

Contents

Introduction	1
Arbitrage-Free Markets and the Pricing Kernel	5
2.1 Implications of Arbitrage-Free Markets.	5
2.2 The Representative Agent Economy.	10
2.3 Summary of Chapter 2.	13
The Information Process	15
3.1 Characterization of the Economy.	16
3.2 Complete Information and Constant Coefficients of the Book Value Process.	17
3.3 Complete Information and Random Coefficients of the Book Value Process.	19
3.3.1 Random Drift of the Book Value Process.	19
3.3.2 Stochastic Volatility of the Book Value Process.	20
3.4 Unknown Drift of the Book Value Process.	21
3.5 Summary of Chapter 3.	24
Literature Review	25
4.1 Empirical Literature.	26
4.1.1 Asset Returns.	26
4.1.2 Option Prices.	31
4.1.3 Summary.	34
4.2 Theoretical Literature.	35
4.2.1 The Viability Discussion.	35
4.2.2 Constructive Asset Pricing Models.	42
4.2.3 Summary.	47
4.3 Summary of Chapter 4.	48

5	Asset Returns with Non-Constant Elasticity of the Pricing Kernel	49
5.1	Implications for Asset Returns in Continuous-Time	49
5.2	Implications for Asset Returns in Discrete-Time	54
5.2.1	Time-Homogeneity	54
5.2.2	Time-Series Properties of Asset Returns	56
5.3	The Explanatory Power of Multiples	59
5.4	Summary of Chapter 5	62
6	Analytical Asset Price Processes	65
6.1	A New Class of Pricing Kernels	65
6.1.1	General Characterization of Asset Prices	65
6.1.2	Example	67
6.2	HARA-Preferences	71
6.2.1	The Standard Information Process	72
6.2.2	Displaced Diffusion	74
6.2.3	Truncated Displaced Diffusion	78
6.3	Summary of Chapter 6	80
7	Asset Returns Given Stochastic Volatility of the Information Process	81
7.1	The Model	81
7.2	Summary of Chapter 7	86
8	Summary	87
A	Appendix	89
A.1	Theorem of Feynman-Kac	89
A.2	Lemma 2 of Decamps and Lazfak	89
A.3	Technical Discussion of Viability in Two-Factor Models	90
A.4	Proof of Lemma 1	93
A.5	Proof of Corollary 1	94
A.6	Proof of Proposition 4	95
A.7	Derivation of Equation 6.3	96
A.8	Proof of Proposition 8	97
A.9	Derivation of Equation 6.17	98
A.10	Proof of Corollary 2	99
A.11	Proof of Proposition 9	100
A.12	Proof of Proposition 10	100
B	Appendix: Figures	103
	References	113