

REVIEW

By Assoc.Prof. Irina Petkova Kazandzhieva-Yordanova, PhD., Department of Finance, Faculty of Accounting and Finance, UNWE

of the dissertation for awarding the educational and scientific degree "Philosophiae Doctor" in the field of higher education 3. Social, economic, and legal sciences Professional area 3.8. Economics, Doctoral Program "Finance, and Insurance"

Author: Nikolay Lazarov Lazarov

Topic: Innovations in Retail Banking and Their Application in Bulgaria

Scientific Advisor: Prof. Daniela Nikolova Bobeva-Filipova, VUZF

1. General description of the submitted materials

By order № 89 from 05.04.2022 r. of the Rector of the Higher School of Insurance and Finance Assoc. Prof. Dr. Grigorii Vazov I was appointed as a member of the scientific jury for providing a procedure for the defence of a dissertation on the topic Innovations in Retail Banking and Their Application in Bulgaria for acquiring the educational and scientific degree Ph.D. in the field of higher education 3. Social, economic, and legal sciences, Professional area 3.8. Economics, the Ph.D. program "Finance and Insurance". The author of the dissertation is Nikolay Lazarov Lazarov, a Ph.D. student in an independent form of study at the Department of Finance with supervisor Prof. Daniela Nikolova Bobeva, PhD.

The submitted by the PhD student materials include the following: (CV, copy of master degree diploma – at Assen Zlatarev University in Bourgas, Master of International Management and in Business Administration and Management at Cotrugli Buisness School in Croatia, dissertation, three publications, abstract of the dissertation in Bulgarian and in English, reference for the implementation of the minimum national requirements set out in the Law for the Development of the Academic Staff in the Republic of Bulgaria and the Regulations for its implementation.

2. Brief biographical data about the PhD Student

The PhD student is in an independent form of study for acquiring the educational and scientific degree PhD in the field of higher education 3. Social, economic, and legal sciences, Professional area 3.8. Economics, the Ph.D. program "Finance and Insurance" at VUZF. He works under the scientific advisory of Prof. Daniela Bobeva.

The PhD student has a long experience in the field of banking. He started his professional career at Raiffeisenbank where he got 10-year professional experience and reached the position Head of Retail Sales Department. The PhD student continued his professional development at Post Bank where he had been at the position Head of Sales Division for more than 5 years. The serious professional experience and career devotion of the PhD student in the field of retail banking explains his adequate and thorough knowledge in retail banking and the creation of a high-quality dissertation which I dare say we are witnessing.

3. Relevance of the topic and expediency of the set goals and objectives

The dissertation investigates a topic that is indisputably interesting and topical, namely – the significance of innovations in retail banking. The innovations are undoubtedly an important part of retail banking. The social uncertainty which we are currently witnessing in the last few years defines the strength and dynamic of that process and confirms the importance of innovations in banking. Innovations lead to changes in the client's experience, which together with the market experience should be adequately estimated. In that relation the changes in the distribution channels for consumer loans and loans for house purchases, the effects of innovations and digital solutions in lending are analysed in the dissertation. Econometric analyses on the influence of innovations on the variables Net Income from Fees and Commissions, Administrative Expenses and Staff Expenses is performed as in the econometric analysis other significant factors influencing the above-mentioned variables are also discussed.

In the context of the described above I think that the problems discussed in the dissertation are topical and they arise from the concrete issues analysed in the research – the emphasis on the consumer lending and home loans as I would like to note that there is a lack of a similar detailed and thorough research for the Bulgarian market, and even similar researches touching the Bulgarian market are rare as the topic is currently gaining popularity. In that relation I would say considering the long-term involvement in writing dissertation that the scientific advisor and the PhD researcher have succeeded in catching one very interesting and topical issue for the banks which is successfully developed in the dissertation.

4. Knowledge of the problem

The PhD student is definitely acquainted with the topic on which he works as well as the researches on the topic. A number of researches are cited on the definition of innovations, relations between innovations, profits and company's profitability, banks' efficiency as well as the factors affecting demand and supply of loans on the Bulgarian market. I would like to note that the PhD student has made a very detailed investigation of the researches in the field in which he works in the following

main areas – financial innovations, the influence of financial innovations on profitability, the factors that affect demand and supply of loans. The foreign literature on the topic is also investigated as well as the Bulgarian practice as a number of resources in English and Bulgarian are cited – approximately 400.

5. Research methodology

Qualitative and quantitative analyses are used in the research as I agree with the PhD student statement that the qualitative analysis prevails. Correlation analysis is used for investigating the dependency between consumer loans and home loans and GDP in the euro area and in Bulgaria as well as for testing the link between a number of variables – Net Income from Fees and Commissions, Administrative Expenses, Staff Expenses. On the basis of the correlation analysis the factors having the most significant influence on those three variables are determined. The correlation analysis is adequate as the respective statistical checks are done, e.g., for serial correlation, stationarity, etc. I think that the chosen methodology gives grounds for achieving the goals set in the dissertation as well as for finding adequate solution on the main tasks.

6. Characteristics and evaluation of the dissertation

The dissertation includes 249 pages as well as two appendices – the first one describes the innovations applied by the seventh biggest banks in the country and the second one describes the methodology of the different banks for the reference interest rates. The dissertation contains 62 figures and 9 tables. It is structured as introduction, three chapters and conclusion. The bibliography contains 400 sources – articles, books, Internet resources, legal acts, etc. The resources are used in accordance with the rules.

The goals set by the dissertation are to be investigated the possible risks related with the implementation of innovative technological solutions by the banks, the effect of innovations on banks' administrative costs, staff expenses and revenues from fees and commissions as well as the factors influencing consumer loans and home loans as well as the implementation of innovations in retail lending. I consider the goals set in the dissertation as being successfully achieved.

The research thesis is that the innovations and the technological development are becoming an important factor for a significant change in the conventional commercial banking. In relation with the research thesis the following hypothesis are tested:

Hypothesis 1 – innovations in banking and the new technological decisions significantly change the business model of the traditional retail banking.

Hypothesis 2 – technological innovations influence significantly banks' profitability and efficiency. The necessity of significant investments for the realization of the banks' digital transformations leads to changes in banks' strategies and retails banking.

For supporting the thesis set in the dissertation it is structured in three chapters. The first chapter is theoretical and it leads to the following important conclusions which I totally agree – digital platforms provide the client access at any time to products, services and consultations; the new technologies are going to have a significant role regarding the products and services offered by the banks in the future but they will simultaneously affect the banks' regulation and this will lead respectively to serious transformation of the financial system and the applicable regulations; the information security and banking is going to become one of the main priorities for the banks. I would like to note that despite more theoretical nuance of the first chapter the PhD student does not go into detailed descriptions and succeeds adequately to synthesize the information and to outline the more important aspects /for that reason a number of tables and figures are used/.

The second and the third chapter have definite practical orientation. A detailed analysis on consumer and home lending is done in the second chapter as there is an emphasis on the factors affecting consumer loans and loans for house purchases in the country. On the basis of comparison of the consumer loans market and loans for house purchases market the PhD student comes to the conclusion that consumer lending and lending for house purchases in Bulgaria have deep potential for development. Consumer loan products and home loan products in eight banks are analysed as it is emphasized on the analysis which products can be considered as innovation. The development of the distribution channels of consumer loans and home loans by those eight banks is analysed as the PhD student makes a conclusion that in short term and in middle term the digital channels for distribution are not going to substitute the physical ones in the country. Correlation analysis on the links between consumer loans and home loans and GDP is done for the euro area countries and Bulgaria as the results for Bulgaria are lower than the average correlation for the euro area regarding consumer loans and higher than the average correlation for home loans but no significant deviations are registered. The detailed investigation based on the Internet sites on consumer loans and home loans as types, parameters and specific characteristics is impressing. The conclusions made in the second chapter proving the thesis of the dissertation are that competition between the banks and other market participants guarantees high level of innovations, product quality and servicing as well as those innovations and digital solutions stimulate lending and the entry of new products which is a prerequisite the banks to invest more in new technological solutions. Regarding the banks included in the analysis the PhD student makes the conclusion that investments and innovations in distribution channels lead to an increase of the share of the investigated banks in consumer lending and

home lending, the big banks dominate in the distribution mix and in innovations and investments by the banks in digital solutions is something that we are going to observe more in the future.

An econometric model for the estimation of the effect of innovations on Net Income from Fees and Commissions, Administrative Expenses and Staff Expenses is developed in the third chapter. The methodology of the research is thoroughly described as the emphasis is put on the variables and factors that determine the links and regression as the statistical aspects that may lead to deviations and errors are explained. The links and the effect of POS in Bulgaria, amounts on new business on consumer loans, outstanding amounts on overnight deposits, deposits redeemable at notice, deposits with agreed maturity and repurchase agreements, innovations, innovations aiming at cost optimization, innovations aiming at increase of revenues and cost optimization on the Net Income from Fees and Commissions is investigated, as well as credit cards, card payments, average gross payments, amounts on new business on loans for non-financial corporations on Administrative expenses, the number of debit and credit cards, average gross monthly salary, amounts on new business on home loans, amounts on new business on overnight deposits, deposits redeemable at notices, deposits with agreed maturity and repurchase agreements to the household sector and innovations on Staff Expenses are also investigated. Factors influencing consumer loans and home loans in Bulgaria are also analysed in the third chapter. Regarding consumer loans those factors are GDP, inflation, employment, price index of homes, interest rates on consumer loans and the interest rates on home loans. For home loans those factors are inflation, employment, price index of homes, claims from the companies specialized in consumer loans, the amounts on new business on loans, different than overdraft for non-financial corporations, the effective interest rate on new business on consumer loans and the amounts on new business on consumer loans. The results and the reasons for them are explained.

The third chapter supports the thesis through econometric analysis that innovations have a positive effect on the revenues from fees and commissions and they have a negative effect on the cost expenses.

The research in the dissertation proves that the innovations in banking and in new technologies have the potential to change significantly the business model in the traditional retail banking and that technological innovations have a significant influence on the banks' profitability and efficiency.

7. Contributions and significance of development for science and practice

I would outline as contributions in the dissertation the detailed investigation of the different financial technologies and their application in retail banking as well as the reference interest rate, the contribution to the existing models about the factors influencing consumer loans and home loans,

the application of adequate model for estimating the factors influencing the banks' revenues from fees and commissions, administrative expenses and staff costs.

Thus, I consider the research could serve as a good basis for the banks to direct their resources to the implementation of innovative channels for distribution of consumer loans and home loans, for the development of innovative products directed to the retail lending where they have a serious potential for development. The research clearly shows that in order to be proffitable and efficient banks in Bulgaria should serously focus on digitalizations and clients' needs. As banks' innovations on products and distribution channels are investigated in the disseration this could also be a good starting point for comparison on individual level and in that aspect the respective efforts should be done for reaching the average levels and for development.

8. Evaluation of the dissertation publications

Three publications are presented in accordance with the national minimum requirements for acquiring educational and scientific degree and my opinion is that they are definitely related with the topic of the dissertation. Two of the publications are in the journals - in Economic Thought issued by the Economic Institute at the Bulgarian Academy of Science and Money and Culture issued by VUZF. The first publication investigates the factors influencing home loans and consumer loans in Bulgaria and the second one is dedicated on estimation of the factors and the efficiency of innovations and digitalization by the banks in Bulgaria. The third publication is in the proceedings from National Students and PhD Researchers Conference on the topic The Economic Challenges in Bulgaria (2021-2023) – Sustainability and Risks, as the topic of the publication is the perspectives and tendencies in home lending in Bulgaria.

9. Assessment of compliance with the minimum national requirements

Considering the report for fulfilling the minimum national requirements for acquiring educational and scientific degree PhD in the professional field 3.8. Economics and the materials presented by the PhD student my opinion is that the national requirements for acquiring educational and scientific degree PhD in the professional field 3.8. Economics are fulfilled.

10. Personal participation of the doctoral student in his works submitted for review

My opinion is that the declared by the PhD student scientific and theoretical and practical contributions are correct. The review that I made leads me to the conclusion that the research is a result of the PhD student's authentic work.

From my point of view as the most significant contributions I consider the analysis of the reference interest rates on consumer and home loans on the Bulgarian market, the analysis of the innovations

in consumer lending and home lending and the econometric model for the estimation of innovations on the Net Income from Fees and Commissions, Administrative Expenses and Staff expenses as well as the statistical estimation of the factors affecting consumer lending and home lending in Bulgaria.

11. Abstract

The abstract of the dissertation is structured logically and accurately and reflects the essence of the work. The scientific as well as the practical contributions truly respond to the scientific achievements of the dissertation.

12. Critical remarks and recommendations

The dissertation is complete research which is original, with contributions and theoretical direction. It is detailed, thorough, precise and shows very good knowledge on the topic by the author.

As critical notes, I would point out writing mistakes, sentences that are not full, some figures used from other sources are in English /fig. 14, 15, 18, fig. 18 even points out that the source is the author, fig. 20, 21/. I would recommend conclusion about each chapter not to in the concluding part of the dissertation but to be as a part of each chapter. These notes are technical and I do not think they worsen the quality of the dissertation.

13. Personal impressions

I do not know the PhD student and I do not have personal impressions from him. However, from the works presented my opinion is that he has place among the researchers in the field of economics in Bulgaria.

14. Recommendations for future use of dissertation contributions and results

I would recommend the dissertation to be published and the work to be made more popular considering the topical practical orientation of the research. As an object for further investigation, I would recommend the changes in the retail clients' behaviour as a result of the digital changes in banking products and services to be investigated. Definitely, it is only a recommendation in case the PhD student is interested.

CONCLUSION

The dissertation contains scientific and applied results which represents an original contribution in science and responds to the requirements of the Law on the Development of Academic Staff in the Republic of Bulgaria and the Regulations for its implementation. The presented materials and dis-

sertation results correspond to the specific requirements of the Regulations for Admission and Training of Doctoral Students at VUZF.

The dissertation shows that the PhD student Nikolay Lazarov Lazarov has thorough theoretical knowledge and professional skills in professional field 3. 8. Economics, as he demonstrates qualities and skills for individual scientific researches.

Due to the above, I confidently give my positive assessment for the research by the above peer-reviewed dissertation, abstract, results and contributions and I propose to the honourable scientific jury to award the educational and scientific degree PhD to Nikolay Lazarov Lazarov in the Higher Education field 3. Social, economic, and legal sciences; Professional area 3. 8. Economics; doctoral program "Finance and Insurance".

23/05/2022 г.

Reviewer: 

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(Assoc. Prof. Irina Kazandzhieva,
PhD)