საქართველოს ეროვნული ბანკი
National Bank of Georgia

Macroeconomic Forecast Scenarios for IFRS 9

January

2019

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) welcomes this amendment and believes that it 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 IFRS 9 by financial institutions, starting from 2018 the NBG regularly publishes macroeconomic and financial forecasts and risk scenarios. The estimates provided within these scenarios can be used 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. Forecast scenarios are thus very likely to change when new information becomes available. The dynamics of the variables presented in the forecast 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.

The forecast horizon is three-four years and the scenarios are updated twice a year. The scenarios describe the macroeconomic situation in the country and cover all of the main macroeconomic variables. However, not all of these variables require inclusion in the credit loss assessment model.

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 Scenario

According to the baseline scenario, which is based on the latest issue of the Monetary Policy Report, domestic and foreign economic conditions continue to improve. Improvement of economic activity is mainly driven by positive developments in the foreign sector and the growth of domestic demand. In particular, exports of goods and services and tourism revenue have significantly increased. Remittances also showed a positive trend. In terms of domestic factors, the growth of investments and consumption has had a positive impact on economic activity, which in turn is due to credit growth and improved business and consumer confidence. In the second half of 2018, external risks increased in the light of regional political and economic tensions, while the growth of domestic demand has decelerated slightly. According to the baseline forecast, real GDP annual growth will remain around 5.0% over the next three years and unemployment will continue to fall (see Diagram 2). Inflation will be close to the 3% target in the medium term (see Diagram 1). Real estate prices in GEL will rise proportionally to inflation.

In the baseline scenario, the US dollar LIBOR rates continue to increase. As anticipated in the previous issue of the scenarios, there have been two rate hikes in the second half of 2018. However, the pace of Fed's policy normalization is expected to slow down in upcoming years with only two more hikes in 2019. According to the Fed's forecast, the policy rate is expected to increase by 0.5-0.75 percentage points during 2019-2021. In this scenario, the European Central Bank exits from its eased monetary policy and increases its policy rate by 1.5pp throughout 2019-2021.

In the baseline scenario, it is assumed that the GEL nominal exchange rate against the US dollar remains at its current level. The nominal effective exchange rate will also stay stable (see Diagram 3).

In the face of external risks arising from regional tensions, the NBG has maintained the monetary policy rate at 7.0% in the second half of 2018. Given the regional and global risks, policy rate will continue to decrease at a slow pace. In accordance with the current macroeconomic forecast, the policy rate is expected to go back to a neutral level in the medium term (see Diagram 4).

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 on expert judgement. The upside scenario considers a more rapid recovery of the economy compared to the baseline scenario, while the adverse scenario focuses on negative shocks. It should also be noted that the alternative scenarios do not consider risks associated with fiscal and/or other macroeconomic policies.

Upside Scenario

The upside scenario considers faster economic growth compared to the baseline, which is due to stronger demand. The strong demand, on the one hand, is driven by improving foreign sector, namely the high growth of export, tourism, remittances and direct investments, and on the other hand, by the improvement of business and consumer sentiment.

In line with stronger demand compared to baseline, real GDP growth is high and unemployment is declining. Given the improved economic growth, the negative output gap closes at a faster pace and increases inflationary pressure.

In this scenario, FED and ECB policy rates increase by the same amount as in the baseline scenario. However, the effective exchange rate as well as the bilateral GEL/USD exchange rate appreciate in the upside scenario given the soaring foreign currency inflows due to high ecenomic growth. According to the scenario, in 2019, the GEL appreciates against the US dollar by 10%, and then by another 5% in 2020. The appreciation is partially offset in 2021.

In order to reduce inflationary pressure caused by strong demand, monetary policy remains tight for a longer period than in the baseline scenario. Consequently, the reduction of policy rate in the upside scenario is relatively modest.

Adverse Scenario

The adverse scenario considers intensified regional and global economic tensions together with the continued tightening of global financial conditions and reversal of risk appetite. Rising protectionism and policy uncertainty in developed countries contribute to reduced trade in investment flows resulting in weaker global growth. In this scenario, the federal funds rate increases at greater-than-expected rate in 2019-2021 and reaches 4.5% by 2021. In the adverse scenario, the European Central Bank exits from its eased monetary policy at a faster pace and increases its monetary policy rate by 2.5pp throughout 2019-2021.

In line with tightened global financial conditions, investors' risk appetite towards emerging countries decreases, which leads to the snapback of sovereign risk premiums in these countries from their historically low levels. Risk premium hike in the region is further amplified by the political and economic instability in Ukraine and Turkey. Tightened financial conditions and an increase in risk premiums together with oil price drops reduce capital inflow into Georgia's trading partners with adverse implications for their exchange rates. Therefore, in this scenario, US dollar and partially EUR appreciate against the trading partner currencies. Consequently, the impact of external factors on the GEL exchange rate is negative. The adverse scenario implies that in 2019, the GEL depreciates against US dollar by 15%, and then by another 10% in 2020, which facilitates the elimination of external disbalances. Alongside the economic recovery in 2021, the GEL appreciates by 5%. In these years, the depreciation of nominal effective exchange rate is small as the exchange rates of the trading partners also depreciate due to the global developments.

In line with adverse external environment, during 2019-2021 real GDP growth falls relative to baseline by 7 percentage points cumulatively. Since the currencies of the trading partners along with the GEL depreciate against the USD, the imported inflation does not increase and as a result, the impact on headline inflation is small. In order to anchor inflation expectations, monetary policy is tighter than in the baseline scenario. In the adverse scenario, real estate prices expressed in GEL exhibit volatility by dropping in 2019 only to recover as the shock fades away in later years.

Summary of Macroeconomic Forecast Scenarios

Scenario	Baseline	Upside (Strong Demand)	Adverse (Negative External Shock)
FED Funds Rate	2019: +0.5 pp 2020: +0.25 pp 2021: +0.0 pp	2019: +0.5 pp 2020: +0.25 pp 2021: +0.0 pp	2019: +1.0 pp 2020: +0.5 pp 2021: +0.5 pp
ECB Policy Rate	2019: +0.25 pp 2020: +0.5 pp 2021: +0.75 pp	2019: +0.25 pp 2020: +0.5 pp 2021: +0.75 pp	2019: +0.5 pp 2020: +1.0 pp 2021: +1.0 pp
Change in Country Sovereign Risk Premuim*	2019: Unchanged 2020: Unchanged 2021: Unchanged	2019: Unchanged 2020: Unchanged 2021: Unchanged	2019: +1.5 pp 2020: +1.0 pp 2021: +0.0 pp
GEL/USD Nominal Exchange Rate	2019: Unchanged 2020: Unchanged 2021: Unchanged	2019: Appreciation 10% 2020: Appreciation 5% 2021: Depreciation 5%	2019: Depreciation 15% 2020: Depreciation 10% 2021: Appreciation 5%
Change in Real Estate Prices (expressed in GEL, YoY)	2019: 2.9% 2020: 3.0% 2021: 3.0%	2019: 3.4% 2020: 3.2% 2021: 3.0%	2019: -5.0% 2020: +0.0% 2021: +5.0%
Real GDP Growth (YoY)	2019: 5.0% 2020: 5.0% 2021: 5.0%	2019: 6.0% 2020: 5.5% 2021: 5.0%	2019: 2.0% 2020: 2.5% 2021: 3.5%
Change in Unemployment Rate	2019: -0.2 pp 2020: -0.2 pp 2021: -0.2 pp	2019: -0.5 pp 2020: -0.5 pp 2021: -0.2 pp	2019: +1.0 pp 2020: +1.0 pp 2021: +0.5 pp
CPI Inflation (YoY)	2019: 2.9% 2020: 3.0% 2021: 3.0%	2019: 3.4% 2020: 3.2% 2021: 3.0%	2019: 4.5% 2020: 4.0% 2021: 3.0%
Monetary Policy Rate (%)	2019: -0.5 pp 2020: -0.5 pp 2021: -0.25 pp	2019: -0.25 pp 2020: -0.25 pp 2021: -0.0 pp	2019: +0.5 pp 2020: +0.0 pp 2021: -0.75 pp
Nominal Effective Exchange Rate (NEER)	2019: Unchanged 2020: Unchanged 2021: Unchanged	2019: Appreciation 6% 2020: Appreciation 3% 2021: Unchanged	2019: Depreciation 7% 2020: Depreciation 5% 2021: Appreciation 2%

*JPMorgan EMBI Global Georgia Sovereign Spread; Source: Bloomberg

Appendix

Forecast Dynamics for Main Domestic Variables

Figure 1. CPI Inflation (YoY, %)

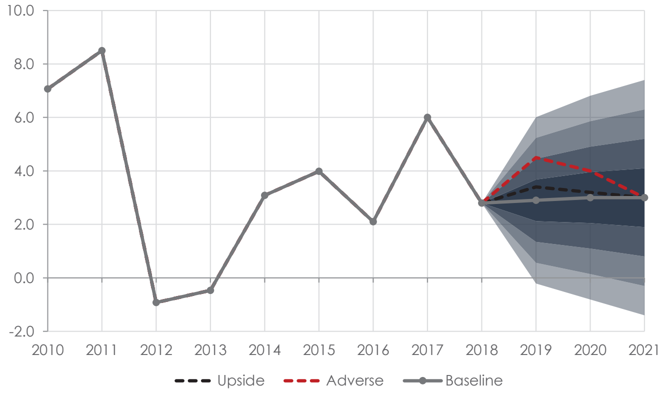


Figure 2. Real GDP Growth (YoY, %)

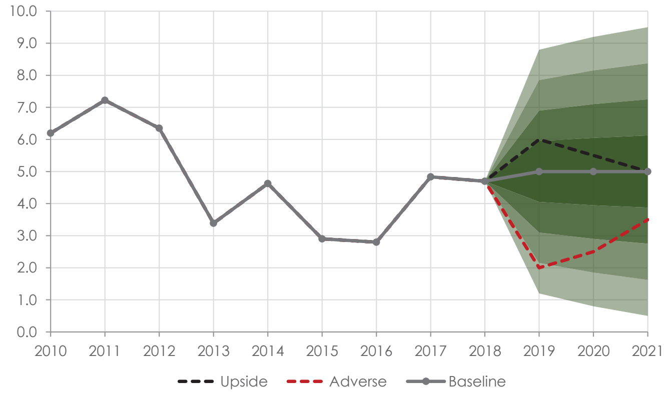
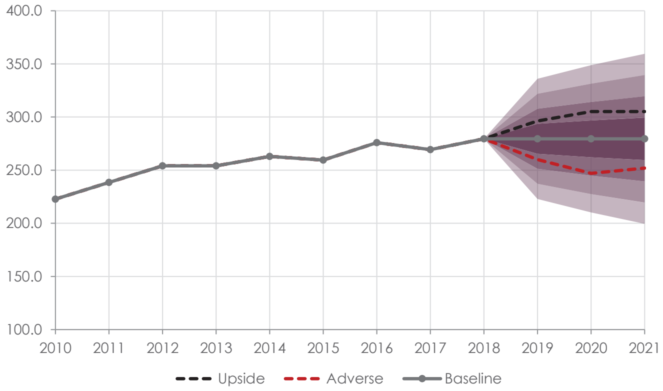
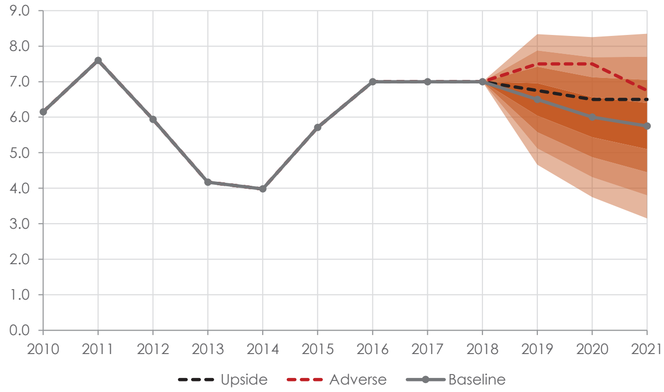


Figure 3. Nominal Effective Exchange Rate, NEER*



* 1995=100; Increase means appreciation

Figure 4. Monetary Policy Rate (%)



	History									Forecast Scenarios								
										Baseline			Upside			Adverse		
	2010	2011	2012	2013	2014	2015	2016	2017	2018*	2019	2020	2021	2019	2020	2021	2019	2020	2021
CPI Inflation (YoY, %)	7.1	8.5	-0.9	-0.5	3.1	4.0	2.1	6.0	2.8	2.9	3.0	3.0	3.4	3.2	3.0	4.5	4.0	3.0
Monetary Policy Rate (%)	6.15	7.6	5.9	4.2	4.0	5.7	7.0	7.0	7.0	6.50	6.0	5.8	6.75	6.50	6.50	7.50	7.50	6.75
Real GDP Growth (YoY, %)	6.2	7.2	6.4	3.4	4.6	2.9	2.8	4.8	4.7	5.0	5.0	5.0	6.0	5.5	5.0	2.0	2.5	3.5
Nominal Effective Exchange Rate, NEER (1995=100)	222.8	238.4	254.1	254.0	262.9	259.5	275.9	269.3	279.5	279.5	279.5	279.5	296.3	305.2	305.2	259.9	246.9	251.9

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 forecast scenarios should not be perceived as the target of the National Bank of Georgia (e.g., the interest rate, the exchange rate, etc.).