

TABLE OF CONTENT

THESIS SUPERVISOR'S APPROVAL.....	III
ABSTRACT	V
ABSTRAK	VI
PREFACE.....	VII
TABLE OF CONTENT	VIII
LIST OF FIGURES	XI
LIST OF TABLES	XII
CHAPTER 1 INTRODUCTION	1
1.1 Background.....	1
1.2 Research Questions	5
1.3 Research Objectives	5
1.4 Research Beneficiary	6
1.5 Thesis Structure	7
CHAPTER 2 LITERATURE REVIEW	9
2.1 Profitability.....	9
2.2 Determinants of Profitability	11
2.2.1 Firm Size (LSIZE).....	11
2.2.2 Company Efficiency (CE)	13
2.2.3 Liquidity (LIQ).....	16
2.2.4 Market Power (MP).....	18
2.2.5 Sales Growth (LSG)	20
2.2.6 Sustainable Growth Rate (LSGR)	22
CHAPTER 3 RESEARCH METHOD	24
3.1 Data.....	24
3.2 Empirical Model.....	24
3.3 Panel Data.....	26
3.3.1 Common Effect Model (CEM).....	26
3.3.2 Fixed Effects Model (FEM)	27
3.3.3 Random Effects Model (REM).....	27

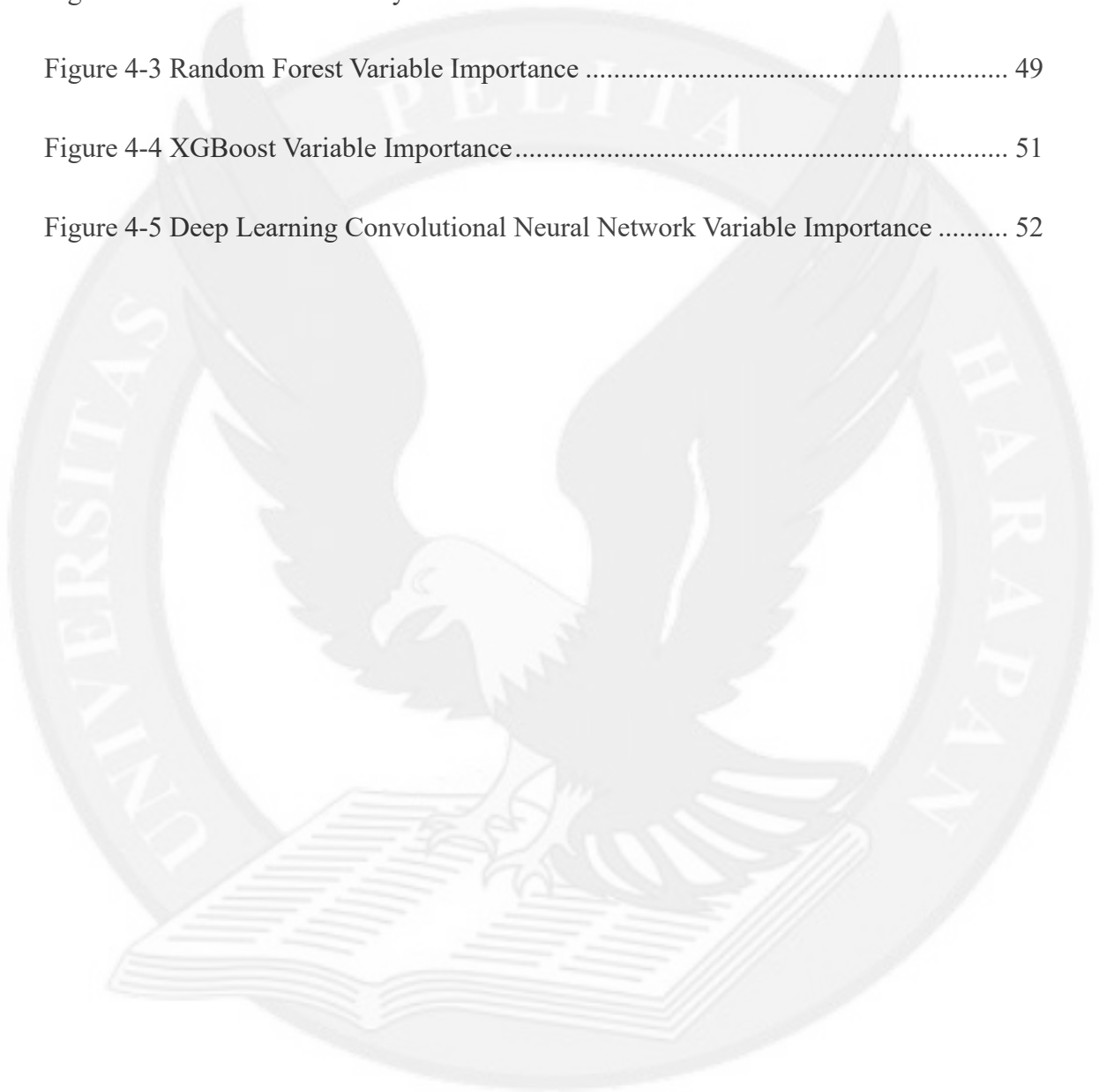
3.4	Panel Models Selection	28
3.4.1	Chow-Test.....	28
3.4.2	Hausman Test.....	28
3.4.3	Lagrange Multiplier Test	29
3.5	Diagnostic Test	30
3.5.1	Autocorrelation Test	30
3.5.2	Heteroskedasticity Test.....	31
3.5.3	Cross-Sectional Dependence Test.....	31
3.6	Variable Importance Measurement.....	32
3.6.1	Random Forest.....	32
3.6.2	XGBoost	33
3.6.3	Deep Learning Neural Network (DLNN).....	33
CHAPTER 4 RESULTS AND DISCUSSIONS		35
4.1	Descriptive Statistics	35
4.2	Panel Model Selection.....	38
4.2.1	Chow Test.....	38
4.2.2	Hausman Test.....	38
4.3	Diagnostic Test	39
4.3.1	Autocorrelation Test	39
4.3.2	Heteroskedasticity Test.....	39
4.3.3	Cross-Sectional Dependence Test.....	40
4.4	Result and Empirical Interpretation.....	40
4.5	Variable Importance Analysis.....	47
4.5.1	Random Forest.....	47
4.5.2	XGBoost	50
4.5.3	Deep Learning Neural Network	51
4.5.4	Model Improvement Results	52
CHAPTER 5 CONCLUSION AND SUGGESTION		54
5.1	Conclusions	54
5.2	Research Limitations	57
5.3	Suggestions for Future Research	58

BIBLIOGRAPHY	60
APPENDIX	68



LIST OF FIGURES

Figure 4-1 Out of Bag Error	48
Figure 4-2 Random Forest Mtry	48
Figure 4-3 Random Forest Variable Importance	49
Figure 4-4 XGBoost Variable Importance	51
Figure 4-5 Deep Learning Convolutional Neural Network Variable Importance	52



LIST OF TABLES

Table 4-1 Descriptive Statistics	35
Table 4-2 Chow Test	38
Table 4-3 Hausman Test	38
Table 4-4 Autocorrelation	39
Table 4-5 Heteroskedasticity Test	39
Table 4-6 Cross Sectional Dependency	40
Table 4-7 Panel Data Regression	41
Table 4-8 Random Forest RMSEs	48
Table 4-9 IncNodePurity Random Forest	49
Table 4-10 XGBoost RMSEs	50
Table 4-11 Gain XGBoost	50
Table 4-12 Importance Deep Learning Convolutional Neural Network	51
Table 4-13 ROA Model Improvement	52
Table 4-14 EPS Model Improvement	53