

Contents

List of Boxes	xv
Acknowledgements	xvii
Disclaimer	xviii
PART I PRIVATE EQUITY ENVIRONMENT	1
1 Introduction	3
1.1 Routes into private equity	3
1.2 The limited partner's viewpoint	4
1.3 The challenge of venture capital fund valuation	4
1.4 Hard figures or gut instinct?	5
1.5 Managing with fuzzy figures	5
1.6 Making the grades	5
1.7 Outline	7
2 Private Equity Market	9
2.1 Funds as intermediaries	10
2.2 The problem of predicting success	15
2.2.1 Can success be repeated?	15
2.2.2 What is success?	17
2.2.3 Tolerance for failure	18
2.3 Broad segmentation of investment universe	18
2.3.1 Institutional quality funds	18
2.3.2 Newcomers	21
2.4 Private equity market dynamics	22
2.4.1 Boom-and-bust cycles	22
2.4.2 The relationship between limited and general partners	23
2.4.3 Life cycle of limited and general partner relationship	24
2.5 Conclusion	26

3 Private Equity Fund Structure	27
3.1 Key features	29
3.1.1 Corporate governance	30
3.1.2 Investment objectives, fund term and fund size	31
3.1.3 Management fees and expenses	31
3.1.4 Carried interest	32
3.1.5 Preferred return or hurdle rate	33
3.1.6 General partners' contribution	34
3.1.7 Key person provision	35
3.1.8 Termination and divorce	36
3.1.9 Distribution waterfall	37
3.2 Conflicts of interest	38
3.3 Finding the balance	38
4 Buyout and Venture Capital Fund Differences	41
4.1 Valuation	43
4.2 Business model	44
4.3 Deal structuring	45
4.4 Role of general partners	45
5 Funds-of-funds	47
5.1 Structure	47
5.2 Value added	48
5.2.1 Diversification	49
5.2.2 Resources	49
5.2.3 Selection skills	50
5.2.4 Incentives	50
5.3 Costs	51
5.4 Private equity investment programme	52
5.4.1 Funding	53
5.4.2 Management fees and profit sharing	53
5.4.3 Investment activities	54
Appendix 5A	54
PART II INVESTMENT PROCESS	57
6 Investment Process	59
6.1 Key performance drivers	59
6.1.1 Fund manager selection	60
6.1.2 Management of diversification	60
6.1.3 Commitment management	60
6.2 Process description	61
6.2.1 Portfolio objectives	61
6.2.2 Portfolio design	62
6.2.3 Liquidity management and valuation	63
6.2.4 Monitoring	64
6.2.5 Action and implementation	64

6.3 Risk management	65
6.3.1 Risk-measurement framework	65
6.3.2 Risk control	65
6.3.3 Risk mitigation	67
6.4 Tackling uncertainty	68
6.4.1 Reducing uncertainty	69
6.4.2 Strategies under uncertainty	69
7 Risk Framework	73
7.1 Market value	75
7.2 Market or credit risk?	77
7.2.1 Market risk	77
7.2.2 Credit risk	77
7.3 Conclusion	78
Appendix 7A: Incorporating private equity into the traditional VaR framework	79
7A.1 VaR calculation based on reported financial data	79
7A.2 Marking-to-model	80
8 Portfolio Design	81
8.1 Portfolio design framework	81
8.1.1 Modern portfolio theory	81
8.1.2 “Naïve” allocation	83
8.2 Portfolio construction techniques	83
8.2.1 Bottom-up approach	84
8.2.2 Top-down approach	84
8.2.3 Mixed approach	85
8.2.4 Portfolio monitoring	87
8.3 Risk–return management approaches	88
8.3.1 Core–satellite approach	88
8.3.2 Diversification	90
9 Case Study	95
9.1 Looking for the optimal programme size	95
9.1.1 Data	96
9.1.2 The model	97
9.1.3 Results	98
9.1.4 Extension	100
9.1.5 Conclusion	102
9.2 Overcoming entry barriers: long-term strategies	104
9.2.1 Data	104
9.2.2 Modelling	105
9.2.3 Results	106
9.2.4 Conclusion	106
Appendix 9A: Formulae	111
Appendix 9B: Skewness and kurtosis	112
Appendix 9C: Expected utility	113

10	The Management of Liquidity	115
10.1	Liquidity management problem	115
10.1.1	Modelling	117
10.1.2	Impact of liquidity returns	118
10.1.3	Over-commitments	119
10.1.4	Conclusion	122
10.2	Liquidity management approaches	123
10.2.1	Sources of liquidity	123
10.2.2	Foreign exchange risk	124
10.2.3	Distributions-in-kind	128
10.2.4	Consequences for performance measurement	130
10.3	Investment strategies for undrawn capital	130
10.3.1	Publicly quoted private equity	131
10.3.2	Other alternative assets	132
10.4	Cash flow projections	133
10.4.1	Estimates	135
10.4.2	Forecasting	138
10.4.3	Scenarios	142
10.4.4	Control framework	144
10.5	Conclusion	145
Appendix 10A:	Cash flow estimation technique	145
10A.1	Cash flow estimate—example 1	145
10A.2	Cash flow estimate—example 2	145
10A.3	Cash flow estimate—example 3	146
Appendix 10B:	Cumulative net cash flow statistics	147
Appendix 10C:	Liquidity management tests	147
10C.1	Main tests	148
10C.2	Liquidity tests	148
10C.3	Performance tests	149
10C.4	Matching tests	149
10C.5	Scenario validity tests	149
PART III	DESIGN TOOLS	151
11	Established Approaches to Fund Valuation	153
11.1	Bottom-up approach to private equity fund valuation	154
11.2	Inconsistency of valuations	157
11.3	NAVs do not tell the full picture	157
11.4	Portfolio companies cannot be valued in isolation	159
11.5	Conclusion	162
12	Benchmarking	165
12.1	Specific issues	165
12.2	Individual funds	166
12.2.1	Performance measures	166
12.2.2	Classical relative benchmarks	167

12.2.3	Other relative benchmarks	169
12.2.4	Absolute benchmarks	169
12.3	Portfolio of funds	170
12.3.1	Performance measures	170
12.3.2	Benchmarks	171
13	A Prototype Internal Grading System	173
13.1	Grading of private equity funds	173
13.2	The NAV is not enough	174
13.3	Existing approaches	176
13.3.1	Fund rating by external agencies	176
13.3.2	Internal VC fund assessment approaches	178
13.3.3	Comparison of approaches	180
13.4	New approach to internal fund-grading system	180
13.4.1	Grading formalisation	180
13.4.2	Expected performance grades	181
13.5	Summary—NAV- and grading-based valuation	188
13.6	Conclusion	189
	Appendix 13A	189
14	Fund Manager Selection Process	193
14.1	Relevance of fund manager selection	193
14.2	Why due diligence?	194
14.2.1	Due diligence as a requirement for prudent investors	194
14.2.2	Due diligence as a basis for better investment decisions	195
14.3	The due diligence process	195
14.3.1	Limitations	195
14.3.2	Due diligence questionnaires	196
14.4	Fund manager selection process	197
14.4.1	Determination of the “wish list”	197
14.4.2	Deal sourcing	198
14.4.3	Screening	198
14.4.4	Meet the team	198
14.4.5	Evaluation	199
14.4.6	In-depth due diligence	200
14.5	Decision and commitment	201
	Appendix 14A: Illustrative due diligence questionnaire—venture capital funds	202
15	Qualitative Fund Scoring	219
15.1	Scoring approach	219
15.2	Scoring dimensions	221
15.2.1	Management team skills	221
15.2.2	Management team stability	224
15.2.3	Management team motivation	225
15.2.4	Fund strategy	227
15.2.5	Fund structure	229

xii	Contents	
	15.2.6 External validation	230
	15.2.7 Overall fit	231
16	Grading-based Economic Model	233
	16.1 Approach	233
	16.2 Internal age adjustment	237
	16.3 Private equity fund IRR projections	238
	16.4 Expected portfolio returns	239
	16.5 Discussion	241
	16.5.1 Verification of approach	241
	16.5.2 Reliance on assumptions	242
	16.6 Conclusion	242
	Appendix 16A	242
	16A.1 Identifying bottom funds	243
	16A.2 Identifying top funds	243
	Appendix 16B	245
	Appendix 16C: Grading-based private equity fund valuation—how fair is my valuation?	248
	16C.1 The revised IAS 39	248
	16C.2 Valuation model (mark-to-model)	251
17	Private Equity Fund Discount Rate	253
	17.1 The capital asset pricing model	253
	17.1.1 Risk-free rate	254
	17.1.2 Equity risk premium	254
	17.1.3 Beta	256
	17.2 Private equity fund betas	257
	17.2.1 Estimation based on quoted comparable	257
	17.2.2 Alternatives to the “standard” regression betas	261
	17.3 The alternatives to the capital asset pricing model	264
	17.3.1 The opportunity cost of capital	265
	17.3.2 The historical performance	265
	17.4 Summary and conclusion	266
	PART IV MANAGEMENT TOOLS	269
18	Monitoring	271
	18.1 Approach to monitoring	272
	18.1.1 Monitoring as part of a control system	272
	18.1.2 The trade-offs	273
	18.2 The monitoring objectives	273
	18.2.1 Protecting downside	274
	18.2.2 Creating value	276
	18.3 Information gathering	276
	18.3.1 Standard monitoring	279
	18.3.2 Specific monitoring	281
	18.4 Evaluation	282
	18.5 Actions	285

19 Case Study: Saving Your Investments—Approaches to Restructuring	287
19.1 The valley of tears	288
19.2 The report to the board	289
19.3 The terms of the restructuring	291
19.4 Epilogue	293
Appendix 19A: Investment proposal	293
Appendix 19B: Track record	294
19B.1 Greenlight 1	294
19B.2 Greenlight buyout	295
20 Secondary Transactions	297
20.1 Sellers and their motivations	297
20.2 Buyers and their motivations	299
20.3 Secondary market prices	300
20.3.1 Factors for valuation	303
20.3.2 Top-down analysis	304
20.3.3 Bottom-up analysis	306
20.3.4 Comparables	307
20.4 Transactional issues	307
20.5 The fund manager perspective	308
PART V EMBRACING UNCERTAINTY	311
21 Deviating from Top Funds	313
21.1 Strategic investments	313
21.2 Policy objectives	314
22 Real Options	319
22.1 Real options in private equity	319
22.2 Real option analysis	321
22.3 An expanded strategy and decision framework	322
22.3.1 Decision framework	322
22.3.2 Strategy framework	322
Appendix 22A: A real option example	324
23 Beyond the J-curve	327
23.1 Some do it better	327
23.2 Deadly sins	327
23.3 Structure instead of “gut instinct”	328
23.4 Patience is a virtue	328
23.5 Turning water into wine	329
Glossary	331
Bibliography	341
Abbreviations	351
Index	353

