

# Investment Analysis

Lecturer: Mikhail Moshkov

## Course description

Investment Analysis is a one-semester elective course designed for the second-year students of the ICEF Master of Science program in financial economics. The course is taught in Russian, however all main terms and concepts are presented in English.

The course provides an overview and analysis of key modern valuation methods. The course is based on the materials of Level II of the CFA® Program.

The course starts with a brief introduction and discussion of fundamental definitions. Then, we discuss the uses of and general approaches to valuation. The core of the course contains valuation methods applied by IFC and other major financial institutions nowadays such as methods based on multiples, discounted cash flows, and others. Please note that only those methods actually applied in modern practice are going to be presented. Most methods will be illustrated by real life examples.

This course will be most useful to those considering a career in investments.

## Prerequisites

Basics of accounting and financial forecasting.

## Teaching objectives

Students are expected to learn how to:

- Choose methods for asset valuation;
- Understand pros and cons of each method;
- Apply valuation methods in practice.

## Teaching methods

The following methods and forms of study are used in the course:

- Seminars
- Self study

## Grade determination

The grade is determined on class participation (30%) and final exam (70%).

## Main reading

Stowe, Robinson, Pinto and McLeavey, Analysis of Equity Investments: Valuation, AIMR, 2002

## Additional reading

1. DeFusco, McLeavey, Pinto and Runkle, Quantitative Methods for Investment Analysis, 2nd E, CFA Institute, 2004
2. Justin J. Camp, Venture Capital Due Diligence, John Wiley & Sons, Inc., New York, 2002
3. Robert F. Bruner, Applied Mergers & Acquisitions, John Wiley & Sons Inc, 2004

## Course outline

1. Basic Definitions.  
Risk. Required Return. Expected Return. Discounting. Present Value. Net Present Value. Sunk costs.
2. Valuation applications. Choice of a valuation method.  
Decision tree in selection valuation approaches used at IFC.
3. Dividend Discount Model (DDM).  
Practical examples of DDM. One-, two, and multi-stage DDMs. Gordon Model. Assumptions. Advantages and Disadvantages.
4. Definition and Application of Free Cash Flows (FCFF & FCFE).  
Definition of cash flows used for valuation. Free Cash Flow to the Firm (FCFF) and Free Cash Flow to Equity (FCFE).
5. Multiples Method (P/E, P/BV, EV/EBITDA and others)  
Comparative methods of valuation. Most frequently used methods. Advantages and disadvantages of each method. Critique of EBITDA as an approximation of operating cash flows.

## 6. Practical Example on the Multiples Method.

Analysis of practical example (on the basis of an investment banking pitch to value and sell a Russian FMCG company).

## 7. Residual Value Method.

Description of the method and areas of application.

## 8. Venture Capital Method.

This method can be applied to start-up businesses with no sales or cash flows. It reflects the general approach of venture capitalists to investing.

## 9. CAPEX Budgeting.

Analysis of the capital expenditures budgeting process of a Russian vertically-integrated business. Methods for CAPEX budgeting (payback, discounted payback, NPV, and PI).

## 10. Risk Estimation.

Estimation of the required rate of return.

## 11. Basics of Financial Modeling.

Steps in compilation of a financial model. Two practical examples in Excel.

## 12. Mergers &amp; Acquisitions (1).

Introduction. Types of M&A deals. Motivation and other related issues.

## 13. Mergers &amp; Acquisitions (2).

M&A Strategies. Valuing synergies. Real options and their impact on M&A.

## 14. Mergers &amp; Acquisitions (3).

Application of valuation methods to M&A activities.

## Distribution of hours

#	Topic	Total hours	Contact hours		Self study
			Lectures	Seminars	
1.	Basic Definitions	6	2		4
2.	Valuation applications. Choice of a valuation method	12	4		8
3.	Dividend Discount Model (DDM)	6	2		4

#	Topic	Total hours	Contact hours		Self study
			Lectures	Seminars	
4.	Definition and Application of Free Cash Flows (FCFF & FCFE)	12	4		8
5.	Multiples Method (P/E, P/BV, EV/EBITDA and others)	6	2		4
6.	Practical Example on the Multiples Method	12	4		8
7.	Residual Value Method	6	2		4
8.	Venture Capital Method	6	2		4
9.	CAPEX Budgeting	12	4		8
10.	Risk Estimation	6	2		4
11.	Basics of Financial Modeling	6	2		4
12.	Mergers & Acquisitions (1)	6	2		4
13.	Mergers & Acquisitions (2)	6	2		4
14.	Mergers & Acquisitions (3)	6	2		4
Total:		108	36	0	72