
Contents

Part I Introduction

1 Capital Budgeting and Investment Decisions	3
1.1 Characteristics and Classification of Investment Projects	3
1.2 Investment Planning and Investment Decisions	6
1.2.1 Investment Planning as Part of the Management Process	6
1.2.2 Investment Planning as Part of the Capital Investment Decision-Making Process	8
1.2.3 Strategic Analysis Tools Supporting the Capital Investment Decision-Making Process	19
1.3 Investment Appraisal Methods as Tools for Investment Planning	23
Further Reading – Part I	25

Part II Basic Methods of Investment Appraisal

2 Static Methods	29
2.1 Cost Comparison Method	31
2.2 Profit Comparison Method	37
2.3 Average Rate of Return Method	39
2.4 Static Payback Period Method	42
Assessment Material	44
3 Discounted Cash Flow Methods	47
3.1 Introduction	47
3.2 Net Present Value Method	50
3.3 Annuity Method	61
3.4 Internal Rate of Return Method	63
3.5 Dynamic Payback Period Method	71
3.6 Data Collection	73
Assessment Material	79
Further Reading – Part II	81

Part III Advanced Methods and Applications of Investment Appraisal

4	Compounded Cash Flow Methods	87
4.1	Compound Value Method	87
4.2	Critical Debt Interest Rate Method	92
4.3	Visualisation of Financial Implications (VoFI) Method	94
	Assessment Material	102
5	Selected Further Applications of Investment Appraisal Methods . . .	105
5.1	Income Taxes and Investment Decisions	105
5.1.1	Taxes and the Net Present Value Method	105
5.1.2	Taxes and the Visualisation of Financial Implications (VoFI) Method	110
5.2	The Assessment of Foreign Direct Investments	112
5.2.1	Special Characteristics of Foreign Direct Investments	112
5.2.2	Net Present Value Model and the Assessment of Foreign Direct Investments	115
5.2.3	The Visualisation of Financial Implications (VoFI) Method and the Assessment of Foreign Investments	121
5.3	Models for Economic Life and Replacement Time Decisions	125
5.3.1	Overview	125
5.3.2	Optimum Economic Life Without Subsequent Projects	127
5.3.3	Optimum Economic Life with a Limited Number of Identical Subsequent Projects	130
5.3.4	Optimum Economic Life with an Unlimited Number of Identical Subsequent Projects	133
5.3.5	Optimum Replacement Time with an Unlimited Number of Identical Subsequent Projects	137
5.3.6	Optimum Replacement Time with a Limited Number of Non-identical Subsequent Projects	140
5.4	Models to Determine Optimum Investment Timing	143
	Assessment Material	152
	Further Reading – Part III	158

Part IV Multi-Criteria Methods and Simultaneous Decision-Making

6	Multi-criteria Methods	163
6.1	Introduction	163
6.2	Utility Value Analysis	167
6.3	Analytic Hierarchy Process	171
6.4	Multi-attribute Utility Theory	184
6.5	PROMETHEE	193
	Assessment Material	204

7 Simultaneous Decision-Making Models	209
7.1 Static Model for Simultaneous Investment and Financing Decisions (DEAN Model)	209
7.2 Multi-tier Model of Simultaneous Investment and Financing Decisions (HAX and WEINGARTNER Model)	216
7.3 Multi-tier Model of Simultaneous Investment and Production Decisions (Extended FÖRSTNER and HENN Model)	226
Assessment Material	234
Further Reading – Part IV	240
 Part V Methods and Models that Incorporate Uncertainty	
8 Methods and Models for Appraising Investment Projects Under Uncertainty	247
8.1 Decision Theory	248
8.2 Risk-Adjusted Analysis	253
8.3 Sensitivity Analysis	259
8.4 Risk Analysis	265
8.5 Decision-Tree Method	270
8.6 Options Pricing Models	280
Assessment Material	290
9 Analysing Investment Programmes Under Uncertainty	299
9.1 Overview	299
9.2 Portfolio Selection	302
9.3 Flexible Planning	310
Further Reading – Part V	318
Solutions	323
References	355
Index	363

Investment Appraisal

Methods and Models

Götze, U.; Northcott, D.; Schuster, P.

2015, XV, 366 p. 74 illus., Hardcover

ISBN: 978-3-662-45850-1