

REVIEW OF A DISSERTATION

entitled

“Challenges to the Modern Monetary Policy and Optimization of Monetary Aggregates Management”

for acquisition of the educational and scientific degree of Doctor of Philosophy in the Doctoral Programme of “Finance, Money Circulation, Credit, and Insurance (Finance)”

Author of the dissertation: Vladimir Hristov Sirkarov, doctoral student

The dissertation was prepared at the Department of Finance and Credit of D. A. Tsenov Academy of Economics – Svishtov

Dissertation Advisor: Assoc. Prof. Aleksandar Petrov Ganchev, PhD

Author of the review: The review was submitted by Prof. Daniela Bobeva, PhD on the grounds of Order No. 1035 of 02 Dec. 2021 of the Rector of D. A. Tsenov Academy of Economics – Svishtov regarding the procedure acquisition of the educational and scientific degree of Doctor of Philosophy in the Area of Higher Education: 3.8 Social, economic and legal studies

Professional field: 3.8. Economics, Doctoral Programme “Finance, Money Circulation, Credit, and Insurance (Finance)”

1. General characteristics of the dissertation thesis

The documentation provided on the procedure is complete and gives grounds for preparing this review.

Relevance of the subject matter and expedience of the set goals and tasks

The dissertation addresses a topic that has not been discussed in the academic literature in Bulgaria for a long time. In this respect I would add a few arguments about the importance and relevance of its subject matter in addition to those given by its author. The fact that the currency board that has been operating effectively over the last twenty-four years is the reason why the monetary policy and the management of monetary aggregates have not been the subject of extensive research. At the same time, however, a number of events, including the financial crisis, the emergence of cryptocurrencies, the dynamics of monetary instruments, etc. require a revision of the traditional monetary policy concepts and practices. From the point of view of the forthcoming accession of our country to the euro area and the theoretical developments in the

field of monetary policy, its rationalization and the capacity building in this field are of utmost importance.

The proposed topic is relevant and of great practical importance. The doctoral student has well justified this significance and relevance. He clearly defined the unsolved and incompletely solved problems that have to be addressed in his research. The topic is appropriate for a doctoral dissertation due to its scientific significance, practical importance and insufficient research. The fact that the topic has not been researched sufficiently is due to its complexity and thus provides opportunities for further research based on good theoretical knowledge, the use of adequate financial apparatus, and good analytical skills, which the author clearly demonstrates.

The main goal of the research is to formulate a relevant definition of money and to develop a methodology for optimization of money supply measurement and management. A monetary aggregate that corresponds to the current concept of money has been developed. The author empirically proves that the existence of methodological shortcomings in the existing ways of measuring the money supply can distort the monetary policy. Emphasis is also placed on the loose monetary policies of the leading central banks in recent decades, which have undoubtedly led to higher inflation and sovereign debt levels and thus threaten to impair the macroeconomic stability in the coming years.

The subject and the object of research are clearly defined, which has enabled the author to navigate the dynamics of the scientific process and to structure in an indisputably logical and effective way his dissertation. The subject of research in the dissertation is money supply, and its object - the tools for measuring money supply and the definition of its theoretical, monetary and quantitative characteristics.

The research **goal** is achieved and the main research hypothesis is confirmed by mean of eight **tasks**, starting with an analysis of money and its functions followed by a historical analysis of monetary systems and a proposition for a new concept for measuring the money supply.

Research methodology

In order to achieve the goals and tasks of the dissertation and test the hypotheses, the author has compiled a customary methodological apparatus with high research and innovative potential. It is predominantly theoretical, but also contains some quantitative methods suitable for this type of research. It includes traditional methods of chronological analysis, analysis and synthesis, comparative analysis, methods of induction and deduction, graphical analysis, etc. and is based on the fundamental principles of historical analysis and praxeology methods that are typical for the Austrian school.

An undoubted merit of the dissertation is the empirical study to reveal the quantitative characteristics of monetary aggregates and their impact on key macroeconomic variables. The tools of one-factor linear regression analysis were used to study the impact of money supply and monetary aggregates on six key macroeconomic variables.

the research hypothesis is clearly defined and holds that the classical monetary aggregates in the conditions of fiat monetary systems do not represent correctly the money supply and there is a possibility to optimize the accuracy of its measurement by a monetary aggregate which takes into account the function of money as a universal means of exchange in all possible transactions.

2. Evaluation of the format and contents of the dissertation

Structurally, the dissertation has the classical three-chapter format. Chapter One consists of 4 paragraphs, Chapter Two includes 3 paragraphs and Chapter Three also includes 3 paragraphs. The dissertation comprises a total of 198 pages, including 31 figures, 11 tables and one equation. The list of references includes references to 104 literary and internet sources.

Chapter One is theoretical and reviews the applicable theories of money. The analysis of the theoretical views of over 30 authors aims to propose a modern definition of money in order to lay the foundation for a further development of the concept of monetary aggregate management. The analysis is definitely influenced by the methodology and scientific views of Ludwig von Mises (supplemented by those of Karl Menger), which is revealed by the historicism of the proposed dissertation. The criticisms of Mises's theory and the applicability of his regression theorem were refuted by the author with the argument that "such a critique can only show ignorance of the essential characteristics of the theorem " (p. 23).

Chapter Two of the dissertation logically follows the first chapter and focuses on the various monetary systems. Although the topic is widely researched and there seems to be nothing to add, the PhD student conducted an analysis of the theoretical concepts for calculating monetary aggregates, thus identifying the theoretical deficits and imperfections addressed in Chapter Three.

Chapter Three is dedicated to the ambitious task of proposing a new model of calculating and managing monetary aggregates, in which the quantitative analysis predominant. The quantitative analysis of the impact of money supply and monetary aggregates on the macroeconomic framework is especially interesting. The author demonstrates that it is not only possible, but also necessary to construct a new monetary aggregate that takes into account the dynamics of standard money and cash substitutes referred to as actual money supply (AMS).

The author's summary complies with the standard requirements. It presents the contents of the dissertation as well as the main concepts and conclusions, its scientific contributions, and the degree of its topicality and practical feasibility.

3. Evaluation of the dissertation and its contributions

The dissertation is a comprehensive study that is entirely within the liberal theoretical concept, and the Austrian school (Mises, Menger, Hayek, Rothbard, etc.) is presented with

contemporary arguments for its invulnerability to economic erosion. The author disputes all other theories, arguing that the neo-Keynesian theory "marginalizes the subject of the origin of money" (p. 31) as the role of the state regarding money and monetary systems has always been a controversial issue.

The doctoral student is well-aware of the literature in the field of the researched problem. This has helped him to draw logical and relevant theoretical and methodological conclusions, methodological solutions and justifies propositions. The diverse scientific apparatus and his research skills, constructive analysis, scientific summaries and reasoned propositions prove the high quality of his dissertation.

The main thesis that is proven, is that there is a possibility to optimize the accuracy of money supply measurement through a monetary aggregate that takes full account of the function of money as the ultimate means of exchange in all possible transactions.

It is noteworthy that the author has clearly defined the constraints of his research. This is a rare approach in dissertations, and its application demonstrates the author's scientific maturity.

The quantitative analysis shows that all analyzed relationship between money supply and monetary aggregates and their effects on macroeconomic indicators are significant at a confidence level of over 99%, which makes the conclusions based on the analysed data extremely valid. This shows the high scientific value of the selected theoretical foundations and research methods.

4. Scientific and practical contributions of the dissertation.

The dissertation submitted for review contains significant contributions to the monetary theory and policy, which are described in detail in the enclosed documents. I fully agree with the contributions formulated by the doctoral student and would like to add the following ones:

First: This is the first comprehensive contemporary study conducted in Bulgaria on monetary policy and monetary aggregates with a clear practical focus on central bank practices.

Second: The dissertation demonstrates the author's courage to refute proven theories, practical approaches and policies with the help of updated arguments from the theoretical arsenal of the Austrian School of Economics, complemented by a simple but logical quantitative model.

Third: the proposed monetary aggregate is rather an example of how such an aggregate should be constructed. It determines the aspects for practical development rather than the practice itself, which constitutes the scientific value of the practical results of the research.

Assessment of the compliance with the minimum requirements for acquisition of the educational and scientific degree of Doctor of Philosophy and the author's publications

The statement of compliance with the minimum national requirements according to Art. 1a, Para. 1 of the Regulations for Implementation of the Law for Development of the Academic Staff of the Republic of Bulgaria shows that the doctoral student has exceeded the required level of compliance with the minimum national requirements for acquisition of the educational and scientific degree of Doctor of Philosophy by scoring a total of 45 points out of the required minimum of 30 points.

The doctoral student submitted for review two articles, one conference paper and one study. The analysis and evaluation of the publications show that they reflect important aspects of the dissertation. The dissertation contains the potential for additional publication of original works and research findings of the author in scientific journals published by institutions other than D. A. Tsenov Academy of Economics.

The doctoral student has studied a large number of scientific publications, articles, documents, empirical studies, etc. to achieve the goals of his dissertation. No instances of plagiarism were found. The anti-plagiarism platform rendered extremely good results, which shows the completely independent contribution of the doctoral student in the developed dissertation, which is commendable.

4. Critical notes, recommendations and questions.

Critical notes

Regardless of the in-depth, comprehensive and logically sound content of the paper, some imperfections can be identified that do not diminish the importance of the dissertation, as they do not impair significantly its quality. The critical remarks are within the sphere of collegial benevolence and do not change my positive opinion of the doctoral student's scientific work. These imperfections can briefly be summarised as:

- The theoretical part gives the impression of one-sidedness and dominance of a theoretical concept, while its alternatives seem disregarded. However, the scientific arguments are well-supported by historical facts and the conclusions drawn seem reasonable. On the other hand, the choice of a theoretical framework is extremely suitable for defining the money supply and developing an apparatus for calculating and optimizing the management of monetary aggregates;
- Some of the criticisms are not based on sufficient arguments, e.g. "The two monetary concepts used by every central bank in the world, however, are based on inaccurate and incomplete definitions of money and money substitutes. This leads to corresponding errors and omissions in the definition and calculation of the monetary aggregates currently used by central banks.";

- The author's views on the role of the IMF in the modern international monetary system are not backed by serious arguments, but are rather declarative. The role of the IMF in imposing national reforms as a condition for providing financing has been ignored (its main principle is "Money for Reforms"). It is a powerful drive for liberalization of the national economies, privatization, tight fiscal policy and economic stabilization. National economies needn't become insolvent, lose huge resources and incur high social costs, since the IMF's main objective is to prevent such situations by imposing the neoliberal economic model (which is why it is under attack by the anti-globalists.)

Recommendations:

- The rich theoretical and empirical databases compiled by the author have a huge potential for further analysis. I recommend that the PhD student apply the results of the research questions and problems in research projects and publications in refereed publications;
- I recommend comparing the dynamics of monetary aggregates in countries with different monetary regimes;
- It would be interesting to test the developed model under different assumptions;

Questions:

1. Unfortunately, the cryptocurrencies phenomenon was not addressed in the dissertation, but is referred to in the author's article. It would be very important to test whether the classical liberal paradigm of money is true in this case. Could we claim that in terms of cryptocurrencies the "bad money displaces good money, as the outflow of commodity money is not caused by a negative balance of payments" effect is not caused by government intervention in the price structure? Obviously, the author does not like fiat money, but what are cryptocurrencies? Also, the author should clarify in this context which are bad and which are good money.
2. How would the doctoral student comment on the dynamics of monetary aggregates under a currency board?
3. The dissertation uses empirical data on money supply in the United States with the assumption that such data is "relevant." It would be interesting to indicate which data are missing for the euro area, as well as whether the author would indicate whether his proposed model would work in the euro area.

Conclusion

The dissertation is a comprehensive and diligent scientific study on a topical and significant scientific and practical problem. The research tasks were completed successfully thus achieving the main goal and corroborating the research hypothesis.

The achieved scientific and applied results contribute to the scientific knowledge and support practice. The dissertation deserves a positive assessment and meets the requirements for acquisition of the educational and scientific degree. It shows the author's capacity for

independent research, which is proved by his extensive empirical research and in-depth analyses. The efforts of the doctoral student to present an important financial problem competently deserve a positive assessment. The reasoned conclusions demonstrate the skills of the doctoral student for specialized and purposeful application of theoretical knowledge in practice. This provides an opportunity to improve the existing theory and practice.

This provides me with the grounds to propose to the Scientific jury to confer to Vladimir Hristov Sirkarov the educational and scientific degree of "Doctor" in the Area of Higher Education 3. Social, economic and legal studies, the scientific field 3.8. Economics, the doctoral programme of Finance, Money Circulation, Credit, and Insurance (Finance).

6th January 2021

Prof. Daniela Bobeva, PhD

Sofia