

**STANDPOINT**

**by Prof. Mariana Mateeva Petrova, PhD**

of dissertation for awarding the scientific degree "Doctor"  
in the field of higher education 3. Social, economic, and legal sciences  
Professional field 3.8. Economics  
PhD program: "Finance, Insurance and Social Security"

Author: **Ardit Haxhija**

Title: **THE ROLE AND SIGNIFICANCE OF FINANCE, ACCOUNTING AND FINANCIAL MATHEMATICS IN COMPANIES**

**1. General description of the presented materials**

Following Order No. 161/ 08.05.2024, the Rector of the Higher School for Insurance and Finance - Professor Boris Velchev, was appointed as a member of the scientific jury for providing a procedure for the defense of a dissertation on the topic of “**THE ROLE AND SIGNIFICANCE OF FINANCE, ACCOUNTING AND FINANCIAL MATHEMATICS IN COMPANIES**” for obtaining the educational and scientific degree "Doctor" in the field of higher education 3. Social, economic, and legal sciences, Professional field 3.8. Economics, the program "Finance, Insurance, and Social Security". The author of the dissertation is **Ardit Haxhija**.

The materials submitted by **Ardit Haxhija** include documents according to the presented inventory: reference for the scientific and scientific-applied contributions in the dissertation; reference for the fulfillment of the minimum national requirements for the acquisition of a degree "Doctor" in professional field 3.8. Economics; dissertation work; summary of professional accomplishments. In addition, the doctoral student submitted 3 publications.

**2. Relevance of the topic and expediency of the set goals and objectives**

Finances and accounting play an important role in the management of any company.

The purpose of researching a doctoral dissertation is to prove that finance is of particular importance in the development and operation of companies, accounting for preparing appropriate reports and reporting to management, and financial mathematics to forecast and predict the future operations of the companies.

As a special subject of research in this dissertation, it is to confirm that finance is the lifeblood of a company, accounting is the basic system for providing financial data, and

financial mathematics is a way of modeling and projecting and predicting the future financial flows of a company.

**Basic (general) hypothesis:**

Basic (general) hypothesis is that finance is the money available to spend on business needs. Right from the moment someone thinks of a business idea, there needs to be cash. As the business grows there are inevitably greater calls for more money to finance expansion. The day to day running of the business also needs money..

*First special hypothesis:*

Finances are necessary for companies for their operations, financial flows should be monitored and registered and analyzed in order to be able to make appropriate decisions, and mathematical models should be used in the analyses.

*Second special hypothesis:*

Finances are the basis for business operations of companies, they are recorded and projections are made for future financial movements in the operations of companies..

*Third special hypothesis:*

Companies' finances are the result of their work and cooperation with investors and business managers on how to evaluate business proposals and develop the business most effectively.

**Auxiliary hypothesis:**

Basically, finance, accounting and financial mathematics are interconnected and enable companies to make real business decisions that will achieve the desired development.

The author presented the results of the research conducted and interpreted them correctly.

**3. Knowledge of the problem**

The author has made an extensive, thorough, and correct analysis of the various issues addressed in the work, allowing for correct conclusions. For the preparation of this publication, the author analyzed 119 source materials in English language, specialized literature on the subject, statistical data, and source materials of central authorities.

**4. Research methodology**

With a view to the stated purpose of the work and verification of the adopted research hypotheses, the following research methods were adopted:

- **historical** - by applying this method, the financing situation of companies is historically perceived,

- **content analysis** - by applying this method, the legal bases and other elements of the financing systems of companies are analyzed.
- **comparative method** (comparative) - with the application of this comparative perception of the experiences, methodology and differences in the functioning of the financing systems in companies is performed.
- **statistical method** - statistical method is used for relatively accurate understanding of the general determinations, regularity and legality of current and possible forms of financing companies.
- **synthesis** - with the help of this method the data obtained with the help of the previous methods are combined.
- **induction and deduction** - is used in research procedures to draw conclusions from the theoretical views and opinions of other authors, as well as the experiential collection of data from the practice of certain other entities.

The time frame of the research of this paper is determined for the period from 2000 until today.

## 5. Characteristics and evaluation of the dissertation

**The dissertation** consists of 155 pages and the literature used to prepare this publication constitutes 119 source items.

The study has an introduction, three chapters, a conclusion, and a bibliography.

In first chapter doctorant confirm that finances are important in business because they enable companies to operate without any financial problems, such as lack of cash, funds for investments, for making long-term profits, etc. Businesses must consider their finances in order to achieve their goals, from surviving in bad times to expanding and strengthening in good times. Finance is the foundation of any business. Companies use finance to purchase assets, goods, and raw materials or anything that will push business forward.

In chapter two „The role and significance of accounting in companies” doctoral student confirm, that accounting provides a clear picture of the financial health of organization and its performance, which can serve as a catalyst for resource management and strategic growth. Accounting is like a powerful machine where companies input raw data (figures) and get processed information (financial statements). Accounting plays a vital role in running a business because it helps track income and expenditures, ensure statutory compliance, and provide investors, management, and governments quantitative financial information which can be used in making business decisions.

In chapter three **THE ROLE AND SIGNIFICANCE OF FINANCIAL MATHEMATICS IN COMPANIES**” describes the application of mathematics and mathematical modeling to solve financial problems.

## **6. Contributions and significance of development for science and practice**

The problem posed by **Ardit Haxhija** is interdisciplinary and entirely refers to the current achievements and needs of science and practice, which deserves to appreciate the author's contribution. The chosen research problem is not an easy problem to study due to its interdisciplinary and multifaceted nature. ‘

In the course of scientific research, which demonstrates the potential of scientific contributions:

The scientific contribution of this dissertation refers to the following:

1. To emphasize the close relationship between mathematics and finance, highlighting its importance in the understanding and application of scientific disciplines in the development of financial operations of companies.

2. To point out that mathematical models in finance enable the use of thinking skills together with disciplines such as statistics and computer science.

3. The scientific contribution of this dissertation is reflected in the fact that it emphasizes that the importance of financial knowledge is of crucial importance in everyday life and its application in business and accounting is indisputable. The application of the scientific disciplines of mathematics and finance provides the necessary knowledge to effectively control the finances of the business and provides great opportunities for creating greater economic progress for companies.

4. The scientific approach in understanding financial activities has a key role in the real life of business in making investment decisions to achieve maximum generation of rapid growth and development of companies.

5. To confirm that the complexity of financial transactions must be understood in order to incorporate mathematics into finance.

## **7. Evaluation of dissertation publications**

The results of the scientific research are reflected in 3 publications prepared independently. They testify to the doctoral student's deep scientific interest in finance issues and the fact that the prepared dissertation is the author's work.

## **8. Assessment of compliance with the minimum national requirements**

Attached is a Certificate for fulfillment by the doctoral student of the minimum national requirements for acquiring the educational and scientific degree "Doctor" in the professional field 3.8. Economics. The total number of points is higher than required.

## 9. Assessment of the applicant's personal contribution

The presented dissertation on: "**THE ROLE AND SIGNIFICANCE OF FINANCE, ACCOUNTING AND FINANCIAL MATHEMATICS IN COMPANIES**" is the result of scientific research confirmed by constructive results. There is no doubt about the author's contribution, in-depth scientific research, and pursuit of the set goal and research hypotheses.

The dissertation demonstrates the author's theoretical knowledge and proves her ability to conduct scientific work independently.

## 10. Summary of professional accomplishments

The summary of professional accomplishments consisting of 50 pages (36 in English), has been prepared following the requirements of LDAS and RILDAS. It is structurally correct and adequately reflects the dissertation's logic, consistency, and contributions. It demonstrates **Ardit Haxhija's** skills in synthesizing and summarizing her most essential ideas and conclusions.

## 11. Critical comments and recommendations

My critical notes to the presented dissertation work of **Ardit Haxhija** are the following:  
Imbalance of the structure of the dissertation work.

Need for more argumentation of rather exposed theses and statements.

Also, this kind of scientific research implies more financial and economic analysis of data, statistical information, comparison and contrast, conclusions, generalizations, models and original contributions to the studied issues.

I recommend presenting the results in specialized international publications with IF / IR, allowing higher visibility of scientific results and creating conditions for more intensive citations.

## 12. Personal impressions

I do not know the doctoral student personally. We do not have joint publications and developments.

My impressions come from the dissertation, the author's summary of professional accomplishments, and dissertation publications. They show a bona fide scientist with a theoretical background and a proven ability for independent research.

## CONCLUSION

The dissertation contains scientific and scientific-applied results, representing an original contribution to science and meeting all the requirements (s) of LDASRB and RILDASRB. The presented materials and dissertation results correspond to the specific requirements of the Regulations for admission and training doctoral students at the Higher School of Insurance and Finance.

The dissertation shows that **Ardit Haxhija** has in-depth theoretical knowledge and professional skills in the Professional field 3. 8. Economics, demonstrating qualities and skills for independent research.

Due to the above, I give my **positive** assessment of the research presented by the above-reviewed dissertation, a summary of professional accomplishments, results, and contributions, and I invite the scientific jury to award the educational and scientific degree "Doctor" to **Ardit Haxhija** in the field of higher education 3. Social, economic, and legal sciences; Professional field 3.8. Economics; Ph.D. program "Finance, Insurance and Social Security".

09.06.2024

Member of a scientific jury: .....

/prof. Mariana Petrova, PhD/