

Contents

| | |
|--|-----------|
| I EVALUATION AND ANALYSIS OF THE VALUE OF GERMAN REAL ESTATE FOLLOWING THE FINANCIAL CRISIS OF 2007 | 1 |
| 1 Introduction | 3 |
| 2 Multiple linear regression and rating factors | 5 |
| 3 Solving for characteristics | 9 |
| 3.1 Nominally scaled characteristics | 10 |
| 3.2 Ordinarily scaled characteristics | 11 |
| 3.3 Proportionally scaled characteristics | 12 |
| 4 Calculation of rating factors in a group of characteristics | 13 |
| 4.1 Nominally scaled characteristics | 13 |
| 4.2 Ordinarily scaled characteristics | 13 |
| 4.3 Proportionally scaled characteristics | 14 |
| 5 Calculating rating factors | 19 |
| 5.1 Some rating factors | 19 |
| 5.2 Evaluation of rating factors | 22 |
| 6 Evaluation of rating factors and interest rates | 23 |
| 6.1 Long-term analysis of select characteristics | 23 |
| 6.1.1 Location | 23 |
| 6.1.2 Housing type | 25 |
| 6.1.3 Districts and East-West comparison | 26 |
| 6.2 Short-term analysis of the last three years | 28 |
| 6.2.1 Housing type | 28 |
| 6.2.2 Condition of the building | 30 |
| 7 Conclusion | 35 |

| | |
|--|------------|
| II HOUSING MARKETS: A DSGE ANALYSIS OF THE GERMAN CASE | 37 |
| 8 Introduction | 39 |
| 9 DSGE Model | 43 |
| 9.1 The Data Used | 45 |
| 9.2 Calibration and Estimation of Model Parameters | 47 |
| 10 Evaluation of the Results | 49 |
| 10.1 Parameters | 51 |
| 10.2 Shock Decomposition | 55 |
| 10.3 Variance Decomposition | 62 |
| 10.4 Impulse Responses | 64 |
| 11 Conclusions and Analysis | 71 |
| 12 Critical Appraisal | 75 |
| 13 Data Sources | 79 |
| 13.1 Statistisches Bundesamt (Federal Statistical Office of Germany) | 79 |
| 13.2 Deutsche Bundesbank (German Federal Bank) | 79 |
| 13.3 Bank of International Settlements | 79 |
| 14 Appendix A: Data Preparation | 81 |
| 15 Appendix B: Calibration | 101 |
| III INTEGRATION OF FIXED INTEREST PERIODS IN THE ICEACE MODEL | 105 |
| 16 Introduction | 107 |
| 17 The IceACE Model | 109 |

| | |
|---|------------|
| 18 Modifying the Model | 115 |
| 18.1 Decision rules for households in the housing market | 115 |
| 18.2 Payment flows for mortgages of households | 124 |
| 18.3 Interest rates | 128 |
| 19 Results and Evaluation | 131 |
| 19.1 The base variant | 131 |
| 19.1.1 Base variant with endogenously set interest rates | 132 |
| 19.1.2 Base variant with exogenous interest rates | 139 |
| 19.2 Overview of the variants | 145 |
| 19.2.1 Housing prices | 148 |
| 19.2.2 Supply / Demand / Transactions | 150 |
| 19.2.3 Blocked and rejected mortgages | 155 |
| 19.2.4 Illiquid und Insolvent Firms | 157 |
| 19.2.5 Firm revenues | 162 |
| 19.2.6 Unemployment | 165 |
| 19.2.7 Reference interest rate | 166 |
| 19.2.8 Housing stock | 168 |
| 19.2.9 Mortgage stock | 170 |
| 19.3 Evaluation | 171 |
| 19.3.1 Special focus: Variant [Keine Spekulation 5% Verkaufschance] | 171 |
| 19.3.2 Special focus: Variant [2 Häuser] | 178 |
| 20 Conclusion and outlook | 187 |
| 20.1 Credit | 186 |
| 20.2 Housing market | 187 |
| 20.3 Capital income | 188 |
| 20.4 Interest rates | 188 |
| 21 Data sources | 191 |
| 22 Appendix | 193 |
| 22.1 New file: N_loanset | 193 |
| 22.2 New file: N_loanset_Anschluss | 202 |
| 22.3 Changes in file: Households_initialization_multiple | 210 |
| 22.4 Changes to file: CentralBank_TaylorPolicy | 217 |
| 22.5 Changes to file: Households_repay_mortgage_to_banks | 220 |

| | |
|---|-----|
| 22.6 Changes to file: Households_housing_decision | 226 |
| 22.7 Changes in file: Households_housingmarket | 231 |
| 22.8 Changes to file: Banks_transfer_money_to_funds | 245 |
| 22.9 Changes to file: Household_choose_fund | 250 |