



CORPORATE INCOME TAX SYSTEM EVALUATION

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ACRONYMS

CIT	Corporate Income Tax
EBITDA	Earnings before interest, taxes, depreciation, and amortization
EU	European Union
FDI	Foreign Direct Investment
GDP	Gross Domestic Product
G4G	Governance for Growth
MoF	Ministry of Finance of Georgia
OECD	Organisation for Economic Co-operation and Development
PIE	Public Interest Entity
RIA	Regulatory Impact Assessment
SARAS	Service for Accounting, Reporting, and Auditing Supervision
TWFE	Two-way-fixed-effects
USAID	United States Agency for International Development
VAT	Value Added Tax

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I. INTRODUCTION

The profit tax system that came into force on January 1, 2017 in Georgia aims to create a favorable business environment, accelerate economic growth, and improve tax administration. This system is based on the distributed profit taxation regime, similar to the one implemented in Estonia. Under the new rules, only distributed profit is subject to a 15 percent tax, while the corporate income tax (CIT) on retained earnings has been abolished. The tax rates for profits (15 percent) and dividends (5 percent) remain unchanged.

The new profit tax model applies to Georgian resident companies and permanent establishments of non-resident companies. However, unlike Estonia, the CIT reform in Georgia does not encompass all business segments. For example, as of now, the financial sector, including insurance organizations, commercial banks, credit unions, microfinance organizations, and other loan issuing entities, is not covered by the new tax system.

This report analyzes the impact of the corporate income tax model implemented in Georgia. It provides an in-depth analysis of various aspects related to the reform of the existing profit tax model and international practices, as well as the economic impact of the reform, examining macroeconomic indicators and firm-level financial performance. Regression analysis is employed to assess the causal relationship between the reform and firms' reinvested profits.

Additionally, the paper explores the fiscal consequences of the reform, including the extension of profit tax reform to commercial banks and insurance companies. The effects of potential changes in the tax code for individual entrepreneurs and the fiscal implications of inconsistencies in the tax code are also examined. The paper concludes by summarizing the key findings.

As the results show, the implementation of the reform in Georgia is associated with positive trends in macroeconomic and firm-level indicators, suggesting a potential impact of the reform. At the firm level, there were improvements in financial ratios, including reduced liability pressure and increased reliance on firms' own capital for financing. Profitability and efficiency indicators also exhibited positive trends, indicating improved competitiveness and operational and managerial efficiency. Regression analysis using the two-way-fixed-effects (TWFE) model demonstrated a causal positive impact of the CIT reform on retained earnings for companies. Furthermore, a strong correlation between retained earnings and gross revenue of firms was observed, emphasizing the significant passthrough of the policy change to increased economic activity.

Overall, the findings highlight the significance of the CIT reform, its potential implications for economic growth and financial stability, and the fiscal consequences associated with its implementation and extension.

2. ECONOMIC ASSESSMENT OF CORPORATE INCOME (CIT) TAX REFORM

This section of the report examines various macroeconomic and financial indicators that have direct or indirect relevance to the CIT reform in Georgia. These indicators are expected to show improvement since the implementation of the distributed profit tax system. The evaluation of the Estonian profit tax model should align with the initial goals of the reform, as stated by the implementing agencies. According to the explanatory note accompanying the draft law on "Amendments to the Tax Code of Georgia," the objectives of the CIT reform were to promote economic growth, create a favorable business environment, and enhance tax administration in the country. Through stakeholder consultations and ex-ante and ex-post regulatory impact assessment (RIA) documents, it has been highlighted that the CIT reform also aims to stimulate investment accumulation, increase reinvestment and savings, improve business liquidity, foster capital accumulation, encourage entrepreneurship and job creation, and enhance the resilience of companies during economic crises.

A significant portion of our analysis builds on the extension of macro and firm-level data analysis conducted in the ex-post RIA to observe the midterm outcomes of the reform. Some key macro and firm-level indicators include foreign direct investment (FDI), investments in fixed assets, business sector profit and bank deposits, private sector employment, number of newly registered businesses, commercial lending, liability pressure, profitability and efficiency, as well as liquidity indicators.

The retrospective evaluation of the reform presented here, which is conducted six years after the introduction of the new CIT model, reveals positive trends in key macro and firm-level indicators that can be directly or indirectly attributed to the profit tax reform in Georgia. While certain indicators show noticeable differences in values before and after the CIT reform (such as reinvestments of earnings, number of newly registered business entities, business sector deposits, commercial lending, liability pressure, and profitability and efficiency indicators), it is important to note that some economic indicators depicting increasing trends in the post-reform period began accelerating prior to the introduction of the new profit tax regime. Therefore, the effects of the reform are not entirely clear-cut. Moreover, it is crucial to consider the impact of the COVID-19 pandemic during the analysis period, as it may have led to deteriorating situations in selected economic indicators for the years 2020-2021.

Furthermore, we aim to assess the causal impact of the Estonian model of taxation on the performance of companies affected by the reform. The outcomes of this analysis highlight the importance of the CIT reform, demonstrating a significant average increase of 27.1 percent in retained earnings for companies generating positive profits. Moreover, the observed strong correlation between retained earnings and gross revenue further emphasizes the substantial impact generated by the policy change. Section 2.3 provides more details from the regression analysis.

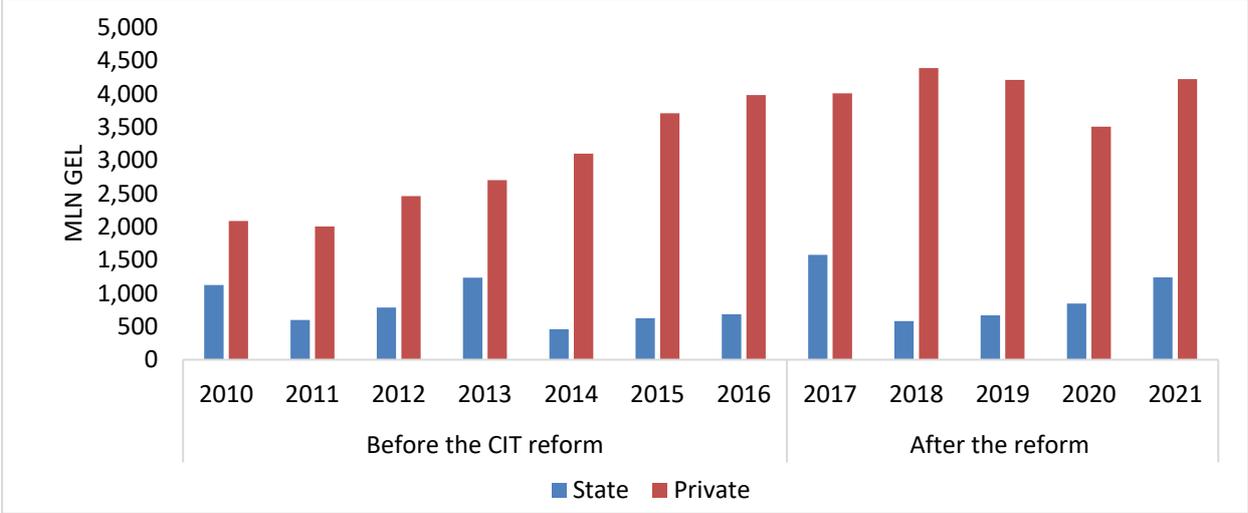
2.1 MACROECONOMIC INDICATORS

2.1.1. INVESTMENTS IN FIXED ASSETS

Chart 2.1.1 showcases the investments in fixed assets in the business sector categorized by ownership type. It is observed that investments made by state-owned enterprises fluctuated during the 2010 to 2021 period. On the other hand, private enterprises have consistently increased their investments in fixed assets since 2011. In 2018, the total investments made by private enterprises amounted to GEL 4.4 billion.

Although there was a slight decrease in private investments in fixed assets in 2019, followed by a reduction induced by the COVID-19 pandemic in 2020, there has been a notable recovery. In 2021, private investments in fixed assets increased by 12 percent compared to the pre-pandemic level.

Chart 2.1.1 Investments in fixed assets in business sector, by ownership type



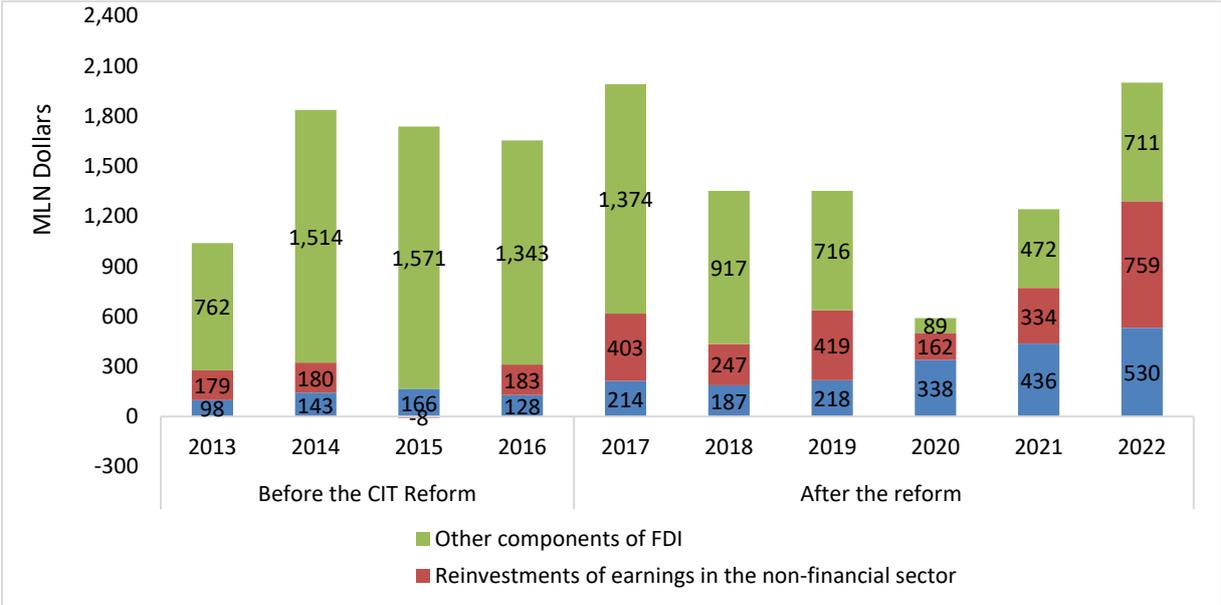
Source: National Statistics Office of Georgia

2.1.2. FOREIGN DIRECT INVESTMENTS

Reinvestments of earnings serve as an important output indicator directly linked to the implementation of the CIT reform. When examining the components of FDI, it is notable that reinvested earnings in the non-financial sector more than doubled in 2017 compared to 2016, amounting to \$403 million. At that time, the total share of reinvestments accounted for 31 percent of FDI (Chart 2.1.2). Even though this growth was primarily driven by the non-financial sector, it is worth mentioning that the financial sector, although exempt from the reform, has seen a steady increase in the amount of reinvested earnings since 2018.

The share of total FDI earnings reinvested in Georgia has exhibited significant growth, with an average value of 50 percent during the period of 2017-2022, compared to 17 percent in the years 2013-2016. In 2022 the reinvestments of earnings reached its highest value in the past decade, amounting \$1.289 billion.

Chart 2.1.2. Components of Foreign Direct Investments



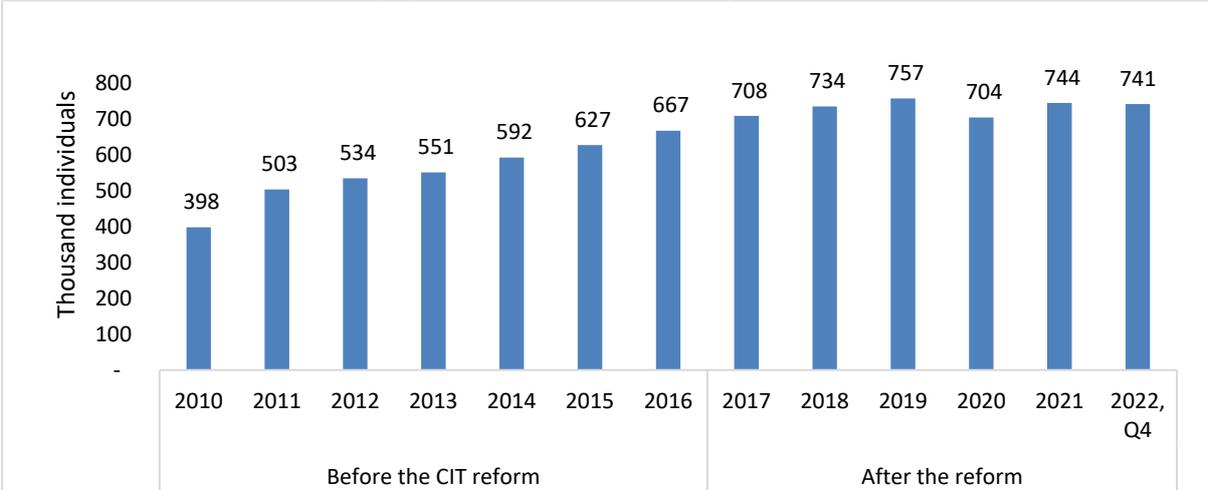
Source: National Statistics Office of Georgia

2.1.3. EMPLOYMENT IN BUSINESS SECTOR

One of the main objectives of the CIT reform was to foster entrepreneurship and boost employment within the country. According to Geostat's statistical survey of enterprises, the number of individuals employed in the business sector (excluding the financial sector) has demonstrated a steady increase since 2010, up until the impact of the pandemic on the economy in 2020 (Chart 2.1.3).

From 2017 to 2019, business sector employment experienced an average annual growth rate of 4.3 percent, with the number of employed individuals reaching 757,000 in 2019. Notably, this growth was primarily driven by employment dynamics within private enterprises. Conversely, the number of individuals employed in state-owned enterprises decreased by an average of 0.5 percent during the same period.

Chart 2.1.3 Number of individuals employed in business sector (excluding the financial sector)



Source: National Statistics Office of Georgia

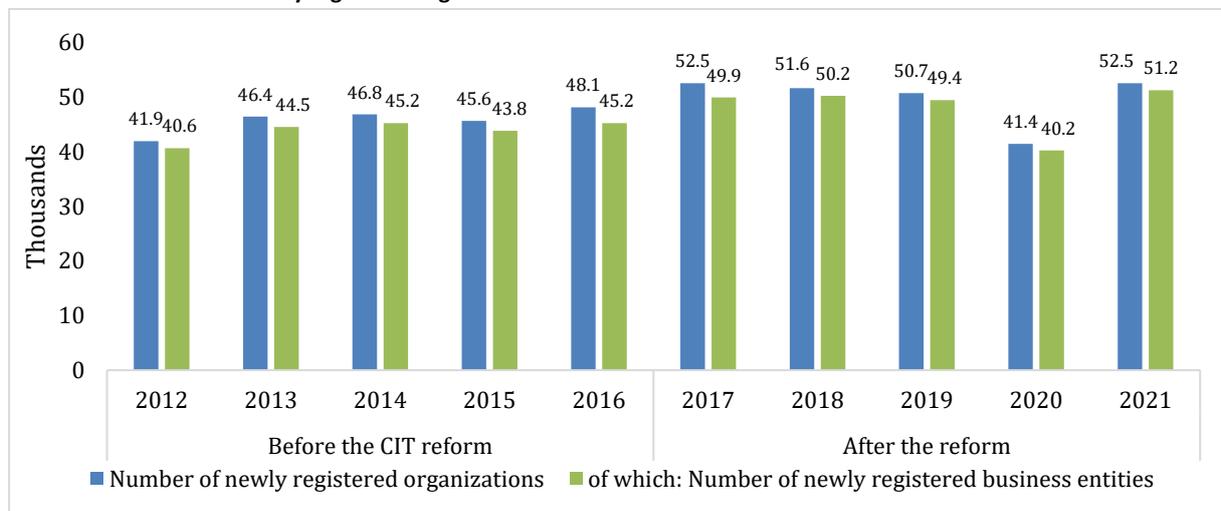
2.1.4. NUMBER OF NEWLY REGISTERED BUSINESS ENTITIES

In 2017, the number of newly registered business entities reached 49,900 which represents a 10.4 percent increase compared to the previous year (Chart 2.1.4). It is important to note that during the same year, the number of newly registered organizations also experienced a growth of 9.1 percent.

In 2018, there was a slight increase in the number of newly registered business entities, rising by 0.6 percent compared to 2017. However, in the subsequent years, there was a declining trend in the dynamics of newly registered businesses.

Amid the post-COVID recovery period in 2021, there was a notable resurgence in entrepreneurial activity. The number of newly registered businesses amounted to 51,200, indicating a substantial increase of 27.4 percent compared to 2020. This signifies a positive rebound and an encouraging sign for economic revitalization following the challenges posed by the pandemic.

Chart 2.1.4. Number of newly registered organizations and business entities



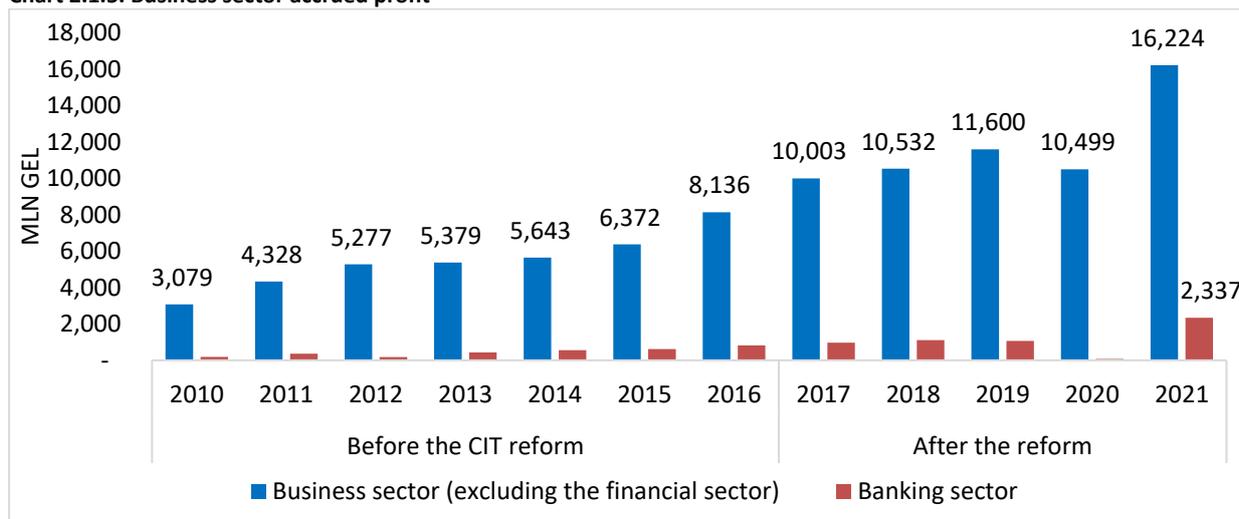
Source: National Statistics Office of Georgia

2.1.5. BUSINESS SECTOR PROFIT

Starting from 2010, the accrued profit of the business sector displayed a consistent upward trend until the onset of the COVID-19-induced crisis in 2020 (Chart 2.1.5). From 2017 to 2019, the business sector profit experienced an average annual growth rate of 12.8 percent, reaching a total of 11.6 billion GEL in 2019.

Following the sharp downturn in 2020, the business sector swiftly rebounded in 2021, accumulating a profit of 16.2 billion GEL. This represents a remarkable 40 percent increase compared to the profit recorded in 2019. The rapid recovery indicates the resilience and adaptability of the business sector in the face of challenges posed by the pandemic.

Chart 2.1.5. Business sector accrued profit

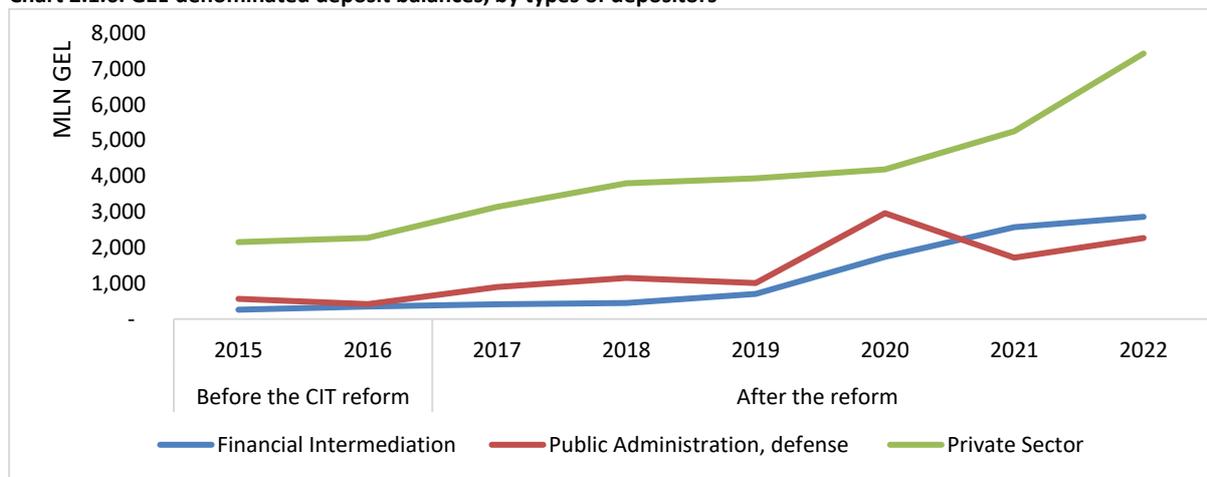


Source: National Statistics Office of Georgia

2.1.6. BUSINESS SECTOR DEPOSITS

Chart 2.1.6 shows the dynamics of the GEL-denominated deposit balances by types of depositors. As depicted, since 2017, business sector deposits (excluding the financial intermediation) have been increasing with an annual average growth rate of 23 percent, reaching GEL 7.4 billion in 2022.

Chart 2.1.6. GEL-denominated deposit balances, by types of depositors

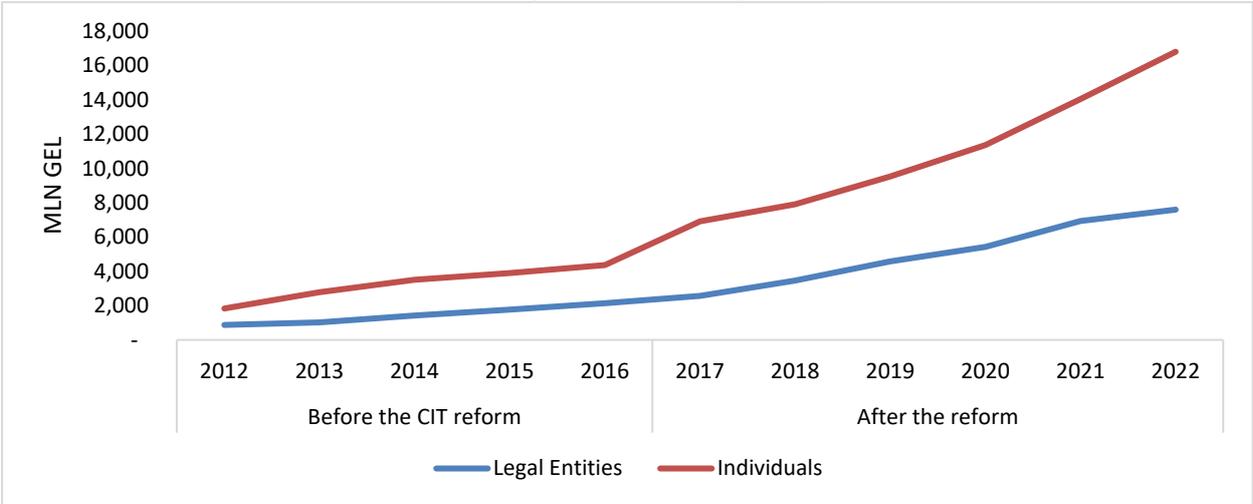


Source: National Bank of Georgia

2.1.7. LOANS TO THE NATIONAL ECONOMY

Significantly, as the business sector deposits experienced growing dynamics, the issuance of loans to the national economy also witnessed an upward trend. In the initial year of implementing the reform, the value of loans issued to resident individuals and legal entities increased by 20 percent and 59 percent, respectively, compared to the figures in 2016 (Chart 2.1.7). The rapid growth in lending activity persisted in the subsequent years. Notably, the reform may have affected lending to the private sector in two ways. On the one hand, improved access to their own funds decreases the firms' demand for borrowing. At the same time, healthier financial standing and higher liquidity of the companies improves their access to finance.

Chart 2.1.7. Amount of loans to the national economy in national currency (end of period stocks)



Source: National Bank of Georgia

2.2 FIRM-LEVEL FINANCIAL INDICATORS

The next section of the report provides an overview of firm-level financial indicators that are expected to be influenced by the CIT reform, either directly or indirectly. These financial indicators assess the performance of non-financial companies across various dimensions: liability pressure (including liability to assets ratio; borrowing to assets ratio; liabilities to operating income ratio), profitability and efficiency (including operating income to assets ratio, operating income to gross revenue ratio), and liquidity (cash to assets ratio). Additionally, the ratio of retained earnings to total equity was examined to analyze the growth of retained earnings following the implementation of the reform (Table 2.2.1).

Table 2.2.1 Financial indicators and corresponding dimensions

Financial Indicators	Dimension
Liabilities / Assets	Liability Pressure
Borrowing / Assets	
Liabilities / Operating Income	
Operating Income / Assets	Profitability and Efficiency
Operating Margin (Operating Income / Gross Revenue)	
Cash and Cash Equivalents / Assets	Liquidity

Data and Methodology

Financial indicators are calculated based on the data from financial statements reported by the companies. Starting from 2017, public reporting became mandatory for I¹ and II² category firms, as well as Public Interest Entities (PIE).³ In 2019, public reporting also became mandatory for III and IV category firms. As a result, financial statements are available for the reporting periods from 2017 to 2021.

The firm-level financial statements data were provided by the Service for Accounting, Reporting, and Auditing Supervision (SARAS). From these financial statements, we observed the financial

¹ An entity, the criteria of which at the end of the reporting period meet at least two criteria out of the following three: The value of total assets exceeds GEL 50 million; the revenue exceeds GEL 100 million; the average number of employees during the reporting period exceeds 250 persons.

² An entity, which does not represent an enterprise of the fourth or the third category and the criteria of which at the end of the reporting period meet at least two criteria out of the following three: the value of total assets does not exceed GEL 50 million; the revenue does not exceed GEL 100 million; the average number of employees during the reporting period does not exceed 250 persons.

³ A Public Interest Entity is a legal entity, which represents: a) an accountable enterprise whose securities are admitted to trading on the stock exchange in accordance with "the Law of Georgia on Securities Market"; b) a commercial bank and a qualified credit institution in accordance with "the Organic Law of Georgia on the National Bank of Georgia"; c) a microfinance organization in accordance with "the Law of Georgia on Microfinance Organizations"; d) an insurer in accordance with "the Law of Georgia on Insurance"; e) a founder of non-state pension scheme in accordance with "the Law of Georgia on Non-State Pension Insurance and Welfare"; f) an investment fund in accordance with "the Law of Georgia on Investment Funds"; g) a Non-bank deposit institution – credit union in accordance with "the Law of Georgia on Non-Bank Deposit Institutions – Credit Union"; or h) entities defined as PIEs by the Government of Georgia.

information on each firm's financial position, outcome of activities, and cash flow. For each reporting period (from 2017 to 2021), information on financial position and cash flow is filled out for the reporting period t, t-1 reporting year, and t-2 reporting year. As for the outcome of activities, information is filled out for the reporting period and t-1 reporting year. Therefore, the observed data spans the period from 2015 to 2021.

To ensure accuracy and avoid missing values in the financial statements, the final data was generated as follows: for each year, each financial indicator was searched for each year and, for each company, the latest financial statement was searched. If the data point was not missing or zero, the latest financial statement data was used. If the data point was missing or zero, we looked for the data point in the t-1 year's financial statement. If the data point was still missing or zero in the t-1 financial statement, we used the data point from the t-2 year's financial statement.

To observe firm-level performance before and after the reform, we focused on a set of non-financial firms that reported financial statements in each reporting period from 2017 to 2021. In total, we observed 361 companies. As of 2021, 206 companies (57 percent) were from the II category, 74 companies (20 percent) were from the I category, 42 companies (12 percent) were from the III category, and 39 companies (11 percent) were PIEs.

To analyze the changes in financial indicators for these selected companies, we calculated the median, first quartile, and third quartile values of the financial indicators, as well as the average values. To understand the short-run impacts of the reform immediately after its implementation, we compared the financial coefficients from 2016 to the values in 2017 and 2019. Please note that the financial indicators for 2020 and 2021 will not be included in the analysis below, as they were affected by the COVID-19 pandemic-related business shocks and subsequent recovery tendencies.

Results of the firm-level financial indicator analysis

Below, we present the results of the firm-level indicator analysis, including the average, median, first quartile, and third quartile values of the financial indicators. Additionally, we provide indicator distribution histograms that compare the pre-reform period to 2017 and 2019 separately.

Please refer to the tables and histograms below for detailed results.

1. Liability pressure - Liabilities to assets ratio

The indicators from the liability pressure dimension assess the flexibility and long-term viability of companies. Specifically, the liability to assets ratio measures the proportion of a company's assets financed through liabilities. As shown in Table 2.2.2, the average value of this indicator decreased in 2017 but increased in 2019.

A decrease in the liability to assets ratio indicates that companies are relying more on their own capital rather than liabilities to finance their assets. This can lead to reduced financial costs and risks for the companies. It is important to note that the improvement in this indicator in 2017 is most notable for firms that had a higher initial ratio. This is evident from the visible decrease in the third quartile value of the liability to assets ratio from 88.0 percent to 80.8 percent in 2017, while the median and first quartile values did not show any improvement (Table 2.2.2).

Table 2.2.2 Average, median, first and third quartile values for liability to assets ratio in 2016, 2017 and 2019.

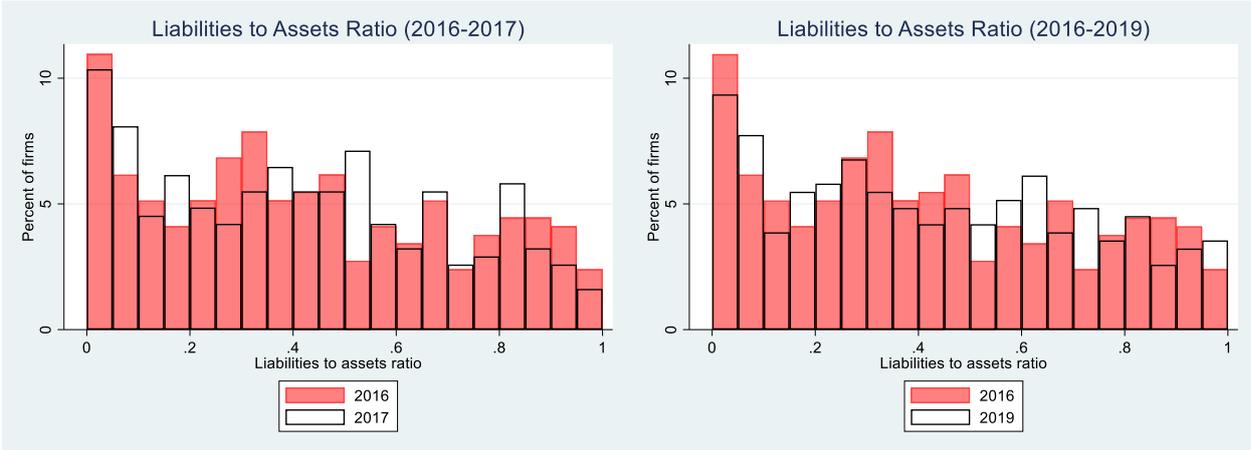
	2016	2017	2019
Q1	23.3%	20.4%	21.9%
Median	47.8%	47.8%	49.6%
Q3	88.0%	80.8%	80.9%
Average	60.4%	57.3%	61.6%

Source: SARAS, Author’s calculations

On the histograms below, the red distribution represents the indicator ratios for the year 2016, while the transparent black distributions demonstrate the comparison years. The histogram on the left compares the distribution of the liability to assets ratio in 2016 to 2017, capturing the immediate effects of the reform in 2017.

As mentioned earlier, the most significant improvement is observed within the range of 0.8 to 1 for the ratio. The lower transparent bars for 2017, compared to the red bars for 2016, indicate a smaller percentage of firms with high levels of the liability to asset ratio. This suggests that after the reform, there was a decrease in the proportion of companies relying heavily on liabilities to finance their assets.

Figure 2.21.7.1 Comparison of distributions of liability to assets ratio, 2016 to 2017 and 2016 to 2019⁴



Source: SARAS, Author’s calculations

2. Liability pressure - Borrowing to assets ratio

A more consistent improvement in the liability pressure dimension is visible in the borrowing to assets ratio indicator. This indicator showed immediate improvement after the reform in 2017, as well as medium-term improvement in 2019. On average, the ratio decreased from 33 percent in 2016 to 29.7 percent in 2019.

⁴ Histogram represents the distribution for companies with a liability to assets ratio less or equal to 1.

The most significant improvement can be observed for companies with a higher initial ratio, specifically the third quartile. For this group, the indicator decreased from 48.9 percent in 2016 to 46.4 percent in 2017, and further decreased to 43.2 percent in 2019.

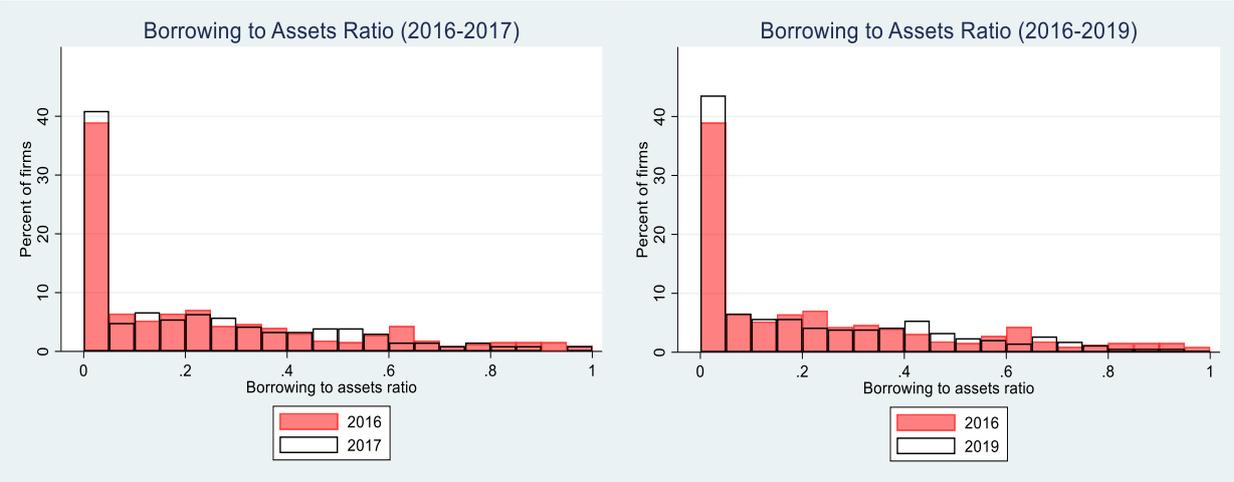
Table 2.2.3 Average, median, first, and third quartile values for borrowing to assets ratio in 2016, 2017, and 2019.

	2016	2017	2019
Q1	0.0%	0.0%	0.0%
Median	18.5%	17.2%	13.5%
Q3	48.9%	46.4%	43.2%
Average	33.0%	31.4%	29.7%

Source: SARAS, Author’s calculations

In figure 2.2.2, the histogram on the left, one can observe the mentioned improvement in 2017 for companies with a borrowing to assets ratio between 0.8 and 1. This is indicated by the lower transparent bars for 2017, indicating a smaller percentage of firms compared to the red bars for 2016. The histogram on the right, for 2019, shows a further improvement in the same range, with even lower transparent bars.

Figure 1.7.2 Comparison of distributions of borrowing to assets ratio, 2016 to 2017 and 2016 to 2019⁵.



Source: SARAS, Author’s calculations

3. Liability pressure - Liabilities to operating income ratio

The liabilities to operating income ratio demonstrates the ability of a company to service its debts, indicating how many times liabilities exceed operating income. On average, the liability pressure improved in both 2017 and 2019, with the ratio decreasing from 5.19 in 2016 to 3.65 in 2019. However, when looking at the median, first quartile, and third quartile values of the liabilities to

⁵ Histogram represents the distribution for companies with a borrowing to assets ratio less or equal to 1.

operating income ratio, there is a slight deterioration observed in 2017. Nevertheless, there is an improvement in the medium term, specifically in 2019 (Table 2.2.4).

Table 2.2.4 Average, median, first, and third quartile values for liabilities to operating income ratio in 2016, 2017, and 2019.

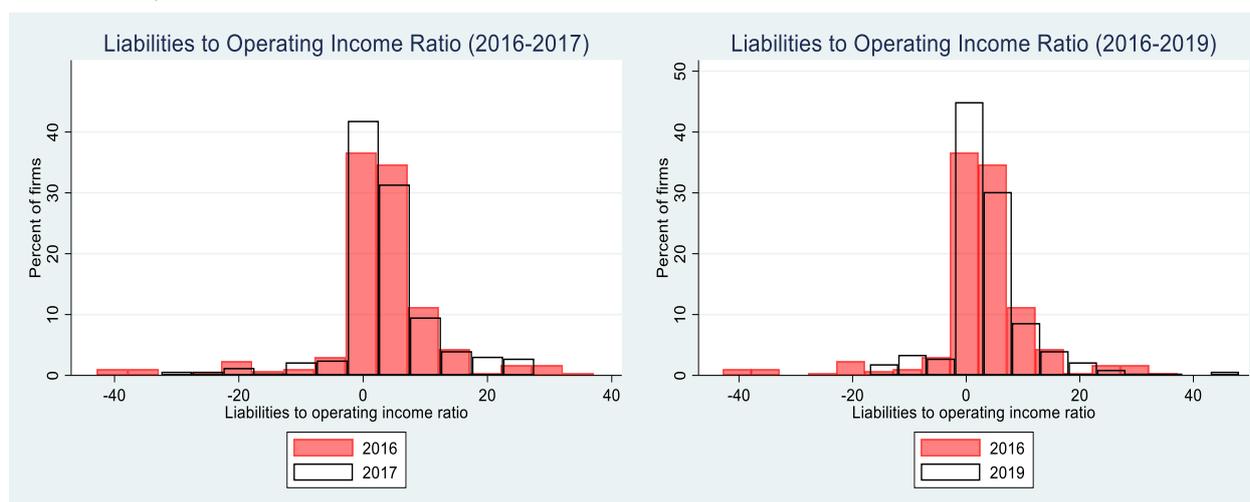
	2016	2017	2019
Q1	0.39	0.45	0.35
Median	2.55	2.58	2.40
Q3	6.54	6.77	6.65
Average	5.19	4.34	3.65

Source: SARAS, Author's calculations

In figure 2.2.3, improvement in 2019 is visible for companies with high liability to income ratio irrespective of whether they have positive or negative operating income.

Figure 2.2.3 Comparison of distributions of liabilities to operating income ratio, 2016 to 2017 and 2016 to 2019.

Source: SARAS, Author's calculations



4. Profitability and Efficiency - Operating income to assets ratio

The profitability and efficiency dimension assesses companies' competitiveness, operational effectiveness, and management efficiency. The average operating income to assets ratio showed improvement in both 2017 and 2019, indicating enhanced performance. The indicator increased from 5.9 percent in 2016 to 7.0 percent in 2019.

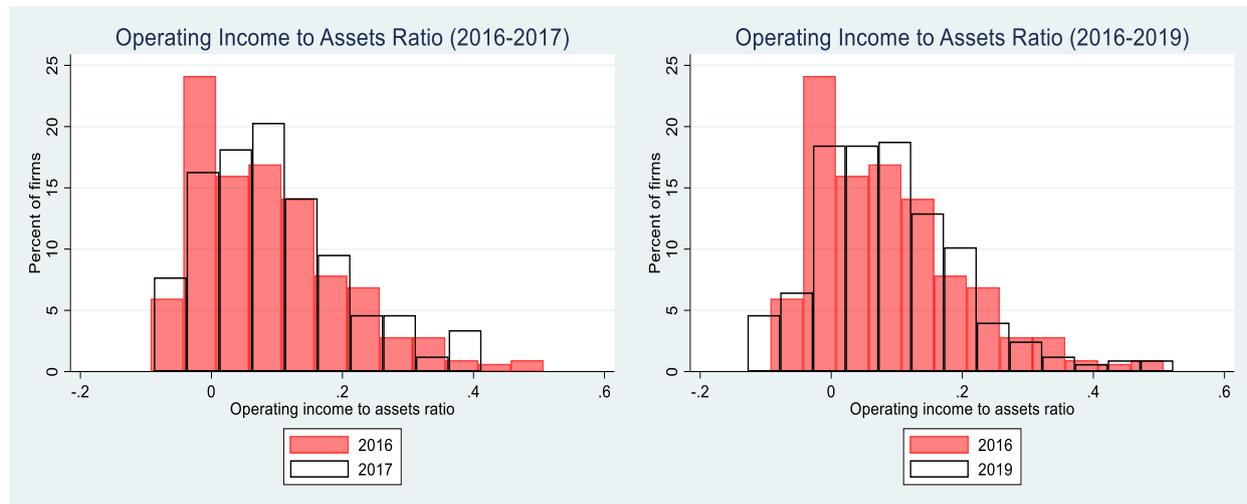
Table 2.2.5 Average, median, first, and third quartile values for operating income to assets ratio in 2016, 2017, and 2019.

	2016	2017	2019
Q1	-0.1%	1.0%	0.1%
Median	6.6%	8.4%	7.9%
Q3	16.0%	16.5%	16.5%
Average	5.9%	6.1%	7.0%

Source: SARAS, Author's calculations

Improvement in the indicator is mostly visible for companies with operating income to assets ratio between 0 to 0.2, both in 2017 and in 2019 (Figure 2.2.4).

Figure 2.2.4 Comparison of distributions of operating income to assets ratio, 2016 to 2017 and 2016 to 2019.



Source: SARAS, Author's calculations

5. Profitability and Efficiency - Operating income to gross revenue ratio (Operating margin)

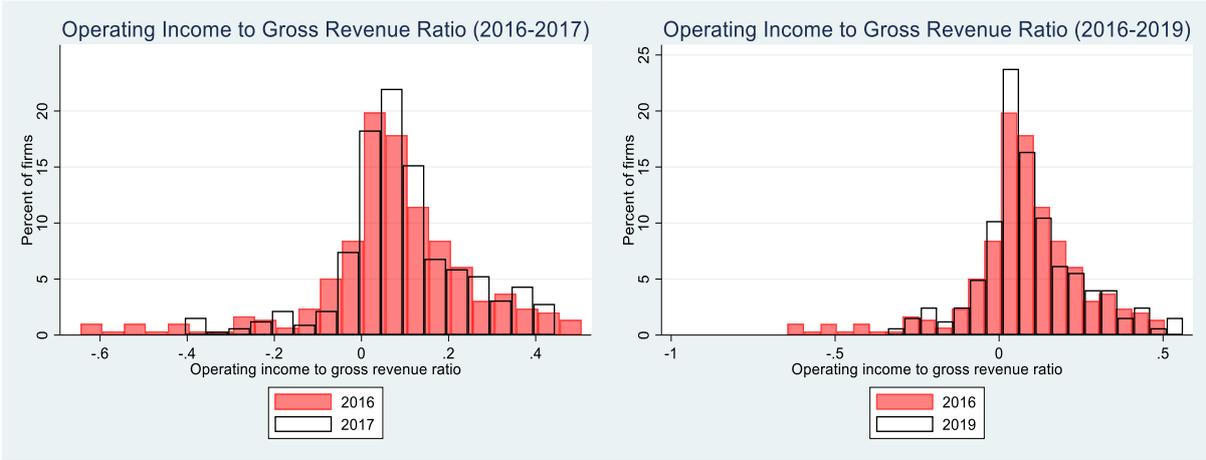
The average operating margin, which is calculated as the operating income to gross revenue ratio, showed an increase in 2017 from 8.1 percent to 8.5 percent. Further improvement in the medium term is also evident, with the indicator reaching 8.7 percent in 2019. However, it is worth noting that the median companies experienced a reverse trend, as their operating margin decreased from 7.6 percent in 2016 to 6.8 percent in 2019. For companies with higher initial operating margin values, there was an immediate improvement following the introduction of the reform in 2017 (from 17.7 percent to 19.9 percent). However, the ratio slightly decreased to 18.6 percent in 2019 (Table 2.2.6).

Table 1.7.6 Average, median, first and third quartile values for operating income to gross revenue ratio in 2016, 2017, and 2019.

	2016	2017	2019
Q1	-0.5%	1.6%	0.9%
Median	7.6%	7.5%	6.8%
Q3	17.7%	18.9%	18.6%
Average	8.1%	8.5%	8.7%

Source: SARAS, Author's calculations

Figure 1.7.5 Comparison of distributions of operating income to gross revenue ratio, 2016 to 2017 and 2016 to 2019.



Source: SARAS, Author’s calculations

6. Liquidity - Cash to assets ratio

The cash to assets ratio, which indicates the proportion of cash and cash equivalents in the total assets, is a measure of a company's overall liquidity. The average indicator showed a slight improvement in 2017 but decreased in 2019. This same trend is also evident in the median and third quartile values.

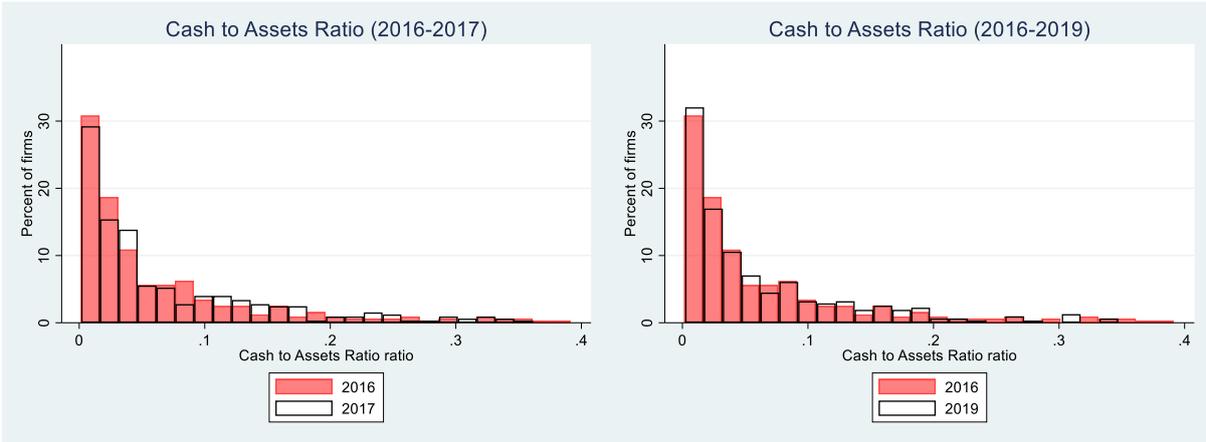
Table 2.2.7 Average, median, first, and third quartile values for cash to assets ratio in 2016, 2017 and 2019.

	2016	2017	2019
Q1	1.1%	1.1%	1.1%
Median	3.2%	3.6%	3.3%
Q3	9.0%	11.0%	9.3%
Average	5.2%	5.3%	5.2%

Source: SARAS, Author’s calculations

The right-hand side histogram in Figure 3.2.6 below illustrates the shift of the distribution to the left, which occurred in 2019 compared to 2016. This shift indicates a decrease in the percentage of firms with a higher cash to assets ratio. Therefore, it suggests a decrease in liquidity in 2019.

Figure 2.2.6 Comparison of distributions of cash to assets ratio, 2016 to 2017 and 2016 to 2019.



Source: SARAS, Author’s calculations

7. Retained earnings to total equity ratio

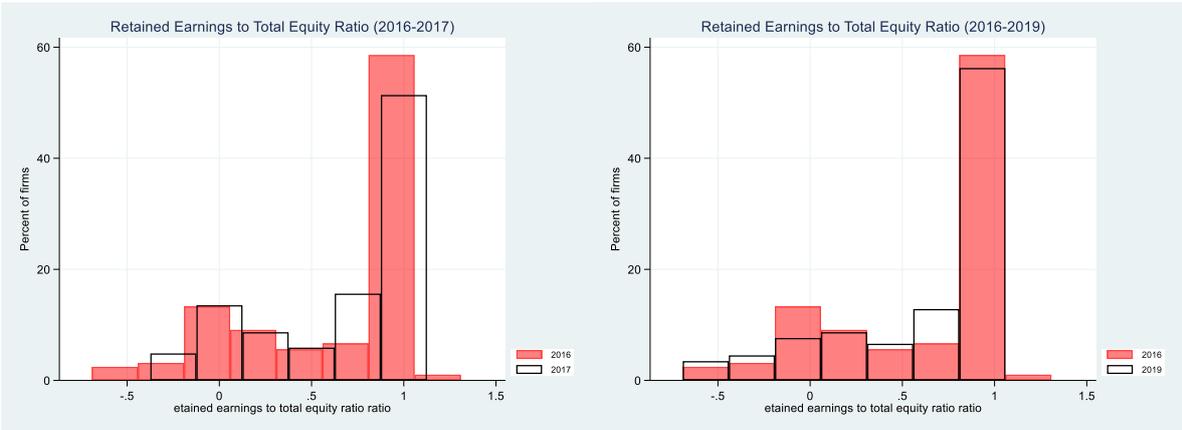
In addition to analyzing the liability pressure, profitability, and liquidity dimensions, we also examined the ratio of retained earnings to total equity. As anticipated with the reform, the average ratio of retained earnings to total equity showed a significant increase in 2017, rising from 17.6 percent to 21.1 percent. Furthermore, in 2019, the indicator continued to improve, reaching 21.5 percent. The improvement in this indicator was particularly notable among companies with a low initial value of retained earnings to total equity ratio, where the ratio initially stood at 5.2 percent and improved to 14.4 percent in 2019.

Table 1.7.8 Average, median, first, and third quartile values for retained earnings to total equity ratio in 2016, 2017, and 2019.

	2016	2017	2019
Q1	5.2%	13.1%	14.4%
Median	91.1%	89.1%	90.5%
Q3	100.0%	100.0%	100.0%
Average	17.6%	21.1%	21.5%

Source: SARAS, Author’s calculations

Figure 2.2.7 Comparison of distributions of retained earnings to total equity ratio, 2016 to 2017 and 2016 to 2019.



Source: SARAS, Author’s calculations

In summary, the analysis of firm-level indicators reveals improvements in financial ratios related to the liability pressure dimension in 2017 compared to 2016. Furthermore, indicators such as borrowing-to-assets ratio and liabilities-to-operating profit ratio, which reflect a company's ability to service debt, show improvements in the medium term by 2019. In terms of the profitability and efficiency dimension, which assesses a company's competitiveness and operational efficiency, the operating income to assets ratio demonstrated improvement in both the short and medium term. Additionally, there has been a slight improvement observed in the liquidity dimension.

2.3 REGRESSION ANALYSIS - FIXED-EFFECTS MODEL

This section evaluates the causal impact of the Estonian model of taxation on the volume of firms' reinvested profits. For this purpose, the regression analysis, specifically, the TWFE linear regression model, is applied to the sample of firms exhibiting positive net profits prior to the reform.

The main regression results are presented below, while detailed methodology, including sample selection and full description of the regression models, is presented in Annex A1.

Regression: $\text{Log}(\text{retained earnings}) = 15.8 + 0.24 \text{ treatment dummy} + 0.01 \text{ profit margin} + u$

In this model, the treatment dummy indicates a policy change for non-financial firms and the coefficient of this variable indicates the effect of the policy change on retained earnings.

The analysis suggests that on average, CIT reform increased the retained earnings of companies by 27.1 percent.⁶ Based on the available data, we assert that this estimate represents the most reliable and accurate measurement obtainable.

At the end we attempted to capture the effects of the retained earnings on the gross revenues and found that there is a positive correlation between retained profits and gross revenue. Specifically, a one percent change in retained earnings increases gross revenue by 0.6 percent.

The findings underscore the significance of CIT reform, revealing a statistically significant and robust increase in retained earnings for companies in multiple regression models. Additionally, a strong correlation observed between the retained earnings and gross revenue further emphasizes the substantial impact resulting from the policy change. These results not only emphasize the importance of the CIT reform but also suggest its potential implications for promoting economic growth and fostering financial stability.

⁶ Interpretation of the treatment dummy coefficient follows the rule: $100*(e^{0.24}-1) = 100*(e^{0.24}-1) = 27.1\%$

3. FISCAL ANALYSIS

The following section provides an evaluation of the actual fiscal effects of the CIT reform in Georgia and puts it into perspective compared to an alternative scenario where the reform had not been implemented. Additionally, the section analyzes the fiscal effects of recent changes in the tax code and changes that were or are planned to be implemented regarding the corporate income tax.

Initially, the plan was to extend the new CIT model to commercial banks and insurance companies from January 1, 2023, after its implementation for non-financial corporations. However, the Estonian model was not extended to the banking sector. Instead, a new tax regime was introduced, which introduces a 20 percent corporate income tax. Section 3.2 examines the expected fiscal effects of the new tax regime based on different scenarios. Furthermore, if the profit tax reform is extended to commercial banks and insurance companies, the fiscal implications are also being evaluated.

Moreover, ongoing discussions about potential changes in the tax code also consider applying the Estonian principle to individual entrepreneurs. Section 3.4 of the analysis explores the potential fiscal effects that could arise from this proposed change.

3.1 EVALUATION OF THE FISCAL CONSEQUENCES OF CORPORATE INCOME TAX REFORM

The corporate income tax reform has had a significant impact on tax revenues for the government budget. In 2016, the corporate income tax generated a total of 1.056 billion GEL, which was equivalent to 2.9 percent of the nominal gross domestic product (GDP). With the implementation of the corporate income tax reform, the Ministry of Finance of Georgia (MoF) projected a budget revenue of 681 million GEL from the corporate income tax in 2017, accounting for approximately 1.7 percent of the nominal GDP.

However, in the middle of 2017, the projected revenue from the corporate income tax increased by 59 million GEL compared to the approved plan, reaching 740 million GEL. This increase was caused by companies' corporate income in 2016 surpassing the forecasted rate, leading to higher corporate income tax payments based on their declarations submitted by April 1, 2017. The budget execution data for the first quarter of 2017 showed a budget revenue of 259 million GEL from the corporate income tax, which accounted for 126 percent of the projected amount.

As a result, the actual income received from the corporate income tax in 2017 amounted to 757 million GEL, representing 102 percent of the annual projection. It is important to note that the mobilized amount was 28.3 percent lower than the previous year, making up 1.9 percent of the nominal GDP. In 2018, the budget revenue from the corporate income tax decreased by 2.6 percent compared to 2017, totaling 737 million GEL (1.7 percent of GDP), which was 99.5 percent of the annual forecast.

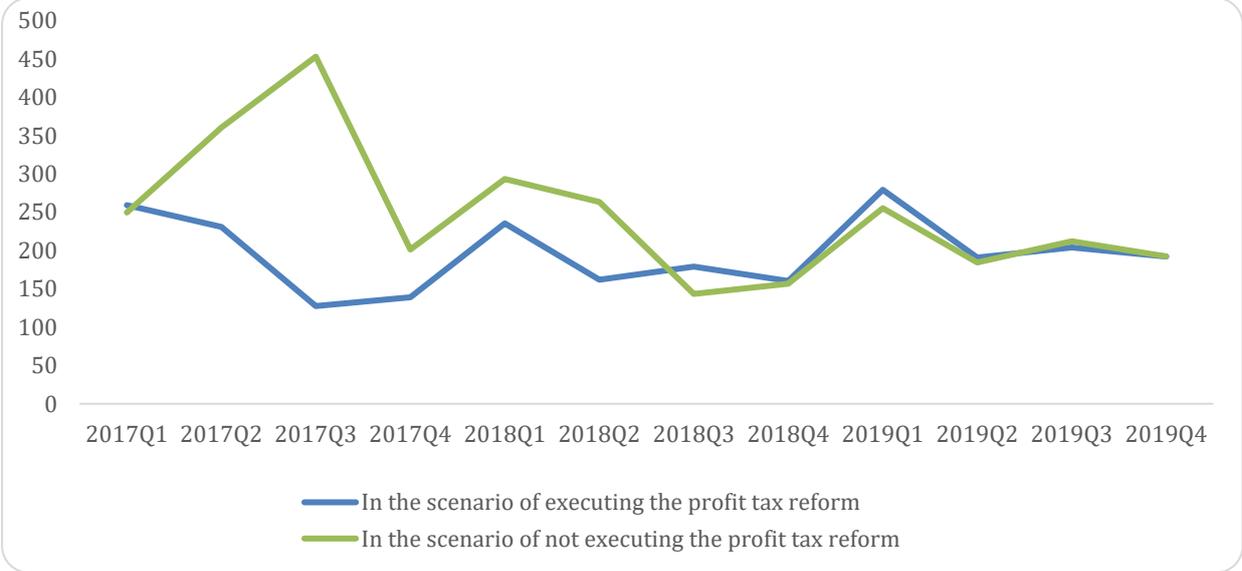
Following two consecutive years of decline in budget revenue from the corporate income tax, starting from 2019, there has been an annual increase in revenue. The growth observed in 2019 was particularly significant, with a 17.6 percent increase in annual terms, reaching a total of 866.2 million GEL, which accounts for approximately 1.8 percent of the nominal GDP. The growth rates experienced in 2020 and 2021 were comparatively moderate, amounting to 919 million GEL (1.9 percent of the nominal GDP) with an annual growth of 6.1 percent, and 1.015 billion GEL (1.7 percent of the nominal GDP) with an annual growth of 10.4 percent, respectively. It is worth noting that the budget revenue in 2021 has nearly recovered to the levels observed in 2016; however, the share of corporate income tax revenue in the nominal GDP remains considerably lower than that of 2016.

This section analyzes the impact of the new corporate income tax reform on budget revenue. The objective is to estimate the budget revenue from corporate income tax if the reform had not been implemented and compare it with the actual revenue during the period of 2017-2019. The years 2020 and 2021 are excluded from the analysis due to the anomalous economic conditions resulting from the COVID-19 pandemic.

To conduct this analysis, we employ a simple time series regression model using quarterly data from 2008 to 2016 to estimate the correlation between the growth rate of budget revenue from the corporate income tax and the growth rate of the nominal GDP. Both series exhibit stationarity. The results reveal that a one percentage point increase in the growth rate of the nominal GDP corresponds to a 1.49 percentage point increase in the growth rate of budget revenue generated from the corporate income tax.

Next, we forecast the growth rates (and subsequent levels) of tax revenue generated from the corporate income tax during the 2017-2019 period, assuming that the aforementioned relationship would have remained intact if the reform had not been implemented. Additionally, we consider the impact of the corporate income tax reform on the growth rate of the nominal GDP, based on the findings of the ex-ante RIA on the CIT reform. The RIA projected an additional 1.44 percent increase in the real GDP within 1.5 years due to the reform. We adjust this estimate to account for inflation rates and conservatively assume that the impact would persist for one year until the GDP reaches a steady state. Subsequently, we incorporate these adjusted growth rates into our model to estimate the growth rate of corporate income tax revenue for 2017-2019 in the absence of the reform.

Figure 3.1.1. Budget revenues from the corporate income tax with and without the CIT reform in millions of GEL



Source: MoF, Authors’ calculations

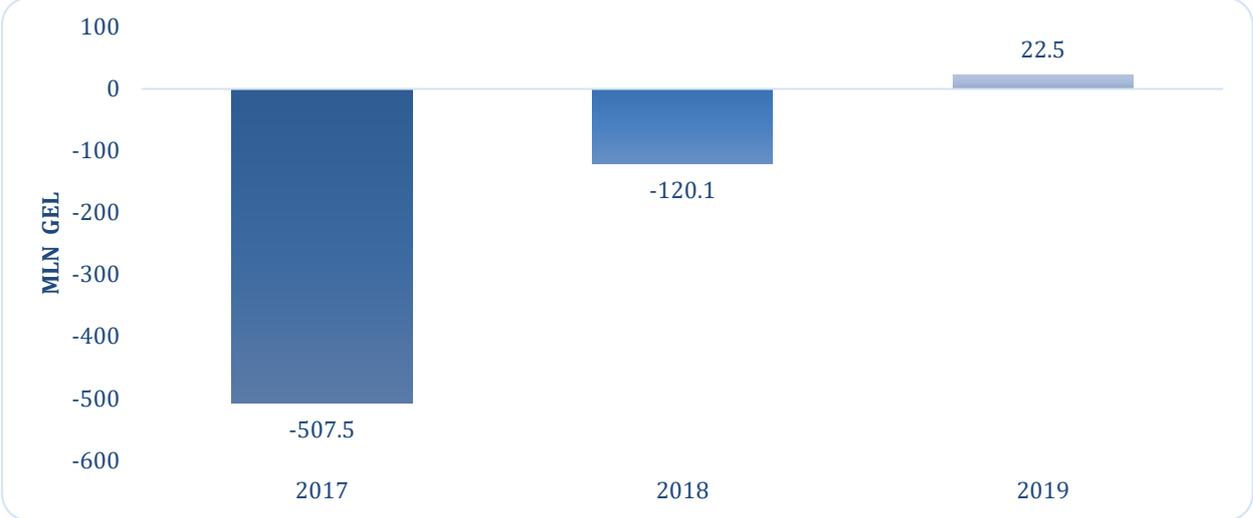
The comparison of reconstructed budget revenues with the actual budget revenues from the corporate income tax during the corresponding period showed that in 2018, the budget revenue without the implementation of the reform would have been significantly higher compared to the revenue with the reform. However, the gap would narrow in the subsequent years, and the budget revenue with the reform would even surpass the revenue without the reform in 2019 (Figure 3.1.1).

In 2017, the loss of budget revenue due to the corporate income tax reform amounted to 508 million GEL. However, this loss was reduced to 120 million GEL in 2018, and the budget received an

additional 23 million GEL in 2019. The total budget loss from 2017 to 2019 amounted to 605 million GEL (Figure 3.1.2)

This recovery can be attributed to the actions taken by companies, as they chose to distribute a lesser share of their corporate income, leading to increased liquidity and the accumulation of funds for future projects.

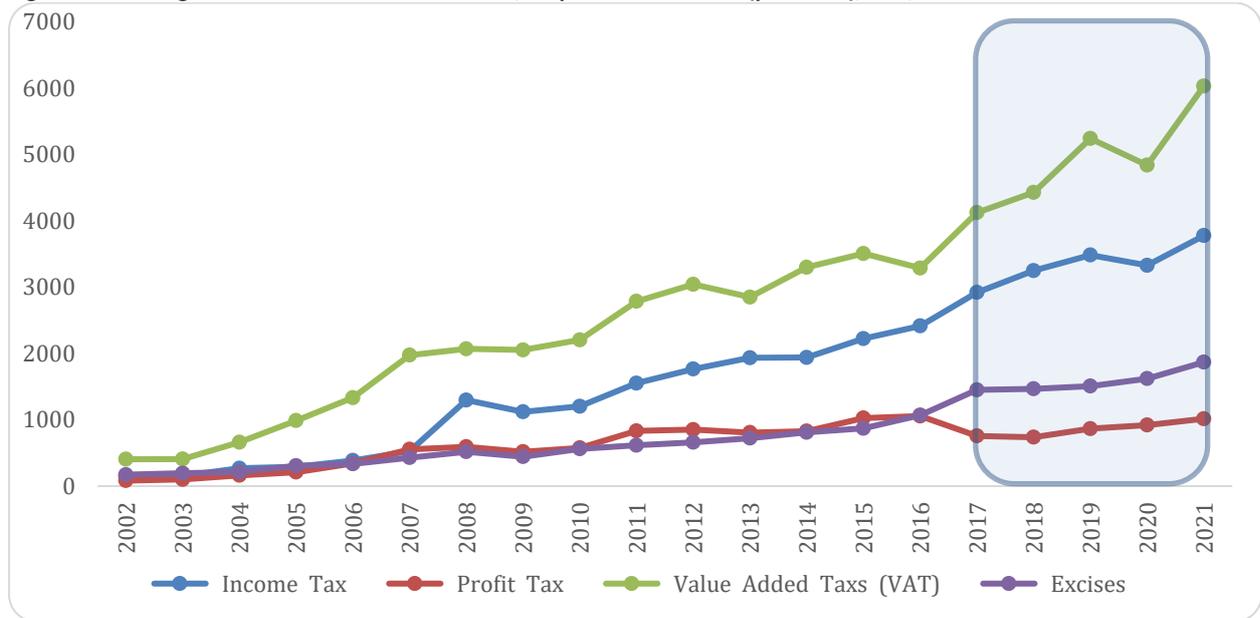
Figure 3.1.2. The alteration in budgetary income stemming from the profit tax following the implementation of the reform, denominated in millions of GEL



Source: Authors' calculations

In both 2017 and 2018, revenues from other significant taxes experienced an increase, primarily due to an improved economic climate and higher excise duties on tobacco and fuel (Figure 3.1.3). This upswing offset the loss of budget revenue resulting from the corporate income tax reform. Notably, revenue from the value-added tax (VAT) exhibited an annual growth of 25.4 percent in 2017 (equivalent to an increase of 836 million GEL), 7.4 percent in 2018 (with an increase of 304 million GEL), and 18.3 percent in 2019 (resulting in an increase of 812 million GEL). These figures starkly contrasted with the average annual growth rate of 5.4 percent witnessed during the 2014-2016 period.

Figure 3.1.3. Budget revenues from the income tax, corporate income tax (profit tax), VAT, and excise



Source: MoF

Budget revenue from income tax observed an annual increase of 20.9 percent in 2017 (corresponding to a change of 504 million GEL), 11.2 percent in 2018 (with a change of 328 million GEL), and 7.3 percent in 2019 (yielding a change of 236 million GEL). These percentages differed from the average annual growth rate of 7.8 percent witnessed during the 2014-2016 period.

Revenue obtained from excise experienced a rise of 35.6 percent in 2017 (equivalent to an increase of 381 million GEL), one percent in 2018 (with an increase of 15 million GEL), and 2.8 percent in 2019 (resulting in an increase of 41 million GEL). The average annual growth rate during the 2014-2016 period stood at 14.2 percent. Budget revenue derived from property tax displayed an increase of 8.6 percent in 2017 (corresponding to a change of 31 million GEL), 11.8 percent in 2018 (with a change of 46 million GEL), and 7.5 percent in 2019 (resulting in an increase of 33 million GEL). As a consequence, tax revenues in the consolidated budget witnessed a growth of 11.3 percent in 2017 compared to the previous year. Subsequently, the growth rate reached 7.4 percent in 2018 and 8.7 percent in 2019.

3.2 FISCAL IMPLICATIONS OF EXTENDING PROFIT TAX REFORM TO COMMERCIAL BANKS AND INSURANCE COMPANIES

The adoption of the Estonian taxation model in commercial banks, if implemented as planned from January 1, 2023, would have resulted in an estimated budgetary loss of approximately 312-399 million GEL in 2023. This shortfall would further increase to 412-633 million GEL in 2026, as shown in Figure 3.2.2.

To obtain these estimates, we conducted forecasts for corporate income for the years 2023-2026 using two scenarios. Scenario 1 assumed that the corporate income tax revenues would increase at the same rate as the average growth rate observed during the period of 2017-2019. Scenario 2 considered the average growth rate in the broader period of 2014-2019. The average annual growth rate in the 2017-2019 period was 9.6 percent, while it reached 16.7 percent in the 2014-2019⁷ period. Therefore, Scenario 1 is regarded as more conservative compared to Scenario 2.

Under Scenario 1, the projected corporate income before extraordinary items and taxes is expected to range from 2.777 billion GEL in 2023 to 3.661 billion GEL in 2026. On the other hand, Scenario 2 suggests a wider range, with estimated figures ranging from 2.955 billion GEL in 2023 to 4.692 billion GEL in 2026 (Figure 3.2.1).

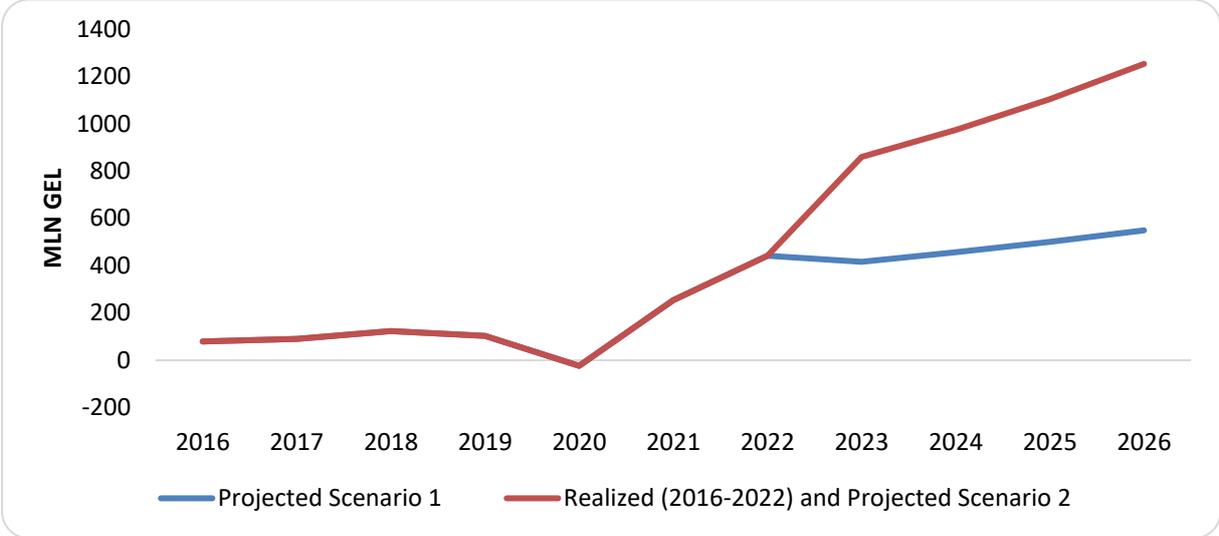
After estimating the corporate income tax, we computed the budget revenue by considering that commercial banks would pay 15 percent of their corporate income into the government budget as corporate income tax. It is worth noting that, on average, commercial banks contributed a slightly reduced portion of 11.4 percent of their corporate income before extraordinary items and taxes to the state budget during the period from 2016 to 2022 (excluding the year 2020). This difference can be attributed to factors such as extraordinary revenue/expenses and double taxation regimes of the corporate income tax with other countries.⁸ Therefore, the estimate presented in this section may slightly overestimate the actual figures.

Subsequently, we considered two scenarios assuming the distribution of 10 percent and 25 percent of the taxable corporate income. A comparison was then made between the projected budget revenues with and without the implementation of the tax reform, and the resulting difference was calculated in million GEL and as a percentage of the predicted total budget revenue. For more detailed information, please refer to Table A2.1 in the Annex 2.

⁷ The statistical data used in this analysis was obtained from the database "Financial Aggregates of Commercial Banks Activities" provided by the National Bank of Georgia.

⁸ Assuming a distribution of 11.4 percent of the taxable corporate income among shareholders, the taxable corporate income tax would range from 317 million GEL in 2023 to 417 million GEL in 2026 (under Scenario 1), and from 337 million GEL in 2023 to 535 million GEL in 2026 (under Scenario 2).

Figure 3.2.1. Corporate income tax revenue in millions of GEL for the years 2016-2026, both current and projected



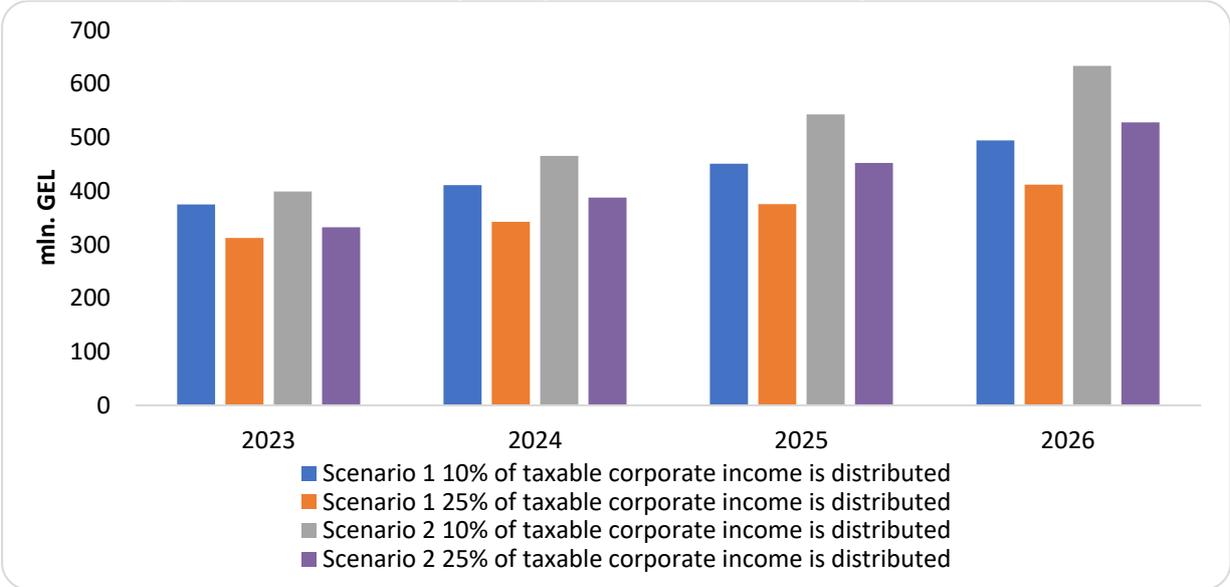
Source: Authors’ calculations

Lastly, we computed the present value of the lost budget revenue for 2023-2026. The findings revealed that, in Scenario 1, a range of 375-494 million GEL (equivalent to 2-2.1 percent of the total budget revenue) would be incurred as budgetary losses due to the introduction of the Estonian model between 2023-2026, assuming a 10 percent distribution of corporate income. In the case of a 25 percent distribution, this amount would vary between 312 to 412 million GEL (equivalent to 1.7 percent of the total budget revenue). The present value of the budgetary loss generated from the introduction of the corporate income tax reform during the 2023-2026 period would be 1.4 billion GEL (10 percent of the tax is distributed) and 1.167 billion GEL (25 percent of the tax is distributed) in Scenario 1.

In Scenario 2, with a 10 percent distribution of corporate income, the budgetary losses due to the introduction of the Estonian model would range from 399-633 million GEL (equivalent to 2.1-2.7 percent of the total budget revenue) between 2023-2026. Alternatively, in the case of a 25 percent distribution, this amount would vary between 332 to 528 million GEL (equivalent to 1.8 percent and 2.2 percent of the total budget revenue, respectively). The present value of the budgetary loss during the 2023-2026 period would be 1.640 billion GEL (10 percent of the tax is distributed) and 1.367 billion GEL (25 percent of the tax is distributed) in Scenario 2.⁹ (For more detailed information, please refer to Table A2.2 of the Annex 2).

⁹ Assuming a distribution of 11.4 percent of the taxable corporate income among shareholders, the revenue loss from corporate income tax, following the implementation of the Estonian model, would have ranged from 212 million GEL (25 percent of profit being distributed) to 275

Figure 3.2.2. Budget loss in case of introducing the corporate tax reform in the banking sector



Source: Authors’ calculations

Subsequently, the budget loss incurred by insurance companies transitioning to the Estonian model was calculated, assuming a same growth trajectory for corporate income as observed on average during the period of 2017-2019. The range of taxable corporate income would be between 67 million GEL in 2023 and 109 million GEL in 2026. Under the existing taxation system, the revenue derived from corporate income tax exhibited variation, ranging from 10 million GEL in 2023 to 16.4 million GEL in 2026.

In the event of insurance companies adopting the Estonian model, the corporate income tax, considering a distribution of 10 percent of the taxable corporate income, would range from 1 million GEL in 2023 to 1.6 million GEL in 2026. Alternatively, assuming a distribution of 25 percent, the budget revenue generated from corporate income tax would range from 2.5 million GEL in 2023 to 4.1 million GEL in 2026. Consequently, the budget losses resulting from the tax reform would vary from 7.5 million GEL (with 25 percent distribution) to 9 million GEL (with 10 percent distribution) in 2023, and from 12.3 million GEL (with 25 percent distribution) to 14.8 million GEL (with 10 percent distribution) in 2026.

The proportion of budget losses relative to the total budget revenue would reach its maximum value of 0.1 percent in 2026 when a 10 percent distribution was applied. Additionally, the present value of the budgetary loss for the period of 2023-2026 would range from 31 million GEL (with 10 percent

million GEL (10 percent of profit being distributed) in 2023 under Scenario 1. In the same scenario, the measure would have varied from 280 million GEL (25 percent of profit being distributed) to 362 million GEL (10 percent of profit being distributed) in 2026. Additionally, the revenue loss from corporate income tax, post introduction of the Estonian model, would have ranged from 227 million GEL (25 percent of profit being distributed) to 293 million GEL (10 percent of profit being distributed) in 2023 under Scenario 2. In the same scenario, the measure would have varied from 359 million GEL (25 percent of profit being distributed) to 464 million GEL (10 percent of profit being distributed) in 2026.

distribution) to 38 million GEL (with a 25 percent distribution). For further elucidation, please refer to Table A2.3 provided in the Annex 2 for comprehensive details and specific information.

Nevertheless, according to the “Explanatory Note of the draft law of Georgia on Amendments to the Tax Code of Georgia,” it is noteworthy that the transition to the Estonian model of taxation for financial institutions (excluding insurance organizations) starting from January 1, 2023, would result in an estimated budgetary loss of approximately 127 million GEL (138 million GEL - 16 million GEL). The comparison is based on the annual corporate income tax declared by taxpayers with the aforementioned status under the existing taxation system in the period of 2017-2021 (138.5 million GEL¹⁰) versus the average annual corporate income tax that would have been declared in the same period if the Estonian model were in place (11.6 million GEL). It is important to note that these estimates are made based on certain assumptions, assuming that the business environment and dividend distribution policy of the mentioned taxpayers will remain relatively stable compared to the period of 2017-2021. The disparity between the estimation in the explanatory note and the estimations presented in previous paragraphs is due to the assumption made in the explanatory note that the corporate income tax in 2023 will be equal to the average value observed in the period of 2017-2021. In contrast, in the previous paragraph, the assumption was made that the corporate income would experience growth in line with previous years. It is noteworthy that in 2022, the budget revenue of the corporate income tax generated by financial institutions, primarily driven by commercial banks, witnessed a significant increase compared to previous years.

3.3 FISCAL ASSESSMENT OF IMPLEMENTING A 20 PERCENT PROFIT TAX FOR THE BANKING SECTOR

Regarding the impact of the change in the corporate income tax rate for commercial banks, the consideration of its effect on the budget revenues of 2023-2026 is of utmost importance. To this end, the assumption is made that the profit before extraordinary items and taxes revenues in 2023-2026 would experience growth at the same rate as the average annual growth observed in 2017-2019 (Scenario 1) and 2014-2019 (Scenario 2). Subsequently, calculations were conducted to determine the budget revenue resulting from the 15 percent corporate income tax and 5 percent dividends tax (status quo), assuming different distributions of taxable corporate income (0 percent, 10 percent, and 25 percent) among shareholders. Furthermore, we computed the budget revenue generated by the 20 percent corporate income tax (with 0 percent tax on dividends) system,¹¹ along with the difference resulting from the transition from the 15 percent corporate income tax and 5 percent dividends tax to the 20 percent corporate income tax system, considering two scenarios and the three dividend distribution cases. These calculations were expressed in millions of GEL and as a percentage of the budget revenue.

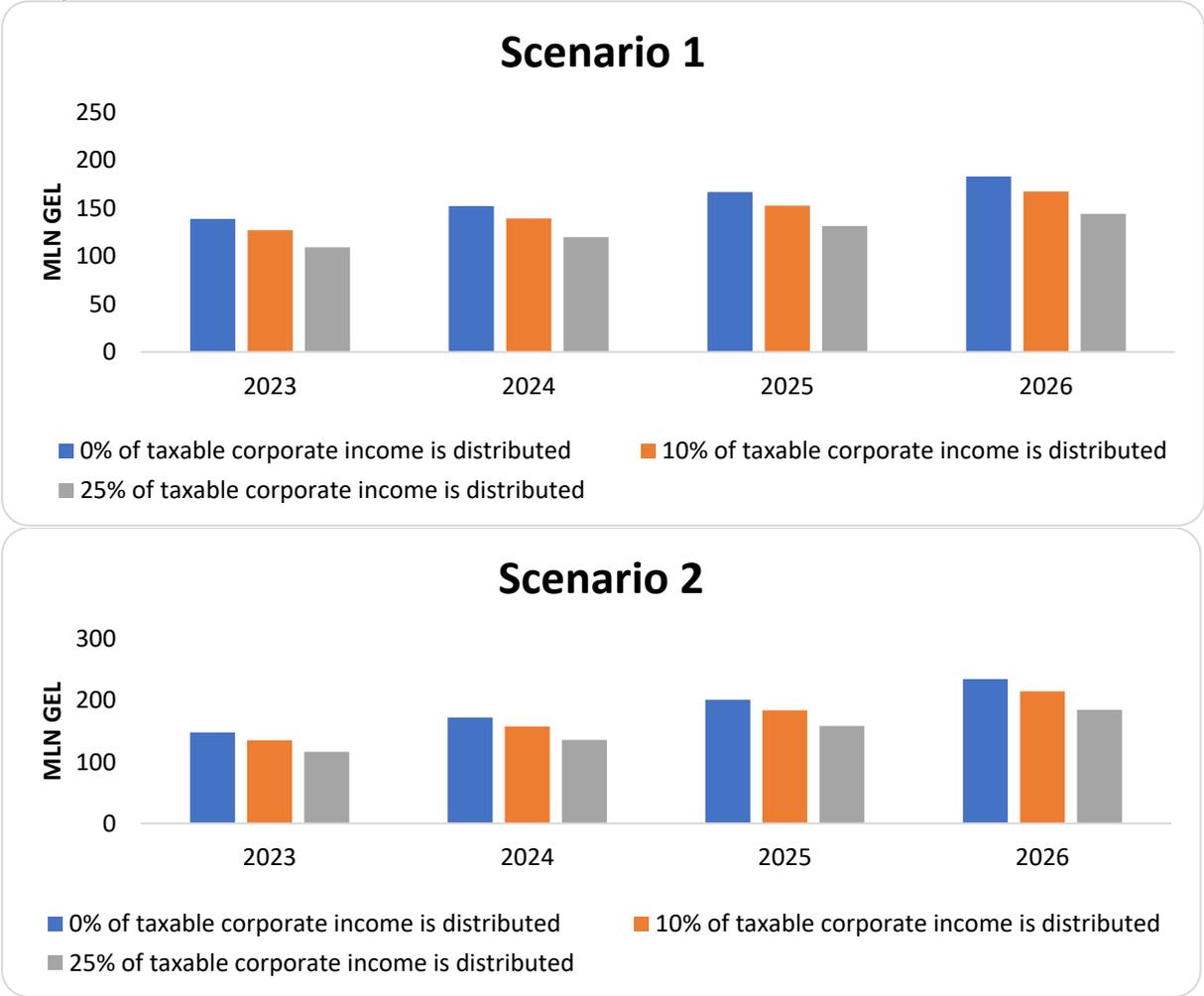
¹⁰ The average corporate income tax revenue generated by commercial banks during the period of 2017-2021 amounted to 109.6 million GEL.

¹¹ The proposed framework involves a potential adjustment in the corporate income tax rate, raising it from 15 percent to 20 percent, while simultaneously eliminating the tax imposed on dividends.

In Scenario 1, the additional budgetary revenue generated by the transition to the 20 percent corporate income tax system would vary between 109 million GEL (in the case of 25 percent distribution) and 139 million GEL (in the case of 0 percent distribution) in 2023, representing 0.7 percent to 0.8 percent of the budget revenue. Similarly, in 2026, this range would be between 144 million GEL and 183 million GEL, amounting to 0.6 percent of the budget revenue. The present value of this measure for the period of 2023-2026 would range from 408 million GEL to 518 million GEL (Figure 3.3.1). For further elucidation, please refer to Table A2.4 provided in the Annex 2 for comprehensive details and specific information.

In Scenario 2, the additional budgetary revenue resulting from the transition to the 20 percent corporate income tax system varied between 116 million GEL (in the case of 25 percent distribution) and 148 million GEL (in the case of 0 percent distribution) in 2023, equivalent to 0.8 to 1 percent of the budget revenue. Similarly, in 2026, this range was between 185 million GEL and 235 million GEL, representing 0.6 to 0.8 percent of the budget revenue, respectively. The present value of this measure for the period of 2023-2026 would vary from 478 million GEL to 607 million GEL. For further elucidation, please refer to Table A2.5 provided in the Annex 2 for comprehensive details and specific information.

Figure 3.3.1. The additional budget revenue generated by the transition from the current taxation system to a 20 percent tax regime



Source: Authors' calculations

3.4 EFFECTS OF THE POTENTIAL CHANGES IN THE TAX CODE FOR INDIVIDUAL ENTREPRENEURS

Currently, the MoF is working on several amendments to the tax code, including the implementation of the Estonian model principle for individual entrepreneurs. This proposed change entails two key aspects: 1) individual entrepreneurs will be required to open an investment account to track their income and expenses, and 2) non-economic expenses and entertainment expenses above a certain threshold will be subject to taxation.

To evaluate the potential fiscal effect of expanding the Estonian model to individual entrepreneurs, the following **methodology** was employed:

1. Financial statements of Category IV¹² companies that registered positive profits in 2021 were analyzed using data from the SARAS database. Category IV companies are comparable to individual entrepreneurs in terms of their size, thus assuming similar behavior in terms of profit reinvestment once taxed with the Estonian model principle. The ratio of reinvestments to total profits was calculated for these companies.
2. The ratio of reinvestments to total profits was then applied to the taxable income/profit of individual entrepreneurs. To calculate the taxable income of individual entrepreneurs, data on income tax revenue was obtained from the Analytical Department at the Revenue Service of Georgia. The analysis excludes individual entrepreneurs operating under special taxation regimes.

The results of the fiscal effects analysis are as follows:

Based on the financial statement analysis for 2021, it was found that 43 percent of Category IV companies reported positive income in that period. For these companies, the distribution of profits to owners (dividends) and total incomes were observed. The share of distributed profits to total positive profit was calculated to be 19.4 percent. The income tax revenue of individual entrepreneurs in 2021, according to data from the Analytical Department at the Revenue Service of Georgia, amounted to GEL 64,543,804.1. Therefore, the taxable income/profit of individual entrepreneurs was determined to be GEL 322,719,020.7. Assuming no change in taxable income/profit and a distribution of 19.4 percent of that income, the tax revenue from individual entrepreneurs would amount to GEL 12,535,024.8.¹³ Consequently, the fiscal effect for 2021, which represents the difference between the tax revenue in the absence of the Estonian model extension to individual entrepreneurs and the tax revenue in the Estonian model scenario, is estimated at GEL 52,088,779.4. In other words, GEL 52,088,779.4 less tax revenue would be collected.

Additionally, other scenarios of profit distribution were examined, assuming 10 percent or 40 percent of profits would be distributed. Considering a 5 percent annual increase in total taxable income/profits, the values for 2024 were calculated, and the 10 percent, 19.4 percent, and 40

¹² An entity, the criteria of which at the end of the reporting period meet at least two criteria out of the following three: a) The value of total assets does not exceed GEL 1 million; b) The revenue does not exceed GEL 2 million; c) The average number of employees during the reporting period does not exceed 10 persons.

¹³ $GEL\ 322,719,020.7 * 0.194 * 0.2 = GEL\ 12,535,024.8.$

percent profit distribution scenarios were applied. The summary of the scenario analysis, including the possible fiscal effects, can be found in Table 3.4.1.

Table 3.4.1 Scenario analysis of fiscal effects in the event of extending the Estonian tax model to individual entrepreneurs.

		Share of reinvestments ¹⁴		
Taxable income/profit of individual entrepreneurs		60%	80.6%	90%
Current 2021	322,719,020.7	- 38,726,282.5	- 52,008,779.4	- 58,089,423.7
Prognosis for 2024	373,587,606.4	- 44,830,512.8	- 60,206,663.2	- 67,245,769.2

Source: Analytical Department at Revenue Service of Georgia, Author’s calculations

The analysis indicates that for 2024, assuming a taxable income/profit of GEL 373,587,606.4 for individual entrepreneurs and a reinvestment share of 80.6 percent (with a distributed profits share of 19.4 percent), the fiscal effect of implementing the Estonian model for individual entrepreneurs would be GEL - 60,206,663.2.

4. CONCLUSION

In 2017, the Georgian government introduced a profit tax reform, commonly referred to as the Estonian model, to improve the business environment. This reform eliminated taxes on reinvested earnings for businesses. A study of the new profit tax regime six years after it was introduced found positive trends in key macroeconomic and firm-level indicators, suggesting a potential impact of the reform. However, it is worth noting that certain economic indicators had already been exhibiting growth prior to the introduction of the new tax regime, making it challenging to attribute all observed changes solely to the reform.

At the firm level, positive changes were observed in various financial ratios. There was an improvement in liability pressure, with firms relying more on their own capital for financing, reducing financial costs, and risks. Profitability and efficiency indicators showed positive trends, indicating improved competitiveness and operational and managerial efficiencies.

Notably, to determine the causal impact of the reform on firms' reinvested profits, a regression analysis was performed using the TWFE linear model. The regression analysis revealed a significant causal effect of the CIT reform, with an average increase of 27.1 percent in retained earnings for companies. Furthermore, we observed a strong correlation between retained earnings and gross revenue, highlighting a substantial positive impact of the policy change on economic activity. These

¹⁴ Share of reinvestments equal to 100% - share of distributed profits to total positive profits.

findings not only highlight the importance of CIT reform but also suggest its potential implications in promoting economic growth and enhancing financial stability.

In terms of fiscal impacts, budget revenue from the corporate income tax declined after the introduction of the CIT reform in 2017 and 2018 but recovered in 2019 with a 17.6 percent increase. The budget revenue in 2021 had almost returned to its 2016 level, but the ratio of corporate income tax revenue to nominal GDP remains lower than that of 2016. Comparing estimated budget revenues without the reform to actual revenues, the revenue without the reform would have been higher in 2018, but the disparity was decreasing over the years, and by 2019, the revenue with the reform exceeded its counterfactual level.

The analysis of extending the reform to individual entrepreneurs suggests that if the taxable income/profits of individual entrepreneurs reach €373.6 million in 2024, with 80.6 percent allocated for reinvestments and 19.4 percent distributed as profits (projections made based on the behavior of Category IV companies), the estimated fiscal effect of extending the Estonian model for individual entrepreneurs would be a negative €60.2 million. Additionally, using data for the year 2021, a thorough evaluation of the existing inconsistencies in the tax code, which enable profit distribution without paying a 5 percent dividend tax, indicates that resolving these gaps would lead to an estimated fiscal impact of approximately €133.6 million.

5. ANNEX

ANNEX A1: REGRESSION ANALYSIS - FIXED-EFFECTS MODEL, METHODOLOGY

The two-way fixed-effects linear regression model is a valuable statistical technique employed in economic analysis to account for two types of omitted variables in panel data. It addresses omitted variables that vary across entities (such as firms) but remain constant over time, as well as variables that are constant across entities but change over time. By incorporating these fixed effects and time-specific controls, the model enables researchers to identify and estimate the effects of independent variables that exhibit variation across observations. This approach provides a reliable method for analyzing causal relationships and generating accurate empirical results in economic research.

In case of our analysis, both firm and time fixed effects are included in the regression model:

- Firm fixed effects control for unobserved variables that are constant over time but differ across entities (e.g., difference in business practices, management quality across firms)
- Time fixed effects controls changes over time that is constant across firms (e.g., national regulations; macro shocks)

In the framework of two-way fixed effects model, we evaluate the possible change of the policy by two regressions. At first, we assumed that only variable that affects the reinvested profits of firms across time is treatment dummy (policy change) variable that is differentiating treatment (non-financial sector) and control (financial sector) group observations at the firm-level. Therefore, regression 1 below estimates the effect of the policy change, implementation of the Estonian taxation model, on the retained earnings.

Regression 1: $Y_{it} = \alpha_i + \lambda_t + \beta_1 \cdot treatment_{it} + \mu_{it}$

where Y_{it} is log of retained earnings, α_i is firm fixed effects, λ_t is time fixed effects, $treatment_{it}$ is a dummy variable which equals 1 if firm is treated and 0 otherwise, and μ_{it} is an error term.

To further increase the reliability of the model estimation procedure, on the second step we also control for the variable that varies both across firms and over time – profit margins for each firm (Regression 2).

Regression 2: $Y_{it} = \alpha_i + \lambda_t + \beta_1 \cdot treatment_{it} + \beta_2 \cdot X_{it} + \mu_{it}$

where X_{it} is a profit margin and all other variables are the same as in Regression 1.

To capture the effects of the retained earnings on the firm's performance, we observed the gross revenues across observations and how it is affected by changes in values of retained earnings (Regression 3).

Regression 3: $Y_i = \alpha_0 + \alpha_1 \cdot X_i + \mu_i$

where Y_i is log of gross revenue, X_i is log of retained earnings, and μ_i is an error term.

The required firm-level data for the analysis was obtained from financial statements provided by SARAS. The analysis covers a total of 361 non-financial firms and 68 business entities from the financial and insurance sector. The observed companies include those belonging to category I, II, III, and PIEs. The time period considered for the analysis spans from 2015 to 2021.

To ensure a more accurate assessment of the impact of the CIT reform after 2017, the regression analysis focuses on companies that had positive profits in the pre-reform period. Specifically, the analysis examines companies with positive profits in both 2015 and 2016.

Results of the analysis are provided in Table A1 below:

Table A1: Fixed-Effects model results

Dependent Variable: Retained Earnings	Regression 1	Regression 2
_cons (a0)	15.6***	15.8***
Treatment dummy (β_1)	0.40***	0.24*** ¹⁵
Profit margin (β_2)		0.01***
N of obs.	1,919	1,656
N of groups	330	325

Note: Treatment dummy (policy change) variable captures firms from non-financial sector after year 2017

Source: Author’s calculations

Based on the outcomes of the analysis, regression 1 and regression 2 can be represented in the following way:

Regression 1: $\text{Log (retained earnings)} = 15.6 + 0.40 \text{ treatment dummy} + u$

Regression 2: $\text{Log (retained earnings)} = 15.8 + 0.24 \text{ treatment dummy} + 0.01 \text{ profit margin} + u$

¹⁵ Three stars next to a regression coefficient value signifies its high level of statistical significance.

ANNEX A2: FISCAL EFFECTS SCENARIO ANALYSIS

Table A2.1: Scenario 1 entails the alignment of the average growth rate of taxable profit (profit before tax) for Commercial Banks for the forthcoming four years with the rate observed during the period of 2017-2019.

mln. GEL	2023	2024	2025	2026
Corporate income before extraordinary items and taxes	2,776.8	3,044.8	3,338.6	3,660.8
Corporate income tax under the current system	416.5	456.7	500.8	549.1
Corporate income tax under the Estonian model				
Assumption: 10% of the taxable corporate income is distributed	41.7	45.7	50.1	54.9
Assumption: 25% of the taxable corporate income is distributed	104.1	114.2	125.2	137.3
The difference between the current system and the Estonian model				
Assumption: 10% of the taxable corporate income is distributed	374.9	411.0	450.7	494.2
Assumption: 25% of the taxable corporate income is distributed	312.4	342.5	375.6	411.8
The difference between the existing system and the Estonian model (as a percentage of the general tax revenue)				
Assumption: 10% of the taxable corporate income is distributed	2.0%	2.0%	2.1%	2.1%
Assumption: 25% of the taxable corporate income is distributed	1.7%	1.7%	1.7%	1.7%
Present values of the difference generated over the next 4 years (2023-2026)				
Assumption: 10% of the taxable corporate income is distributed				1,399.8
Assumption: 25% of the taxable corporate income is distributed				1,166.5

Source: Authors' calculations

Table A2.2: Scenario 2 entails the alignment of the average growth rate of taxable profit (profit before tax) for Commercial Banks for the forthcoming four years with the rate observed during the period of 2014-2019.

mln. GEL	2023	2024	2025	2026
Corporate income before extraordinary items and taxes	2,954.6	3,447.0	4,021.6	4,691.9
Corporate income tax under the current system	443.2	517.1	603.2	703.8
Corporate income tax under the Estonian model				
Assumption: 10% of the taxable corporate income is distributed	44.3	51.7	60.3	70.4
Assumption: 25% of the taxable corporate income is distributed	110.8	129.3	150.8	175.9
The difference between the current system and the Estonian model				
Assumption: 10% of the taxable corporate income is distributed	398.9	465.3	542.9	633.4
Assumption: 25% of the taxable corporate income is distributed	332.4	387.8	452.4	527.8
The difference between the existing system and the Estonian model (as a percentage of the general tax revenue)				
Assumption: 10% of the taxable corporate income is distributed	2.1%	2.3%	2.5%	2.7%
Assumption: 25% of the taxable corporate income is distributed	1.8%	1.9%	2.1%	2.2%
Present values of the difference generated over the next 4 years (2023-2026)				
Assumption: 10% of the taxable corporate income is distributed				1,639.8
Assumption: 25% of the taxable corporate income is distributed				1,366.5

Source: Authors' calculations

Table A2.3: Assumption entails the alignment of the average growth rate of taxable profit (profit before tax) for Insurance Companies the forthcoming four years with the rate observed during the period of 2017-2019.

mln. GEL	2023	2024	2025	2026
Corporate income before extraordinary items and taxes	66.8	78.7	92.8	109.3
Corporate income tax under the current system	10.0	11.8	13.9	16.4
Corporate income tax under the Estonian model				
Assumption: 10% of the taxable corporate income is distributed	1.0	1.2	1.4	1.6
Assumption: 25% of the taxable corporate income is distributed	2.5	3.0	3.5	4.1
The difference between the current system and the Estonian model				
Assumption: 10% of taxable profit is distributed	9.0	10.6	12.5	14.8
Assumption: 25% of taxable profit is distributed	7.5	8.9	10.4	12.3
The difference between the existing system and the Estonian model (as a percentage of the general tax revenue)				
Assumption: 10% of taxable profit is distributed	0.0%	0.1%	0.1%	0.1%
Assumption: 25% of taxable profit is distributed	0.0%	0.0%	0.0%	0.1%
Present values of the difference generated over the next 4 years (2023-2026)				
Assumption: 10% of taxable profit is distributed				37.7
Assumption: 25% of taxable profit is distributed				31.4

Source: Authors' calculations

Table A2.4: Under Scenario 1, the anticipated average growth rate of taxable profit (profit before tax) for the forthcoming four-year period corresponds to the rate observed during the years 2017-2019.

mln. GEL	2023	2024	2025	2026
Corporate income before extraordinary items and taxes	2,776.8	3,044.8	3,338.6	3,660.8
15% + 5% system (current system)				
Revenue from the corporate income tax	416.53	456.72	500.79	549.11
Revenue from tax on dividends				
Assumption: 10% of the taxable corporate income is distributed	11.80	12.94	14.19	15.56
Assumption: 25% of the taxable corporate income is distributed	29.50	32.35	35.47	38.90
20% system				
Revenue from the corporate income tax	555.37	608.96	667.72	732.15
Additional budgetary revenues generated in the scenario of adopting the 20% system				
Assumption: 0% of the taxable corporate income is distributed	138.84	152.24	166.93	183.04
Assumption: 10% of the taxable corporate income is distributed	127.04	139.30	152.74	167.48
Assumption: 25% of the taxable corporate income is distributed	109.34	119.89	131.46	144.14
Proportion of additional budget revenues generated in the scenario of adopting the 20% system to the total general tax revenue				
Assumption: 0% of the taxable corporate income is distributed	0.7%	0.8%	0.8%	0.8%
Assumption: 10% of the taxable corporate income is distributed	0.7%	0.7%	0.7%	0.7%
Assumption: 25% of the taxable corporate income is distributed	0.6%	0.6%	0.6%	0.6%
The present value of the additional budget revenues generated within the upcoming four-year period (2023-2026)				
Assumption: 0% of the taxable corporate income is distributed				518.08
Assumption: 10% of the taxable corporate income is distributed				474.04
Assumption: 25% of the taxable corporate income is distributed				407.99

Source: Authors' calculations

Table A2.5: Under Scenario 2, the anticipated average growth rate of taxable profit (profit before tax) for the forthcoming four-year period corresponds to the rate observed during the years 2014-2019.

mIn. GEL	2023	2024	2025	2026
Corporate income before extraordinary items and taxes	2,954.6	3,447.0	4,021.6	4,691.9
15% + 5% system (current system)				
Revenue from the corporate income tax	443.2	517.1	603.2	703.8
Revenue from tax on dividends				
Assumption: 10% of the taxable corporate income is distributed	12.6	14.6	17.1	19.9
Assumption: 25% of the taxable corporate income is distributed	31.4	36.6	42.7	49.9
20% system				
Revenue from the corporate income tax	590.9	689.4	804.3	938.4
Additional budgetary revenues generated in the scenario of adopting the 20% system				
Assumption: 0% of the taxable corporate income is distributed	147.7	172.4	201.1	234.6
Assumption: 10% of the taxable corporate income is distributed	135.2	157.7	184.0	214.7
Assumption: 25% of the taxable corporate income is distributed	116.3	135.7	158.3	184.7
Proportion of additional budget revenues generated in the scenario of adopting the 20% system to the total general tax revenue				
Assumption: 0% of the taxable corporate income is distributed	0.8%	0.9%	0.9%	1.0%
Assumption: 10% of the taxable corporate income is distributed	0.7%	0.8%	0.8%	0.9%
Assumption: 25% of the taxable corporate income is distributed	0.6%	0.7%	0.7%	0.8%
The present value of the additional budget revenues generated within the upcoming four-year period (2023-2026)				
Assumption: 0% of the taxable corporate income is distributed	606.9			
Assumption: 10% of the taxable corporate income is distributed	555.3			
Assumption: 25% of the taxable corporate income is distributed	477.9			

Source: Authors' calculations

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