CZECH BANKING SECTOR STRESS TESTS FEBRUARY

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Financial Stability Department

CNB CZECH NATIONAL BANK

CZECH BANKING SECTOR STRESS TESTS (FEBRUARY 2012)

SUMMARY

The results of stress tests of the Czech banking sector performed using data available as of 2011 Q4 still show that the banking sector is resilient to potential adverse shocks. The capitalisation of the entire sector would remain above the regulatory minimum of 8% even in a significantly adverse stress scenario combining negative developments in the domestic and external economy and renewed uncertainty in financial markets caused by an escalation of the debt crisis in the indebted euro area countries. The stress scenario simulated an additional stress by assuming the impairment of one-third of all exposures of the largest domestic banks to their parent groups. This highly unlikely and extreme stress assumption would cause the banking sector's aggregate capital adequacy ratio to decline towards the 8% level.

1. INTRODUCTION

The Czech National Bank regularly conducts stress tests to assess the impacts of highly adverse and implausible future economic scenarios on the domestic banking sector. This document presents the results of stress tests conducted on the data as of 31 December 2011. To capture the long-term effects of shocks, the previous two-year test horizon has been extended and the tests now focus on the coming three years. In the assessment of the sector's 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. The stress scenario also has an extended variant assuming the impairment of a portion of the exposures of the largest Czech banks to their parent groups, thereby significantly increasing the stress on the banking sector in the tests. This additional assumption in the stress scenario simulates the extremely unlikely – although not entirely impossible – scenario of one of the parent banking groups failing due to a marked escalation of the euro area debt crisis.

2. MACROECONOMIC SCENARIOS

In its first two years, the **Baseline Scenario** corresponds to the CNB's official February macroeconomic forecast published in Inflation Report I/2012. It assumes stagnation of the economy in 2012 and renewed but subdued growth as from 2013 H2. Headline inflation will be temporarily just above 3% during 2012 due to the VAT increase and fall below the target of 2% in early 2013. The exchange rate appreciates gradually from its current weakened level and short-term interest rates are stable in the near future and fall slightly thereafter.

The **Debt Crisis** stress scenario assumes an extreme fall in economic activity due to a marked escalation of the euro area debt crisis. This would lead to a slump in economic activity in the Czech Republic's main trading partners followed by a sharp fall in domestic economic activity. At the same time, the general uncertainty in the financial markets would result in a loss of investor confidence, a rise in risk aversion and a fall in Czech government bond prices. The stress scenario also assumes some impairment of exposures to all highly indebted EU countries. A methodological change was also made in this area to ensure more comprehensive identification of risks. While in the previous round of testing only all exposures to the PIIGS

countries[1] were revalued to zero, the current round assumes partial impairment of exposures to those EU countries whose government debt exceeded 60% of GDP at the end of 2010. The degree of impairment is derived from the countries' ratings as of the end of January 2012.[2]

Charts 1–4 below illustrate the evolution of the key macroeconomic variables of the stress scenario compared to the baseline scenario.
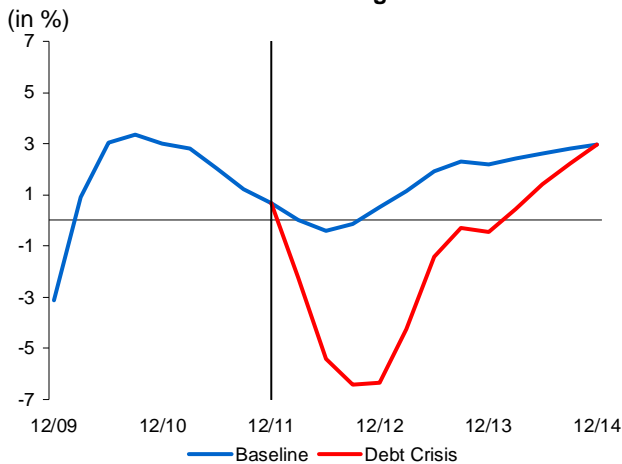
Chart 1
Alternative scenarios: real GDP growth
(in %)

Chart 2
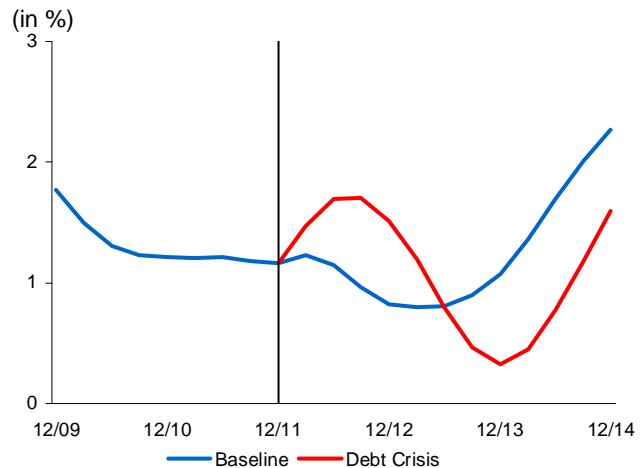**Alternative scenarios: 3M PRIBOR**
(in %)

Chart 3
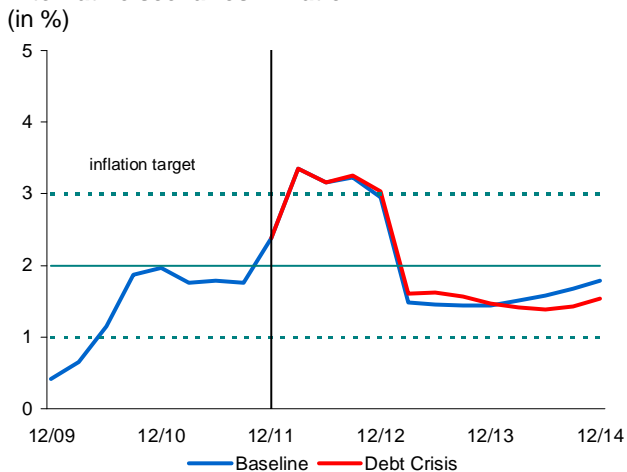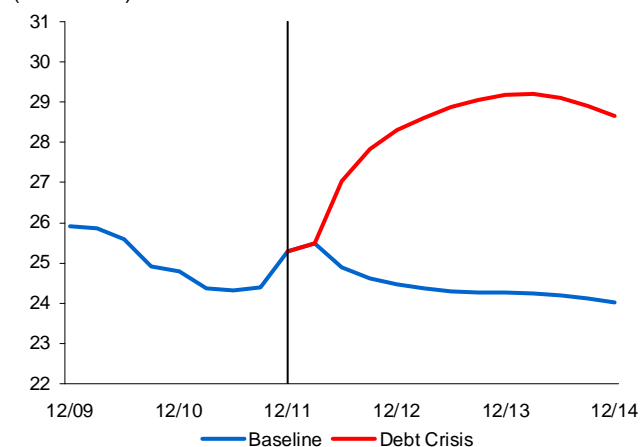**Alternative scenarios: inflation**
(in %)

Chart 4
Alternative scenarios: exchange rate
(CZK/EUR)

Note: The path for the *Baseline Scenario* in the first two years is based on the CNB's official prediction; beyond this horizon it is extended towards the expected long-term equilibrium values

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[1] Greece, Ireland, Italy, Portugal and Spain.

[2] The impairment of exposures (haircut) to highly indebted countries was specified in relative terms based on their ratings with Standard & Poor's as of 31 January 2012. For example, the haircut on CC-rated exposures to Greece was set at 60% for all bank exposures to this country, with the haircut being applied to the lowered residual value of the exposures, which in the case of Greek government bonds is around 30% of the original face value. This assumption thus implies an additional write-down of claims on Greece of 18 percentage points of the original face value and a decline in the residual value of the exposures from 30% to 12%. The haircut for Portugal (rated BB) was set at 39%, that for Hungary (rated BB+) at 35%, and that for Ireland (rated BBB+) at 25%. A zero haircut was set for countries having the top AAA rating and reporting government debt above 60% of GDP.

The stress scenario in this round of testing is extended to include an assumption that some of the parent groups of Czech banks also run into trouble because of the debt crisis. This risk is captured through the impairment of one-third of all gross exposures of the seven largest Czech banks to their parent groups. This would generate additional losses of CZK 37 billion for them. The selected additional shock should be seen as an extreme and very improbable stress.

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 in the non-financial corporations sector remains stable in the coming quarters and starts edging up again in 2012 H2 to almost 9%. Similarly, a further increase in the NPL ratio towards 6% occurs in the household sector at the two-year horizon. However, the NPL ratios in both sectors are declining slightly in the last year of the three-year horizon. The less favourable evolution of the NPL ratios for both sectors compared to the previous round of stress testing is due to the worse-than-expected economic outlook at the prediction horizon.

The *Debt Crisis* stress scenario would be reflected in a larger rise in credit risk, and the NPL ratio in this scenario would be much higher than in the *Baseline Scenario* (see Charts 5 and 6).

Chart 5
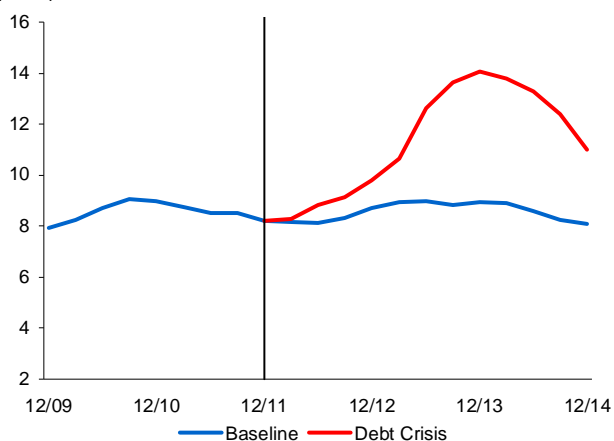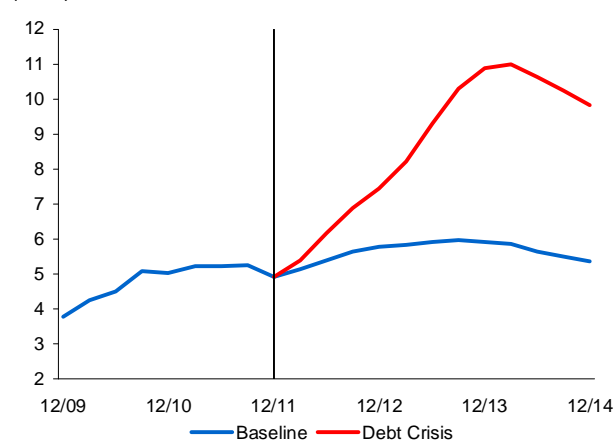**Non-performing loans: non-financial corporations**
(in %)

Chart 6
Non-performing loans: households
(in %)

The credit losses in the stress scenario would average around CZK 60 billion a year, i.e. three times the average annual losses recorded in 2009–2011. In parallel, the banking sector would be hit in this scenario by relatively high market losses of CZK 15 billion in 2012, due mainly to an expected fall in prices of Czech government bonds. Revaluation losses on all claims on indebted EU countries, which were set individually for each country according to its rating, would be realised in 2012 H2 and would run to about CZK 20 billion. From this perspective, the stress is similar to the assumption of 100% impairment of exposures to the PIIGS countries made in the previous round of stress testing in November 2011 (CZK 24.4 billion).

Banks' operating profit is the first line of defence against credit and market losses.[3] While the *Baseline Scenario* makes a conservative assumption of a slight year-on-year fall in operating profit of about 6% owing chiefly to rising competition in the deposit market and falling income from fees and commissions due to lower volumes of financial transactions for clients, the stress scenario assumes a sharp drop in operating profit of 30–40% compared to 2011. In the stress scenario, therefore, many banks would get into a loss-making situation amid a rise in credit and market losses. This would automatically reduce their regulatory capital.

Chart 7
Capital adequacy ratio
(in %)

Baseline
Debt Crisis
Debt Crisis + 1/3 Impairment of Exposures to Parent Groups
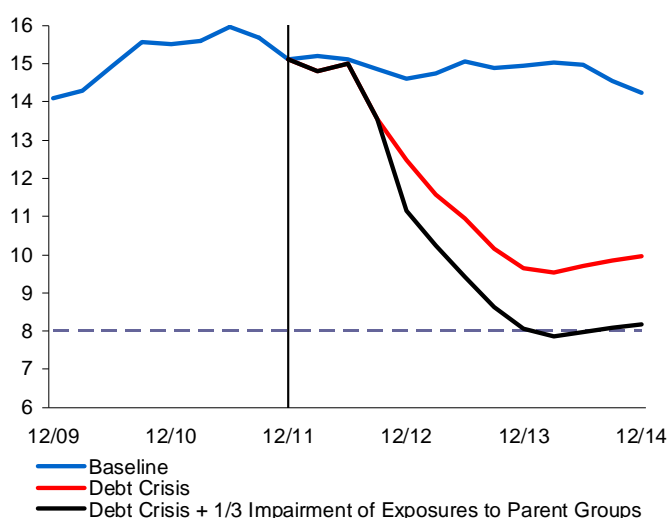
Despite the relatively high credit and market losses and weaker operating profit, the banking sector as a whole remains stable in both main scenarios and its aggregate capital adequacy ratio stays above the regulatory minimum of 8% (see Chart 7). This positive result is achieved despite the very conservative settings of the individual scenarios, which assume very unfavourable developments. The banking sector's stability continues to be based on its high capital adequacy ratio, which stood at 15.2% at the end of 2011. However, a few banks would get into a situation of insufficient capital adequacy in the stress 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 roughly CZK 19 billion (0.5% of GDP) as at the end of the test period. Relative to the size of the banking sector, this figure is not large enough to jeopardise its stability.

The additional scenario of the write-off of one-third of all gross exposures of the seven largest banks to their parent groups would represent a strong shock to the banking sector resulting in a fall in the aggregate capital adequacy ratio towards the 8% minimum. The capital injections needed for this extreme variant of the stress scenario would be CZK 33 billion (0.9% of GDP). The test results would be substantially worse if banks faced these shocks with a lower initial capital adequacy ratio, due, for example, to higher-than-expected dividend payments during 2012.

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http://www.cnb.cz/en/financial_stability/stress_testing/index.html

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[3] Adjusted operating profit is used for the purposes of stress testing. Such profit is adjusted for banks' profit/loss from activities in the financial markets and, simply put, is calculated as the sum of net interest income and net income from fees and commissions minus administrative expenses.