

Content

| | |
|--|----------|
| INTRODUCTION | 1 |
| 1. AIM OF THE MONOGRAPH | 3 |
| 2. RESEARCH PART – RELEVANCE OF EXISTING COMPREHENSIVE BUSINESS EVALUATION | |
| METHODS | 4 |
| 2.1 MAIN OBJECTIVE OF COMPANY | 4 |
| 2.1.1 <i>Main objective – Maximization of profit</i> | 5 |
| 2.1.2 <i>Main objective – Maximization of values</i> | 5 |
| 2.1.3 <i>Main objective – Maximization of shareholder value</i> | 6 |
| 2.2 CLASSIFICATION OF OBJECTIVES | 7 |
| 2.3 BUSINESS VALUATION METHODS | 8 |
| 2.3.1 <i>Benchmarking</i> | 9 |
| 2.3.2 <i>Financial analysis</i> | 10 |
| 2.4 MATHEMATICAL AND STATISTICAL METHODS | 20 |
| 2.4.1 <i>One-dimensional analysis</i> | 21 |
| 2.4.2 <i>Risk index model</i> | 22 |
| 2.4.3 <i>Multiple discriminant analysis</i> | 22 |
| 2.4.4 <i>Conditional probability models</i> | 24 |
| 2.5 ANALYSIS OF PROBLEMS RELATED TO THE APPLICATION OF CLASSICAL STATISTICAL METHODS | 27 |
| 2.5.1 <i>Selecting independent variables</i> | 27 |
| 2.5.2 <i>Time dimension</i> | 28 |
| 2.5.3 <i>Financial statements as a data source</i> | 31 |
| 2.5.4 <i>Bipolar dependent variables</i> | 34 |
| 2.6 ARTIFICIAL NEURAL NETWORKS | 35 |
| 2.6.1 <i>Basic description, function</i> | 36 |
| 2.6.2 <i>Neural networks with a teacher</i> | 41 |
| 2.6.3 <i>Neural networks without a teacher</i> | 42 |
| 2.6.4 <i>Specific applications of neural networks</i> | 43 |
| 2.7 CREDITWORTHINESS MODELS | 46 |
| 2.7.1 <i>Creditworthiness index</i> | 46 |
| 2.7.2 <i>Grünwald's creditworthiness index</i> | 47 |
| 2.7.3 <i>Kralicek's Quick test</i> | 47 |
| 2.7.4 <i>Tamari model</i> | 49 |

| | | |
|-----------|---|------------|
| 2.7.5 | <i>Argenti model</i> | 49 |
| 2.7.6 | <i>Other models</i> | 49 |
| 2.8 | BANKRUPTCY MODELS | 50 |
| 2.8.1 | <i>Altman's analysis</i> | 50 |
| 2.8.2 | <i>Indexes IN</i> | 52 |
| 2.8.3 | <i>Taffler's index</i> | 54 |
| 2.8.4 | <i>Beaver's profile analysis</i> | 55 |
| 2.8.5 | <i>Beerman discriminatory function</i> | 55 |
| 2.8.6 | <i>Other models</i> | 55 |
| 2.9 | MACROECONOMIC INDICATORS | 58 |
| 2.9.1 | <i>Gross Domestic Product – GDP</i> | 58 |
| 2.9.2 | <i>Inflation</i> | 60 |
| 2.9.3 | <i>Unemployment rate</i> | 62 |
| 2.9.4 | <i>Export, Import, Net export</i> | 63 |
| 2.10 | ENTERPRISE EVALUATION METHODS USING MACROECONOMIC INDICATORS | 64 |
| 2.10.1 | <i>Creditreform credit index</i> | 65 |
| 2.10.2 | <i>The method of Harry Pollak</i> | 65 |
| 3. | METHODOLOGY OF THE MONOGRAPH AND METHODS OF EXAMINATION | 68 |
| 3.1 | FINANCIAL ANALYSIS OF THE AVERAGE ENTERPRISE | 69 |
| 3.2 | CLUSTER ANALYSIS USING ARTIFICIAL NEURAL NETWORKS | 71 |
| 3.3 | CLASSIFICATION ANALYSIS USING ARTIFICIAL NEURAL NETWORKS – MODEL CREATION | 77 |
| 4. | APPLICATION | 83 |
| 4.1 | FINANCIAL ANALYSIS | 83 |
| 4.2 | HORIZONTAL AND VERTICAL ANALYSIS | 89 |
| 4.3 | ANALYSIS OF RATIO INDICATORS | 96 |
| 4.4 | NEURAL NETWORKS | 108 |
| 4.4.1 | <i>Cluster analysis in variant A</i> | 108 |
| 4.4.2 | <i>Cluster analysis in variant B</i> | 118 |
| 4.4.3 | <i>Classification analysis</i> | 131 |
| 4.4.4 | <i>The final model of the neural structure</i> | 143 |
| 5. | SUMMARY | 146 |
| 6. | CONCLUSION | 152 |

| | |
|-----------------------------|-----|
| LIST OF ABBREVIATIONS | 155 |
| LIST OF GRAPHS | 158 |
| LIST OF TABLES | 159 |
| LIST OF FIGURES | 161 |
| REFERENCES | 162 |