

---

# Contents

<b>1</b>	<b>Introduction</b> .....	<b>1</b>
<b>2</b>	<b>On the Economic Content of Models of Default Risk</b> .	<b>7</b>
	2.1 Introduction .....	7
	2.2 A Criterion for Economic Interpretability .....	8
	2.3 Models of Default Risk .....	9
	2.3.1 Reduced-Form Models .....	9
	2.3.2 Firm Value Models .....	11
	2.3.3 Hybrid Approaches .....	13
	2.4 Interpretability of Firm Value Models .....	14
	2.5 Conclusion .....	20
<b>3</b>	<b>Intensity-Based Modeling of Default</b> .....	<b>21</b>
	3.1 Introduction .....	21
	3.2 Default Arrival and the Default Event .....	22
	3.3 The Hazard Rate .....	24
	3.4 Loss Given Default .....	25
	3.4.1 Nature of the Recovery Process .....	25
	3.4.2 Recovery Regime .....	26
	3.5 Defaultable Bond Prices .....	27
	3.6 Implications for the Empirical Studies .....	30
	3.7 Affine Term Structure Models in the Context of Default Risk .....	31
	3.7.1 Model Description .....	32

3.7.2	Completely Affine Models with Independent Factors . . . . .	33
3.7.3	Incorporating Correlation between Risk-Free and Risky Rates . . . . .	36
3.7.4	Maximal Models: Essentially Affine Specifications .	39
3.8	Summary and Outlook . . . . .	41
<b>4</b>	<b>The Empirical Performance of Reduced-Form Models of Default Risk . . . . .</b>	<b>43</b>
4.1	Preliminaries . . . . .	43
4.1.1	Data Description . . . . .	43
4.1.2	Defaultable Term Structure Estimation . . . . .	44
4.1.3	Risk-Free Term Structure Estimation . . . . .	49
4.1.4	Discussion of Data Quality . . . . .	50
4.2	Estimation of Completely Affine Term Structure Models for Defaultable Rates . . . . .	53
4.2.1	Estimation Technique . . . . .	54
4.2.1.1	State-Space Representation . . . . .	54
4.2.1.2	State-Space Specification . . . . .	55
4.2.1.3	Kalman Filter Mechanism . . . . .	57
4.2.2	Implementation . . . . .	59
4.2.3	Results . . . . .	60
4.2.3.1	Preferred Models . . . . .	60
4.2.3.2	In- and Out-of-Sample Fit . . . . .	63
4.2.3.3	Parameter Estimates . . . . .	65
4.3	Estimation of Completely Affine Term Structure Models for Spreads . . . . .	69
4.3.1	Implementation . . . . .	70
4.3.2	Results . . . . .	70
4.3.2.1	Preferred Models . . . . .	70
4.3.2.2	In- and Out-of-Sample Fit . . . . .	72
4.3.2.3	Parameter Estimates . . . . .	72
4.4	Incorporating Correlation . . . . .	73
4.4.1	Implementation . . . . .	73
4.4.2	Results . . . . .	74

4.4.2.1	In- and Out-of-Sample Fit .....	75
4.4.2.2	Parameter Estimates .....	77
4.5	Estimation of Essentially Affine Term Structure Models for Defaultable Rates .....	79
4.5.1	Estimation Technique: Efficient Method of Moments .....	79
4.5.2	Implementation .....	83
4.5.3	Results .....	84
4.5.3.1	Auxiliary Model .....	84
4.5.3.2	Structural Model .....	86
4.6	Summary .....	89
<b>5</b>	<b>Explaining Credit Default Swap Premia.....</b>	<b>91</b>
5.1	Introduction .....	91
5.2	Modeling Idea .....	94
5.3	Data .....	98
5.4	Estimation and Results .....	103
5.5	Robustness Checks .....	107
5.6	Conclusion .....	109
<b>6</b>	<b>Conclusion .....</b>	<b>111</b>
	<b>Appendix .....</b>	<b>115</b>
<b>A</b>	<b>Calculation of Volatility Proxies.....</b>	<b>115</b>
<b>B</b>	<b>Tables for Chapter 4 .....</b>	<b>117</b>
<b>C</b>	<b>Tables for Chapter 5 .....</b>	<b>123</b>
	<b>References .....</b>	<b>131</b>