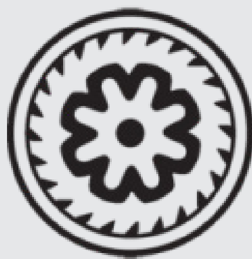

საქართველოს ეროვნული ბანკი
National Bank of Georgia

Macroeconomic Scenarios for IFRS 9

December

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Within the International Financial Reporting Standards (IFRS9) framework, credit risk assessments should incorporate forward-looking analysis. In particular, when assessing expected credit losses, the analysis of macroeconomic and financial factors, expected risks and dynamics should all be taken into account. The National Bank of Georgia (NBG) believes this amendment will facilitate timely recognition of credit risks and will therefore have a positive impact on financial stability.

To ensure transparent, consistent and efficient implementation of IFRS9 by financial institutions, starting from 2018 the NBG regularly publishes macroeconomic and financial forecasts and risk scenarios. The purpose of these scenarios is to provide financial institutions with consistent quantitative estimates of key macroeconomic variables to use them for expected credit loss calculations.

The baseline scenario relies on the NBG's Forecasting and Policy Analysis System (FPAS), while the alternate scenarios are based on a macro-financial model for risk scenario analysis. Additional estimations (satellite models) are used for those variables that are not directly derived from the models. The scenarios also incorporate additional analysis and expert judgement.

The scenarios are based on the data available at the moment of analysis and use the appropriate assumptions on exogenous variables. Scenarios are thus very likely to change when new information becomes available. The dynamics of the variables presented in the scenarios should not be perceived as NBG objectives (e.g., the interest rate, the exchange rate, etc.).

The baseline scenario reflects the most probable state of the economy balanced by risks from both sides, while the alternative scenarios consider different types of shocks (both positive and negative). The shocks are selected based on their relevance to current circumstances and on expert judgement. It should be noted that although the adverse scenarios reflect negative shocks, these scenarios are less severe than those used in stress testing.

In the current issue of the scenarios, the main drivers of the encompassing macroeconomic variables are the assumptions related to the duration of the ongoing regional conflicts around the world, along with the globally tightened financial conditions. In the baseline scenario, the increased demand resulting from improved service sector productivity, high competition among firms and accelerated credit activity is considered the leading factor of economic growth. According to the upside scenario, economic activity is more resilient compared to the baseline scenario. This is driven by a reduction in pressure on global food commodity prices and an increase in freight turnover within the country, supported by the expansion of the country's transit potential and the relatively swift resolution of regional conflicts. The adverse scenario encompasses the risks of tightening of trade and financial conditions due to the escalation of regional conflicts worldwide. It should be noted that uncertainty and risks regarding the future period are elevated.

The forecast horizon is three-four years and the scenarios are updated twice a year. In case of any significant changes in the macroeconomic environment, the scenarios will be updated more frequently. The scenarios describe the macroeconomic situation in the country and cover all of the main macroeconomic variables. However, not all of these variables are required to be included in the credit loss assessment model. The macroeconomic variables in the scenarios are provided at annual frequency. If an expected credit loss assessment model utilized by a financial institution is based on data of a higher frequency, the variables can be converted into the desired frequency by using linear interpolation. This way annual changes in the selected macroeconomic variables will be evenly distributed over the chosen higher frequency.

For credit loss assessment, 50% probability should be assigned to the baseline scenario, while the upside and adverse scenarios should both be given 25%-25% probabilities. It should be noted that as Georgia is a small open economy it is highly vulnerable to shocks. Thus, it is essential to consider the non-linear relation between macroeconomic scenarios and credit risk. Therefore, it is necessary to evaluate the expected credit loss for each of the scenarios, and only then weight them with the corresponding probabilities.

It should also be noted that the macro scenarios published by the NBG should not be perceived as the only correct version. Financial institutions may add an alternative scenario and/or change it. However, in such cases it is necessary for the financial institution to understand the relevance of the corresponding scenario and the linkages between the different macroeconomic variables within each scenario. If necessary, the financial institution should be able to prove the reasonability of any changes made to a scenario and/or justify the introduction of new scenarios.

Baseline Scenarios

According to the baseline scenario, which reflects the forecasts published in the October 2024 issue of the Monetary Policy Report, the Georgian economy continues to grow at a high rate in 2024. In the current year, the prices of both food and oil products on the international markets remained mostly stable. Amid uncertainty regarding the supply of energy carriers, as a result of the Russia-Ukraine war and the ongoing conflict in the Middle East, European countries have replenished their natural gas and oil reserves. Reduced economic activity in several EU countries and high levels of oil product inventories limited further increases in energy prices. However, there have been expectations of a suspension of natural gas flowing from Russia to Europe via Ukraine, which puts an upward pressure on prices. On the other hand, due to the increased interest from the US to supply its natural gas to Europe, it is expected that natural gas prices will change only slightly.

Recently stronger-than-expected domestic demand amid low unemployment in the US has helped boost economic activity. Tightened financial conditions led to a decrease in prices, which brought the inflation closer to the target rate. This supported easing of the monetary policy by the Fed. Following the normalization of the US economic growth rate, inflation will come down to the target rate, which will contribute to the reduction of the interest rate set by the Fed in the subsequent period as well.

In contrast to the US, disruptions in the manufacturing sector were evident in the EU, particularly in Italy and Germany. Amid tightened financial conditions and geopolitical fragmentation, this had an overall negative impact on their economic growth. Considering the expected stabilization of natural gas prices, additional decrease in inflation is expected, bringing it closer to the target rate. As a result, the ECB is expected to continue cutting its monetary policy rates at a faster pace compared to the Fed.

In the majority of Georgia's trading partner countries inflation remains above target levels. However, amid still tightened global financial conditions, inflation has taken a decreasing trend in most of Georgia's trading partner countries, including the EU. The decreased inflation is also related to the reduced activity due to disruption of trade flows amid geopolitical fragmentation. Accordingly, interest rates are expected to decrease in the mentioned countries, although this will happen at a slower pace in less developed countries. The situation is relatively harsh in the cases of Turkey and Russia, where monetary and fiscal policies have been additionally tightened against the backdrop of high inflation. Consequently, a decrease in economic activity is expected in the mentioned countries. It should be noted that there is a shortage in the Russian labor market, which further reduces its economic growth potential.

Setting aside the external factors, domestic economic activity is stronger than expected, which was caused by the ongoing structural changes in the country. This comes due to the rapid growth of the service sector in Georgia, in particular, the transportation, and the information and communication sector. At the same time, credit activity has increased significantly in the country, which facilitates consumption growth. The demand side pressure on prices is offset by the increase in production potential as a result of increased competition among firms. At the same time, the reduction of the unemployment level to the historical minimum also indicates the ongoing structural changes in the country, which leads to the acceleration of the economic growth potential in the short term. Acceleration of potential growth, along with ongoing fundamental and cyclical changes in the economy will significantly reduce the level of unemployment this year, and bring it closer to the natural level in the medium term.

The existing global geopolitical uncertainty, along with the local one, may affect the country's sovereign risk premium. In the current year, Georgia's sovereign risk premium will remain close to the average level of 2023, will increase slightly in 2025 and, in the medium term, will return to its equilibrium level. Considering the stabilization of external factors and strong economic activity, no significant changes are observed in the nominal exchange rate, both effective and against the US dollar, in the medium term.

Inflation remaining below the target throughout the current year is the result of the joint impact of several factors. These factors include the improvement of the potential of the economy, due to which the elevated aggregate demand did not bear inflationary pressures. Likewise, keeping inflation below the target is supported by the still tightened monetary policy, stable exchange rate and mostly unchanged prices of commodity products on the international markets. However, amid the ongoing conflicts in the region, uncertainty regarding oil prices remains, and the unpredictability of natural events caused by climate change puts pressure on food prices. These circumstances create risks of increased imported inflation. As the existing inflationary expectations diminish, the monetary policy rate will continue to decrease by small amounts and will stabilize around its neutral level. As a result, according to the baseline scenario, inflation will remain below the target rate in 2024, slightly exceed it in 2025, and be close to the target rate in the medium term.

The acceleration of the economic potential, reduction of the unemployment rate and easing of the monetary policy are all factors that boost the demand for real estate, creating an upward pressure on real estate prices. Consequently, real estate prices are still characterized by high growth. According to the baseline scenario, under these conditions and a stable exchange rate, real estate prices will rise this year in proportion to nominal economic growth in the medium term.

There is a high uncertainty around the baseline scenario due to existing geopolitical conditions in the region. In particular, in the coming years, Georgia's economic activity will significantly depend on the disruptions of trade relations on the global and local markets due to the geopolitical fragmentation aggravated by the possible escalation of existing regional conflicts. This process has a significant impact on the expectations of the global trade and financial markets and increases the pressure from the external sector on Georgia. The following alternative scenarios consider the sources of uncertainty and discuss the possible alternative developments of events.

Alternative Scenarios

In contrast to the baseline scenario, which is balanced by risks from both sides, the alternative scenarios examine various exogenous shocks that are chosen based on their relevance to current circumstances and expert judgement. In particular, the upside scenario discusses the

reduction of global inflationary pressures on oil following the faster resolution of regional conflicts, along with the expansion of Georgia's trade potential, while the adverse scenario focuses on the tightening of global trade and financial conditions due to the escalation of regional conflicts around the world. It should also be noted that the alternative scenarios do not consider risks associated with fiscal and/or other macroeconomic policies.

Upside Scenario

According to the upside scenario, there will be no further escalations of the conflict in the Middle East, and the Russia-Ukraine war will end relatively quickly. As a result, from the beginning of the following year, freight turnover in the Red Sea will be restored, global transportation costs will decrease, and trade flow will increase. Subsequently, easing of supply disruptions worldwide is occurring faster than in the baseline scenario. A faster-than-expected decline in global inflation will reduce the need for central banks to maintain a tight monetary policy regime, leading to an easing of global financial conditions. This will contribute to the improvement of global economic activity.

In the upside scenario, the US will increase the supply of its own oil products to European countries, which contributes to further lowering of oil prices. As a result, the significance of the US in the international arena is growing even more, which leads to the strengthening of the US dollar against the currencies of emerging markets and developing economies. Increased exports and a relatively loose monetary policy rate facilitate economic growth, although amid the improved fundamentals, they do not generate inflationary expectations. Accordingly, the Fed continues to reduce its monetary policy rate towards the neutral level at a faster pace compared to the baseline scenario. Due to the less inflationary environment as a result of the reduced pressure on the prices of food and oil products, the European Central Bank is also exiting the tight monetary policy regime relatively quickly in the medium term.

In emerging markets, the initial depreciation of local currencies with respect to the U.S. dollar encourages exports and generates inflationary pressures, offsetting the effects of already tightened monetary policies in these countries. However, the decrease in food prices neutralizes the effect of devaluation. Considering the above, against the background of geopolitical fragmentation of markets, the reduction of inflation in emerging markets and developing economies, and consequently, the exit from the tightened monetary policy regime, is taking place at a slower pace compared to the developed countries.

According to the upside scenario, starting from the following year, the reduction of regional risks will improve the market sentiment, which will lead to an increase in economic activity, as well as trade and investment flows in the majority of Georgia's trading partner countries. Subsequently, external demand for Georgia's exports will be solid, which will facilitate economic activity. The completion of infrastructure projects aimed at increasing cargo turnover of Georgia will balance the increased external demand and improve its sustainability. Implementation of infrastructural projects will lead to the creation of new workforce, which will reduce the level of unemployment in the country. Considering the country's geographical location, Georgia is strengthening its transit role in the region and is able to significantly increase the trade flows, which will increase the country's economic potential. As a result, Georgia's economy grows at a higher rate compared to the baseline scenario and will stabilize around 6 percent in the medium term.

Due to its increased role in the region, Georgia's sovereign risk premium will stabilize at a lower level compared to the baseline scenario. Reduced riskiness paves the way to attracting new foreign investments, which becomes a prerequisite for a slight strengthening of the domestic currency both effective and against the US dollar. Considering the existing macroeconomic stability in the country and

the improved expectations regarding economic growth, the real estate prices expressed both in GEL, and in the US dollars, are rising faster than in the baseline scenario.

According to the upside scenario, under the stable exchange rate, the inflationary pressure arising from the increase in external demand will be largely offset by the increase in trade potential. Increased domestic demand in the wake of increased employment will be the main driver of short-term inflation, the effect of which will wane in the first half of 2026 due to the utilization of the economy's potential. Therefore, considering the recovery of global economic activity, stable macroeconomic environment in the country and balanced inflationary expectations, the monetary policy exits from the tightened stance mostly similar to the baseline scenario.

Adverse Scenario

According to the adverse scenario, the escalation of regional conflicts, given their wide spectrum, could further disrupt trade flows, leading to an increase in transportation costs, along with prices of food, energy and other commodities. Volatility in the prices of consumer goods can lead to higher inflation, especially for importing countries, and limit the scope for monetary policy easing by central banks. However, countries' recourse to protectionist policies will not only exacerbate global trade tensions and disrupt supply chains, but may also affect economic potential and impede their medium-term growth prospects. This will place a particularly heavy burden on relatively less developed countries.

In the adverse scenario, a longer-than-expected slowdown in China's real estate sector, will weaken consumer and investor sentiment. This might, in turn, decrease investments, and in the wake of rising public debt, will limit the scope for fiscal support. Fiscal consolidation is likely to further dampen economic activity, which will lower the already reduced demand for oil products from China and will somewhat slow down the initial increase in the global oil prices.

Due to increased uncertainty on global markets under the mentioned circumstances and existing geopolitical tensions, higher than target inflation expectations are maintained in the following period, which is reflected in the delay in monetary policy easing by the Fed and the ECB. Accordingly, by the end of 2024, the Fed and the ECB will keep the monetary policy at the current level, tighten it slightly in the following year, and start reducing it from 2026. Moreover, following the emergence of recessionary risks in EU countries, the ECB tightens the monetary policy relatively less. Long-term maintenance of tighter global financial conditions will lead to significant alterations in global growth potential, which will be reflected in a medium-term decline in global economic activity.

Considering the deterioration of economic activity in trading partners, along with the emerging obstacles related to trade flows, a decrease in external demand, as well as exports is expected, which will increase the current account deficit of Georgia. Amid decreased trade inflows, along with global uncertainty due to the fundamental changes in trade and financial relations in the world, an outflow of capital from Georgia is probable in the following year. As a result, Georgia's sovereign risk premium will increase, which will have an impact on the local currency. Due to the still high dollarization of loans, the volatility of GEL and the prolongation of globally tightened financial conditions, it is expected that the debt burden for foreign currency borrowers will increase and their solvency will decrease.

As a result of the increased prices of imports, oil and food products, inflation will significantly increase in Georgia in 2025, which will remain above the target level throughout 2026. In the wake of increased inflation and inflationary expectations, the National Bank of Georgia will tighten the monetary policy and will remain in a tightened state in the medium term.

Amid increased uncertainty and worsening expectations with the current events, both globally and in the region, a large part of the Georgian population reduces consumption and increases savings in the following period. A decrease in domestic demand, along with a decrease in external demand, will significantly hinder economic activity. Reduced demand and increased operating costs could lead to a reduction in the production scale. Companies that are less diversified are particularly vulnerable. The deteriorating economic environment for businesses causes an increase in the unemployment rate in the country. This further reduces the domestic demand and worsens the expectations of the medium term recovery of the business sector. As a result, a large part of households and companies will find it difficult to service their existing debt, which leads to an increase in credit risk. This will negatively impact the stability of the local financial system. Against the background of existing risks and deteriorating expectations of economic recovery in the medium term, financial companies will tighten credit conditions, which will limit the issuance of new credit, compared to the baseline scenario, and further limit demand. This could decrease economic growth potential and delay its recovery.

Given the high level of unemployment and tighter credit conditions, real estate activity will decrease in the medium term. At the initial stage, due to the increase in intermediate costs, real estate prices will also increase. However, the attractiveness of Georgian real estate as an investment asset decreases, which will increase the demand-supply mismatch in the real estate market. Although, due to high inflation, real estate prices expressed in GEL will continue increasing.

Summary of Macroeconomic Scenarios

Scenario	Baseline	Upside (Improved Domestic and International Environments)	Adverse (Deterioration of Trade and Financial Conditions)
Fed Funds Rate	2024*: +0.0 pp (compared to the current level) 2025: -0.5 pp 2026: -0.5 pp 2027: -0.25 pp	2024*: +0.0 pp (compared to the current level) 2025: -1.0 pp 2026: -0.5 pp 2027: -0.5 pp	2024*: +0.0 pp (compared to the current level) 2025: +0.5 pp 2026: -0.75 pp 2027: -0.75 pp
ECB Policy Rate	2024*: +0.0 pp (compared to the current level) 2025: -0.5 pp 2026: -0.5 pp 2027: +0.0 pp	2024*: +0.0 pp (compared to the current level) 2025: -0.75 pp 2026: -0.25 pp 2027: -0.5 pp	2024*: +0.0 pp (compared to the current level) 2025: +0.5 pp 2026: -0.75 pp 2027: -0.5 pp
Change in Country Sovereign Risk Premuim**	2024: -0.1 pp (compared to 2023) 2025: +0.75 pp 2026: -0.25 pp 2027: +0.0 pp	2024: -0.1 pp (compared to 2023) 2025: +0.5 pp 2026: -0.25 pp 2027: -0.25 pp	2024: -0.1 pp (compared to 2023) 2025: +2.0 pp 2026: -1.0 pp 2027: -0.5 pp
GEL/USD Nominal Exchange Rate	2024*†: Unchanged 2025††: Unchanged 2026: Unchanged 2027: Unchanged	2024*†: Unchanged 2025††: Appreciation 2% 2026: Appreciation 3% 2027: Unchanged	2024*†: Unchanged 2025††: Depreciation 15% 2026: Unchanged 2027: Appreciation 5%
Nominal Effective Exchange Rate (NEER)	2024*†: Unchanged 2025††: Unchanged 2026: Unchanged 2027: Unchanged	2024*†: Unchanged 2025††: Appreciation 1% 2026: Appreciation 2% 2027: Unchanged	2024*†: Unchanged 2025††: Depreciation 9% 2026: Unchanged 2027: Appreciation 3%
Real GDP Growth (YoY)	2024: 8.7% 2025: 4.9% 2026: 5.8% 2027: 5.7%	2024: 8.7% 2025: 7.0% 2026: 6.0% 2027: 6.0%	2024: 8.7% 2025: 2.0% 2026: 3.0% 2027: 5.0%
Change in Unemployment Rate	2024: -2.4 pp 2025: +0.25 pp 2026: -0.25 pp 2027: -0.25 pp	2024: -2.4 pp 2025: -0.5 pp 2026: -0.5 pp 2027: +0.0 pp	2024: -2.4 pp 2025: +1.5 pp 2026: +1.5 pp 2027: -1.0 pp
CPI Inflation (YoY)	2024: 1.2% 2025: 2.9% 2026: 3.6% 2027: 2.7%	2024: 1.2% 2025: 3.0% 2026: 3.0% 2027: 3.0%	2024: 1.2% 2025: 8.0% 2026: 5.0% 2027: 3.0%
Change in Real Estate Prices (expressed in GEL, YoY)	2024: 11.0% 2025: 6.0% 2026: 6.5% 2027: 5.5%	2024: 11.0% 2025: 7.5% 2026: 6.5% 2027: 6.0%	2024: 11.0% 2025: 5.0% 2026: 6.0% 2027: 5.5%
Monetary Policy Rate (%)†††	2024*: +0.0 pp (compared to the current level) 2025: -0.8 pp 2026: -0.6 pp 2027: -0.1 pp	2024*: +0.0 pp (compared to the current level) 2025: -1.0 pp 2026: -0.5 pp 2027: +0.0 pp	2024*: +0.0 pp (compared to the current level) 2025: +1.5 pp 2026: -1.0 pp 2027: -1.0 pp

Note: Current levels correspond to the publication date of these scenarios. The numbers represent annual average changes, unless otherwise specified.

* The assumption is made for the remaining period of the year.
** JPMorgan EMBI Global Georgia Sovereign Spread; Source: Bloomberg.
† Average level prevailing in the two-week period ending on the cut-off date of 14 December 2024.
†† Compared to the December average of the previous year.
††† The assumption shows the change over the course of the year.

Appendix

Dynamics of Main Domestic Variables

Figure 1. CPI Inflation (YoY, %)

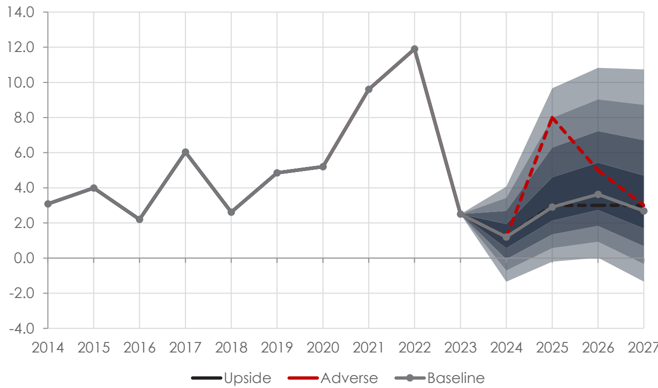


Figure 2. Real GDP Growth (YoY, %)

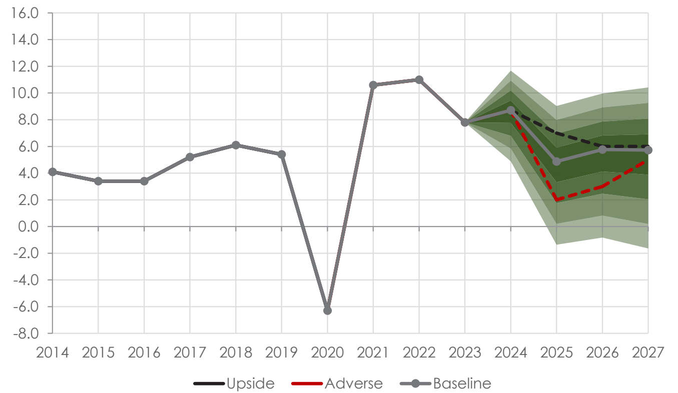
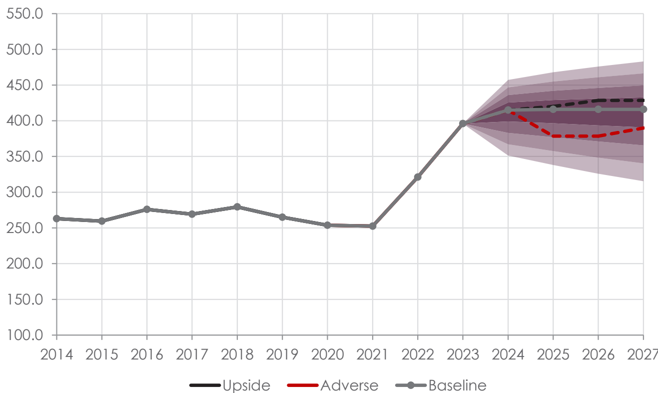
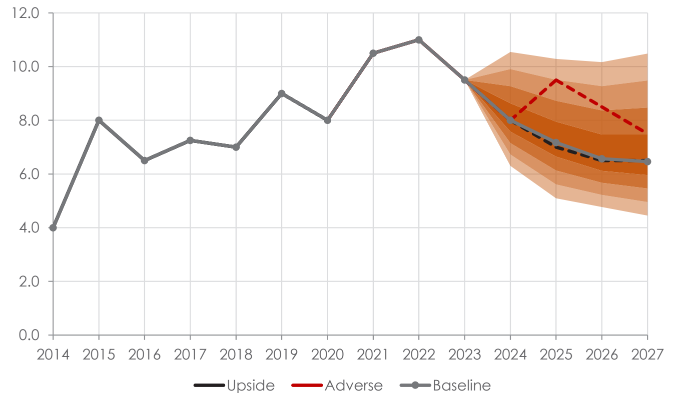


Figure 3. Nominal Effective Exchange Rate, NEER**



** 1995=100; Increase means appreciation

Figure 4. Monetary Policy Rate* (%)



	Hystory													Scenario											
														Baseline				Upside				Adverse			
	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2024	2025	2026	2027	2024	2025	2026	2027
CPI Inflation (YoY, %)	8.7	-0.9	-0.5	3.1	4.0	2.2	6.0	2.6	4.9	5.2	9.6	11.9	2.5	1.2	2.9	3.6	2.7	1.2	3.0	3.0	3.0	1.2	8.0	5.0	3.0
Monetary Policy Rate (%) *	6.75	5.25	3.75	4.0	8.0	6.5	7.25	7.0	9.0	8.0	10.5	11.0	9.5	8.0	7.2	6.6	6.5	8.0	7.0	6.5	6.5	8.0	9.5	8.5	7.5
Real GDP Growth (YoY, %)	7.9	6.6	5.1	4.1	3.4	3.4	5.2	6.1	5.4	-6.3	10.6	11.0	7.8	8.7	4.9	5.8	5.7	8.7	7.0	6.0	6.0	8.7	2.0	3.0	5.0
Nominal Effective Exchange Rate, NEER (1995=100)	238.4	254.1	254.0	262.9	259.5	275.9	269.3	279.4	265.0	253.8	252.6	321.1	395.9	414.9	416.0	416.0	416.0	414.9	420.1	428.5	428.5	414.9	378.5	378.5	389.9

Note: Data is annual average unless otherwise indicated.

The scenarios are based on the latest available data and the corresponding assumptions on exogenous variables. Thus, during each update, as new information becomes available scenarios are expected to change. The dynamics of the variables presented in the scenarios should not be perceived as the target of the National Bank of Georgia (e.g., the interest rate, the exchange rate, etc.).

* The numbers show the end-of-year values.