Supervisory stress tests of selected banks 2023

Czech National Bank —— Supervisory stress tests of selected banks —— 2023

CZECH NATIONAL BANK

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SUMMARY

The aggregate results of the supervisory stress tests of domestic banks subject to CNB supervision (accounting for around 91% of the assets of the Czech banking sector) confirmed that those banks are sufficiently resilient to potential hypothetical adverse economic developments. The capitalisation of the part of the banking sector tested would remain well above the regulatory minimum of 8% even in an Adverse Scenario assuming a decline in economic activity in the Czech Republic and abroad, as well as a period of higher inflation. The sector's resilience is based mainly on its initial capitalisation with a total capital ratio, which amounted to 20.2% for the tested banks on a consolidated basis at the end of 2022, and profitability maintained amid higher interest rates. As usual, credit risk was the most significant of the risks under review.

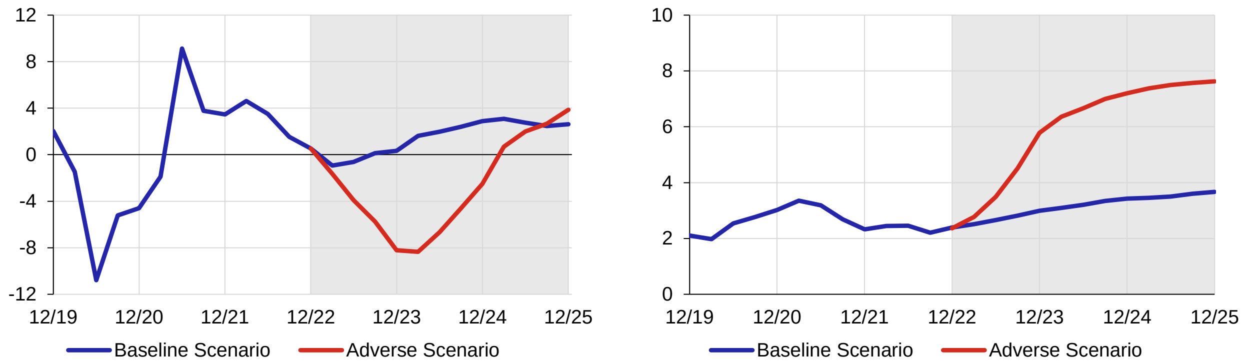
I. FOREWORD

The CNB has been conducting supervisory stress tests in partnership with selected domestic banks and banking groups since 2009. The tests are used to assess the risks[1] they face in the event of hypothetical adverse economic developments as represented by the *Adverse Scenario* defined by the CNB. Banks use the single methodological framework to model the developments of selected risks and provide the CNB with the expected impact on solvency. The results are used by the CNB's Financial Market Supervision Department in the process of supervising and assessing the capitalisation of individual banks.[2] Since 2018, the supervisory stress test methodology has been based on the European Banking Authority's (EBA) rules for EU-wide stress testing adapted to the specificities of the Czech banking system.

II. MACROECONOMIC SCENARIOS

The *Baseline Scenario* for the first two years is based on the CNB's official macroeconomic forecast published in Monetary Policy Report – Winter 2023. The *Baseline Scenario* for the third year was created by the Monetary Department solely for the purposes of stress testing the financial sector. The scenario (see Chart 1 and Chart 2) expects economic activity to grow moderately (by around 0.5%) in the first year, due to low household consumption as a result of a decline in their real income and a higher saving rate. Growth will also be positively affected by net exports, which will be fostered by the fade-out of value chain problems, cheaper energy and a gradual recovery in external demand. Economic growth will pick up to 3% in the second and third years of the stress tests. This will also be fostered by a decline in inflation, which is expected to reach single figures at the end of 2023 and fall to the 2% target next year. In line with this, interest rates will also start to decline. The labour market tightness will persist and the unemployment rate will increase only slightly in the years ahead. Real wages will return to growth in 2024, which will further boost positive sentiment and growth in household consumption and foster a greater economic recovery. The expected effect of fiscal policy will be neutral initially, later slightly countercyclical. Government bond yields will decline gradually, reaching 4% at the scenario horizon. The exchange rate will weaken slightly to CZK 24.50 to the euro in the second year of the horizon and will remain at these levels until the end of that year.

Chart 1 Alternative scenarios: real GDP growth (y-o-y; in %) and growth in unemployment (in %)

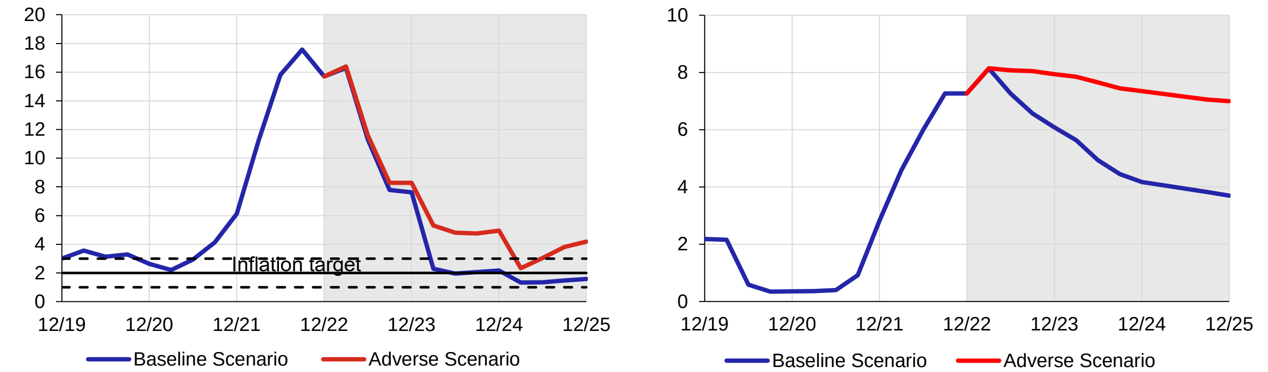


Source: CNB

1 Supervisory stress testing covers credit, market and operational risk, interest income and expenses, and capital.

2 Article 100 of Directive 2013/36/EU of the European Parliament and of the Council (CRD).

Chart 2 Alternative scenarios: inflation (y-o-y; in %) and the 3M PRIBOR (in %)



Source: CNB

The *Adverse Scenario* (Chart 1 Chart 2) was created by the Monetary Department solely for the purposes of stress testing the financial sector. Hypothetical adverse global developments related to the war in Ukraine, rising commodity prices and continued value chain problems would lead to inflation remaining elevated for longer. Inflation (around 11% in the first year, 5% in the second year and 3% in the third year) would thus continue to limit household consumption and firms' investment activity. A decline in external demand, accompanied by a fall in confidence among households and firms, would also have a negative impact on the domestic economy. GDP would thus drop to around 5% in the first and second years of the scenario, unemployment would rise gradually to 7.5% in the third year of the scenario and wage growth would slow. The economy would recover in the third year due to an increase in external demand and investment. Owing to persisting inflation pressures, monetary policy would be restrictive and monetary policy rates would fall only gradually from the elevated levels. Due to the monetary policy settings, yields on Czech government bonds would increase in 2023 and decline gradually for shorter maturities in the coming years, while remaining high for longer maturities due to an increase in the credit risk premium. The exchange rate would gradually weaken to CZK 30 to the euro in the scenario.

III. RESULTS

Given the assumptions in supervisory stress testing, banks expect profitability to decline from CZK 91.8 billion in 2022 to around CZK 70 billion in the *Baseline Scenario* (see Chart 3). The profit is affected mainly by net interest profit (the main component of Net profit to cover risks, see Chart 4) and impairment of assets held at amortised cost (the main component of Credit risk). Net profit to cover losses contributes to growth in the capital ratio of 9.1 pp and credit risk reduces the capital ratio by 2.5 pp. Banks thus expect a slight decline in interest profits compared to the very high level in 2022, and a slight increase in impairment losses. Market risk fosters an increase in the capital ratio of 0.5 pp (due to historical profitability on assets and liabilities held for trading) and operational risk reduces the capital ratio by 0.06 pp. The impacts of the *Baseline Scenario* are reflected both in the total and CET1 capital ratios, which increase from 20.2% and 18.5% respectively to 20.6% and 19.1% (see Table 1). The reason for the only slight increase is mainly the payment of dividends, which reduces the capital ratio by 5.0 pp (see Chart 4). As a result, the leverage ratio increases from 6.6% to 7.1% (see Table 1).

Chart 3
After-tax profit in the *Baseline* and *Adverse Scenarios*
(CZK billions)

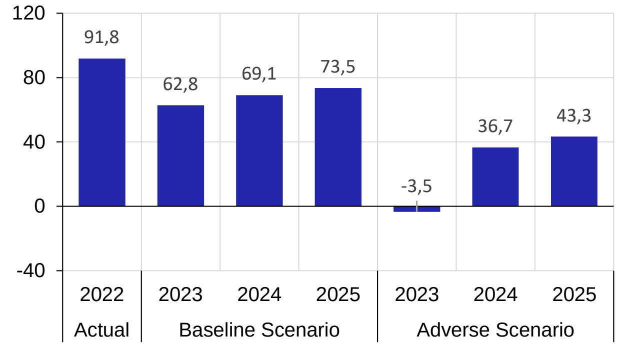


Table 1
Impact of the *Baseline* and *Adverse Scenarios*
(in CZK billions and %)

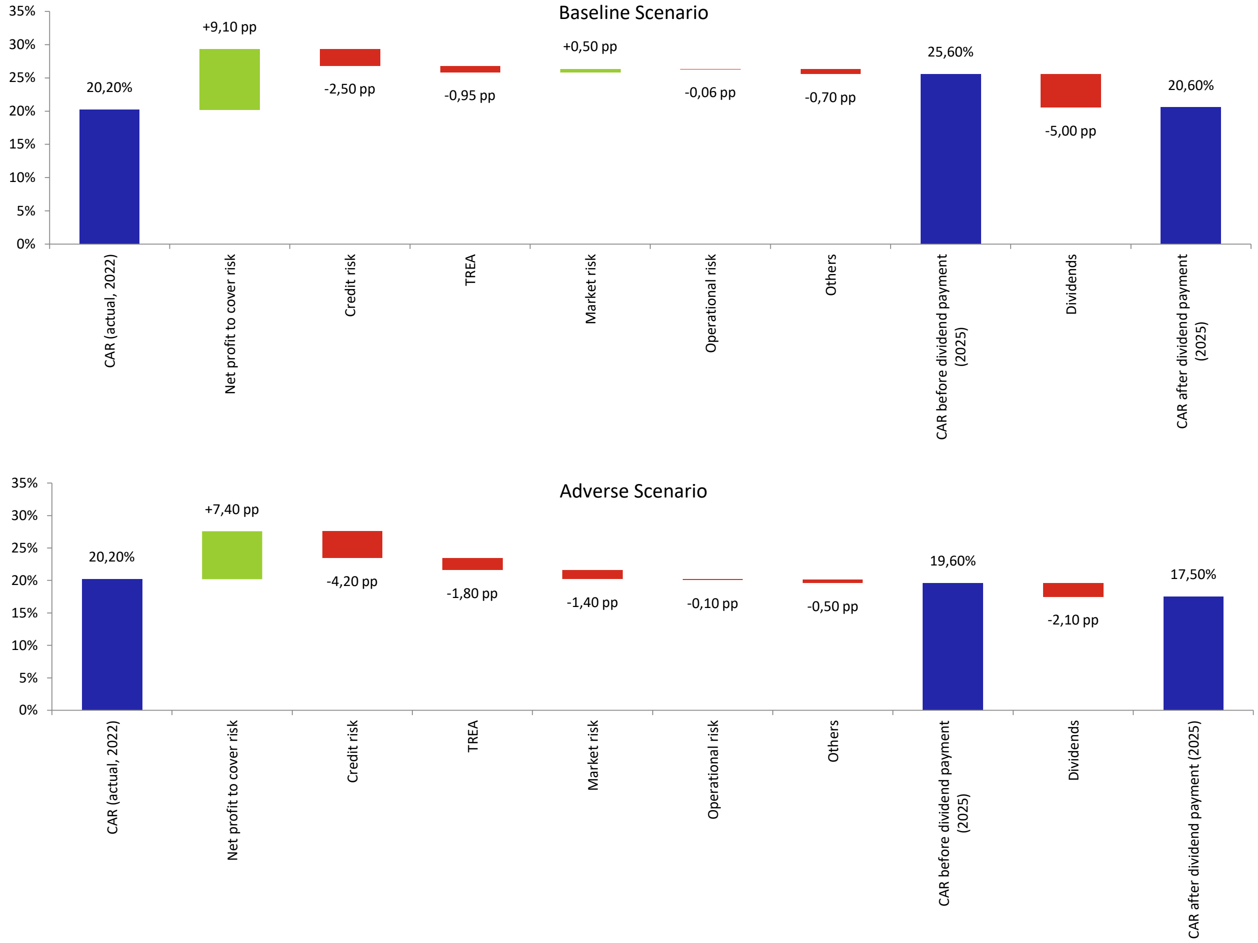
	Actual value	*Baseline scenario*	*Adverse Scenario*
	31/12/2022	31/12/2025	31/12/2025
CET1 capital (CZK billions)	506.0	545.4	484.1
Regulatory capital (CZK billions)	551.9	585.6	524.5
Total risk exposure amount (TREA, CZK billions)	2732.2	2848.2	2997.3
CET1 capital ratio (%)	18.5	19.1	16.2
Total capital ratio (%)	20.2	20.6	17.5
Leverage ratio (%)	6.6	7.1	6.3

Source: CNB

The *Adverse Scenario* sees a decline in interest profit and increased materialisation of the individual risks, which result in a total sectoral loss of CZK 3.5 billion in the first year (see Chart 3). In the coming years, the negative impacts of market risk in particular would decrease and banks would be able to generate annual profits of around CZK 40 billion. Net profit to cover risks would make a positive contribution to the capital ratio of 7.4 pp (see Chart 4), but increased materialisation of credit risk (-4.2 pp), market risk (-1.4 pp) and operational risk (-0.1 pp) would almost offset this effect. A rise in risk weights would increase risk-weighted exposures (TREA, -1.8 pp) and the capital ratio would decrease from 20.2% to 19.6%. Profits combined with the initial level of the capital ratio would allow banks to pay dividends at the aggregate sector level, which would reduce the capital ratio to 17.5%, i.e. well above the minimum capital requirements. The total drop in the capital ratio of 2.7 pp indicates high resilience of the banking sector.

Chart 4

Decomposition of the change in the overall capital ratio of the banks tested in the alternative scenarios



Source: CNB

IV. FREQUENCY OF SUPERVISORY STRESS TESTS

The supervisory stress tests of banks are carried out every two years. The CNB is thus planning to conduct the next supervisory stress tests in 2025. However, it may perform the annual stress test if the financial or macroeconomic situation changes significantly or other material facts arise.

Issued by:
CZECH NATIONAL BANK
Na Příkopě 28
115 03 Praha 1
Czech Republic

Contact:
COMMUNICATIONS DIVISION
GENERAL SECRETARIAT
Tel.: +420 224 413 112
www.cnb.cz