

CZECH BANKING SECTOR STRESS TESTS  
NOVEMBER 2015

Financial Stability Department

2015

## SUMMARY

*The results of stress tests of the Czech banking sector performed using data available as of the end of 2015 Q3 confirm that the banking sector is sufficiently resilient to potential adverse shocks. The capitalisation of the sector as a whole would remain above the regulatory minimum of 8% even in a stress scenario assuming a hypothetical sizeable decline in economic activity in the Czech Republic and abroad. The sector's resilience is based mainly on its high capital adequacy ratio, which stood at 17.3% at the end of September 2015, and on its robust profitability.*

## 1. INTRODUCTION

The Czech National Bank regularly conducts stress tests to assess the impacts of highly adverse future economic scenarios on the domestic banking sector. This document presents the results of the November stress tests, which were conducted on the data as of 30 September 2015 and focus on the coming three years. In the assessment of resilience, the impact of future economic developments – represented by one baseline scenario and one stress scenario – on selected indicators of the banking sector's soundness was tested.

## 2. MACROECONOMIC SCENARIOS

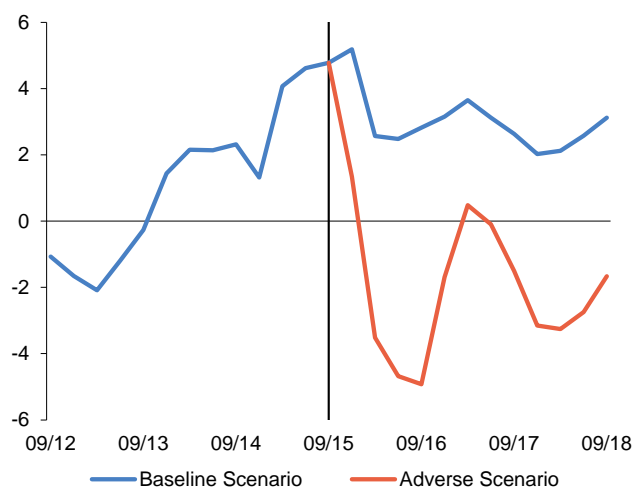
The **Baseline Scenario** is based on the CNB's November macroeconomic forecast published in Inflation Report IV/2015 and assumes economic growth of 4.7% this year. Economic activity is being favourably influenced by an environment of easy monetary conditions, growth in external demand, low oil prices and higher growth in government investment financed chiefly from EU funds. The scenario assumes a slowdown in economic growth to just below 3% in 2016 and 2017 as extraordinary factors dissipate. The general unemployment rate falls below 5% as economic activity increases at the scenario horizon. Headline inflation will rise from its current low levels and reach the 2% target in late 2016 and early 2017. Consistent with the forecast is stability of market interest rates until the end of 2016, followed by a gradual increase in rates in 2017. The forecast also assumes that the exchange rate will be used as a monetary policy instrument until the end of 2016.

The **Adverse Scenario** assumes an end to the euro area recovery and a marked drop in economic activity in Europe. This may be caused, for example, by negative expectations about global economic growth and a renewed increase in investors' risk aversion with regard to the EU and emerging economies. The Czech economy falls back into recession owing to a decrease in external demand. This causes a return of pessimistic private sector expectations about future economic developments and renewed deferral of household consumption and corporate investment. The combination of a downturn in external demand and then also in domestic demand will cause a sizeable decline in economic activity in the Czech Republic and result in a W-shaped recession, quantitatively similar to the economic downturns recorded in 2009 and 2012. In addition, a debt deflation scenario will materialise, with price deflation leading to real growth in private sector debt as a result of declining economic activity, rising unemployment and falling wages. The adverse economic situation causes the funds of households and non-financial corporations gradually to become exhausted. Coupled with a rise in real debt, this causes a significant deterioration in their ability to repay their obligations. The problems in the real economy later also affect the financial sector, which records considerable credit losses and a marked decline in profits. Monetary policy remains easy, the three-month PRIBOR stays very low over the entire test horizon and the exchange rate weakens. However, long-term bond yields surge as global risk aversion increases and the quality of some assets is re-assessed. At the same time, banks revise their view of credit risk and increase their risk mark-ups on interest rates on new loans, which will shift to a much higher level also due to an increase in long-term interest rates. The related rise in debt service together with the other impacts of recession will increase the default rate for loans for house purchase and loans to non-financial corporations.

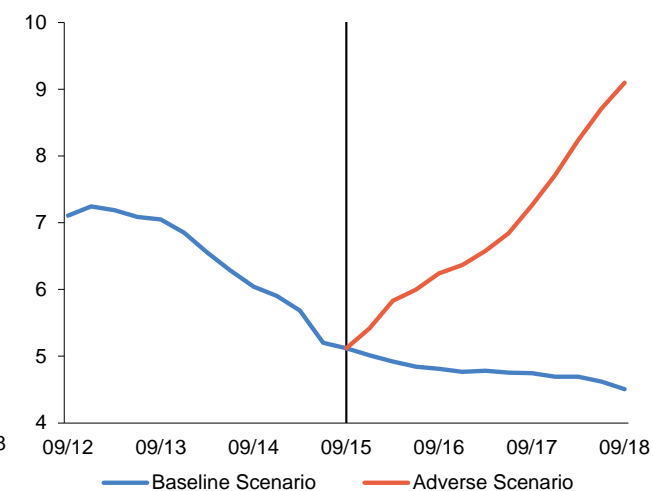
Charts 1–4 illustrate the evolution of the key macroeconomic variables of the baseline and adverse scenarios.

**Chart 1****Alternative scenarios: Real GDP growth**

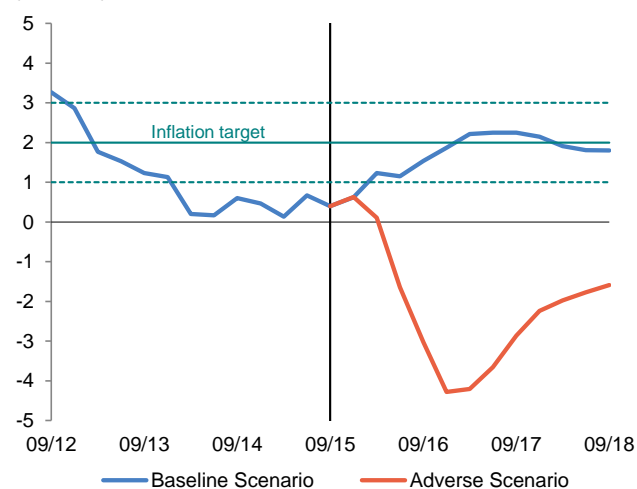
(year on year in %)

**Chart 2****Alternative scenarios: Unemployment**

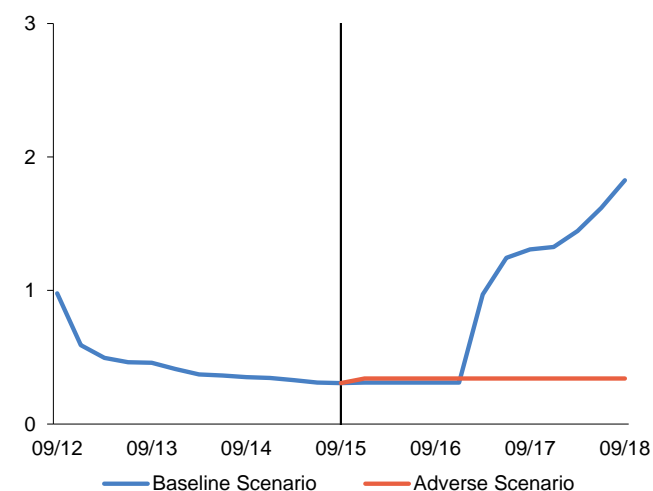
(%)

**Chart 3****Alternative scenarios: Headline inflation**

(year on year in %)

**Chart 4****Alternative scenarios: 3M PRIBOR**

(%)

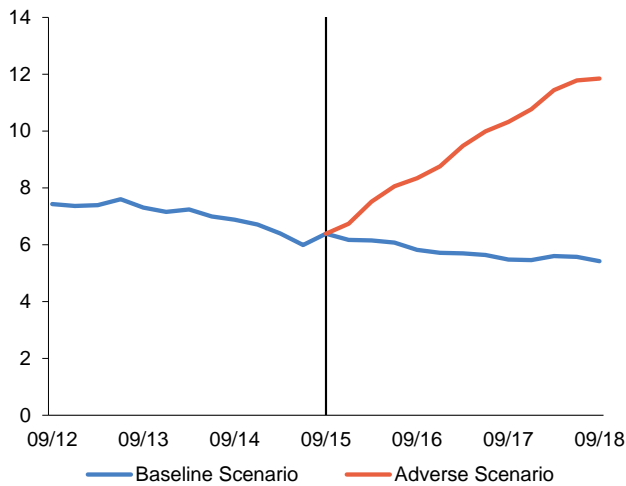


### 3. THE IMPACT OF THE MACROECONOMIC SCENARIOS ON THE BANKING SECTOR

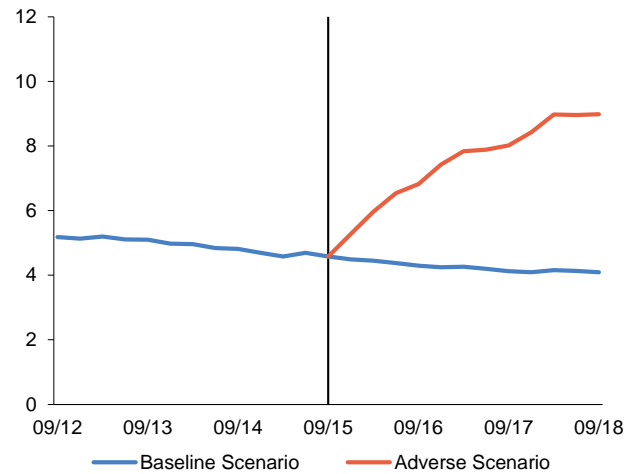
Credit risk is the most significant risk in the Czech banking sector. It can be quantified using the ratio of non-performing loans (NPLs) to total loans. In the *Baseline Scenario*, this ratio decreases modestly in 2016–2017 for both non-financial corporations and households (see Charts 5 and 6).

In the *Adverse Scenario*, the combination of a drop in economic activity, an increase in unemployment and a decline in real wages would be reflected in a noticeable rise in credit risk caused by growth in the default rate for both non-financial corporations and households. NPLs in this scenario would be considerably higher than in the *Baseline Scenario*, not only in terms of the NPL ratio, but also in absolute terms, against which banks would have to create an appropriate level of provisions with an adverse impact on their profitability.

**Chart 5**  
NPL ratio: non-financial corporations  
(%)



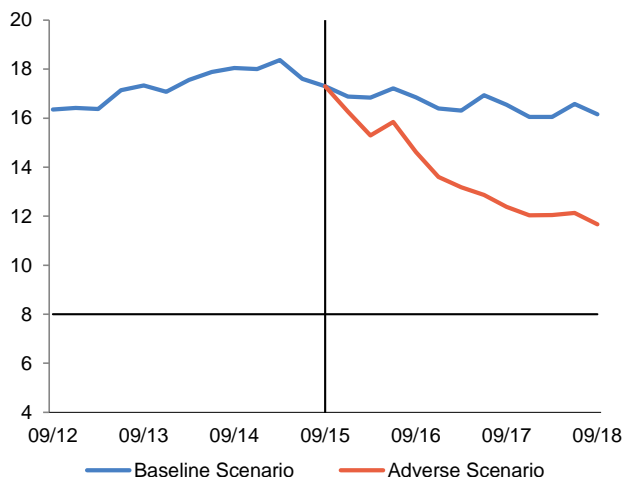
**Chart 6**  
NPL ratio: households  
(%)



Banks' operating profit is an important assumption of the stress tests, as it is the first buffer for covering potential banking sector losses. The *Baseline Scenario* assumes a slight fall in banks' operating profits owing to persisting strong competition in all market segments, which – combined with the environment of low interest rates – leads to a decline in interest and fee profits despite the expected recovery in credit activity. In the *Adverse Scenario*, operating profits plummet, recording a cumulative fall of roughly 40% compared to 2014 over the test horizon.

Although it is weakened by lower profits and in the *Adverse Scenario* hit by high credit losses, the banking sector as a whole remains stable in both scenarios and its aggregate capital ratio always stays above the regulatory minimum of 8% by a sufficient margin (see Chart 7). This result is achieved despite the conservative settings of many of the stress test assumptions. The sector's resilience is based mainly on its high capital adequacy ratio, which stood at 17.3% at the end of September 2015, and on its robust profitability.

**Chart 7**  
**Total capital ratio**  
 (%)



Despite the high resilience of the sector as a whole, three banks (representing around 2% of the sector's assets) would get into a situation of insufficient capital adequacy in the *Baseline Scenario*, implying an adjustment of their business models<sup>1</sup> or a need to top up capital by about CZK 0.6 billion (0.01% of GDP) in the future.

In the *Adverse Scenario*, the sector as a whole records a loss which substantially reduces its regulatory capital and its aggregate capital ratio falls below 12%. A total of nine banks (representing about 15% of the sector's assets) would get into a situation of insufficient capital adequacy in this scenario. To make up their capital adequacy to the regulatory minimum of 8%, banks having their registered offices in the Czech Republic (i.e. excluding foreign bank branches) would together have to increase their regulatory capital by around CZK 10 billion (roughly 0.2% of GDP) as at the end of the test period. Relative to the size of the banking sector, this figure is still not significant enough to jeopardise its stability.

<sup>1</sup> Banks may also get into a situation of an insufficient capital adequacy ratio because the stress test methodology assesses their business model as unsustainable in the longer run. However, this methodology is based on a universal bank model and may not be entirely accurate for specialised banking institutions. The CNB therefore takes into account the institutions' specific characteristics when assessing the test results.