

## EMPIRICAL ANALYSIS OF THE INVESTMENT POTENTIAL OF THE FINANCIAL MARKET OF GEORGIA

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**Abstract.** Constant growth in the quantity of goods and services produced in a country is an indication of economic development. As the most important economic sector, manufacturing requires easy access to capital to maintain business continuity. Due to the underdeveloped mechanisms of financing capital flows in the real sector of the economy, the financing of the production process of enterprises in Georgia using favourable financial instruments remains problematic despite more than three decades of economic system transformation. In Georgia, the financial market is limited to the segment of the money market, which is the primary driving force of businesses in the developed nations of the world for the smooth financial provision of the production process. Unfortunately, the securities market is limited to the distribution of shares among joint-stock companies, which is the best opportunity for both financing and investment for enterprises and individuals who participate in the market.

The economies of developed nations have validated Adam Smith's observation from two centuries ago that "the more perfect the markets, the more efficient the economy". A perfect market is one in which there are no impediments to the free flow of resources among market participants. Inclusion of all financial market institutions in the distribution of resources is the issue that could not be eradicated from the Georgian economy.

Based on the current situation, it was aimed to analyse the role of each financial institution in the financing of enterprises. The institutional structure of the financial market and the investment potential of each institution were analysed for this purpose. The effect of financial institution investment opportunities on the nation's gross domestic product was determined through empirical analysis. With the results obtained by institutions operating on the financial market, including the correlation, the regression equation was clarified. Using the method of forecasting, the 10-year increase in the volume of bank loans and insurance company investments was calculated. On the basis of the obtained results, proposals to maximize the use of the defective segment of the financial market were developed.

**Key words:** market, investing, financing, enterprise, financial instrument.

**JEL code:** G1, G11, G21, G22, G31

### Introduction

The movement of cash flows determines the economy's viability and its long-term strategy for the next few years. The banking system is a credit-based institution whose primary objective is to maximize profit. This is logical, but the development of the money market cannot be determined solely by the presence of credit institutions in the ring of money movement. The primary vector is the formation of financial savings and their conversion into credit resources.

In the modern economy, financial markets perform essential functions that not only enable the conversion of savings into capital and ensure the efficient allocation of capital, but also collect and process vast quantities of information required for making investment decisions. It is difficult to conceive of an imperfect financial market in the twenty-first century, the burden of which would primarily fall on the banking sector. In such a scenario, the supreme economic law of competition makes money more expensive, delaying the development of production. The financing of corporations with securities occupies an important place in the history of the development of financial markets. This mechanism provides production with financial resources and contributes to business continuity. Institutionally, the Georgian

financial market comprises banking-credit, microfinance, insurance, and stock institutions. The most important aspect is their growth and full participation in the financing of business entities.

The issue raised in the paper is the condition of enterprise financing by these institutions. The problem is the result of three decades of banking sector dominance as the primary source of financing. The activity of financial market institutions is the movement of cash flows that are mutually dependent. The "price" of the credit resource depends on the economic condition of the entity supplying these resources, i.e. the enterprise is financed with a cheap monetary resource, receives a high profit, and distributes the profit as necessary to banking and stock institutions. A country establishes a state fund, the standard of living rises, "long-term capital" - life insurance, a pension fund - participates in the movement of cash flows, and a profit-driven circle is completed. During the research process, an examination of information sources related to the financial market revealed that the involvement of insurance companies in the Georgian financial market with "life insurance reserves" in the provision of enterprises with cash resources is still a distant possibility; due to the high risk of the stock market, trading in shares is limited to "internal" distribution. Consequently, the development of the economy is primarily funded by foreign investments. The financial market is both a generator of incoming and outgoing cash flows and a catalyst for financial crises. This is demonstrated by the 50 percent decline of the New York Stock Exchange in 1907, the Wall Street depressions of 1929 and 1937, the global financial crisis of 2007-2008, and the decline in prices of mortgage-backed securities (MBS), which were linked to US real estate.

As a result, global financial institutions were severely damaged. The financial markets of small economies facilitate the participation of financially stable financial institutions in investment financing.

According to the purpose of the paper, the following tasks were assigned.

- 1) Evaluation of the role of the Georgian financial market in providing enterprises/organizations with financial resources, based on which the investment opportunity and role of each institution in the financing of enterprises, as well as their impact on the GDP of the country, were determined.
- 2) On the basis of descriptive statistics of a distinct institution of the financial market, the level of development, the share of the GDP, the factors, and the answer to the given task were determined, and empirical research methods were utilized.
- 3) Based on the total volume of annual financial investments on the financial market, an economic development forecast was generated.

On the basis of descriptive statistics of individual institutions of the financial market, their level of development, share of GDP, factors are identified, and empirical research methods are used to test the hypothesis. The economic development forecast is based on the total annual volume of financial market investments. The financial market converts corporations' financial resources into investments. Different economic conditions result in varied levels of demand. In particular, when the economy is booming, wealthy companies with stocks do not turn to the financial market, which reduces the demand for loans and encourages firms with limited resources to take out loans, thereby increasing the cost of loans. Thus, opportunities and needs to access loans fluctuate cyclically on the loan market.

Dorrucci et al. argued that a (domestic) financial market develops when it contains all financial institutions, to whose financial instruments economic agents must have unrestricted access in order to protect their positions from adverse shocks. Important characteristics of such markets include transparency (reduction of information asymmetry), competition, and rule of law. Consequently, the developed financial market will attract the savings of various economic agents and contribute to the economic growth via efficient redistribution (Dorrucci et al., 2009).

A favorable environment for economic activity necessitates a stable, transparent, and efficiently operating financial market, whose legal regulation ensures the protection of investors' rights, thereby boosting market confidence (Tsintsadze et al., 2021).

In his speech, Rodrigo de Rato, managing director of the International Monetary Fund, stated that "the benefits of healthy financial markets are well known. The role of these markets in mobilizing savings and allocating them to productive investments is crucial. Moreover, robust local markets can provide the public and private sectors with a more stable source of financing, thereby protecting their capital from volatile global flows. In the past decade, financial markets have significantly enhanced economic performance by creating a vast array of products that permit a more efficient allocation of savings. Rapid financial development contributes to economic development" (Rodrigo de Rato, 2007).

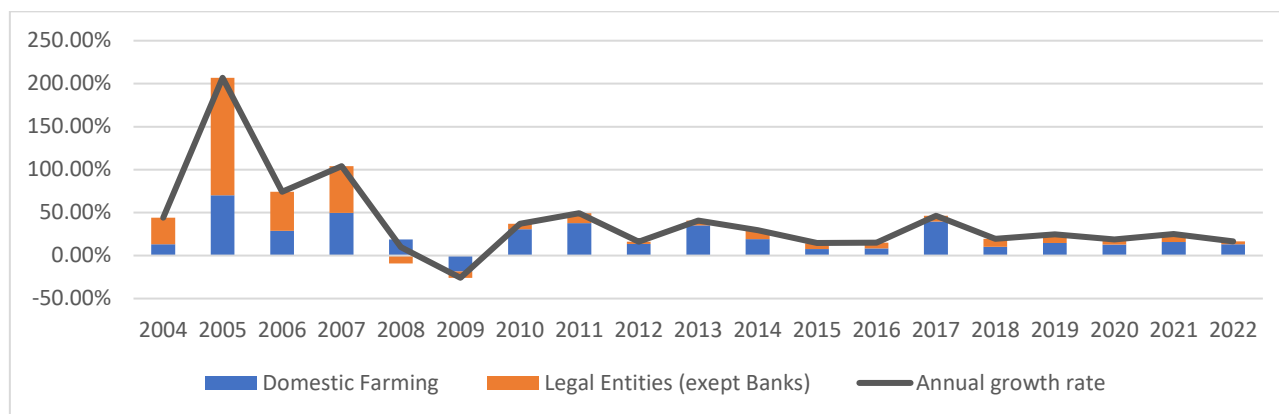
The availability of statistical information reflecting the functioning of the country's financial market, the evaluations of experts, and the use of tried-and-true research methods enabled the identification of problems in the Georgian financial market.

### **Research findings and discussion**

When a financial system can provide services to market participants under both normal and stressed conditions, it is stable. It is the primary pillar of the economy's sustainable development. The role of Georgian financial market institutions in providing enterprises with financial resources is inconsistent. The role of individual institutions in enterprise investment is discussed against the background of the reasons described in the paper's introduction.

Companies have maintained access to financial resources as a result of the support measures implemented by the National Bank and the government and the grace periods offered by commercial banks for loans. However, under conditions of increased uncertainty, bank loans continue to be the primary source of financing for businesses. The contribution of business loans to the expansion of bank loans will increase in 2022. In June 2022, the annual growth of total loans was 12.5 percent, with business loans contributing 7.2 percentage points to this figure. After the spread of the pandemic in 2020, lending to legal entities slowed significantly. However, the demand for business loans increased in the second quarter of 2021, and a downward trend was observed in the second half of 2022.

If the dynamics of the recovery of the companies' activities improve and international tourist flows recover gradually, the demand for goods and services will increase. This will lead to the recovery of the companies' incomes, which in turn will contribute to the expansion of investment and employment. Thus, the existing positive dynamics will be transferred to the household sector, accelerating the economic recovery and recovery process.



Source: compiled by the authors based on the data from NBG

Fig. 1. Components of the annual expansion rate of bank loans

The graph depicts loans issued to legal entities between 2008 and 2009. It fell due to the global financial crisis and could not recover to its 2006-2007 level. Why did this setback occur? To answer this question, it is necessary to analyse other financial market institutions by comparing their investments in the banking sector to their share of investments in the stock market. In the first half of 2022, as a result of the resurgence of the economy, a trend toward revenue restoration became apparent. However, the rate of recovery remains sluggish. Companies' financial vulnerability is determined by their reliance on foreign sources of financing, proportion of short-term debt, and degree of dollarization of liabilities. Credit funds allocated to highly productive sectors of the economy generate greater added value, whereas loans granted to low-productivity sectors have minimal effect on economic growth. In addition, excessive debt growth exacerbates the risk of insolvency among borrowers and increases the likelihood of a financial crisis.

Due to the underdevelopment of Georgia's financial market, the majority of firms (small, medium, and large) rely primarily on bank loans for funding. Households with savings and legal entities with excess financial resources contribute to the supply of credit resources. According to data from 2022, only 915 of the 3,122 joint stock companies registered in the country are active. There are 83 large, 108 medium, and 724 small containers. According to the rules governing the behavior of investors on the stock exchange, investing in securities issued by a small joint-stock company is unacceptable. This is why commercial banks and large publicly traded corporations appear as market participants. Commercial banks are favored over the other investment options, and so they indirectly contribute to the provision of financial resources to businesses.

Inflation, government decisions, supply and demand, foreign investment, and other variables contribute to the volatility of the financial markets. The purpose of this paper is not to examine the influence of the aforementioned factors, as the Georgian financial market is far from perfect, and it is first and foremost necessary to identify the development issues in relation to the investment opportunities of the operating financial institutions. The following variables were chosen as research variables: gross domestic product (dependent variable); investments made by commercial banks; transactions made on the stock exchange; and investments made by insurance companies (independent variables), as revealed in Table 1.

Table 1

**Investment data of financial market institutions**

Year	GDP (million GEL)	Financial institutions' investments (million GEL)	Transactions conducted on a stock exchange (million GEL)	The investments made by the insurance provider (million GEL)
2004	9800	0.12	46.67	0.56
2005	11600	0.39	62.36	0.74
2006	13800	0.29	169.4	0.98
2007	17000	1.40	194.26	1.85
2008	19100	0.76	95.75	2.64
2009	18000	1.14	96.05	5.32
2010	20700	0.99	16.84	9.34
2011	24300	2.33	726.72	6.71
2012	26100	2.71	51.95	6.94
2013	28863	3.82	48.33	5.75
2014	32430	4.94	943.98	4.81
2015	36095	5.67	37.53	5.46
2016	40174	6.53	146.16	6.74
2017	37846	9.55	131.44	8.05
2018	44600	11.41	109.14	10.92
2019	49300	14.24	50.73	14.66
2020	49300	16.93	61.98	21.96
2021	60000	21.16	194.26	23.66
2022	64007	24.65	785.23	2.08

**Source: authors' calculations based on the statistical data of the National Bank**

On the basis of an analysis of financial market participants, it was determined that 95 percent of the investment resources of insurance companies that operate under the legal form of corporations are placed in the deposits of commercial banks. Furthermore, the fact of securities emission and participation in stock market transactions after the establishment is not evident. For the adequacy of the regression model, data were collected from 2004 to 2022.

Thus, the following variables were defined as independent:

- 1) volume of loans issued by commercial banks to legal entities by years -  $X_1$ ;
- 2) transactions conducted on the securities exchange -  $X_2$ ;
- 3) investments made by the insurance organization -  $X_3$ ;
- 4) according to the hypothesis, the dependent variable ( $Y$ ) is the country's gross domestic product, the volume of which should be affected by the goods and services produced by the country's enterprises.

The estimated equation for multifactorial regression has the following form:

$$Y = a_0 + a_1x_1 + a_2x_2 + ax_3 \quad (1)$$

In order to verify the accuracy of the data, descriptive statistics were used to examine the information. As a result, it was determined that the volume of transactions on the stock market fluctuates widely, indicating that the market is unstable; however, high volatility indicates a high risk and allows the investor to predict future fluctuations.

Table 2

**Multicollinearity of variables**

	Y	x1	x2	x3
Y	1			
x1	0.960065483	1		
x2	0.249624942	0.242956526	1	
x3	0.658609588	0.633102064	-0.173475526	1

Source: author's created by Excel Statistical program

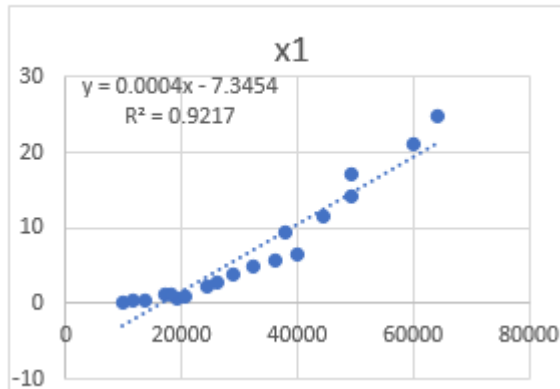
There is a weak correlation between the volume of bank loans and stock market transactions, as shown in the table. This is because large companies primarily redistribute shares and less frequently finance corporations by making deals, so the money in their accounts is fictitious and does not contribute to the production process.

This is because a decline in insurance investment on bank deposits is followed by a rise in the value of stock market transactions. Which is a standard method for developing the stock market.

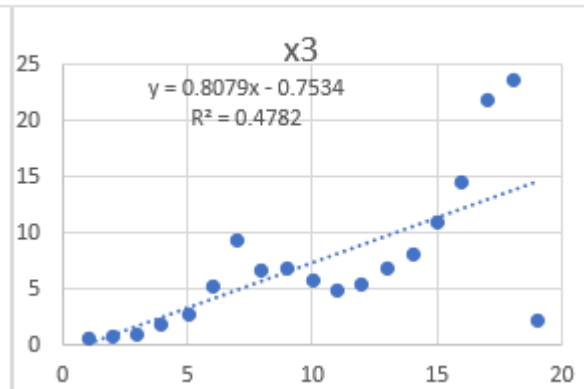
Therefore, the variable of stock exchange transactions was excluded from the regression analysis's factors, and the analysis was conducted with the participation of two independent variables: x1 (bank loan) and x3 (insurance company investments).

Diagrams were drawn between the dependent variable (Y) and each independent variable (x1 and x3) based on the correlation matrix. Confirmation of a linear relationship between variables and a robust correlation between GDP and bank loan volume coefficients (Appendix 1; Appendix 2).

**Diagram 1**



**Diagram 2**



Source: constructed by the authors

Fig. 2. Correlation between the linear relationship between variables and the coefficients of GDP and bank loan volume

To determine the dependability of statistical data, autocollinearity tests were conducted on variables. Utilization of Durbin Watson's criterion

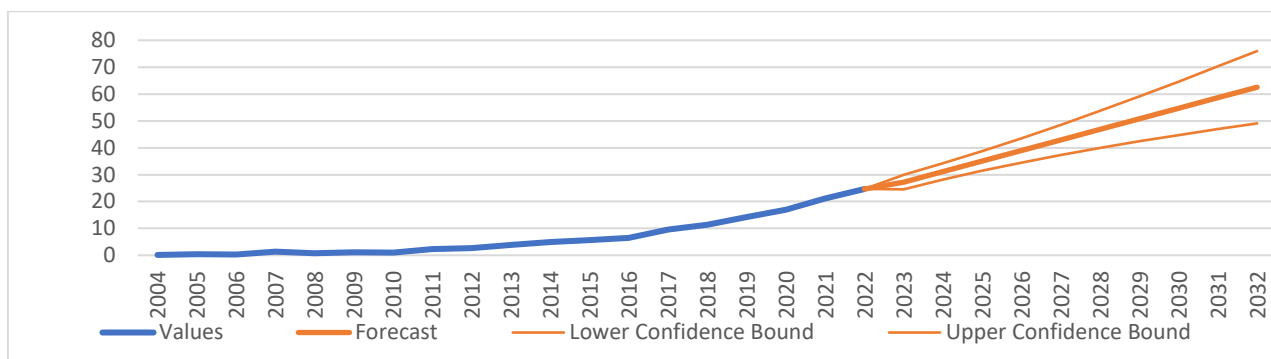
$$DW = \frac{\sum[e_t - (e_{t-1})^2]}{\sum e_t^2} \tag{2}$$

DW = 1,738 as calculated by balance data deviations. Comparing the balances to Durbin Waston's suggested criteria, it was determined that there is no autocorrelation. A linear relationship between the variables enables regression analysis.

Normalized  $R^2 = 0.92$ , as determined by regression analysis, demonstrates that factor selection was adequate. Specifically, bank loans stand out in terms of their effect on GDP growth, as their ratio is approximately nine times greater than the ratio of insurance company investment volume.

The conducted research is absolutely pertinent to the level of financial market development in the country. Until now, the only source of capital for businesses has been deposits in the banking sector. The high demand on the financial market increases the cost of the loan, thereby retarding the country's production growth.

It is essential to forecast the effects of bank loans and insurance companies on GDP growth. Since the data of the independent variables of GDP change over time, the Dickey Fuller test was used to determine whether the time series was stationary. Excel was utilized for forecasting. The forecast of GDP growth cannot tell us much about the growth of the financial market, as it is influenced by a multitude of other variables. For this reason, bank loans were anticipated.



Source: author's created by Excel Software Predicting

Fig. 3. Predicting the volume of bank loans

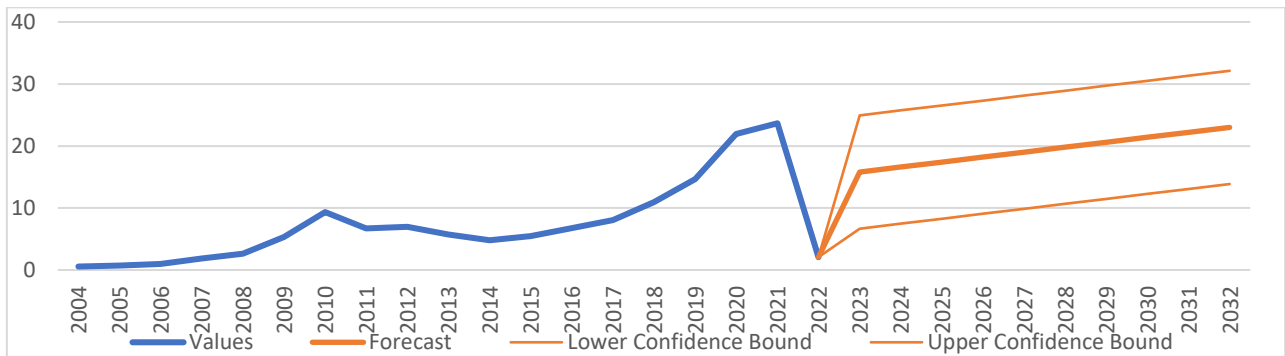
The forecast graphs indicate that bank lending will increase by approximately 150 percent over the next decade, with a 95 percent confidence interval. The nearly identical relationship between the upper and lower bounds and the predicted rates is also readily apparent. If other factors remain unchanged, there will be no sudden increase in bank loans, which is an indicator of the stability of both the banking system and the economy. On the basis of the projected data, it is reasonable to assume that the increase in bank loans will result in the expansion of production and the availability of loans for small businesses. A developed economy affords the chance for the growth of the financial market, and vice versa.

Table 3

Forecast data of bank loans

Year	Forecast	Lower Confidence Bound	Upper Confidence Bound
2023	27.239587	24.54	29.94
2024	31.160933	28.14	
2025	35.08228	31.45	38.71
2026	39.003626	34.48	43.52
2027	42.924972	37.29	48.56
2028	46.846318	39.91	53.78
2029	50.767665	42.39	59.15
2030	54.689011	44.73	64.65
2031	58.610357	46.96	70.26
2032	62.531703	49.08	75.99

Source: author's calculations



Source: authors' created by Excel Software Predicting

Fig. 4. Forecasting the volume of insurance company investments

Table 4

**Forecast data of insurance companies**

Year	Forecast	Lower Confidence Bound	Upper Confidence Bound
2023	15.803949	6.68	24.93
2024	16.60314	7.47	25.73
2025	17.402331	8.27	26.53
2026	18.201522	9.07	27.33
2027	19.000713	9.87	28.13
2028	19.799903	10.67	28.93
2029	20.599094	11.47	29.73
2030	21.398285	12.27	30.53
2031	22.197476	13.07	31.33
2032	22.996667	13.87	32.13

Source: author's calculations

With a confidence interval of 95 percent, the insurance market is expected to experience a growth spurt through 2023, followed by a steady increase in the years that follow. In 2022, insurance companies redirected the majority of their capital to the establishment of branches, which will have a negative impact on income growth in the coming years.

Even though the forecast indicators are on the rise, this does not meet the criteria for a perfect financial market. Due to high risk and a lack of long-term investment capital, insurance company investments in securities remain problematic. Participation of successful businesses in the role of issuer; placement of pension funds with a high degree of risk.

**Conclusions**

The study of financial market institutions revealed that the Georgian financial market is institutionally perfect, with the presence of banking, microfinance, insurance, stock, and pension funds, but functionally underdeveloped. The smooth operation of all institutes ensures that the enterprise is not reliant on a single source of financing; as a result, loan interest rates are lowered, economic growth is promoted, and the standard of living is raised. On the Georgian financial market, only the banking sector finances businesses with deposited funds, according to the research. Notable is the Fitch Rating of financial institutions. The National Bank of Georgia's website states: "Compared to other countries with a BB rating by Fitch, Georgia's effective and dependable policy framework and strong governance indicators strengthen the country's rating position." During the COVID-19 pandemic, the country maintained stability, according to the same

information. We concur with the rating agency's assessment, but the development of the financial market cannot be achieved by concentrating solely on the development of the banking sector, and the necessary financial investments for the growth of businesses will always be "expensive."

For the direct participation of all institutions in the transformation of financial resources into production investments, the following is required:

- 1) to increase the investment potential of insurance companies, the accumulative and returnable life insurance subsector, which permits the use of long-term free cash resources as credit resources, should be developed;
- 2) individuals should be permitted to trade so they can invest their savings in stocks in order to increase the volume of transactions on the stock exchange;
- 3) according to a study of the impact of bank loans, insurance company investments, and stock market transactions on GDP, bank loans will remain in the lead for the next ten years. To alter the current state of affairs, it is necessary to form businesses as open joint-stock corporations, which will expand the free trading of shares and increase the investment potential;
- 4) in order to expand the scope of free trade, initial stock market speculation should be prohibited.

The developed financial market is characterized by a number of factors, including infrastructure, regulatory frameworks, local investors, the ability to diversify to protect against high risks, a high level of liquidity, a vast array of financial instruments etc. With this list, the following evaluation of the Georgian market can be made: the legal and regulatory framework is in place, all types of financial institutions are operating, but their financial stability, investment opportunity, and financial instrument issuance are still problematic; as a result, the banking sector bears the burden of financing, as confirmed by the study.

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