

CAPITAL BUDGETING (22E12000) (6cr) SYLLABUS

20.2.2024 vers.

Aalto University School of Business

From 27th February to 9th April 2024, (6 weeks; fully onsite at Ekonominaukio 1)

Week 9: Tuesday 27th February 8.30–11.45 o'clock (V001)

Weeks 10-12: Tuesdays 9.00–11.00 o'clock (V001); Thursdays 14.15–16.15 o'clock
(Weeks 10-11: V002; Week 12: U006)

Week 13: Tuesday 26th March 9.00–11.00 o'clock (Q201)

Week 14: Thursday 4th April 14.15–16.15 o'clock (V002)

Week 15: Tuesday 9th April 8.30–11.45 o'clock (V001)

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COURSE OBJECTIVES

The main objective of this course is to provide students with a capability to participate in capital investment decision-making processes. The course also aims at providing students with the understanding of the opportunities and limitations of various capital budgeting methods and of how they could be used in modern organizations.

More specifically, after completing this course, the students will be able to:

1. Prepare capital investment proposals in an international context.
2. Analyze critically investment proposals made by other people.
3. Explain what phases a typical capital investment process comprises of.
4. Apply and compare key capital budgeting techniques.
5. Explain how flexibility and risks can be taken into account in investment analysis and what challenges relate to this.
6. Discuss how sustainability aspects can be considered in capital investment.
7. Describe special features of IT and R&D investments.
8. Discuss how gameplaying may influence capital investment.
9. Explain the benefits and challenges of post-completion auditing.
10. Explain how strategic considerations can be taken into account in investment analysis and what challenges relate to this.

COURSE PHILOSOPHY

The course is very interactive. Students are expected to participate actively in the lectures by

1. Writing learning diaries based on assigned pre-reading material
2. Conducting investment appraisal exercises
3. Preparing case analysis in small groups
4. Participating actively in the discussions

The top 5 contributors to class discussions will be given three bonus points.

There will also be more traditional lecturing, as well as presentations by guest lecturers.

COURSE CONTENT

The major topics of capital budgeting course cover the general features of capital budgeting process, costs and benefits of investments, cost of capital, capital budgeting in modern production environment and in an international context, flexibilities and uncertainties in capital budgeting, strategic investments, gameplaying, post-completion auditing, special features of IT & R&D investments, and sustainability related topics.

COURSE FORMAT AND GRADING

The course format comprises of the following elements: participation in the lectures, 3 personal learning diaries based on pre-readings (represent 18% of the grading), 2 individually conducted investment appraisal exercises (12%), case analysis prepared in small groups (20%) and final exam (50%).

Course site

We will use the course site in MyCourses as the channel for all the interaction during the course. The course name in MyCourses: *22E12000 Capital Budgeting (6 cr)*. The individual and group assignments conducted during the course need to be submitted through MyCourses.

Lectures

From 27th February to 9th April 2024, (6 weeks; fully onsite at Ekonominaukio 1)

- Week 9: Tuesday 27th February 8.30–11.45 o'clock (V001)
- Weeks 10-12: Tuesdays 9.00–11.00 o'clock (V001); Thursdays 14.15–16.15 o'clock (Weeks 10-11: V002; Week 12: U006)
- Week 13: Tuesday 26th March 9.00–11.00 o'clock (Q201)
- Week 14: Thursday 4th April 14.15–16.15 o'clock (V002)
- Week 15: Tuesday 9th April 8.30–11.45 o'clock (V001)
- The lectures will be given by Professor Jari Huikka

Investment appraisal exercises enable you to apply capital budgeting techniques in practice

- Includes two individually conducted case exercises: Hola-Kola – The Capital Budgeting Decision (6/12%) and the Manufacturing Line Investment case in Invest for Excel (6/12%)
- Introduced during the first lecture on February 27
- Both returned separately through MyCourses
- Manufacturing Line case returned by Thursday, March 7 at 23.59 o'clock and Hola-Kola Case returned by Monday, March 11 at 23.59 o'clock through MyCourses
- Manufacturing Line discussed during the lecture on March 12 and Hola-Kola case on March 14
- The Manufacturing Line case exercise must be conducted by using Invest for Excel program (online version)
- The following dates booked for Invest for Excel tutoring:
 - 28.2., 16.15–17.45 (training/demonstration at U351, Kandikeskus)
 - 29.2., 15.00–16.00 (training/support person present, Zoom)
 - 1.3., 15.00–16.00 (support person present, Zoom)
 - 4.3.–6.3., 15.00–16.00 (support person present, Zoom)
 - 7.3., 16.30–17.30 (support person present, Zoom)
- **12% of the overall grade**

Learning diaries are a personal tool for enhancing learning. They are written for the three lectures. Diaries help you to crystallize and reflect on what you have learned by reading the pre-lecture material (see Appendix A for more detailed instructions for the diaries)

- Length about 3 pages
- Use page numbers and see that there is your name on every page (e.g. in the footer)
- Deadlines: March 14 & 24 and April 7 at 23.59 o'clock
- The diaries should be submitted through MyCourses
- Grading per diary: Max 6 points. One point will be given if a proper effort has been made. In addition, grading is based on the rubric in the Appendix A.
- There will be diary feedback and discussion sessions during the lectures
- Voluntary individual feedback possibility during March 19–22 (10 minutes per student, Zoom) for the first diary. To be booked on the second course week.
- **18% of the overall grade (3x6%)**

Case analyses provide you with an opportunity to apply to practice many of the topics and concepts covered during the course.

- Comprises of cases: “Stryker Corporation: In-Sourcing PCBs” (10%) and “Stryker Corporation: Capital Budgeting” (10%)
- Length of each sub-case 5-10 pages + potential appendices
- Introduced during the first lecture on February 27
- Stryker Corporation: In-Sourcing PCBs; submitted by Wednesday March 20 (by 23.59 o'clock)
- Stryker Corporation: Capital Budgeting; submitted by Tuesday April 2 (by 23.59 o'clock)
- The cases will be discussed during the lectures on March 21 and April 4, respectively
- Prepared in small groups (2-3 persons per group)
- **20% of the overall grade**

Final exam

- Will take place on April 18 at 9.00–12.00 o'clock (morning, at the campus)
- Open questions on wider topics: explain, analyze, compare, calculate...
- May also include questions related to the Case analyses
- 4 questions of which 4 answered
- **50% of the overall grade**

Readings for the exam:

- All lectures
- Baker, H.K. and English, P. (eds.) (2011) Capital Budgeting Valuation: Financial Analysis for Today's Investment Projects. John Wiley & Sons, Hoboken, NJ. ISBN 978-0-470-56950-4; the following chapters: 1-8, 10, and 18.
- Other pre-readings mentioned in the Syllabus (excluding Business and Investment Planning Module. ForestBioFacts Learning Environment, 2024; Huikka and Kolehmainen, 2024; Rasmussen, 2020).

COURSE CORRESPONDENCE:

- Jari Huikka
 - jari.huikka@aalto.fi; Aalto University School of Business (Main Building), Accounting Department, Otaniemi; Room U307, tel. 050-553 1920

February 27, 2024 (8.30 – 11.45 o'clock): Introduction

Pre-readings for the lecture

- i. Baker & English: Chapters 1-3 (p. 1-55) Capital Budgeting: An Overview & Foundations and Key concepts

Content

- Introduction of the course
- Getting organized for the course
- Briefing for the investment appraisal exercises
- Briefing for the case analyses
- Introduction to capital budgeting

March 5, 2024 (9.00 – 11.00 o'clock): Evaluation of capital investments 1.

Pre-readings for the lecture

- i. Baker & English: Chapters 4-6 (p. 59-110) & 10 (p. 175-195) & 18 (p. 339-362)

Content

- Evaluating capital investments
- Capital rationing for capital budgeting
- Estimating the project cost of capital
- Estimating project cash flows

March 7, 2024 (14.15 – 16.15 o'clock): Evaluation of capital investments 2.

Pre-readings for the lecture

- i. Baker & English: Chapter 7 (p. 111-130)
- ii. Miller, P. and O'Leary, T. (2005) Capital budgeting, coordination, and strategy: a field study of interfirm and intrafirm mechanisms. In *Controlling Strategy; Management, accounting and performance measurement* (ed. C. Chapman), Oxford: Oxford University Press, 151-182.
- iii. The Case of International Diesel Corporation

Content

- Analyzing foreign investments: The Case of International Diesel Corporation
- Modern production environment: Intra-organizational and inter-organizational aspects in capital budgeting

- Investment appraisal exercise “Manufacturing Line Case” to be returned by March 7, 23.59 o’clock
- Investment appraisal exercise “Hola-Kola – The Capital Budgeting Decision” to be returned by March 11, 23.59 o’clock

March 12, 2024 (9.00 – 11.00 o’clock): Flexibility in capital budgeting; Real options; Risk analysis

Pre-readings for the lectures

- i. Shapiro, A. (2005) Real options and project analysis. Chapter 4 in *Capital Budgeting and Investment Analysis*, 1st edition. Pearson Prentice Hall, Upper Saddle River.
- ii. Barnett, M.C. (2003) Falling off the fence? A realistic appraisal of a real options approach to corporate strategy, *Journal of Management Inquiry*, 12(2), 185-196.
- iii. Shapiro, A. (2005) Risk analysis in capital budgeting. Chapter 5 in *Capital budgeting and investment analysis*, 1st edition. Pearson Prentice Hall, Upper Saddle River.

Content

- Flexibility in capital budgeting; Real options
- Risk analysis
- Investment appraisal exercise (Manufacturing Line Case): Feedback and discussions

March 14, 2024 (14.15 – 16.15 o’clock): Gameplaying; Sustainability aspects

Pre-readings for the lecture

- i. Lumijärvi, O-P. (1991) Selling of capital investments to top management. *Management Accounting Research*, 2, 171-188.
- ii. Rasmussen, J. (2020) The Role of Structural Context in Making Business Sense of Investments for Sustainability – A Case Study. *Sustainability*, 12, 1-24.

Content

- Gameplaying in capital budgeting
- Sustainability aspects in capital budgeting
- Investment appraisal exercise (Hola-Kola – The Capital Budgeting Decision): Feedback and discussions

- **1st Learning diary to be returned by March 14, 23.59 o'clock**
- **Individual feedback for the 1st Learning diary, March 19-22, 10 minutes per student (Zoom), voluntary**

March 19, 2024 (9.00 – 11.00 o'clock): R & D investments

Pre-reading for the lecture

- i. Huikku, J., and Kolehmainen, K. (2024) The Role of Net Present Value Calculation in the Development of Experience of Knowing in Strategic Investment Decision-Making Process. Unpublished working paper. Aalto University.

Content

- Visitor: R&D investments in the pharmaceutical industry (Orion Corporation, CFO Jari Karlson)
 - R & D investments
- **Case analysis “Stryker Corporation: In-Sourcing PCBs” to be returned by March 20, 23.59 o'clock**

March 21, 2024 (14.15 – 16.15 o'clock): Information technology investments

Pre-readings for the 1st Learning diary (Information technology investments)

- i. Joshi, K. and Pant, S. (2008) Development of a framework to assess and guide IT investments: An analysis based on a discretionary – mandatory classification. *International Journal of Information Management*, 28, 181-193.
- ii. Lefley, F. (2013) The appraisal of ICT and non-ICT capital projects; A study of the current practices of large UK organisations, *International Journal of Managing Projects in Business*, 6(3), 505-533.
- iii. Ward, J., Daniel, E. and Peppard, J. (2008) Building better business cases for IT investments. *MIS Quarterly Executive*, 7(1), 1-15.

Content

- Information technology investments
 - Learning diary 1: Feedback and discussions
 - Case analysis: “Stryker Corporation: In-Sourcing PCBs” discussions
- **2nd Learning diary to be returned by March 24, 23.59 o'clock**

March 26, 2024 (9.00 – 11.00 o'clock) Strategic analysis 1.

Pre-reading for the lecture

- i. Business and Investment Planning Module. ForestBioFacts Learning Environment (2024)

Content

- Visitor: Forecasting and scenario analysis (PhD, Senior Advisor, Foresight and Strategy, Katja Kolehmainen, Capful Oy)
 - The Case of Forest Companies' Investment Planning
- **Case analysis “Stryker Corporation: Capital Budgeting” to be returned by April 2, 23.59 o'clock**

April 4, 2024 (14.15 – 16.15 o'clock): Strategic analysis 2.

Pre-readings for the 2nd Learning diary (Strategic investments)

- i. Carr, C., Kolehmainen, K. and Mitchell, F. (2010) Strategic investment decision making practices: A contextual approach. *Management Accounting Research*, 21(3), 167-184.
- ii. Courtney, H., Lovallo, D. and Clarke, C. (2013) Deciding how to decide. *Harvard Business Review*, November, 62-70.
- iii. Grant, M., and Nilsson, F. (2020) The production of strategic and financial rationales in capital investments: Judgments based on intuitive expertise. *The British Accounting Review*, 52(3), 1-19.

Content

- Corporate strategy and the capital budgeting decision; Strategic analysis
- The role of financial management in strategic investment decision-making
- Learning diary 2: Feedback and discussions
- Case analysis: “Stryker Corporation: Capital Budgeting” discussions

- **3rd Learning diary to be returned by April 7, 23.59 o'clock**

April 9, 2024 (8.30 – 11.45 o'clock): Mergers & Acquisitions; Post-completion auditing

Pre-readings for the 3rd Learning diary (Post-completion auditing)

- i. Huikku, J. (2011) Postcompletion auditing of capital investments, In Baker & English: Chapter 8, p. 131-149.
- ii. Huikku, J. (2008) Managerial uses of post-completion auditing of capital investments. *The Finnish Journal of Business Economics*, 57(2), 139-164.
- iii. Huikku, J. and Lukka, K. (2016) The construction of persuasiveness of self-assessment based post-completion auditing reports. *Accounting and Business Research*, 46(3), 243-277.

Content

- Visitor: Mergers and acquisitions as investments (DBA, Professor of Practice, Professional Board Member Panu Routila)
- Post-completion auditing
- Learning Diary 3: Feedback and discussions
- Wrap-up of the course
- Course feedback

APPENDIX A: LEARNING DIARIES

- Personal tool for enhancing learning
- Helps you to crystallize and reflect the topics addressed
- Topics will be discussed and pondered further during the lectures
- Very roughly, one well-written learning diary may take on average about eight hours to write
- A lot of work, but you will learn a lot and it makes studying for the final exam so much easier...

General instructions

- Length about 3 pages (font 11 or 12; line spacing 1or 1,5; top-down & left-right margins 2-3 cm)
 - Presented in an organized manner
 - What were the main issues in the given pre-material?
 - Did the authors agree, or were they of different opinion on some essential matters?
 - How does this relate to your earlier knowledge?
 - Did some issues remain unclear? What would you like to know more about?
 - Do you disagree on something? Why?
 - Reflect (analyze, present own opinions, adopt a discussive stance)
 - Be critical (justify your criticism)
 - Present 2 questions which you would like us to address during the lecture (locate these at the end of the diary).
- Hence, do not simply repeat what the authors said, but try to explain in your own words what the main issues were. Present own opinions, thinking, and justified criticism; adopt a reflective, discussive stance. Make an effort to synthesize the readings instead of analyzing them only separately. Reflect on what you learnt and what you would still like to know more about. Consider using a few subtitles.

Grading

1	<ul style="list-style-type: none"> • Does not address most key issues in the pre-lecture material • No/little evidence of own reflection • Contains no/little or inappropriate critical comments; no/little justification for these comments • Presented in a disorganized, incoherent manner
3	<ul style="list-style-type: none"> • Addresses key issues in the pre-lecture material • Some evidence of own reflection • Provides some critical comments that reflect an understanding of key issues • Is presented in an organized manner
5	<ul style="list-style-type: none"> • Essential content successfully integrated • A lot of own reflection • Includes critical comments with substantial justification that reflect an integrated understanding of key issues • Evidence of relating the material to other knowledge domains • The paper is well organized and written, and free of errors

APPENDIX B: SUMMARY OF THE COURSE CONTENT
(Extensions to earlier knowledge marked with green)

Techniques	NPV,IRR, Payback, Profitability Index, ARR	Real Options	Risk Analysis Techniques	Strategic Analysis Techniques	
Process	General stages of the investment process	Post- Completion Auditing	Gameplaying	Sustainability Aspects	
Contexts	General domestic manufacturing context	International Investments	R&D Investments	IT Investments	Mergers & Acquisitions