

## **CHALLENGES AND PROSPECTS OF E-COMMERCE MANAGEMENT IN THE BANKING SECTOR**

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### ***Abstract***

*In the context of the globalization of the world economy, e-commerce plays an important role in the development of the banking sector. In particular, by using the global Internet, it significantly reduces the time and financial costs of banking operations, which enable banks to conduct financial transactions faster, deliver new banking products and increase their customer base. Consequently, at the present stage, the countries that use e-commerce extensively in the banking sector are developing the fastest. Given the scarce economic resources of our country, the Internet economy is the means by which it is possible to achieve greater socio-economic effects, the development of trade, currency and credit relations. In Georgia, these opportunities are not used properly. The reason for this is the challenges in e-commerce in the banking sector of our country and the mismanagement of their elimination processes.*

**Keywords:** *E-Commerce; Banks, Banking Products; Banking, Cyber Security; Banking Process Management.*

**JEL Codes:** *G21, L81, L86*

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### **Introduction**

In the aftermath of the global financial crisis and especially in the wake of the covid-19 pandemic, e-commerce has become an integral part of the banking system. The mobile banking system has simplified transfers, which has enabled customers to use their cash better and more securely. Although the development of e-commerce in our country's banking sector is hampered by shortcomings in the development of Internet technologies, Georgia still tries not to lag behind technological innovations. The widespread spread of the COVID 19 pandemic has posed many challenges to the Georgian banking sector. The solvency of consumers of banking products has decreased, the share of bad loans has

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increased, and commercial banks have delayed the obligation to repay the main part of the loan for several months, which has reduced the financial stability of banks. Many leased businesses were shut down altogether, with companies, vehicles, restaurants, hotels, wholesalers and retailers operating at the expense of loans previously taken from commercial banks. The level of banking risks has increased, attacks on bank branches have increased, the level of banking cyber security has decreased, due to the decrease in the scale of work in traditional businesses, the profit margin has decreased. Retailers, wholesalers, restaurants, catering establishments and other economically active businesses have moved from the traditional form of business to e-commerce, which has led to the creation of new websites and online platforms. This has increased the demand for ISPs, servers, online services. All of this has overwhelmed the Internet space, and ISPs have faced the need to increase server capacity and bandwidth.

Against this background, the population in some regions of Georgia does not have access to the Internet at all. The problem of internetization is still present in the mountainous and border regions of our country. Therefore, the state should actively seek the mass introduction of Internet technologies. The need for mass use of the Internet is also important in the marketing and delivery of banking products by commercial banks, and in the selection of banking products by the consumer, as the Internet provides more information to the public about financial processes (Katamadze et al., 2019). Having a wealth of information, especially in the banking sector, helps citizens to make and implement a variety of financial decisions, make informed credit choices, and manage their chosen loan portfolio.

### **Literature review**

Authors L. Bregadze (2020), Y. Blount (2005), Abuselidze and Mamaladze (2021), P. Lata (2016) discusses the general principles, features of e-commerce, models of e-commerce organization, development trends of e-commerce, the pros and cons of using electronic technologies, etc. Todua and Abuladze (2011) in the monograph "Georgian Internet Market Marketing Research" examines the global computer and Internet market and their development trends at the present stage, outlines the state of e-business and development peculiarities in the world, marketing research of Georgian consumers' behavior towards Internet services.

Authors Kapanadze, Zhvania, and Tskhadadze (2017) Discuss the essence of e-business, principles, development directions, organizing models, e-commerce development trends in world business. And st. Janjgava discusses the factors that affect the development of e-commerce in Georgia. Angelakopoulos & Mihiotis (2011), S. Bakare (2015), R. T.

Watson et al., (2008), Kardaras and Papathanassiou (2001), H.H.M. Rashwan (2020), S. Rehman (2012), V. Ratten 2008; 2016), E. Jarrett, J. (2016), e-commerce is considered as one of the promising directions of strategic development of companies.

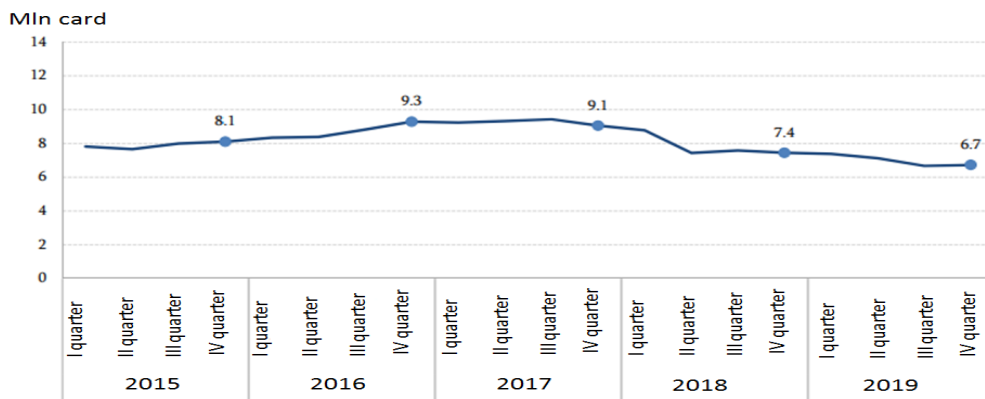
V. Lobzhanidze (2009) discusses the types of e-business, the involvement of modern technologies in international business, the advantages and disadvantages of Internet business. Tsiuri Nozadze discusses the essence of e-commerce, Internet technologies, local data protection technologies, tax systems in e-commerce. Teimuraz Sukhiashvili discusses the research and modeling of business processes of the modern electronic tax system based on UML diagrams, for their further software implementation. Z. Surmanidze (2018) discusses the theoretical-methodological aspects of Internet economy, its origin and development factors, peculiarities of e-commerce, the role of Internet economy in the world economy, Internet economy development trends, difficulties of Internet economy development, potential opportunities (perspectives) and its importance in Georgia's economic development.

### 3. Results and Discussion

#### 3.1 Challenges of e-commerce in the banking sector

Due to the use of 4G internet at the modern stage, the use of "smartphones" is becoming more and more popular, as a result of which the number of e-commerce users in the banking sector is steadily increasing. According to the data of the National Bank of Georgia, in the IV quarter of 2019, 919 million GEL was paid online, which is 8% more than in the previous III quarter. Compared to the IV quarter of 2018, the number of Internet payments decreased by 8% and the amount increased by 7%. Compared to the index of the third quarter, the share of the number of Internet payments decreased by 1%, and the share of the amount by 5%”(Turashvili, 2013, p. 13). A comparison of the share of Internet payments is given in Diagram 1.

*Diagram no. 1 Number of cards Issued in Georgia (2015-2019)*



Chip cards are widely used in the banking sector of Georgia. The global network of the Internet is full of comprehensive information and accessible guides for everyone, which makes it possible to use contactless cards in our country. In addition, thanks to the information posted on the Internet, many bank managers find the necessary staff at work, as well as many people find jobs in the banking sector, which significantly affects the efficiency of commercial banks in our country and the sale of banking products.

The worldwide spread of the COVID 19 pandemic has hampered the development of not only Georgia but the entire world economy (Abuselidze and Mamaladze, 2020; Abuselidze and Slobodanyk, 2021). Its negative effect, along with other sectors of the economy, was reflected in the banking sector. The massive spread of the COVID 19 pandemic has significantly reduced the share of traditional businesses in the banking sector. Against this background, the role of e-commerce in this sector of the economy has sharply increased, an open banking system has been prepared and launched, the number of employees in the traditional banking sector has been reduced, some of them have been retrained and new banking products have been adapted to new jobs.

In such conditions, it is necessary for the National Bank of Georgia to develop such a long-term strategy for the development of the banking sector, which, if properly managed, will create a favorable financial, credit and investment environment for the development of this sector. Despite the many advantages, the use of e-commerce in the banking sector also has drawbacks, which are manifested in the availability of financial indicators, hacking of bank accounts by hackers and insecurity of personal data of users of banking products. Internet users entrust their bank card data to various companies, and failure to provide such information can lead to crimes such as Internet fraud, embezzlement and other cybercrimes.

Cyber security is one of the most important directions of the security policy of the Georgian banking sector, which means protection of the banking system from online attacks, as it poses a threat to the bank's owners, managers and employees, as well as consumers of banking products. The banking sector of our country is acutely aware of the threat of cyber attacks. Therefore, for the full implementation of e-commerce in the Georgian banking sector, our country's commercial banks need to develop a credit policy that ensures their e-commerce and cyber security.

Cyber attacks in the banking sector damage software packages, disrupt computer services. Georgian commercial banks have been repeatedly attacked by cyber-attacks, and many banking programs and banks' websites have been deliberately damaged. Cyber attacks are a problem not only in the Georgian banking space, but also in the entire world banking system, which poses a significant threat to the use of e-commerce tools in the banking sector. Therefore, commercial banks are trying to develop an effective cyber

security system. The National Bank of Georgia, by introducing e-commerce in the banking sector, is trying to simplify and accelerate banking operations. In recent years, a number of projects have been launched to promote Fintech, including: the Financial Innovation Office and the Regulatory Laboratory, the Digital Banking model, the Open Banking Standards Framework, the first phase of Open Banking is now available to commercial banks from 31 March. Nevertheless, the commercial banks of our country still face great difficulties in this area.

### **3.2 Prospects for e-commerce in the banking sector**

Problems in the banking sector can be eliminated with proper and correct management of banking processes, and with the help of e-commerce, these processes can be accelerated and become more efficient. Therefore, the online trading mechanism should be used more fully in the banking sector of Georgia, the population should get used to various online services of a commercial bank, using open banking. For this purpose, it is possible to use the platform for online sales of banking products, which offers the customer a convenient banking payment system.

Commercial banks can sell their banking product through their electronic platform, by leasing it from B2C, with the banking created through this platform, users will be able to take advantage of the features of the online trading mechanism. Therefore, the role of open banking in the Georgian market should be significantly increased in defining bank liabilities, offering new loan terms, establishing banking services, finding information about the bank's cooperation with other companies and shopping centers, etc. Sh.

The development of open banking depends on the readiness of the consumer of banking products to use the banking system. It is the advantages seen by the consumer towards banking that should determine the intensity of the use of e-commerce in the banking sector. When studying the mechanism of using e-commerce in the banking sector, the consumer prefers to purchase a banking product and service online and not traditionally, due to the practicality and efficiency of its use. Due to the fact that the share of e-commerce in the Georgian banking sector is still quite low, the e-Commerce Association aims to harness the existing potential in this area and promote the growth of online sales of commercial banks playing in the domestic market.

The purpose of the Georgian E-Commerce Association is to facilitate credit relations between commercial banks and its corporate clients, companies, logistics providers and other individuals wishing to receive banking products (services) online. Therefore, e-commerce is characterized by a rapid development trend in the Georgian banking sector. Accordingly, the banking sector is actively involved in the development of e-commerce in our country. One of the manifestations of this is TBC Group, which is starting to develop

e-commerce in Georgia. The new digital trading platform VENDOO will be added to the market soon, which will allow consumers to buy products comfortably and quickly without leaving home, and small and medium-sized entrepreneurs will be able to provide their products to the population of Georgia via the Internet. VENDOO online store is created on the basis of SWOOP, 100% of which was acquired by TBC Group. SWOOP is a well-known online marketplace discount and sales company. It will remain a separate brand and will continue to operate in the same way, while existing users will be able to use the services of both brands' websites. "TBC" Bank through VENDOO will bring all kinds of products that are produced in Georgia or imported from abroad. Customers will be able to buy the product they want without leaving home. The platform will be available to everyone and will offer customers a wide selection of products, as well as for users of banking products it will implement personalized installment offers. The main purpose of its operation is to simplify banking services. This platform, on the one hand, will enable commercial banks of Georgia to successfully market and sell banking products, and on the other hand, will enable customers to purchase higher quality banking services.

Customers will be able to make easier and faster decisions regarding online purchases of banking products. Thus, the digital trading platform will help commercial banks to scale their business, which will help them to increase sales of banking products, make loans available to the private sector faster and easier (without extra bureaucratic barriers), conduct online marketing of banking products. E-commerce is one of the fastest growing areas in Georgian commercial banks. In today's world of technology, online shopping is becoming more and more popular. The new digital platforms, on the one hand, will make it easier for consumers to purchase the desired banking products, on the other hand, will facilitate business development.

Voice of E-commerce - The group was created to help the development of e-commerce in the banking sector, the main purpose of its operation is to unite all the employees in the field of e-commerce. The Group is ready to assist commercial banks in managing force majeure situations, provide relevant and objective information on current developments in the business sector, and provide advice and recommendations so that banks can quickly overcome the challenges they face. Any bank can join the group, for whom it is important to use online sales tools in order to successfully develop and profit business.

E-commerce does not only mean "online" store, this field includes platforms, as well as logistics companies, payment providers, etc. Group members can receive information that is critical to them and speak unanimously to relevant government agencies, address them and share their position on behalf of the group. The greatest good of the group is the

ease of information exchange, which allows us to respond quickly to critical issues. voice of E-commerce - the group protects the interests of the banking sector, and creates new opportunities for the development of e-commerce in this area, at the present time the group brings together more than 400 people from relevant fields.

As it is known, in order to limit the spread of Covid 19, during 2020 the Georgian government has repeatedly imposed restrictions on traditional business. The bans did not only apply to e-commerce, food delivery, bank and postal items. This circumstance further facilitated the development of e-commerce, moving the business from the traditional to the online format. As a result, local companies engaged in online commerce have experienced rapid growth, while traditional businesses have suffered significant losses. Since the spread of Covid 19 infection became a global problem, restrictions have affected many businesses, including online retailers.

This issue turned out to be especially painful for the Georgian banking sector, because unlike other countries, only certain types of banking products could be purchased so far, which in itself had a negative impact on the development of the banking sector. Losses due to restrictions are associated with quite large amounts. Despite all this, e-commerce has a good prospect of development in the Georgian banking sector. The interest of the banking sector in e-commerce clearly shows that this field is developing and growing, as banks in developed countries have a high level of customer confidence, which simplifies the development of credit relations between them.

In 2020, due to the proliferation of Covid 19, consumer isolation has further enhanced the role of e-commerce in the banking sector. In such conditions, Georgia has the best opportunity to develop e-commerce in the banking sector, which will lead to beneficial shifts, such as: creating new jobs, facilitating the search for key markets for entrepreneurs, and more. All this will give impetus to the development of local production.

At the present stage, there are thousands of small and medium-sized online stores in Georgia, which employ tens of thousands of people. They trade independently through subscription or their own handmade products through various online platforms. Starting this business requires quite a bit of capital investment and is, in fact, available to everyone. Due to the fact that e-commerce is not well developed in Georgia's neighboring countries, this circumstance gives our country the opportunity to become a regional center. In order for the e-commerce mechanism to develop faster in the Georgian banking sector, it is necessary to remove certain legislative barriers so that the population of our country can benefit more from the benefits of e-commerce.

In order to study the challenges in the management of the electronics of the Georgian banking sector and to outline the prospects for its development, we conducted an in-depth

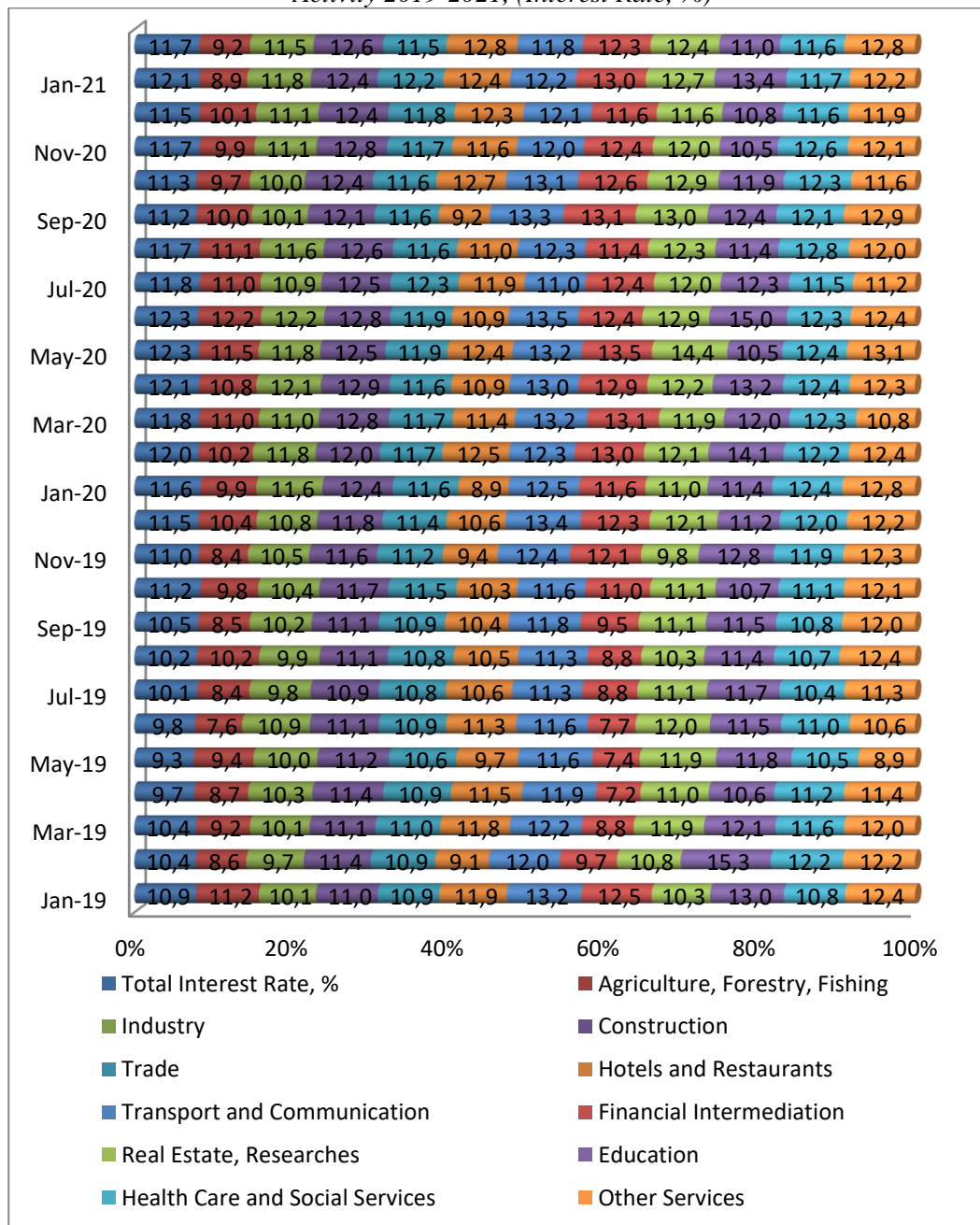
study. In particular, there are 15 banks operating in our country, of which, based on a direct interview, we interviewed the managers of the leading banks in this field (Bank of Georgia, TBC Bank, Bank-Credo and others). The study revealed the development trends of e-commerce in these banks, which can be generalized to the entire banking space of Georgia and thus see the overall dynamics (with an error of 1-2%), which is the allowable limit according to the statistical research methodology.

In particular, an in-depth study on the development of e-commerce at Credo Bank showed that the question: ***how many consumer loans were issued in 2019 and 2020, including what percentage was issued through the electronic platform (remote means)?*** - The answer was as follows: Lending to Bank Credo through an electronic platform was introduced in November 2020 and during the same month (between 1.11.2020 and 30.11.2020) only 1% of the 678 loans issued from the first branch were issued through an electronic platform, issued from the second branch 2% out of 384 loans were issued through electronic platform, out of 523 loans in the third branch - 1%, out of 131 loans in the fourth branch - 1%, etc. Sh. Similar data for December 2020 looks as follows: between 1.12.2020-31.12.2020 2% of 791 branch's 798 loans were issued via electronic platform, №2 of №2 branch's 353 loans - 2%, №3 branch 12 612 loans - 3%; № Out of 161 branches - 3%. It is true that e-platform loans in December increased from 1-2% to 2-3% compared to November 2020, but this is not enough to prove that e-commerce is firmly entrenched in this bank and is represented by a high interest rate. One of the obstacles to issuing loans online through Credo Bank is that certain types of loans (eg, refinancing another bank, co-borrower / guarantor loan), which are issued in large quantities during the month, cannot be processed electronically due to certain software limitations. In addition, the lack of an electronic platform at Bank Credo in 2019 is explained by its short history of operating as a bank. In particular, "Credo" has been operating in the credit market as a bank since 2017. In the case of Bank of Georgia, up to 80-85% of the pre-approved limits are issued through Internet Banking and the system has been operating for many years (source: <https://bankofgeorgia.ge/ka>).

As for the second question of the in-depth study: ***how many real estate loans were issued in 2019 and 2020, including what percentage were issued through electronic platform (remote means)?*** - Issuance of real estate loans in the banking sector of Georgia by electronic platform is not possible due to the complexity of the procedure.



Figure no. 1 Volume and Interest Rates on Commercial Banks Loans, Granted in National Currency to the Resident Legal Entities in the Reporting Period, by Type of Activity 2019-2021, (Interest Rate, %)



Source: Compiled by the authors based on the data of the National Bank of Georgia for 2019-2021

As for the third question of the in-depth study: ***the number of loans issued in 2019 by type of activity, including what percentage was issued through the electronic platform (remote means)?*** - The analysis of the answers given by the respondents revealed that in most banks operating in Georgia, most loans are issued through electronic platform to individuals with fixed salaries, because with the borrower's consent, the salary is checked with a single button. The loan amount is transferred to the account.

As for the fourth question of the in-depth study: ***List the number of loans issued in 2020 by type of activity, including what percentage was issued through the electronic platform (remote means)?*** - The analysis of the answers given by the respondents reveals that according to the types of activities, as in 2019, in 2020, loans were issued mainly to employees in the public sector and the private sector, because the pandemic, for the most part, did not stop receiving employment of employees of government agencies or private organizations. . Employees in those sectors whose economic activities have been restricted to minimize the spread of the pandemic (restaurants, grocery stores, foreign trade, etc.) receive income on hand.

As for the fifth question of the in-depth study: ***How many active operations were carried out by the commercial bank in 2019 and 2020? Among them: What percentage by remote (electronic and other means of communication)?*** - The answer of the majority of respondents was as follows: “The program does not count and we can not summarize it. The only thing is that if we single out a few active operations, we will get an idea of the number of operations carried out according to the branch plan, because the plan is often completed. ”

As for the sixth question of the in-depth study: ***how many passive operations were carried out by a commercial bank in 2019 and 2020? Among them: What percentage by remote (electronic and other means of communication)?*** - The majority of respondents answered this question as follows: “The number of passive operations can not be determined programmatically. They will give us an idea about the planned passive operations carried out by the branches, because the planned passive operations are usually completed. ”

As for the seventh question of the in-depth study: ***by what percentage has the bank's income increased or decreased on the basis of loan deferrals in 2020 compared to 2019?*** - The total assets of Georgian banks, despite the economic crisis, have increased by 22% annually and amount to 56.9 billion GEL. However, the total profit of the sector decreased eight times. If in 2019 the total profit of 15 banks was 853 million GEL, in 2020 the total profit of the sector was 99 million GEL, with 8 banks having a loss instead of a profit. Cartu Bank suffered the largest loss of 24.7 million. TBC Bank had the highest net profit of 123

million. As can be seen from the financial figures presented here, the main determinant of the current loss is the accumulation of GEL 1.2 billion in the expected credit loss reserve by banks. In total, Georgian commercial banks have reserved GEL 1.22 billion in the "Assets Losses" buffer, which reflects the amount of possible loan losses due to the expected crisis.

As for the eighth question of the in-depth study: by what percentage has the cost decreased or increased based on the issuance of loans electronically in 2020 compared to 2019? - The analysis of the answers given by the respondents revealed that "if we consider the cost of the borrower, the electronic issuance / non-issuance did not affect either the nominal or the effective rate. However, it would be logical for banks to encourage borrowers who would receive services electronically and not increase queues at banks, especially in a pandemic. It is not technically possible to accurately calculate the costs incurred by the bank for the software refinement and continuous development of the electronic platform. Therefore this data is not countable. Remuneration of a branch employee for issuing loans electronically is the same and the data does not change in this regard.

As the analysis of the results of our in-depth research conducted in the banks operating in Georgia has shown, e-commerce (the practice of issuing loans through the electronic platform) has not yet been introduced in the banking space of Georgia. The only exceptions are a few leading banks where e-commerce is in its infancy. It is this circumstance (among other factors) that has led these banks to hold oligopolistic positions in the Georgian banking sector. Other factors include the monopolistic influence of the banking sector on the financial market due to the underdevelopment of its competitor, the securities market, whose assets have been purchased by the banking sector in order to block the development of this market. These remarks are made by American experts in the field of finance, as a result of a study of the Georgian financial market, who argue that the Georgian securities market is underdeveloped due to the acquisition of its competitors in the embryo market by the banking sector.

## **Conclusion and Recommendations**

Based on our in-depth research and review of the theoretical literature, we can draw the following conclusion:

1. In the banking sector of Georgia, such areas of e-commerce are developing at a fairly rapid pace, such as: offering banking services, online sales of banking products, Internet advertising about banking activities, online platforms, online marketing research in the banking sector, electronic tax systems, etc .;

2. The share of e-commerce (including network commerce) and commerce in the activities of commercial banks in our country is growing quite rapidly;

3. Although the use of e-commerce opportunities in the banking sector has many and very important advantages (advantages), it also has very significant disadvantages (namely, hacker attacks, cyber-security challenges, etc.), which must be taken into account;

4. E-commerce has connected the banking sector with the sectors of the Georgian economy through more and more flexible communication channels, such as trade, tourism, construction, energy, transport, agriculture, etc., which has made these sectors even more interdependent and interdependent;

5. The main advantage of using e-commerce tools in the banking sector is to save time and effort, as well as the ability to get the desired banking products or services faster, at a lower price and better quality than traditional mechanisms;

6. The introduction of e-commerce leverage in the banking sector requires quite a bit of capital investment and is, in fact, accessible to everyone;

7. Due to the scarce economic resources of Georgia, using the e-commerce mechanism in the banking sector, it is possible to accelerate sales of banking products, improve the quality of banking services, financial stability, rapid investment of bank capital and its rapid return, acceleration of banking operations, etc. ;

8. Due to the fact that e-commerce in the banking sector of Georgia's neighboring countries is not well developed, our country has the opportunity to become a regional center in this area;

9. In order to develop the e-commerce system in the banking space of Georgia more quickly, it is necessary to improve the legal framework in this direction and remove certain legislative barriers;

10. In order to diversify the financial market of Georgia, it is necessary for the government of our country to take effective measures by neutralizing the monopolistic positions of banks in the securities market and developing competition in this field.

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