

BABES- BOLYAI UNIVERSITY
DOCTORAL SCHOOL OF ECONOMICS AND BUSINESS ADMINISTRATION
FACULTY OF ECONOMICS AND BUSINESS ADMINISTRATION

DEPARTMENT OF FINANCE

CORPORATE GOVERNANCE AND FINANCIAL FRAUD

SUMMARY OF THE DOCTORAL THESIS

Scientific coordinator:

Prof. univ. dr. habil. Monica Violeta ACHIM

PhD. Candidate

Andrada-Ioana (SABĂU) POPA

Cluj Napoca

2024

TABLE OF CONTENTS

ABBREVIATION LIST	4
FIGURES	6
TABLES	7
INTRODUCTION	10
CHAPTER 1	15
CONCEPTUAL DELIMITATION REGARDING CORPORATE GOVERNANCE	15
1.1 STATE OF THE ART REGARDING CORPORATE GOVERNANCE.....	15
1.2 THE ROLE OF CORPORATE GOVERNANCE IN ENSURING ECONOMIC SUSTAINABILITY.....	17
1.3 THEORIES FOR CORPORATE GOVERNANCE STUDIES.....	21
1.4 THE EVOLUTION OF CORPORATE GOVERNANCE.....	26
1.5 KEY ELEMENTS FOR A SUCCESSFUL CORPORATE GOVERNANCE PROCESS.....	28
1.6 MEASUREMENT OF CORPORATE GOVERNANCE.....	31
1.7 DESCRIPTIVE ANALYSES OF CORPORATE GOVERNANCE QUALITY.....	32
1.7.1 Evidence at macroeconomic level.....	32
1.7.2 Evidence for Romania.....	43
CONCLUSIONS	54
CHAPTER 2	56
THEORETICAL-METHODOLOGICAL APPROACHES REGARDING FRAUD	56
2.1. STATE OF THE ART REGARDING FRAUD.....	56
2.2 BIBLIOMETRIC ANALYSIS FOR FRAUD.....	59
2.3 RELATIONSHIP BETWEEN DATA MANIPULATION AND FRAUD.....	67
2.4 MEASURING FRAUD.....	69
2.5 DESCRIPTIVE STATISTICS FOR FRAUD.....	75
2.6 RELATIONSHIP BETWEEN CORPORATE GOVERNANCE AND FRAUD.....	80
2.7 BIBLIOMETRIC REVIEW OF CORPORATE GOVERNANCE AND FRAUD.....	81
2.8 SYSTEMATIC REVIEW OF THE LITERATURE ON CORPORATE GOVERNANCE AND FINANCIAL FRAUD.....	90
CONCLUSIONS	94
CHAPTER 3	97

EMPIRICAL STUDY ON THE RELATIONSHIP BETWEEN CORPORATE GOVERNANCE AND THE RISK OF FRAUD OCCURRENCE – ROMANIAN COMPANIES.....	97
3.1 HYPOTHESIS DEVELOPMENT	97
3.2 METHODOLOGY AND DATA	101
3.2.1. Methodology	101
3.2.2 Data and variable.....	103
3.3 DATA CHARACTERIZATION	110
3.4 MAIN RESULTS.....	116
3.5 ROBUSTNESS CHECKS.....	120
3.6 DISCUSSIONS	126
CONCLUSIONS.....	129
CHAPTER 4	131
EMPIRICAL STUDY ON THE RELATIONSHIP BETWEEN EARNINGS QUALITY AND CORPORATE GOVERNANCE AT EUROPEAN UNION LEVEL.....	131
4.1 HYPOTHESIS DEVELOPMENT	131
4.2 METHODOLOGY AND DATA	133
4.2.1 Methodology	133
4.2.2 Data and variables	134
4.3. DATA CHARACTERIZATION	138
4.4 MAIN RESULTS.....	144
4.4.1 Results for European Union level	144
4.4.2 Results for European Union regions.....	148
4.5. ROBUSTNESS CHECKS.....	153
4.6 DISCUSSIONS	156
CONCLUSIONS.....	158
GENERAL CONCLUSIONS.....	160
REFERENCES	166
APPENDIX 1	181
APPENDIX 2	205
APPENDIX 3	206
APPENDIX 4	209

ABSTRACT

The PhD thesis entitled “Corporate Governance and Financial Fraud” addresses, from a practical and a theoretical perspective, the implication of corporate governance on financial fraud occurrence at the level of economic entities.

The research is conducted on previous studies available in the literature, from which new research perspectives are identified. The literature review and the descriptive statistics included in the first two chapters reveal important aspects regarding the directions of the current study.

The empirical studies described in chapter three and four outline the importance of corporate governance and its elements in financial fraud occurrence. First, the focus is on the Romanian business environment, through a panel of 66 non-financial companies listed on the Bucharest Stock Exchange, for the 2016-2022 period. In the second study, included in chapter four, the focus is at the European Union level. 939 companies from the European Union are extracted from the Thompson Reuters platform for the year 2022 and analyzed through linear regression. The results outline the importance of adopting the corporate governance code in diminishing the occurrence of financial fraud. Moreover, the corporate governance elements which are validated as important elements both at the macroeconomic level and at the microeconomic level are policy board independence, audit board committee, and the presence of women in leading positions.

The results of the current PhD study are very important for policy-makers, so that they understand how a good corporate governance mechanism will enhance high-performing businesses. The information is very helpful to managers and employees in leading positions as well, for they can extract and try to understand and apply the good characteristics of corporate governance for the well-being of their companies.

Keywords: Corporate Governance, Financial Fraud, Earnings Quality

INTRODUCTION

This doctoral thesis approaches a topic of great importance for the economic environment. The need to develop this topic is based on an extensive theoretical and practical study. It was both identified in the specialized literature and revealed in the practical analysis conducted from the perspective of the studies. The identified research niche involves correlating corporate governance with the occurrence of financial fraud within the context of Romanian companies, aiming to identify the key elements that, with proper implementation, will reduce the risk of financial fraud occurrence. The same idea was placed in the context of the European Union companies, using corporate governance elements and the earnings quality index to underline the impact of corporate governance on the earnings quality process.

The economy is one of the resources which, if well managed, all users, participants will get in return benefits on the long term. The short-term mentality will increase the well-being of others, while the rest will continue to act normally. The negative side is that all users will suffer in one way or another in the case of short-term mentality, as the unfortunate events have shown us (Enron, WorldCom etc.) throughout the economic history.

In time, the researchers have adapted their focus taking into consideration the economic events (post events research), shifting in legislation and the impact on the economic sector, or even pre-thinking scenarios of different directions which can be materialized if well applied.

Corporate governance correlated with fraud has been a subject of interest since early studies. Beasley (1996) was among the first researchers to have conducted tests to identify the effect of corporate governance on financial fraud occurrence. He demonstrated that companies with an increased number of outside members register small changes in fraud occurrence.

On the one hand, wrongdoers of financial statements are continuously looking for ways to break the law and not get caught, while enjoying increased earnings. On the other hand, corporate governance is seen as one of the means with which they can get caught. Studies have demonstrated that a good corporate governance conduit will assure companies of lack of fraudulent activities.

The aim of the conducted studies is to identify the elements that make up the corporate governance principle and have an influence on fraud occurrence in the case of Romanian

companies, and the elements which positively influence earnings quality at the level of European Union companies.

The thesis is based on 1 general objective and 7 specific ones as follows:

General objective: *Evaluate the role of corporate governance in preventing fraud at economic entity level.*

Specific objectives:

- O1. Definition of corporate governance and financial fraud concepts.
- O2. Identification of instruments and methods to measure financial fraud and corporate governance.
- O3. Measurement of corporate governance score quality for Romanian companies.
- O4. Measurement of financial fraud score using the M-Beneish score for Romanian companies.
- O5. Analysis of corporate governance quality at European Union level.
- O6. Mathematical modelling of data.
- O7. Identification of Corporate Governance elements which influence financial fraud occurrence.

The research question underlying the topic chosen for this study is:

Research question 1: Can good corporate governance prevent the occurrence of financial fraud?

Research question 2: Which are the corporate governance characteristics that have a direct influence on fraud occurrence?

The *research methodology* contains econometric models using three-stage general least square (GLS, with iteration, igls, option) with a common first-order panel-specific autocorrelation correction, so as to explain how a poor adoption of the corporate governance score and its elements has a negative implication for the M-Beneish score in the Romanian study. In the case of the European Union, the heteroskedastic linear regression has been applied to process the statistical tests, due to the fact that the data were not normally distributed and heteroskedasticity is present.

The *statistical data samples selected* for analysis are representative, having significant dimensions and providing the opportunity to place the two case studies in the context of current specialized literature. So, on the one hand, we have used 66 companies listed on the Bucharest Stock Exchange (BSE), on the main market, to compute the M-Beneish and the corporate governance score for the Romanian case study. On the other hand, we have used a sample of 939

companies downloaded from the Thompson Reuters platform to measure the relationship between earnings quality and corporate governance elements for the European Union countries. The source of data for the empirical analysis were extracted from recognized data bases such as World Economic Forum, more specifically the GCI (Global Competitiveness Index), to measure Efficacy on corporate boards and Strength of audit and reporting in the descriptive statistics at the European Union level, BSE (Bucharest Stock Exchange) for the empirical study in the case of Romanian companies and the descriptive analysis. The information from the annual reports of the companies available on the platform have been manually collected. Thompson Reuters platform was also used to perform both the descriptive analysis and the empirical study at the European Union level.

The study is divided in four chapters as it follows:

Chapter 1 Conceptual delimitation regarding corporate governance

Chapter 2 Theoretical-methodological approaches regarding Fraud

Chapter 3 Empirical study on the relationship between corporate governance and the risk of fraud occurrence –Romanian companies

Chapter 4 Empirical study on the relationship between earnings quality and corporate governance at European Union level

CHAPTER 1 CONCEPTUAL DELIMITATION REGARDING CORPORATE GOVERNANCE

Chapter one approaches the literature regarding corporate governance in terms of definitions, theories underlying the concept, methods by which corporate governance can be measured, and elements that form “good” corporate governance. Further on, the theories for corporate governance are approached to get deeper into the context. The next topics focus on methods to measure corporate governance and underline the key elements which will ensure healthy business. In order to consolidate this chapter, a descriptive statistic based on the corporate governance score is approached. The first study approaches data at the European Union level and the second one deals with data on Romanian companies. It starts by analysing the macroeconomic context, using two elements extracted from the GCI index: Analysis on Efficacy of Corporate Boards and Strength of Auditing and Reporting, for the 2007-2017 period. To have

another perspective for the European Union companies in terms of qualitative corporate governance reporting, data have been downloaded from the Thompson Reuters platform for the 2012-2022 period. The following corporate governance elements are used: Nomination Board Committee, Audit Board Committee, Compensation Board Committee and Policy Board Independence. The following elements are used to identify the context in the case of Romanian companies, in terms of corporate governance adoption: EQUIL (Equilibrium of board members), INDEP (Independence of board members), NOM (Selection of board members), REM (Remuneration policy), AUDIT (Audit committee), for the 2016-2022 period. The results underline the fact that, in both scenarios, corporate governance has started to be better looked on and implemented more seriously in the current years.

CHAPTER 2 THEORETICAL-METHODOLOGICAL APPROACHES REGARDING FRAUD

The second chapter is dedicated to fraud in the first part, approaching definitions elaborated by the researchers. Further on, a bibliometric analysis is performed to set ground for the topic. Then, a closer look into the scores which can be used to measure the level of financial fraud occurrence is developed. In order to have a practical overview, this chapter approaches, among other aspects, a descriptive analysis for the M-Beneish score in the case of Romanian companies (66 companies), in the 2016-2022 period, so as to see its evolution in time for each company in the sample. Next, to set the ground for the general topic of the thesis, a bibliometric analysis on the concept of corporate governance and fraud is performed. The chapter ends with a systematic review of the literature on corporate governance and fraud.

CHAPTER 3 EMPIRICAL STUDY ON THE RELATIONSHIP BETWEEN CORPORATE GOVERNANCE AND THE RISK OF FRAUD OCCURRENCE – ROMANIAN COMPANIES

The third chapter contains empirical evidence for the Romanian business environment in order to identify the corporate governance elements which impact financial fraud occurrence. The analysed data covers the 2016-2022 period. The final data set is comprised of 66 companies listed on the main market on the Bucharest Stock Exchange (BSE). Once the hypothesis is established, the chapter continues with a description of the variables, followed by the statistical tests. All this

to validate the fact that the corporate governance score, if well adopted, will decrease the occurrence of financial fraud. Moreover, the corporate governance score and the corporate governance elements - EQUIL, INDEP, AUDIT, GENF - will certainly have a positive impact on business development, as the results of the study outlined.

CHAPTER 4 EMPIRICAL STUDY ON THE RELATIONSHIP BETWEEN EARNINGS QUALITY AND CORPORATE GOVERNANCE AT EUROPEAN UNION LEVEL

The fourth chapter approaches a practical study applied at the European Union level, for 939 companies. The data are downloaded from the Thompson Reuters platform for year 2022. The chapter starts with the development of the hypothesis, then details the variables, and describes the first set of statistical tests. The chapter ends with statistical regressions and data interpretation. The connection between the earnings quality index and each of the corporate governance elements - nomination board committee, audit board committee, compensation board committee, policy board independence, board size, gender, board meetings - was found to be positive and statistically significant, with a very good coefficient.

GENERAL CONCLUSIONS

The relationship between corporate governance and financial fraud occurrence is a topic of interest for the economic environment and all the interested parties. Thus, the doctoral research within the doctoral thesis titled “*Corporate Governance and Financial Fraud*” intends to identify the relationship between corporate governance taken as a score (at the level of the Romanian business environment) but also by its elements and financial fraud occurrence (and the earnings quality as fraud proxy at the level of European Union companies). The current study, aiming at the European economic sector both at the European Union level and at the level of the Romanian business environment, attempts to identify the current state in terms of corporate governance code adoption, to see whether a qualitative reporting will prevent the occurrence of financial fraud.

The general objective of this study consists in identifying the relationship between corporate governance and financial fraud occurrence. Two different aspects are involved in accomplishing this objective. On the one hand, corporate governance is qualitatively studied both at the level of the European Union business environment and at the level of Romanian

companies. In the case of Romania, besides the qualitative analysis, corporate governance is computed as a score, but also by a few extracted elements, part of the corporate governance code. On the other hand, by using the M-Beneish score, the purpose is to measure the occurrence of financial fraud in the Romanian economic sector.

The proposed research addresses theories and practitioners alike, from both the public and the private sectors. First, theoretical aspects are approached to capture the theoretical perspectives developed by researchers in time. Exploring the literature over the years, the importance of adopting the corporate governance code is strengthened from one year to another, underlining the economic benefits thereof. Secondly, from an empirical perspective, the case studies comprise a wide view of the corporate governance score both in the micro and in the macroeconomic sector, as well as its impact on financial fraud occurrence.

The topic related to this doctoral research is relevant in the current economic context. Corporate governance within companies is an essential element for the long-term success of companies.

The bibliography related to this doctoral thesis includes both international and national articles. This topic is also approached in the scientific articles published during the doctoral research and presented in international scientific conferences. During the doctoral research, 4 articles were published on Web of Science, 2 indexed articles in an international database, and 5 articles in the volumes of international conferences. Dissemination of the research results was carried out by participating in 11 international conferences, 1 of which was outside Romania, and the rest of them on site and online.

This doctoral thesis is structured into four chapters. The first chapter approaches corporate governance, the second chapter financial fraud, the third chapter contains the empirical study applied at the level of the Romanian business environment, and the last chapter includes the same study extended at the level of European Union companies.

Chapter 1 Conceptual delimitation regarding corporate governance places the research in theoretical terms, analysing the concept through the issued definitions and the results obtained by various researchers in time. Theories for corporate governance have been analysed and filtered through the behaviour of the business environment. It is also in the interest of the current research to see the implication of corporate governance in economic sustainability. Further, methods of measuring the corporate governance score are outlined, followed by the key elements for a

successful implementation of the corporate governance score, based on previous research. In the last part of this chapter, a qualitative analysis is performed to see the degree of adoption of the corporate governance principles both at the European Union level and at the level of Romanian companies.

Chapter 2 Theoretical-methodological approaches regarding fraud approaches the theoretical concepts of financial fraud, issued by various researchers in time. It includes a bibliometric analysis performed to strengthen the importance of financial fraud in the economic environment. It is also in the interest of the study to overview the relationship between data manipulation and fraud since they are used together most of the times. Then, the chapter presents the methods developed by researchers in time. The study focuses on detailing the earnings quality index, due to the fact that it is used as a proxy for financial fraud in chapter four. The last part of chapter two includes discussions on fraud and corporate governance in theoretical terms (bibliometric analysis, literature review on both concepts), and strengthens the connection of the two elements for the following two chapters.

Chapter 3 Empirical study on the relationship between corporate governance and the risk of fraud occurrence – Romanian companies outline the relationship between corporate governance and financial fraud, using data downloaded from the Bucharest Stock Exchange. This chapter validates the fact that an increased interest in applying the corporate governance code will decrease the presence of financial fraud. It starts with developing the hypotheses and describing the methodology, it continues with a characterization of the dataset, and it ends with statistical regressions. The results validate most of the hypotheses, strengthening the importance of corporate governance in the Romanian business environment. Moreover, through the selected corporate governance elements, the ones which are most sensitive in combating financial fraud are also validated.

Chapter 4 Empirical study on the relationship between earnings quality and corporate governance at European Union level approaches the connection between the corporate governance elements and the earnings quality index. In this chapter, the corporate governance elements are downloaded from the Thompson Reuters platform, taking into account the corporate governance elements used in the case of the Romanian business environment, so as to make a comparison between the two sides. The earnings quality index is considered as a proxy for financial fraud occurrence at the level of economic entity. The chapter starts with the

development of the hypotheses and a description of the methodology. Then it continues with a characterization of the dataset and a presentation of the regressions. It is of interest for the study to see the impact of corporate governance on the earnings quality index, by European Union regions. This chapter shows that an increased adoption of corporate governance principles will sustain businesses on the long run, measured through the earnings quality index.

The results of the scientific approach reveal the importance of corporate governance at the level of economic entity. On the one hand, the analysed literature and the qualitative research outline the awareness of adopting the corporate governance score, through increasing trends from one year to another. Thus, it can be concluded that companies realize the importance of adopting the corporate governance code at the level of economic entity. The importance of the concept is also revealed throughout the previous research that has been made. On the other hand, chapter two outlines the impact of financial fraud at the level of economic entity by carrying out a literature review and a bibliometric analysis. The qualitative analyses based on the M-Beneish score show, per each year, the number of companies with fraud risk and of companies with no fraud risk at the level of the Romanian business environment, noting that from one year to another, the tendency is to resort less to fraudulent activities. It can also be noted that post pandemic results reveal the tendency to resort to fraudulent activities. The second part of chapter two shows the relationship between corporate governance and financial fraud as determined through the bibliometric analysis, and grounded with the literature review on the two topics. In time, authors have approached the two topics in associations with several elements measured using a variety of methods and obtained similar results. A search in the literature returned no study applied to the Romanian business environment and extended to the level of the European Union, comparing the results with the Romanian environment. This being said, the next two chapters focus on statistical estimations. Five out of seven hypotheses are validated by performing the statistical estimations. So, at the level of the Romanian business environment, the corporate governance score, along with the elements: Equilibrium between non-executive and executive board members (EQUIL), Independence of board members (INDEP), Audit committee (AUDIT), and Gender (GENf) are found in a statistically negative correlation with the financial fraud score. This means that when the corporate governance code is adopted, the level of financial fraud occurrence will decrease. Moreover, when applied, the elements of the corporate governance code have an increased positive influence on a business well-being. The elements

which are not found in a statistically significant correlation for the study are: Selection of board members (NOM) and Remuneration policy (REM). Romania was part of a communist regime, which can still be felt in different contexts of the business environment. More in the public sector than in the private one. Even though the private sector comes with a different reasoning for employees, as the agency theory states, the human behaviour is changeable and follows its own interest. Thus, with the proper incentive, managers will tend to follow their own interest rather than the multiple interests of the parties involved, as the stakeholders theory states.

The results part of the last chapter strengthens the idea from which the research stems. Both in the case of Romanian companies and in the case of European Union businesses, the adoption of corporate governance translates into increased earnings quality. Therefore, all of the seven hypotheses are validated by this study. The study performed in chapter four, at the macroeconomic level, includes the following corporate governance variables: Nomination board committee (NOM), Audit board committee (AUDIT), Compensation board committee (CBC), Policy board independence (PBI), Board size (Bsize), Board gender diversity (Gender), and Number of board meetings (NBM). All of the selected independent variables are found in a statistically significant positive correlation with the earnings quality index. This means that the quality of earnings (absence of financial fraud) will increase when adopting the corporate governance code, with focus on the selected elements. A broader analysis is performed in the case of the European Union, by regions (South, East, North and West). The results validate the initially developed hypotheses, but the accuracy of the results is the best in the case of Northern businesses. This could be explained by the known fact that the economic environment in the Northern part of the world is more efficient, reliable and accurate.

By comparing the results of the Romanian business environment with the ones at the European Union level, a series of corporate governance variables can be matched and validated in both cases. INDEP and PBI; AUDIT and AUDIT; GENf and Gender are associated as common corporate governance elements and validated in both case studies. Thus, the policy board independence, audit board committee and the presence of women in leading positions have important implications both in the microeconomic and in the macroeconomic environment.

Overall, from the doctoral study on the impact of corporate governance on financial fraud occurrence at the level of economic entity, it can be concluded that if the corporate governance

code is implemented at the level of an economic entity, the occurrence of financial fraud will decrease.

The analysis itself presumes a series of limits. They are related to the sample and the methodology that are used. In the case of Romanian companies, the data were collected manually from financial statements available on the Bucharest Stock Exchange, therefore it was a difficult and long process. Another limitation in the case of the Romanian study reflects into computing only the Beneish score, which is developed for Romanian companies, nor for Eastern ones. Other limitations reflect into inclusion of all the available research published by scholars. In the case of the European Union study, the limitation reflects into the time range and the selection of the dependent variable. For the analysis by regions, the data are not equal for each category.

The policy implications of this study are for policy-makers, so that they will understand how a good corporate governance mechanism will enhance high-performing businesses. Both at the level of private companies and at the level of state-owned companies. Different aspects regarding corporate governance are validated throughout the current doctoral research. Managers can extract and try to understand and apply the good characteristics of corporate governance for the well-being of their companies. For the employees in leading positions, it will be very helpful to become aware of the positive implications of corporate governance at the level of economic entities, on the long-run. At a broader level, the macroeconomic environment will increase its own wellbeing whilst encouraging market players to enhance a qualitative corporate governance reporting. There is no doubt that corporate governance has a positive impact on businesses.

Future research will be focused on developing a corporate governance score at the level of the Romanian business environment and extending the study on the macroeconomic level, applying the M-Beneish score to the European Union businesses, and on a broader time range. Thus, to comprise all the reasonings and analyses from the current doctorate thesis, it can be frankly confirmed that corporate governance is the “good cop” in a company, ensuring the wellbeing of the business on the long run, both for the microeconomic level and for the macroeconomic level.