

# CONTENTS

GENİŞ ÖZET .....	7
ABSTRACT.....	15
ACKNOWLEDGEMENTS.....	17
CONTENTS.....	19
ABBREVIATIONS.....	23
<b>1. INTRODUCTION.....</b>	<b>25</b>
1.1. Literature Review .....	25
1.2. Aim and Scope .....	31
1.3. Problems and Key Research Questions.....	31
1.4. Overview and Contribution.....	32
1.5. The Importance of Study .....	32
1.6. The Planned Structure of the Research.....	32
1.7. Research Methodology .....	33
<b>2. ARTIFICIAL INTELLIGENCE.....</b>	<b>35</b>
2.1. In General .....	35
2.2. Definitions and Functions of AI .....	35
2.3. Types of AI .....	37
2.4. Regulations on AI .....	38
2.5. Changes Brought by AI .....	40
2.5.1. In General .....	40
2.5.2. Effects of AI on Company Law.....	41
2.6. The Use of AI in the Management of the Company .....	45
2.6.1. AI as a Director.....	45
2.6.2. AI-Assisted Decision-Making.....	49

2.6.3. AI in the Appointment of Board Members .....	51
2.7. AI and External Audit.....	54
2.7.1. Audit.....	54
2.7.2. External Audit .....	55
2.7.3. Effects of AI on External Audit.....	56
2.7.4. Possible Uses of AI in External Audit.....	57
2.7.4.1. In General .....	57
2.7.4.2. AI as a Decision Aid .....	60
2.7.4.3. AI as an Auditor.....	63
2.7.5. Thoughts on the Future of External Audit.....	67
<b>3. BLOCKCHAIN.....</b>	<b>71</b>
3.1. In General.....	71
3.2. Definitions of Blockchain .....	72
3.3. Types of Blockchain.....	73
3.4. Characteristics of Blockchain.....	74
3.5. Smart Contracts.....	76
3.5.1. In General.....	76
3.5.2. Smart Contracts on Blockchain .....	77
3.6. Benefits and Challenges of Blockchain .....	79
3.7. From Traditional Ways to Blockchain in Companies .....	82
3.8. Decentralised Autonomous Organisations .....	85
3.9. Blockchain from the Formation to the Termination of the Company.....	87
3.9.1. Forming a Company on Blockchain.....	87
3.9.1.1. Company Formation .....	87
3.9.1.2. Company Formation via Blockchain.....	88
3.9.1.3. A Case Study from Estonia .....	90
3.9.2. Preparation of the Articles of Association on Blockchain .....	92
3.9.3. Keeping Commercial Books and Records of the Company via Blockchain.....	94

---

3.9.4. Having Annual General Meetings via Blockchain .....	98
3.9.4.1. Virtual AGMs .....	98
3.9.4.2. Virtual AGMs via Blockchain.....	101
3.9.4.3. Drawbacks of Blockchain-based AGMs.....	104
3.9.5. Having Board Meetings via Blockchain.....	106
3.9.5.1. Virtual Board Meetings .....	106
3.9.5.2. Board Meetings and Blockchain.....	109
3.9.5.3. Drawbacks of Virtual Meetings and the Blockchain Solution .....	110
3.9.6. Terminating the Company via Blockchain.....	111
<b>4. DIGITALISATION AND CORPORATE GOVERNANCE.....</b>	<b>115</b>
4.1. Corporate Governance.....	115
4.1.1. In General .....	115
4.1.2. Digital Corporate Governance.....	118
4.2. The Principles of Corporate Governance within the Context of New Technologies .....	120
4.2.1. Transparency.....	120
4.2.2. Fairness .....	125
4.2.3. Accountability.....	126
4.2.3.1. In General.....	126
4.2.3.2. Using AI .....	127
4.2.3.2.1. Effects of AI on Accountability.....	127
4.2.3.2.2. Liability of AI.....	129
4.2.3.2.3. The EU Directive.....	130
4.2.3.2.4. Thoughts on Liability of AI .....	130
4.2.3.3. Utilising Blockchain.....	132
4.2.3.4. Regarding DAOs .....	133
4.2.4. Responsibility.....	134
4.2.5. Monitoring .....	137

---

4.3. Shareholder Rights .....	140
4.4. Minority Shareholders' Rights.....	145
4.5. Compliance.....	150
4.6. Board Diversity as a Current Corporate Governance Discussion .....	155
<b>5. CONCLUSION .....</b>	<b>163</b>
5.1. Significance and Contribution.....	163
1.2. Future of Research.....	166
<b>REFERENCES.....</b>	<b>169</b>