

Corporate Finance

ICEF, Higher School of Economics, Moscow

BSc Corporate Finance, 4th year

Prerequisites

The course requires the knowledge in micro and macroeconomics, accounting and banking.

Course description

The course develops theoretical framework for understanding and analysing major financial problems of modern company in market environment. The course covers basic models of valuation of corporate capital, including pricing models for primary financial assets, real assets valuation and investment projects analysis, capital structure and various types of corporate capital employed, derivative assets and contingent claims on assets. It provides necessary knowledge in evaluating different management decisions and its influence on corporate performance and value. The course is based on lectures, seminars, case studies and self-study. "Corporate finance" is a two-semester course designed to prepare students for UOL examination.

Course Objective

The main objective of the course is to provide the conceptual background for corporate financial analysis from the point of corporate value creation. The course develops theoretical framework for understanding and analyzing major financial problems of modern firm in the market environment. The course covers basic models of corporate capital valuation, including pricing models for primary financial assets, real assets valuation and investment projects analysis, capital structure, derivative assets and contingent claims on assets. The course is focused on developing skills in analyzing corporate behavior in capital markets and the relationship of agent, and principal of raising funds, allocating capital and distributing returns. It provides necessary knowledge in evaluating different management decisions and their influence on corporate performance and value. The course requires the knowledge in micro and macroeconomics, accounting and banking.

At the conclusion of the course, students should be able to:

- solve problems in professional sphere based on analysis and synthesis;
- work with information: to find, evaluate and use information from various sources, necessary to solve professional problems in the field of corporate finance (capital budgeting, financing policy, payout policy, M&A motives);
- communicate, express his thoughts orally and in writing on basic topics of corporate finance;
- organize the activities of a small group created for the implementation of a specific project;
- use financial, accounting and other information contained in the statements of enterprises for making management financial decisions (regarding investments, capital structure, payout policy).

Methods of Instruction

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

- Lectures (2 hours a week)
- Classes (2 hours a week)
- Written and on-line home assignments
- Teachers' consultations (2 hours per week)
- Self-study
- Current control includes: written and on-line home assignments, essays and their assessment, participation in classwork and case presentation
- Intermediate control is based on mid-term exam in fall semester plus midyear exam in December
- Final exam in April

Reading List

Required Reading

1. Grinblatt, Titman. Financial Markets and Corporate Strategy. McGraw Hill. 2nd edition 2001 (G&T for short). This is our primary reading. This edition is very similar to the "Hiller, Grinblatt & Titman" mentioned in the study guide.
2. Brealey, Myers. Principles of Corporate Finance. 10th Edition (or earlier). (B&M for short) This is a classic corporate finance book for bachelors.
3. Frantz, Payne, Favilukis. Study Guide. Corporate Finance. First Edition. 2011. (Guide for short)

Supplementary Reading

1. Ross S., R. Westerfield, J. Jaffe. Corporate Finance. Fifth Edition. IRWIN-McGraw-Hill.
2. Copeland T. and Weston J.: Financial Theory and Corporate Policy. 1998
3. Damodaran A. Applied Corporate Finance. Wiley & Sons. 1999
4. Trigeorgis L. Real options. Managerial Flexibility and Strategy in Resource Allocation. The MIT Press. Cambridge. 1999
5. Copeland T., Antikarov V. Real Options: a Practitioner's Guide. Texere. New York. London. 2001
6. Bankruptcy and Distressed Restructuring. Analytical Issues and Investment Opportunities. Edited by E. Altman. Business One IRWIN.

Academic Journal Articles

1. Asquith, P. and D. Mullins 'The impact of initiating dividend payments on shareholders' wealth', Journal of Business 56(1) 1983, pp.77-96.
2. Ball, R. and P. Brown 'An empirical evaluation of accounting income numbers', Journal of Accounting Research 6(2) 1968, pp.159-78.
3. Bhattacharya, S. 'Imperfect information, dividend policy, and "the bird in the hand" fallacy', Bell Journal of Economics 10(1) 1979, pp.259-70.
4. Blume, M., J. Crockett and I. Friend 'Stock ownership in the United States: characteristics and trends', Survey of Current Business 54(11) 1974, pp.16-40
5. Campbell, J. and R. Shiller 'The dividend-price ratio and expectations of future dividends and discount factors', Review of Financial Studies 1 1988.

6. Chen, N-F. 'Some empirical tests of the theory of arbitrage pricing', *The Journal of Finance* 38(5) 1983, pp.1393–414.
7. Chen, N-F., R. Roll and S. Ross 'Economic Forces and the Stock Market', *Journal of Business* 59 1986, pp.383–403.
8. Cochrane, J.H. 'Explaining the variance of price-dividend ratios', *Review of Financial Studies* 5 1992, pp.243–80.
9. Fama, E. 'The behavior of stock market prices', *Journal of Business* 38(1) 1965, pp.34–105.
10. Fama, E. 'Efficient capital markets: a review of theory and empirical work', *Journal of Finance* 25(2) 1970, pp.383–417.
11. Fama, E. 'Efficient capital markets: II', *Journal of Finance* 46(5) 1991, pp.1575–617.
12. Fama, E. and K. French 'Dividend yields and expected stock returns', *Journal of Financial Economics* 22(1) 1988, pp.3–25.
13. Fama, E. and K. French 'The cross-section of expected stock returns', *Journal of Finance* 47(2) 1992, pp.427–65.
14. Fama, E. and K. French 'Common risk factors in the returns on stocks and bonds', *Journal of Financial Economics* 33 1993, pp.3–56.
15. Fama, E. and J. MacBeth. 'Risk, return, and equilibrium: empirical tests', *Journal of Political Economy* 91 1973, pp.607–36.
16. Grossman, S. and O. Hart 'Takeover bids, the free-rider problem and the theory of the corporation', *Bell Journal of Economics* 11(1) 1980, pp.42–64.
17. Healy, P. and K. Palepu 'Earnings information conveyed by dividend initiations and omissions', *Journal of Financial Economics* 21(2) 1988, pp.149–76.
18. Healy, P., K. Palepu and R. Ruback 'Does corporate performance improve after mergers?', *Journal of Financial Economics* 31(2) 1992, pp.135–76.
19. Jegadeesh, N. and S. Titman 'Returns to buying winners and selling losers', *Journal of Finance* 48 1993, pp.65–91.
20. Jarrell, G. and A. Poulsen 'Returns to acquiring firms in tender offers: evidence from three decades', *Financial Management* 18(3) 1989, pp.12–19.
21. Jarrell, G., J. Brickley and J. Netter 'The market for corporate control: the empirical evidence since 1980', *Journal of Economic Perspectives* 2(1) 1988, pp.49–68.
22. Jensen, M. 'Some anomalous evidence regarding market efficiency', *Journal of Financial Economics* 6(2–3) 1978, pp.95–101.
23. Jensen, M. 'Agency costs of free cash flow, corporate finance, and takeovers', *American Economic Review* 76(2) 1986, pp.323–29.
24. Jensen, M. and W. Meckling 'Theory of the firm: managerial behavior, agency costs and capital structure', *Journal of Financial Economics* 3(4) 1976, pp.305–60.
25. Jensen, M. and R. Ruback 'The market for corporate control: the scientific evidence', *Journal of Financial Economics* 11(1–4) 1983, pp.5–50.
26. Lakonishok, J., A. Shleifer and R. Vishny 'Contrarian investment, extrapolation, and risk', *Journal of Finance* 49(5) 1994, pp.1541–78.
27. Lintner, J. 'Distribution of incomes of corporations among dividends, retained earnings and taxes' *American Economic Review* 46(2) 1956, pp.97–113.
28. Lo, A. and C. McKinlay 'Stock market prices do not follow random walks: evidence from a simple specification test', *Review of Financial Studies* 1(1) 1988, pp.41–66.
29. Masulis, R. 'The impact of capital structure change on firm value: some estimates', *Journal of Finance* 38(1) 1983, pp.107–26.

30. Miles, J. and J. Ezzell 'The weighed average cost of capital, perfect capital markets and project life: a clarification', Journal of Financial and Quantitative Analysis 15 1980, pp.719– 30.
31. Miller, M. 'Debt and taxes', Journal of Finance 32 1977, pp.261–75.
32. Modigliani, F. and M. Miller 'The cost of capital, corporation finance and the theory of investment', American Economic Review (48)3 1958, pp.261–97.
33. Modigliani, F. and M. Miller 'Corporate income taxes and the cost of capital: a correction', American Economic Review (5)3 1963, pp.433–43.
34. Myers, S. 'Determinants of corporate borrowing', Journal of Financial Economics 5(2) 1977, pp.147–75.
35. Myers, S. and N. Majluf 'Corporate financing and investment decisions when firms have information that investors do not have', Journal of Financial Economics 13(2) 1984, pp.187– 221.
36. Poterba, J. and L. Summers 'Mean reversion in stock prices: evidence and implications', Journal of Financial Economics 22(1) 1988, pp.27–59.
37. Roll, R. 'A critique of the asset pricing theory's texts. Part 1: on past and potential testability of the theory', Journal of Financial Economics 4(2) 1977, pp.129–76.
38. Ross, S. 'The determination of financial structure: the incentive signaling approach', Bell Journal of Economics 8(1) 1977, pp.23–40.
39. Shleifer, A. and R. Vishny 'Large shareholders and corporate control', Journal of Political Economy 94(3) 1986, pp.461–88.
40. Shleifer, A. and R. Vishny 'Managerial entrenchment: the case of management-specific investment', Journal of Financial Economics 25, 1989 pp.123–39.
41. Warner, J. 'Bankruptcy costs: some evidence', Journal of Finance 32(2) 1977, pp.337– 47.

Special Equipment and Software Support

- Laptop, projector, Internet connection
- MS Word, MS Excel, MS PowerPoint

Internet Resources

- ICEF Information system (<https://icef-info.hse.ru>)
- Virtual Learning Environment (Student Portal) (<https://my.london.ac.uk/>)
- HSE Library e-resources (<https://library.hse.ru/en/e-resources/>)

Grading System and Examination Type

Means of student control:

- Home assignments
 - Individual assignments
 - Group work
- Midterm exam (October)
- Midyear exam (December)
- Final exam (April)

Examination is in writing.

Sample materials for knowledge assessment are available in ICEF Information system at <https://icef-info.hse.ru>.

Grades criteria

Grades	Status
0-3	Not passed
4-5	Satisfactory
6-7	Good
8-10	Excellent

Grade Determination

All grades are given initially out of 100. The final grades are also transferred to 10- and 5-points grades in accordance with the ICEF Grading Regulations (par.3) available at https://icef-info.hse.ru/goto_icef_file_29833_download.html

*Fall Semester*****

First term grades are calculated as weighted average with the following weights:

- Exam in December – 45%
- Class Participation** - 10%
- Home assignments*** – 25%
- Midterm exam - 20%

Total – 100%

*Spring Semester*****

Final Course grade is calculated as weighted average with the following weights:

- Final Exam* – 40%
- Class Participation** - 10%
- Home assignments*** - 15%
- Group assignment – 10%
- Fall semester grade - 25%

Total – 100%

* In case of a passing total grade on the 100-point scale, if the student received a low grade for a final exam (<25), final grade is unsatisfactory.

A passing total grade can be assigned only provided that the student attempted the corresponding final exam, even when the final grade on the 100-point scale, before the final exam, is sufficient to obtain a passing grade on the 10-point scale. In case of a failing total grade on the 100-point scale, the lecturer has the right to give a passing total grade on the 10-point scale, if the student received a high grade for a final examination.

** Class participation includes class activity and attendance

*** Includes written and online home assignments weighted with similar weights and one large assignment on the literature that has a weight of 5 small ones.

**** To have a satisfactory mark the cumulative grade for the fall semester and for the spring semester cannot be less than satisfactory. For the fall semester, the resit is necessary if the cumulative mark is lower than satisfactory; for the spring semester the

resit and the second (the last one resit) resit could take place in case of unsatisfactory grades.

Retakes

The final total grade after the retake includes the grade for the retake and the initial total grade. The weight of the exam retake grade equals the weight of final exam grade in the initial total grade. If the weighted grade after the final exam retake is a pass, the student receives this weighted grade for the course. If the weighted grade after the final exam retake is unsatisfactory, but the grade for the retake is a pass, the student receives a minimal satisfactory grade for the course

If a student retook the exam after receiving a failing grade based on the result of fall semester assessment, the final total grade for the academic year does not include the results of these retakes, and the final total grade is calculated on the basis of the initial grade for interim assessment.

Course Plan

PART 1. Understanding Principles of Financial Valuation

1. Introduction to the Course. Why is Finance Corporate? The Foundations for Proper Financial Analysis of the Firm

The advantages of corporate firm over the sole traders and partnerships. The life-cycle of the corporation at the capital market: funds raising, investing and benchmarks, returning money to investors at the capital market. The functions of corporate financial manager. The role of capital market in explaining corporate performance: main assumptions. The consumption choice and the first Fisher separation theorem. No arbitrage rule and the principle of tracking (replicating) portfolio. Net present value rule of corporate analysis. The sources of NPV. The second Fisher separation theorem.

The differences between financial model of corporate analysis and accounting model: the concept of cost and profits, the concept of money measurement, the concept of return and corporate performance measurement. The value creation and building blocks in corporate finance. The mission of Chief Financial Officer of the Corporation (CFO). The role of corporate finance in building financial model of the firm. Corporate Finance and proper financial analysis of any firm in market economy.

(B&M Ch.1-3 and 11; G&T Ch.1, 9, 11.1; Guide Ch.1)

2. Fundamentals of Corporate Capital Valuation: Corporate Debt Capital

The yield curve. Spot rates and forward rates. Defining forward rate from the yield curve. The term structure of interest rates: theoretical explanation. The role of term structure of interest rates in constructing tracking (replicating) portfolio for Corporate Bonds. Intrinsic value of stand-alone bond. Discounted cash flow valuation of corporate bonds. Corporate bond's types. Bond's covenants: assets covenants, dividend covenants, financing covenants. The influence of covenants over bond's valuation. Bond's yields: promised yield to maturity, realized (horizon yield), promised yield to call. Theorems of bond's pricing. Bond's rating and yields to maturity.

(B&M Ch.4, 23; G&T Ch.2; Guide Ch.1)

3. Fundamentals of Equities Valuation: Preferred and Common Stock

Types of preferred stock by voting rights, dividend rates and dividend payments. Discounted dividend model (DDM) for preferred (preference) shares. Discounted dividend model for common stock (ordinary shares): the criteria for stable growing company, Gordon constant growth dividend rate model. Multistage DDM: 2 stages dividend growth, negative rate of dividend growth. Growth opportunities value. The limitations of DCF valuation.
(B&M Ch.4; G&T Ch.3, Guide Ch.1)

4. Risk and Expected Return: Principles of Portfolio Analysis

Principles and assumptions of mean-variance analysis. Mean and variance of returns of a risky asset. Portfolio expected returns. Portfolio risk and assets's covariances. Feasible set of assets and the efficient frontier. Capital market line. Two-fund separation.
(B&M Ch.7; G&T Ch.4, 5; Guide Ch.2)

5. Capital Asset Pricing Theory: CAPM and its Use in Corporate Finance

Assumptions for capital asset pricing model. Market portfolio and its derivation. Security market line. Stocks' beta. Empirical evidence and critiques.
(B&M Ch.8; G&T Ch.5; Guide Ch.2)

6. Arbitrage Pricing Theory

Understanding single-factor and multi-factor model representation. Systematic risk and diversification. Arbitrage price theory. Multi-factor models in practice.
(B&M Ch.8; G&T Ch.6; Guide Ch.3)

7. The role of Efficient Market Hypothesis in Corporate Analysis: Theory and Evidence

Types of information for investor's decision-making. The value of information for the investor. The efficient market hypothesis. Weak, semi-strong, strong form efficiency. Implications of Efficient Market Hypothesis.
(B&M Ch.13; Guide Ch.5)

8. Option Pricing Models and Corporate Contingent Claims

Varieties of derivatives (Futures, Forward, Options, Swaps). Derivative asset payoff profile. Pricing forward contracts. Put-call parity. Option pricing methods.
(B&M Ch.20, 22; G&T Ch.7, 8; Guide Ch.4)

PART 2. Corporate Financial Strategy and Corporate Value

9. Corporate Investing Policies and Value Creation: The Analytical Toolkit for Riskless Projects

What is risk-free investment project? Competitive advantage and value creation. Incremental cash flows and incremental value. Net present value rule, its assumptions and value additivity rule. The sources for positive net present values. Internal rate of return (IRR) and financial approach to corporate return analysis. The limitations of IRR. Modified IRR. Discounted payback (DPB). Profitability index (PI). Economic value added (EVA) and economic profit generated by the project. EVA versus NPV. Capital budgeting in inflationary environment: nominal approach, real terms approach.
(B&M ch.5,6, 9,10, 19; G&T ch.9,10, ch.11, 12)

10. Corporate Investing Policies and Value Creation: Traditional Analytical Tool Kit for Risky Projects

What are risky projects? The risk-adjusted discount rate method in capital budgeting decisions. Certainty equivalents cash flows and their use in risky project's analysis. Valuation of risky projects: sensitivity analysis, simulation, decision trees. Real options approach

(B&M ch.5,6, 9,10, 19; G&T ch.9,10, 11, 12)

11. Valuing Corporate Strategic Opportunities and Flexibility: Corporate Real Options.

Strategic options of the corporation and the limitations of DCF analysis. Real option valuation: main assumptions, the difference in treatment of parameters between financial and real options. The use of risk neutral approach, binomial and Black-Scholes models in real option valuation. Valuing option to abandon, to postpone, to expand. OPM as a tool of quantifying managerial flexibility. The benefits of real option valuation over DCF project analysis. The use of OPM in corporate valuation. Put-call parity and its application to the corporation: corporate securities as options. The use of OPM in the analysis of corporate cost of capital: warrants and convertibles.

(B&M ch.21; G&T ch. 11; Guide ch.4)

12. Capital Structure Choice and Corporate Value

The assumptions of Modigliani&Miller theorem on capital structure. The arbitrage argument and replicating portfolio of investor in M&M world. The M&M propositions I and II. The cost of capital: traditional and M&M approaches. The propositions I and II with corporate income taxes. The effect of personal taxes on capital structure. Miller equilibrium for the firm and for the investor. Financial distress' direct and indirect costs. Debt holder - equity holder conflicts: debt overhang problem, shareholder's incentives, the ways to minimize the conflicts. The trade-offs theory of capital structure. The pecking order of financing theory. The stakeholders theory of capital structure. The dynamic capital structure theory versus static. The information conveyed by financing choices decision. Signaling concept of capital structure.

(B&M ch.17,18; G&T ch.14,15,16; Guide,ch.6)

13. Capital Market Benchmarking: Corporate Cost of Capital.

Patterns of corporate financing. The many kinds of debt financing. The corporate cost of debt. The debt tax shield. Equity financing. The corporate cost of retained earnings. The issuance of new equity and corporate cost of equity. The weighted average cost of capital (WACC) and corporate hurdle rate. Corporate cost of capital and financial leverage. Asset beta. Levered equity beta. Hamada adjustment to equity beta, its assumptions and limitations. The WACC and the principles of corporate return analysis. Economic profit analysis with corporate hurdle rate: the spread. The volume of financing and the marginal corporate cost of capital.

(B&M ch.14,15, 22, 23, 24, 26; G&T ch13; Guide ch.7)

14. Financial Modeling for Optimal Capital Structure

Adjusted present value (APV): base case value, side effects values, multiple discount rates. Advantages of APV for capital budgeting and valuation. The criteria for optimal capital structure. The rating (WACC) approach to optimal capital structure analysis: the

assumptions, the method, the limitations. The adjusted present value approach (APV) to optimal capital structure analysis: the assumptions, the benefits, and implications. The target capital structure. The operating income approach to planning for optimal capital structure. Factors affecting the target capital structure: macroeconomic, microeconomic and firm's specific factors. The decision-making on capital structure.
(B&M ch.16, G&T ch.17, Guide ch.8)

15. Dividend Policy and Corporate Value: Theory and Evidence

Types of dividend: cash dividend, scrip dividend, forms of share repurchase. The Modigliani& Miller dividend irrelevance theorem. The effect of market imperfections (taxes and transaction costs) on dividend policy. The effect of market frictions on distribution policy. The dividend controversy. The rightists concepts of dividends. Clientele theory: assumptions, empirical evidence. Signaling theory of dividends: the information content of dividends, dividends as mixed signal, empirical evidence. The leftists on dividend policy. Lintner stylized facts modelling. Empirical research on distribution policies.
(B&M ch.16; G&T ch.15,18,19; Guide,ch.9)

16. Corporate Risk Management and Value Creation Risk and the M&M theorem.

The motivation to hedge. Hedging and the firm's stakeholders. The methods of interest rate risk management. Foreign exchange risk management. Application of risk management to industrial firms.
(B&M ch.22 ; G&T ch.21,22)

Part III. Corporate Value Creation and Corporate Control.

17. The Market for Corporate Control: Mergers&Takeovers

Types of mergers and takeovers. The principles of valuation of mergers and takeovers. Stand - alone value of the target and of the buyer. Efficiency theories of M&A activities: differential efficiency, inefficient management, synergy effects theory. The sources and types of synergy. Agency theories of M&A. Signaling theories of M&A. Hostile takeovers and free - rider problem. Management defences. Valuing synergy on the basis of DCF.
(B&M ch.33; G&T ch.20; Guide,ch.10)

18. Strategic and Financial Restructuring

The methods of corporate restructuring. Corporate divestitures and the problem of control. The sources for synergy in restructuring. Bankruptcy and corporate control. Restructuring distressed companies. LBOs: the effect on stock prices. Financial analysis of efficiency in case of restructuring.
(B&M ch.33; G&T ch.20; Guide,ch.10)

19. Corporate Governance and Corporate Value.

Types of corporate governance. Managerial incentives and corporate investing decisions Managerial control and capital structure choices. Management control and performance measurement. The use of economic value added (EVA) in firm's performance measurement and managerial incentives planning. Empirical research on the effects of corporate governance over the market value of the corporation.
(B&M ch. 12, 34; G&T ch.18)

Teaching Hours for Topics

No. of topic	Total (hours)	Class (hours)		Self-study
		Lectures	Practice	
1	14	2	2	10
2	14	2	2	10
3	20	4	2	14
4	24	4	4	16
5	16	2	4	10
6	22	4	4	14
7	14	2	2	10
8	26	4	6	16
9	24	4	4	16
10	22	2	4	16
11	24	4	4	16
12	22	2	4	16
13	20	4	2	14
14	14	2	2	10
15	24	4	4	16
16	14	2	2	10
17	16	2	2	12
18	16	2	2	12
19	14	2	2	10
Total	360	56	56	248