

OPINION

procedure for obtaining a doctoral degree

Tanya Tsvetanova Karamisheva

research topic : "THE CREDIT AND FINANCIAL CYCLE IN BULGARIA, ITS RELATIONSHIP WITH THE BUSINESS CYCLE AND MACROPRUDENTIAL POLICY "

by: Assoc. Prof. Victor Ivanov Yotzov, Ph.D., ERI at BAS and UNWE

1 Candidate details

Tanya Karamisheva is a Chief Expert in the Economic Research and Forecasting Directorate at the BNB. She graduated with a bachelor's degree in "Industrial economics" from the University of National and World Economy in 2000 and holds bachelor's and master's degree in "Business management" from the University of Julius-Maximilian Würzburg, Germany in 2006. She was a doctoral student at the Faculty of Economics at Sofia University "St. Kliment Ohridski". She has a number of specializations in well-known research institutes, universities and central banks. Her research interests are related to economic modeling and in particular to the various manifestations of cyclicity in the economy.

2 General characteristics of the dissertation

The study submitted for review is 200 pages long and includes an introduction, five chapters, a conclusion and two appendices. The bibliography contains 158 titles, most of which are by foreign authors and in English.

The chosen topic is appropriate, interesting and undoubtedly sufficient to achieve a doctoral degree. The object of the study are the cyclical fluctuations in the financial system, measured by the deviation of a set of financial and macroeconomic indicators from their long-term trend and the relationship between the fluctuations in the financial system and the deviation of real GDP from its potential. The subject of the study are the possibilities for using the assessment of the financial cycle in decision-making for macroprudential policy.

The main goal of the dissertation is to study the credit and financial cycle in Bulgaria and its connection with the business cycle. To achieve this goal, the author sets specific tasks that are performed systematically. The research claims that summarizing information from different macroeconomic and financial indicators and setting the overall measure of the financial cycle exceeds the assessment of the credit cycle, using the deviation of the loan-to-GDP ratio from its long-term trend and can provide timely and reliable accumulation signals of cyclical risks in the financial system. It also accepts the interrelation and synchronization between the financial cycle and the business cycle and seeks empirical evidence to support this hypothesis.

In the course of fulfilling the set goals and tasks, the doctoral student applies various approaches and econometric techniques, including traditional and well-tested in the economic literature "frequency filters"; construction of composite indices, taking into account the financial conditions; structural models, incl. those with unobservable variables, etc. Methods based on production functions, vector autoregressive models (VAR), as well as de-trending and smoothing techniques were used in the study of the different cycles.

3 *Structure and content of the dissertation*

In terms of composition, the study consists of five chapters, each of which has its own contribution to achieving the overall goal.

The first chapter provides an in-depth overview of the main literature sources related to the relationship between economic growth and the provision of the necessary financial resources through a bank loan. The conclusion is that in the academic literature are used mainly models with error correction and regression of the panel, based on a balanced or unbalanced data panel. From this point of view, the graduate states that the empirical analysis of the factors for credit growth in Bulgaria will be performed using such approaches.

The second chapter reviews the development of the banking system and lending in Bulgaria, focusing on the period after the introduction of the currency board, and this relatively long period is divided into two subperiods - before and after the global financial crisis. Special attention is paid to the policies pursued by the BNB over the years to maintain financial stability.

In the third chapter an empirical analysis of the factors determining the credit growth in Bulgaria during the studied period, 1999 - 2019 is performed. The analysis in this part can be conditionally divided into three. In the first one, the focus is on credit growth factors at the macro level through the use of aggregate data. In the second one, a distinction is made between the factors on the demand side and the supply side, using the results of the Banking Credit Activity Survey. In the third part, the analysis is supplemented by the use of separate data from banks on the amounts of the granted loans, which in turn are related to the individual responses of banks to the Credit Survey. Of interest are the results obtained, namely that the demand-side factors are more important in explaining the dynamics of business lending than the supply-side factors. However, this conclusion does not appear to be confirmed by a micro-level study showing that both supply and demand factors appear to be equivalent. This finding is important and more in-depth research and analysis may be needed.

The fourth chapter examines the credit and financial cycle in Bulgaria with an emphasis on the interrelations with the business cycle. For this purpose, a standard procedure (deviation of the loan / GDP ratio from its long-term value) was used,

supplemented by indicators signaling the potential accumulation of cyclical risk in the economy. Based on the performed econometric assessments, specific conclusions have been made: (a) from 2017 the Bulgarian economy has entered a phase of gradual accumulation of risks in the financial system; (b) the business cycle in Bulgaria is largely synchronized with the business cycle in the euro area, with the degree of synchronization increasing after Bulgaria's accession to the European Union; (c) the financial cycle in Bulgaria is largely synchronized with the business cycle, but appears longer and is characterized by significantly higher volatility and amplitude.

The fifth chapter outlines the possible use of financial cycle assessments in management decisions regarding macroprudential policy. Special attention is paid to the countercyclical capital buffer as a tool for conducting macroprudential policy, as well as to the various approaches determining its size. The analysis shows that the deviation of the loan-to-GDP ratio from its long-term average is negatively correlated with the business cycle, which has a negative impact on determining the level of the countercyclical capital buffer. This in turn requires the use of a more general measure of the financial cycle to ensure better synchronization.

The conclusion summarizes the results obtained in the individual chapters and convincingly shows that both the main goal of the study and the specific tasks set have been met.

4 *Scientific and applied contributions*

The dissertation has an indisputable originality, which allows to identify and formulate some contributions. There is no purely theoretical contribution (the doctoral candidate does not have such statements), but some applied contributions can be distinguished:

- An aggregate measure of the financial cycle is derived, which exceeds the limits of the use of the deviation of the credit-to-GDP ratio from its long-term trend;
- The phases of the financial cycle are assessed by aggregating the information from a wide range of indicators and is compared with the assessed business cycle;
- An analysis of the development of the banking system in the period before and after the global financial and economic crisis was made, emphasizing the role of the BNB in maintaining financial stability.;
- The factors for the dynamics of credit in Bulgaria have been studied, for which purpose information on individual banks has been used and a distinction has been made between factors on the demand side and on the credit supply side.

- Assessments of the main characteristics of the financial cycle (length, peak, trough, etc.), as well as the degree of synchronization between the financial and business cycle;
- An important step has been taken for the transition from empirical research to the formulation of management decisions.

5 Other publications and participation in scientific forums

The main results of the dissertation are presented to the scientific community through various scientific forums. The materials of the procedure present five publications of the doctoral student (three individual and two co-authored) and three participations in international conferences and seminars. The attached publications and reports demonstrate a lasting interest in the topic of the research and in them the development of the author's views on the various manifestations of cyclicity in the economy can be traced.

6 Conclusion

Based on the achieved results and the above arguments, I believe that the dissertation proposed by the doctoral student, as well as the accompanying publications and scientific reports, fully meet the criteria and requirements set out in the Regulations for the Development of Academic Staff Law in the Republic of Bulgaria and the Regulations. on the terms and conditions for acquiring scientific degrees and holding academic positions at Sofia University "St. Kliment Ohridski". With this opinion I do express my positive opinion regarding the awarding of Tanya Tsvetanova Karamisheva with a doctoral degree in economics.



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