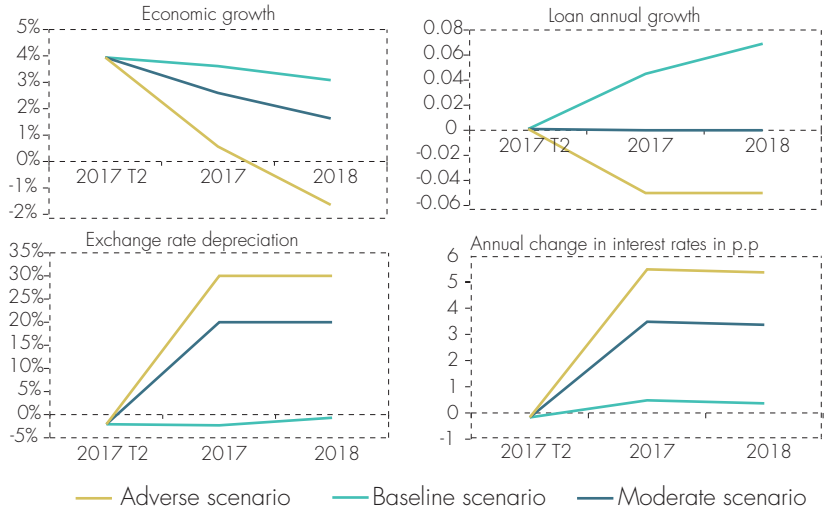
9. ASSESSING BANKING SECTOR RESILIANCE THROUGH STRESS-TESTING[56]

(105) Stress testing assessed the banking sector resilience against economic and financial developments two years ahead. Although the results show that the banking sector remains stable, it appears to be more exposed in the case of the adverse scenario, in which the assumptions are also more extreme. *In terms of capital adequacy, the impact of such scenarios evidences the need for additional capital in some of the individual banks. The stress test on the liquidity situation corroborates the assessment for a strong liquidity position in the banking sector.*

9.1 ASSESING THE RESILIENCE TO MACROECONOMIC SHOCKS

(106) The stress test exercise assesses the banking sector's resilience and capital adequacy for the period 2017-2018. The assessment of the impact from macroeconomic situations on the financial situation of the banking sector excludes the possibility of increasing the paid-in capital during the period, and is performed by applying three scenarios: baseline scenario, moderate scenario and adverse scenario. The last two scenarios have a lower probability of occurrence.

Chart 9.1 Assumptions to construct the stress test



Source: Bank of Albania, Financial Stability Department.

[57] *Stress-testing is not a forecasting method. Intentionally, the scenarios contain adverse and extreme developments, but with a low probability of occurrence to test the banking sector resilience. Though banks are encouraged to assess their financial situation to withstand effects from these scenarios, they should not regard them as events the Bank of Albania expects to take place in the future. The scenarios vary over time, depending on the economic and financial developments. In addition, the scenarios do not take into consideration operations that banks and authorities may carry out to constantly strengthen their financial position and resilience to risks.*

(107) The baseline scenario assumes a positive economic growth until the end of 2018, and relatively comparable with the factual values of 2017 Q1. In this scenario, the economic growth is accompanied with stable lending, supported by significantly improved credit portfolio quality until the end of 2018. The portfolio of non-performing loans continued to be significantly affected by the measures taken by the Bank of Albania in the framework of treating non-performing loans.

(108) The moderate scenario assumes a positive economic growth, but at a slower pace than the baseline scenario, while the adverse scenario assumes a contraction of the economy until the end of 2018. These developments, coupled with a depreciation of the exchange rate, increase of interest rates and shortage and/or contraction of lending, affect the banking sector's performance in terms of its capitalisation. The credit portfolio quality for these scenarios reflects, in addition to cleaning the balance sheets, the new flows in non-performing loans. As a result, until the end of 2018, the ratio of non-performing loans is presented as worsened up to 17.5 p.p. in the moderate scenario and up to 36.5 p.p. in the adverse scenario against the baseline scenario level. The adverse scenarios, in addition to the reduction of credit quality, assume also shocks in terms of market risk: the interest rate risk, re-pricing securities risk, exchange rate risk, and operational risk.

(109) Stress test results in terms of capital adequacy show that:

a. - in the baseline scenario, the capital adequacy ratio (CAR) of the sector registers 16.1% at end- 2017, and 16.6% at end- 2018, following the faster credit growth and the improvement of credit quality, as well as the more favourable performance of the exchange rate. Developments by banking groups attest to resilience and capitalisation above the regulatory minimum requirement.

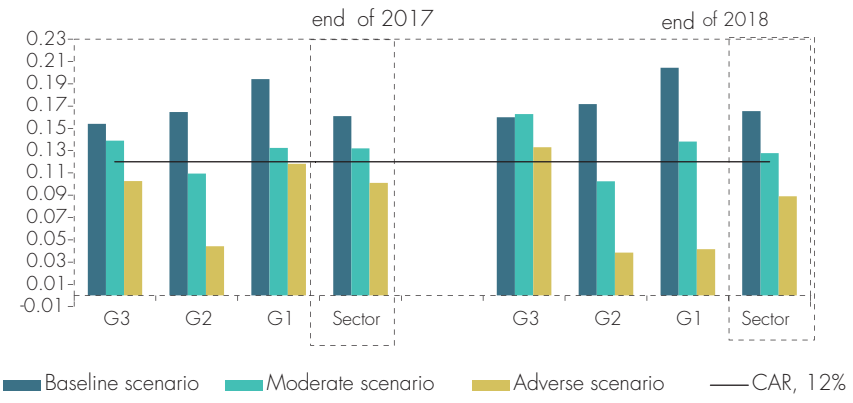
b. - in the moderate scenario, the sector's CAR reaches 13.2% at end-2017 and 12.8% at end- 2018. This rate is driven by assumptions for a lower growth rate of economic activity; shortage of lending to the economy; increase in interest rates; and, depreciation of the national currency. Despite maintaining the capitalisation level at sector level, the developments in individual banks evidence the need for capital injection in six of them, which account for about 35% of the sector's assets. In this case, the needs for additional capital amount up to ALL 15.2 billion until the end of 2018;

c. - in the adverse scenario, the sector's CAR drops even further to 10.1% at the end of 2018, based on even more adverse assumptions included in the scenario. In this scenario, ten banks fall below the required capitalisation level; they account for about half of the sector's assets. The extreme macroeconomic developments that the scenario contains, contribute to the deterioration of credit quality, in the level of

losses of the securities portfolio and the increase of exposure to market and operational risk. In this case, the needs for additional capital are significantly higher than in the moderate scenario.

In a real context, during the period, the paid-in capital of the banking sector increased by around ALL 5 billion or two times higher than the capital growth in same period of the previous year.

Chart 9.2 Capital adequacy ratio, by stress test scenarios



Source: Bank of Albania, Financial Stability Department.

9.2 LIQUIDITY STRESS TEST

(110) **The purpose of the liquidity stress test is to assess the ability of individual banks and of the banking sector to withstand extreme but potential shocks to their financing activity.** These tests aim to identify weaknesses or deficiencies of the sector and particular banks in currencies, instruments and certain time horizons; to assess banks' readiness to cope with extreme liquidity shortages; and to help the supervisory authority to undertake specific policies that address liquidity management, including measures aimed at reducing exposures or creating specific reserves.

(111) **The analysis, in this case, is built based on the liquidity structure of the sector in May 2017.** The information is taken by individual banks data, for granular money flows generated by assets and liabilities classified by maturity structure. The various scenarios assume some shocks from the unexpected deposits withdrawal and assess the adequacy of expanded liquid assets available for financing them. More specifically:

(i) The test assumes the banks will be able to cope with a pronounced deposit withdrawal, only through the sale of expanded liquid assets (without asking for additional liquidity from the Bank of Albania);
(ii) Investments in securities are sold through a haircut of their value by 10% and 20%. The bank is considered as failing the stress test only if expanded liquid assets shrink to the level when additional liquidity is needed by the Bank of Albania in the form of "loan for liquidity support".

Banks fail the stress test only if the expanded liquid assets[58] which are sold at haircut margins set by the test, are insufficient and there is an additional need for liquidity by the Bank of Albania in the form of a "liquidity support loan".

(112) The test results show that overall the banking sector passes the liquidity stress test successfully. The scenario which assumes the use of enhanced liquid assets for closing the gap, shows that for the Albanian lek, there is 1 bank which is not able to close the gap for 6 of 8 maturity baskets and there are 2 banks which are not able to close the gap for 1 of the maturities; For the euro, the gap continues to be negative for 2 banks for first two maturity baskets, whilst for the US dollar the gap remains negative for 1 bank for all the baskets beyond the first basket (up to 1 day).

(113) The test results show that the banking sector successfully passes the liquidity stress test. In comparison with the last six-months, the results for the liquidity gap[59] show a weakening of the situation for euro and US dollar and an almost similar situation for the Albanian lek.

(114) Compared to the previous six months, considering the number of banks that fail the stress test, there is an improvement for the lek and US dollar, and an unchanged situation for euro. Regarding lek, the maximum number of banks that fail to close the negative liquidity gap even after the sale of expanded liquid assets is 2 and lower compared to 3-4 banks that continued to have a negative gap in the stress test of the last six-months, which reflects an increase in the stock of liquid assets in lek. After the sale of liquid assets, for the other two currencies, the system is left with only 1 bank that continue to register a negative gap in the respective currency. For all three currencies, the gap size for the baskets with the largest gap in relation to the sector's assets in that currency is quite low (0.2% for lek, 0.3% for euro and 0.4% for US dollar) The test shows that there are no banks in the banking sector that are facing liquidity difficulties in two or three currencies at the same time, and that banking sector has strengthened the counterbalancing capacities compared to the previous six months.

[58] *Unlike the concept of liquid assets according to the regulation of the Bank of Albania, which limits the maturity of the securities that are considered as liquid assets, in this concept for purposes of this test, is included the entire portfolio of securities.*
[59] *Before selling liquid assets.*

(115) In conclusion, banks are assessed to have a high resilience to liquidity shocks. However, the low diversification level of liquidity reserves, which consist mostly in government debt securities, evidences the need for deepening the market and increasing liquidity for these instruments.