Czech banking sector stress test results (February 2010)

Summary

The results of new stress tests conducted on the 2009 Q4 data confirm that the Czech banking sector remains resilient to shocks arising from potentially adverse macroeconomic developments in 2010–2011. In all the test scenarios, the banking sector's aggregate capital adequacy remains above the regulatory minimum of 8%, despite the highly pessimistic settings of both stress scenarios.

1. Introduction

The Czech National Bank regularly conducts stress tests to assess the impacts of highly adverse and implausible future economic scenarios on the resilience of the domestic banking sector. This report presents the results of the February stress tests, which were conducted on the data as of 2009 Q4[1] and are focused on the coming two years. In the assessment of resilience, the impact of future economic developments – represented by one baseline scenario and two stress scenarios – on selected indicators of the banking sector's soundness was tested.

2. Macroeconomic scenarios

The **Baseline** scenario corresponds to the CNB's official February macroeconomic forecast published in Inflation Report I/2010. This scenario assumes a return of real GDP growth to slightly positive values, a gradual rise in inflation towards the inflation target, exchange rate stability and a gradual moderate increase in short-term interest rates.

The **Double Dip** stress scenario captures the risk of a more protracted, W-shaped recession, i.e. another pronounced fall GDP in 2010, associated partly with a temporary sharp appreciation of the exchange rate in 2010 H1. In such case, inflation and short-term interest rates would be at very low levels.

The **Loss of Confidence** stress scenario simulates the potential combination of weak economic growth (relative to the baseline scenario) and adverse financial market developments. This scenario assumes that potential adverse events in the domestic economy (e.g. a growing public finance deficit or problems in the residential and commercial property market) will trigger concerns in global markets regarding whether previously latent problems in the financial system will start manifesting themselves in the Czech Republic. This will lead to an increase in risk aversion to the Czech Republic, giving rise to a sudden depreciation of the exchange rate and a

[1] For reasons of availability, data on bank portfolios as of 30 November 2009 are used.

fall in government bond prices. The depreciation will cause a relatively large rise in inflation, to which monetary policymakers will respond by temporarily increasing short-term interest rates to levels around 6%. This scenario can be considered extreme and highly unlikely.

The charts 1–4 below illustrate the evolution of the key macroeconomic variables of both stress scenarios compared to the Baseline scenario.

Chart 1
Alternative scenarios: real GDP growth
(in %)

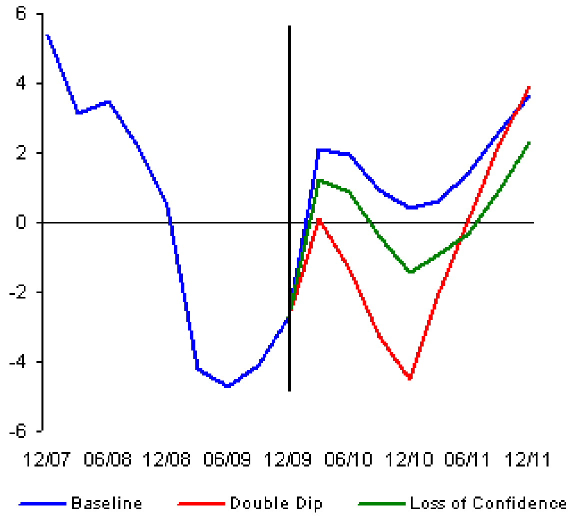


Chart 2
Alternative scenarios: 3M PRIBOR
(in %)

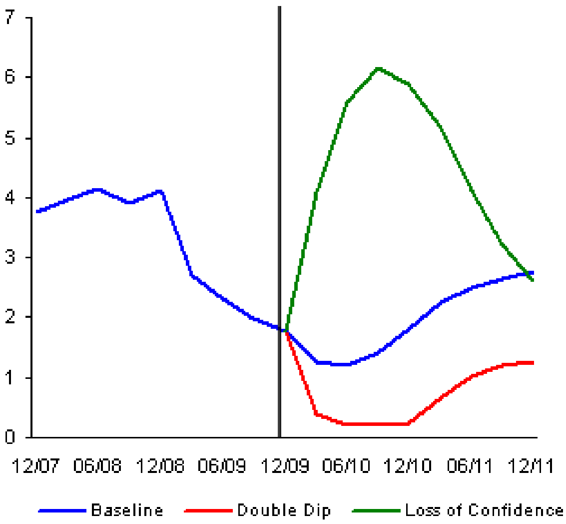


Chart 3
Alternative scenarios: inflation
(in %)

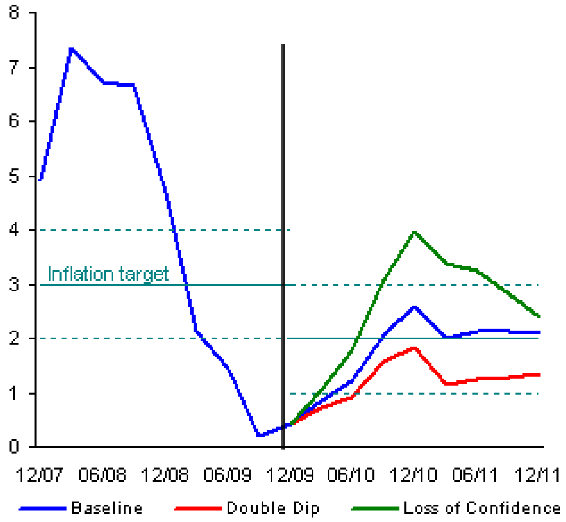
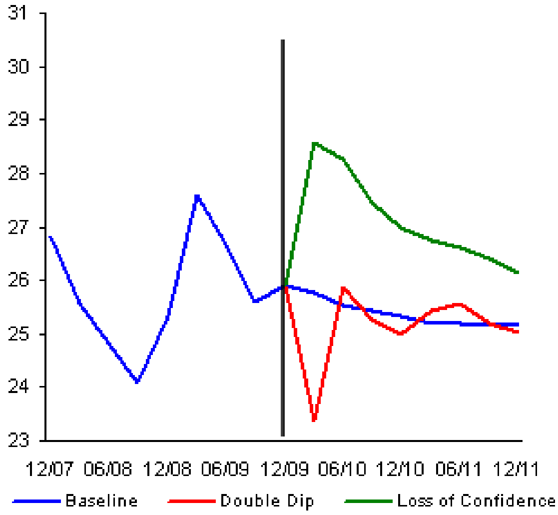


Chart 4
Alternative scenarios: exchange rate
(CZK/EUR)



3. The impact of the macroeconomic scenarios on the banking sector

The ratio of non-performing loans (NPLs) to total loans rises in all the scenarios, doing so for both non-financial corporations and households (see the charts 5 and 6 below). In the Baseline scenario, the NPL ratio in the non-financial corporations sector could increase from its current level of almost 8% to 10%–12% in the course of 2010. In the case of households, the Baseline scenario estimates a slight increase in the NPL ratio from the current almost 4% to levels just below 5%. The NPL ratios estimated in the stress scenarios are even higher owing to weaker expected economic activity.

Chart 5
Non-performing loan ratio: non-financial corporations
(in %)

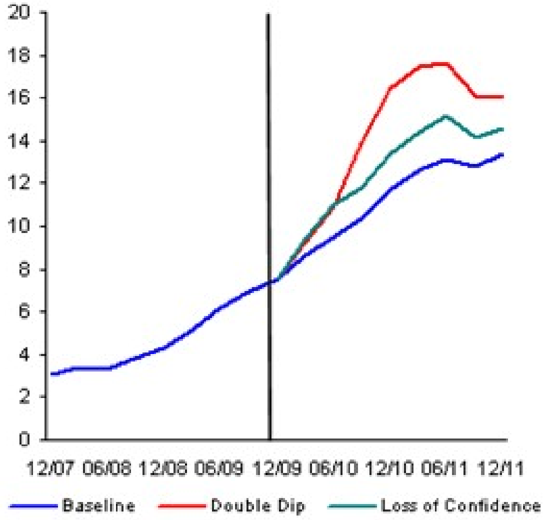
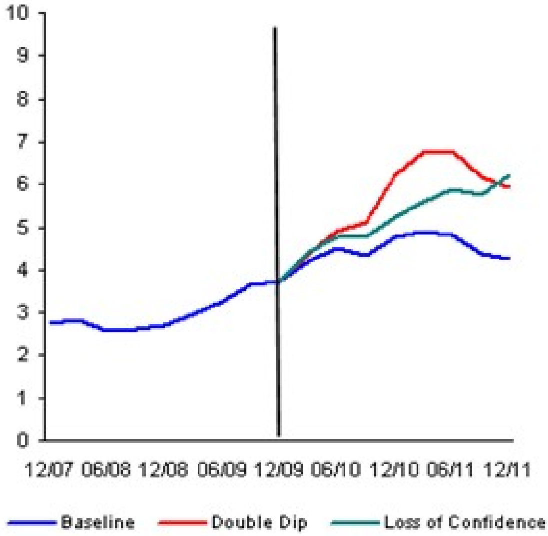


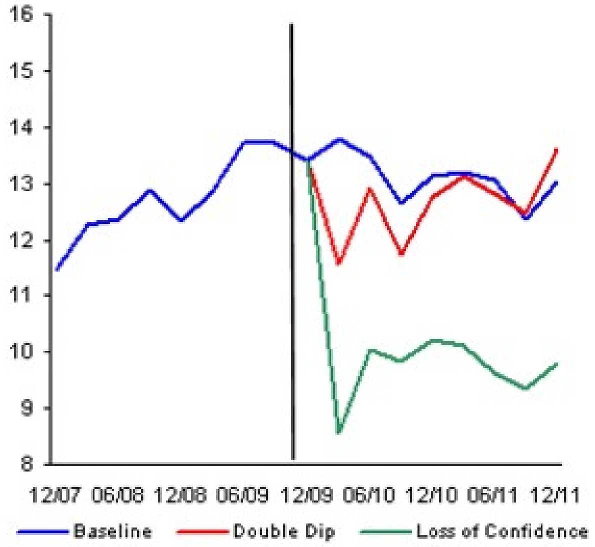
Chart 6
Non-performing loan ratio: households
(in %)



The growth in NPLs causes banks to incur additional loan impairment charges, for which banks must create provisions. The scenarios also estimate considerably weaker pre-provision income for banks in the next two years. Simultaneously, risk-weighted assets are rising because of the deteriorating loan portfolio, although this is offset by very low lending growth, particularly in the double dip scenario. In both stress scenarios some banks might get into a resultant loss-making situation, which will immediately cause regulatory capital to decline.

Despite the relatively high loan impairment losses in all the macroeconomic scenarios, however, the banking sector as a whole remains stable and its aggregate capital adequacy stays constantly above the regulatory minimum of 8% (see Chart 7). This result is achieved despite the conservative settings of many of the assumptions of the individual scenarios, especially regarding the rise in non-performing loans and the level of banks' income over the coming eight quarters.

Chart 7
Capital adequacy ratio
(in %)



The largest fall in capital adequacy occurs in the Loss of Confidence scenario. There are three reasons for this. First, this scenario assumes a pronounced decrease in banking sector revenues, which serve as a first line of defence against the impacts of shocks. Second, the larger loan shock is exacerbated by other losses caused by financial market developments, namely losses on bond holdings due to a decline in their prices and losses due to the sharp depreciation, which have an adverse effect on some banks with negative net open foreign exchange positions. Third, the worse loan quality gives rise to higher capital requirements (or risk-weighted assets) for banks, which reduces capital adequacy further.

In both stress scenarios, several banks could get into a situation of insufficient capital adequacy. To make up their capital adequacy to the regulatory minimum of 8%, all banks having their registered offices in the Czech Republic (i.e. excluding foreign bank branches) would have to increase their regulatory capital by less than CZK 1 billion (i.e. less than 0.5% of the existing regulatory capital) in the Double Dip scenario and by roughly CZK 13 billion (approximately 5% of the existing regulatory capital) in the Loss of Confidence scenario at the end of the test period.

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This document has been placed on the CNB website
http://www.cnb.cz/en/financial_stability/stress_testing/index.html