

Table of Contents

1	Introduction	1
1.1	Origin and Academic Relevance of the Research Focus	1
1.2	Structure of the Thesis	4
2	Theoretical Foundations of Capital Investments and Investment Appraisal	7
2.1	Fundamentals of Capital Investments	7
2.1.1	Definition of Investments in General	8
2.1.2	Classifications and Characteristics	10
2.1.3	Phases of Capital Investments	13
2.2	Fundamentals of Decision Theory and Decision Models	15
2.2.1	Introduction to Decision Theory	16
2.2.2	The Basic Concept of Rationality	17
2.2.3	Decision Models	21
2.3	Investment Appraisal	24
2.3.1	Investment Appraisal Process	25
2.3.2	Fundamental Static Methods	27
2.3.3	Fundamental Dynamic Methods	31
2.3.4	Advanced Methods	35
3	Theoretical Foundations of Cognitive Biases	39
3.1	Fundamentals of Cognitive Psychology	39
3.1.1	General Psychology and its Sub-Disciplines	40
3.1.2	Introduction to Cognitive Psychology	42
3.1.3	Subjects and Approaches of Cognitive Psychology	45
3.2	Heuristics and Biases	47

3.2.1	Introduction to the 'Heuristics and Biases' Approach	47
3.2.2	Fundamental Heuristics and their Resulting Cognitive Biases	52
3.2.2.1	Availability Heuristic	53
3.2.2.2	Representativeness Heuristic	60
3.2.2.3	Anchoring and Adjustment Heuristic	67
3.3	Selection of Further Biases and Effects	70
3.3.1	Framing Effects	71
3.3.2	Irrational Relativity	75
3.3.3	Action and Inaction Preferences	79
3.3.4	Overconfidence Effects	83
3.4	Critical Discussion of the 'Heuristics and Biases' Approach	87
3.4.1	Critiques Regarding the General Orientation and Focus..	87
3.4.2	Critiques Regarding the Scientific Adequacy	89
3.4.3	Critiques Regarding the Content and Research Set-Up...	92
4	Cognitive Biases in the Capital Investment Context	95
4.1	Preparatory Theoretical Considerations	95
4.1.1	Cognitive Biases in the General Business Context	95
4.1.2	Cognitive Biases in the Financial Investments Context: Behavioral Finance	98
4.1.3	Cognitive Biases in the Capital Investments Context	102
4.2	Illustrative Case Examples	107
4.2.1	Identification and Evaluation of Risks for a Capital Investment Project	107
4.2.2	Preparation and Analysis of a Business Case for a Capital Investment Opportunity	112

4.3	Empirical Experiments	117
4.3.1	Overview and General Approach.....	117
4.3.2	Empirical Experiments: Anchoring	127
4.3.2.1	Underlying Theory	128
4.3.2.2	Methodology and Preparation of Empirical Experiments	130
4.3.2.3	Analysis and Conclusions	134
4.3.3	Empirical Experiments: Framing	145
4.3.3.1	Underlying Theory	145
4.3.3.2	Methodology and Preparation of Empirical Experiments	147
4.3.3.3	Analysis and Conclusions	151
4.3.4	Empirical Experiments: Asymmetric Dominance	159
4.3.4.1	Underlying Theory	159
4.3.4.2	Methodology and Preparation of Empirical Experiments	162
4.3.4.3	Analysis and Conclusions	168
4.4	Critical Discussion of Conclusions and Limitations	176
4.4.1	Preliminary Conclusions	177
4.4.2	Limitations inherent in the General Approach and Methodological Set-up	178
4.4.3	Limitations inherent in the Incongruity between Parti- cipant Population and Relevant Real Life Population ..	183
4.4.4	Replication Study with Professionally Experienced Participants	185

5	Debiasing and Potential Countermeasures	
	against Cognitive Biases	191
5.1	Robustness of Cognitive Biases	191
5.2	Debiasing Techniques	193
5.2.1	Definition of Debiasing in General	194
5.2.2	Knowledge, Experience, and Expertise	195
5.2.3	Incentives and Accountability	197
5.2.4	Training and Tools	199
5.3	Counterstrategies	203
6	Conclusion	211
6.1	Overall Summary	211
6.2	Areas for Future Research	216
	Appendices	221
	References	233