

	1
	2
	3
	4
	5
	6
	7
	8
	9
	10
	11
	12
	13
	14
Preface	xi 15
	16
1 Introduction	1 17
1.1 Characteristics of a successful investment process	1 18
1.2 Challenges to be solved	2 19
1.3 Approach taken in this book	3 20
1.4 Structure of the book	4 21
1.5 Notation	7 22
	23
Part I The Value Chain of Active Investment Management	9 24
	25
2 Key Success Factors for Generating Positive Alpha	11 26
2.1 Key success factors	11 27
2.2 Decomposing return	15 28
2.3 Defining risk	17 29
2.4 The information ratio	18 30
2.5 Fundamental law of active management	19 31
2.6 The process of developing an investment process	21 32
	33
	34
3 The Investment Management Value Chain	23 35
3.1 The value chain components	23 36
3.2 Designing a value chain based investment process	25 37
3.3 Implementing the value chain approach	28 38
3.4 Investment processes example	31 39
	40
Part II Forecasting Markets	35 41
	42
4 Judgmental Approaches for Forecasting Markets	37 43
4.1 Market efficiencies	37 44
4.2 Understanding asset returns	39 45
4.3 Forecasting asset returns	44 46
4.4 Example	51 47

5	Quantitative Approaches for Forecasting Markets	57	1
5.1	Building a quantitative forecasting model	57	2
5.2	Defining the model structure	60	3
5.3	Handling data in parameter estimation	68	4
5.4	Testing the model	71	5
5.5	Mitigating model risk	74	6
5.6	Example	74	7
			8
			9
6	Taking Investment Decisions	81	10
6.1	Understanding the theory of decision making	82	11
6.2	Building a decision making process	83	12
6.3	Example	88	13
			14
Part III	Risk Measurement and Management	91	15
7	Modeling Risk	93	16
			17
7.1	The different dimensions of risk	93	18
7.2	Risk management from an investor's perspective	95	19
7.3	Risk from an investment manager's perspective	95	20
7.4	The theory behind modeling market risk	96	21
7.5	The process of developing a risk model	99	22
7.6	Information risk	104	23
			24
8	Volatility as a Risk Measure	109	25
			26
8.1	The volatility risk model in theory	109	27
8.2	Selecting data for parameter estimation	110	28
8.3	Estimating the risk model's parameters	111	29
8.4	Decomposing volatility	119	30
8.5	Additional pitfalls	122	31
8.6	Testing risk models	125	32
			33
9	Alternative Risk Measures	129	34
9.1	Framework defining risk	130	35
9.2	Alternative return distributions	133	36
9.3	Exposure based risk models	138	37
9.4	Nonparametric risk models	140	38
9.5	Handling assets with nonlinear payoffs	144	39
9.6	Credit risk models	144	40
			41
Part IV	Portfolio Construction	147	42
10	Single Period Mean-Variance Based Portfolio Construction	149	43
			44
10.1	Developing a modular portfolio construction process	149	45
10.2	The mean-variance framework	152	46
10.3	The Markowitz mean-variance model	154	47

10.4	Alternative mean-variance based models	161	1
10.5	Models with alternative risk definitions	164	2
10.6	Information risk based models	166	3
10.7	Selecting a portfolio construction approach	170	4
			5
11	Single Period Factor Model Based Portfolio Construction	171	6
			7
11.1	Factor models and their relation to risk	171	8
11.2	Portfolio construction exploiting idiosyncratic risk	172	9
11.3	Pure factor model exposure based portfolio construction	176	10
11.4	Factor sensitivity based portfolio construction	179	11
11.5	Combining systematic and specific risk based portfolio construction algorithms	180	12
			13
			14
12	Dynamic Portfolio Construction	183	15
			16
12.1	Dynamic portfolio construction models	184	17
12.2	Dynamic portfolio construction algorithms	186	18
12.3	A practical example	191	19
			20
Part V	Portfolio Implementation	195	21
13	Transaction Costs, Liquidity and Trading	197	22
			23
13.1	Understanding transaction costs and market liquidity	197	24
13.2	The action and context of trading	202	25
13.3	Implementation and trading as a module of an investment process value chain	205	26
13.4	Equity asset allocation trading approach example	208	27
			28
14	Using Derivatives	213	29
			30
14.1	Derivative instrument characteristics	213	31
14.2	Using derivatives to implement an investment strategy	219	32
14.3	Example	224	33
			34
Part VI	Investment Products and Solutions	231	35
15	Benchmark Oriented Solutions	233	36
			37
15.1	Benchmarks	233	38
15.2	Passive benchmark oriented investment solutions	238	39
15.3	Active benchmark oriented investment solutions	244	40
15.4	Core-satellite solutions	249	41
15.5	A sample benchmark oriented solution	251	42
			43
16	Absolute Positive Return Solutions	253	44
			45
16.1	What absolute positive return can mean	253	46
16.2	Satisfying the investor's expectations	254	47
16.3	The relationship between risk and return	258	

16.4	Long-only forecasting based solutions	259	1
16.5	The portable alpha approach	261	2
16.6	Combining absolute positive return and benchmark oriented solutions	265	3
			4
17	Capital Protection and Preservation Approaches	267	5
			6
17.1	The investor's utility function	267	7
17.2	Portfolio insurance investment processes	268	8
17.3	Comparing different portfolio insurance investment processes	274	9
17.4	Managing risk	276	10
17.5	Designing a client specific capital protection solution	277	11
			12
18	Hedge Funds	279	13
			14
18.1	Success factors of hedge funds	280	15
18.2	Exploitable alpha generating sources	282	16
18.3	Issues specific to hedge funds	284	17
18.4	Developing a hedge fund investment process	286	18
18.5	Hedge funds as an asset class	289	19
			20
19	Liability Driven Investing	293	21
			22
19.1	The concept of liability driven investing	293	23
19.2	Portfolio construction in a liability driven investment context	295	24
19.3	Liability driven investment solutions	297	25
19.4	A process for determining a liability driven investment solution	302	26
			27
Part VII	Quality Management	303	28
20	Investment Performance Measurement	305	29
			30
20.1	Performance measurement dimensions	305	31
20.2	Setting up a performance measurement framework	307	32
20.3	Basics of performance measurement	308	33
20.4	Performance attribution	316	34
20.5	Performance contribution	320	35
20.6	The process behind the process	320	36
20.7	Practical considerations in performance measurement	323	37
20.8	Examples of performance measurement frameworks	325	38
			39
Bibliography		331	40
			41
Index		341	42
			43
			44
			45
			46
			47