

Contents

<i>List of Tables</i>	vii
<i>Acknowledgements</i>	ix
1. Introduction	1
1.1 Field of interest	1
1.2 Outline	2
 PART ONE: CAPITAL MARKET IMPERFECTIONS	 5
2. Investment and Capital Market Imperfections: Theory	7
2.1 Introduction	7
2.2 The neoclassical world: Modigliani-Miller	8
2.3 Economics of imperfection	14
2.4 The importance of internal funds	28
2.5 Conclusions	29
3. Investment and Capital Market Imperfections: Empirics	31
3.1 Introduction	31
3.2 Reduced form investment models	32
3.3 Euler equation models	41
3.4 Vector AutoRegression (VAR) models	46
3.5 Conclusions	48
 PART TWO: INVESTMENT UNDER UNCERTAINTY	 51
4. Investment under Uncertainty: Orthodox Models	53
4.1 Introduction	53
4.2 Orthodox models without adjustment costs	54
4.3 Orthodox models with adjustment costs	61
4.4 Conclusions	73

5. The Option Approach to Investment under Uncertainty	75
5.1 Introduction	75
5.2 A basic example	76
5.3 The optimal timing of an investment project	79
5.4 Optimal irreversible investment	83
5.5 Perfect competition and constant returns to scale	86
5.6 Limited reversibility and expandability	89
5.7 Non-linear effects of uncertainty	95
5.8 Conclusions	95
6. Empirics of the Investment Uncertainty Relationship	99
6.1 Introduction	99
6.2 Measuring uncertainty	100
6.3 Empirical evidence on the investment-uncertainty relationship	105
6.4 Conclusions	111
 PART THREE: CONCLUSION	 113
7. Conclusions	115
 PART FOUR: APPENDICES	 119
A. Derivation of the q and Euler Model	121
A.1 The q model	122
A.2 The Euler model	123
B. Utility Functions and Assumptions Regarding Risk	125
B.1 Utility functions and risk	125
B.2 Mean preserving spread and Jensen's inequality	127
C. Ito's Lemma and Dynamic Programming	129
C.1 Wiener processes and Ito's lemma	129
C.2 Dynamic programming	131
 <i>Bibliography</i>	 137
<i>Author Index</i>	149
<i>Subject Index</i>	153

List of Tables

3.1	Net sources of finance: 1970-94	32
3.2	Reduced form investment models applied to non-US countries	34
3.3	Reduced form investment models applied to the US	35
3.4	Empirical Euler equation models	45
6.1	The sign of the investment-uncertainty relationship	107