

# Table of Contents

<b>1</b>	<b>Incomplete Information: An Overview . . . . .</b>	<b>1</b>
1.1	Introduction . . . . .	1
1.2	Portfolio Choice . . . . .	1
1.2.1	Gennotte's Model . . . . .	2
1.2.2	The Inference Process . . . . .	4
1.2.3	Optimal Portfolio Choice . . . . .	4
1.2.4	An Example . . . . .	7
1.2.5	The Short Interest Rate . . . . .	9
1.3	The Term Structure of Interest Rates . . . . .	10
1.3.1	Dothan and Feldman's Models . . . . .	10
1.3.2	A Characterization of the Term Structure . . . . .	11
1.4	Equilibrium Asset Pricing . . . . .	15
1.4.1	Honda's Model . . . . .	16
1.4.2	The Equilibrium Price Process . . . . .	17
1.5	Conclusion and Outlook . . . . .	19
<b>2</b>	<b>The Impact of Incomplete Information on Utility, Prices, and Interest Rates . . . . .</b>	<b>23</b>
2.1	Introduction . . . . .	23
2.2	The Model . . . . .	25
2.3	Equilibrium . . . . .	27
2.3.1	The Equilibrium Expected Lifetime Utility . . . . .	27
2.3.2	The Equilibrium Price . . . . .	28
2.3.3	The Equilibrium Interest Rate . . . . .	30
2.4	Logarithmic Utility . . . . .	31
2.4.1	The Equilibrium Expected Lifetime Utility . . . . .	31
2.4.2	The Equilibrium Price . . . . .	32
2.4.3	The Equilibrium Interest Rate . . . . .	33
2.5	Power Utility . . . . .	35
2.5.1	The Equilibrium Expected Lifetime Utility . . . . .	35
2.5.2	The Equilibrium Price . . . . .	40
2.5.3	The Equilibrium Interest Rate . . . . .	48
2.5.4	Hedging Demand and the Equilibrium Price of Estimation Risk . . . . .	50
2.6	Information, Utility, Prices, and Interest Rates: A Synthesis . . . . .	51

## XII Table of Contents

2.6.1	Expected Lifetime Utility .....	51
2.6.2	Share Prices .....	52
2.6.3	Interest Rates .....	53
2.7	Time-Varying Parameters .....	55
2.7.1	The Equilibrium Expected Lifetime Utility .....	56
2.7.2	The Equilibrium Price .....	58
2.7.3	The Equilibrium Interest Rate .....	58
2.8	Conclusion .....	61
<b>3</b>	<b>Optimal Portfolio Choice Under Heterogeneous Beliefs</b> .....	<b>65</b>
3.1	Introduction .....	65
3.2	The Model .....	67
3.3	The Deviant Agent's Problem .....	70
3.4	Optimal Portfolio Choice .....	71
3.5	An Example .....	74
3.6	Conclusion .....	78
<b>4</b>	<b>Optimal Consumption Under Heterogeneous Beliefs</b> .....	<b>81</b>
4.1	Introduction .....	81
4.2	The Cox-Huang Methodology .....	82
4.3	Heterogeneous Beliefs .....	84
4.4	An Example .....	86
4.4.1	The Model .....	86
4.4.2	Optimal Consumption Patterns Under Heterogeneous Beliefs .....	87
4.4.3	An Algebraic Solution .....	95
4.4.4	The Effect of the Time Horizon .....	102
4.5	Portfolios and Consumption: A Synthesis .....	105
4.6	Conclusion .....	107
<b>5</b>	<b>Equilibrium Asset Pricing Under Heterogeneous Beliefs</b> ..	<b>109</b>
5.1	Introduction .....	109
5.2	The Model .....	111
5.3	Equilibrium Consumption .....	113
5.4	Equilibrium Prices .....	116
5.4.1	The Equilibrium State-Price Density .....	117
5.4.2	The Equilibrium Short Rate .....	123
5.4.3	The Equilibrium Yield Curve .....	128
5.4.4	The Equilibrium Share Price .....	133
5.4.5	Equilibrium Option Prices and the "Smile Effect" .....	139
5.5	Implied Risk Aversion .....	145
5.6	Conclusion .....	146

<b>6 Costly Information, Imperfect Learning, and Information Aggregation .....</b>	<b>149</b>
6.1 Introduction .....	149
6.2 The Model .....	151
6.2.1 The Economy .....	151
6.2.2 The Inference Process: Imperfect Learning .....	152
6.3 Portfolio Choice under Costly Information .....	154
6.3.1 The Agent's Problem .....	154
6.3.2 The Agent's Optimal Investment and Research Policy ..	155
6.3.3 Determinants of the Demand for Information .....	157
6.3.4 Diversification and Information Costs .....	160
6.4 Equilibrium Asset Pricing .....	161
6.5 Information Aggregation and the Equity Premium .....	165
6.6 Conclusion .....	170
<b>7 Summary and Conclusion.....</b>	<b>173</b>
<b>A Conditional Mean and Variance of <math>\ln(x_s)</math> .....</b>	<b>179</b>
<b>B Conditional Mean and Variance of <math>\ln(x_s)</math> with Time-Varying Parameters .....</b>	<b>181</b>
<b>C The Short Rate Under Heterogeneous Beliefs.....</b>	<b>183</b>
<b>References.....</b>	<b>187</b>
<b>List of Figures .....</b>	<b>191</b>
<b>List of Tables .....</b>	<b>193</b>
<b>List of Symbols .....</b>	<b>195</b>