and spirit of the course
 - b. The firm and its environment
- II. Asset Valuation**
 - a. Valuation in certainty vs. Uncertainty
 - b. The asset pricing fundamentals: from general equilibrium to the no-arbitrage pricing principle
 - c. The 3 layers of financial valuation
 - d. Evolutions, shortcomings and need for further development.
- III. Valuation: from DCF to Real Options**
 - a. Very quick review of valuation techniques
 - i. Free cash flows, DCF valuation and IRR
 - ii. Limits?

- b. Using option pricing theory for corporate valuation
 - i. Examples of uses
 - ii. From the binomial model to the Black & Scholes model
 - iii. Simulations and cash flow at risk

The Impact of the Liability Side

IV. Principles of Investment Decision-Making

- a. Criteria
- b. The FCF model: the DCF method applied

V. The Cost of Capital: A Generalised Approach

- a. ALM and the cost of capital: and introduction
- b. The various versions of WACC
 - i. Modigliani-Miller (MM 1958,1961,1963)
 - ii. Miles-Ezzel (ME)
 - iii. Harris-Pringle (HP)
- c. Capital cash flows
 - i. General
 - ii. Rules on governance of banks
 - iii. Rules on compensation of bank managers

VI. Optimal Capital Structure: Theories and Empirical Studies

- a. Agency theory
- b. Asymmetric information and the pecking order hypothesis
- c. Signalling
- d. Review of recent studies on the optimisation of the capital structure by corporate firms

The Firm and its (Financial) Market

VII. Advanced Fixed Income

- a. Risk of bond investments
- b. Bond sectors and instruments
- c. Understanding yield spreads
- d. Advanced bond valuation
- e. Types of interest rate derivatives

VIII. Risky debt

- a. Financial distress and bankruptcy
- b. Merton's model vs. binomial model and the implementation of KMV
- c. Risky debt and the optimal capital structure paradigm – Leland's approach

IX. Convertible bonds and warrants

- a. Issuing hybrid forms of securities to the market – why ?
- b. Understanding convertibles and warrants