

Agent-based Models of Financial Markets

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| Unit Title | Agent-based Models of Financial Markets | | |
| Level of Study | | | |
| Credit Value | | ECTS Value | |
| Home Department | Mathematical methods in economics | | |
| Home Faculty | Economics | | |
| Unit Co-ordinator | | | |
| Key Words | Agents, Dealer market, Continuous Double Auction, Artificial stock market | | |
| Brief Summary | <p>In the framework of unit are considered: types of markets and agents; concept and structure of the agent-based models, its types, functionality and participants; the nature, role and types of agent-based models. This is a practical unit that enables students to apply its theoretical knowledge on asset pricing, portfolio management, empirical market microstructure, financial management implement in practical information systems of agent-based models.</p> | | |
| Indicative Content | <p>Basics of agent-based models (ABM) Zero intelligence approach: Maslov model, Daniels model, Mike-Farmer model Genoa artificial stock market Levy-Levy-Solomon microsimulation model Santa Fe Artificial stock market Business school representation ABM Extended Glosten-Milgrom model Artificial Stock Market based on an electronic market maker Continuous time asynchronous models Stochastic simulation models Validation and sensitivity of practical agent-based models</p> | | |