

*In 2008, the financial crisis, which started in summer 2007 in the USA and subsequently hit several advanced Western economies, spilled over to other countries and regions. The world economy started heading towards a global recession. Owing to a fall in external demand and a worldwide tightening of the financial conditions, Czech economic growth started to slow sharply in 2008 H2. In 2009 and 2010 the Czech economy is likely to go through a recession. So far during the crisis, however, the Czech financial system has been among the most stable in the EU and is entering the recession in a relatively strong position. Its balance sheets are not burdened by toxic assets and the system is not suffering from a shortage of balance-sheet liquidity. Banks have provided foreign currency loans to businesses to only a limited extent and to households not at all. Thanks to this, the real sector's exposure to foreign exchange risk is very low. The banking sector should thus be able to withstand the second-round effects of the crisis, i.e. the adverse impacts of a decline in the real economy on the ability of corporations and households to repay their previously accepted liabilities.*

*The main risk scenario for the Czech economy in the coming two years is a situation where the recession in Europe deepens as a result of the crisis and owing to economic policy indecisiveness. This would be reflected in a sharp fall in Czech exports and industrial production. The excess capacity in European industry would moreover lead to a decline in industrial producer prices. A higher corporate insolvency rate would be reflected in growth in risk margins on loans to corporations. Corporations would thus face a substantial tightening of the financial conditions. This could then result in a wave of corporate bankruptcies, leading to rising credit losses in financial institutions. This would be accompanied by growth in unemployment and a fall in households' disposable income. That, in turn, would further reduce households' purchasing power and impair their ability to repay mortgage loans and consumer credit, further increasing the credit losses of banks.*

*The second key risk is the exceptionally high degree of uncertainty which businesses, financial institutions and households are facing. Economic growth, asset prices, incomes, inflation and the interest rate path have become hard to predict. The level of uncertainty is due primarily to the unstable international environment. Financial systems in some advanced countries are still exposed to stress. As a result, it is impossible to rule out a continuation or escalation of the credit crisis with adverse impacts on the real economy. In this situation of heightened uncertainty, it is vital to the functioning of the economy to ensure sufficient access to liquidity. This will remain a major task for central banks.*

### **Developments in 2008 and 2009 Q1**

The world economy cooled significantly during 2008, and the forecasts for 2009 predict an absolute fall in global economic activity. In 2010 this fall should stop and the world economy should start recovering gradually. Continued lack of confidence in financial system stability in some countries and the current low effectiveness of macroeconomic policies are increasing the degree of uncertainty surrounding the timeframe and extent of the global economic recovery. From the point of view of the domestic economy, the unexpectedly strong recession in Germany and the slump in the economies of Central and Eastern Europe (CEE) are bad news. The next two years can thus be regarded as a period of exceptionally strong risks.

**In 2008, the world economy switched from rapid growth to global recession with not very bright prospects for a recovery**

**The decline in external demand was reflected in a fall in domestic industrial production and a rise in the credit risk of the corporate sector**

In line with the slowing economic activity observed in the Czech Republic's main trading partners, domestic industrial production started to decline strongly at the end of the year. The decline in external demand hit export-oriented corporations particularly hard. It was confirmed that the size and high degree of the openness of the Czech economy make it highly sensitive to global developments. The financial condition of corporations also started worsening in 2008 H2. Many corporations began to experience problems repaying their liabilities, and for banks the credit risk of the corporate sector started increasing. In response, Czech banks started tightening their lending standards.

**The build-up of household debt slowed markedly and household credit risk is increasing**

In line with the predictions of the 2007 Financial Stability Report, the rate of growth of household debt in the Czech Republic began to fall markedly in 2008. During 2009, household debt ratios should rise only very modestly or even flatten out. The rapid downturn in economic activity during 2008 has started to be reflected in growth in the household sector's credit risk. The default rate on bank loans to households is gradually increasing, although much more slowly than in the corporate sector. In addition to a considerable worsening of the labour market situation, one possible risk for 2009 is a decline in nominal wages in some employee segments.

**Global financial markets were exposed to an extraordinary shock in late 2008**

Starting in mid-September 2008 as a result of the collapse of US investment bank Lehman Brothers and the problems in many other financial institutions, international financial markets went through a period of extreme uncertainty regarding the potential failure of counterparties to transactions. This led to a dramatic increase in risk premia, a rise in market volatility and a fall in market liquidity. This was followed by a sharp decline in stock indices. The situation calmed down somewhat in late 2008 thanks to extensive measures implemented by central banks and governments, but credit premia remain relatively high.

**The abrupt change in the credit cycle led to drastic changes in central bank policies.**

The abrupt change in the credit cycle strongly affected the monetary policies of key central banks. The US Fed lowered its monetary policy rate almost to zero. The ECB and the central banks of some other advanced European economies also cut their monetary policy rates significantly. Some central banks then adopted less conventional measures to exert downward pressure on long-term interest rates.

**The situation in global financial markets caused a decline in market liquidity in the Czech Republic ...**

Owing to the large degree of international integration, the high nervousness on international financial markets spilled over to Czech markets. Activity on the interbank money market dipped and was limited solely to maturities shorter than one week. The liquidity absorbed in 2-week repo tenders declined and the volatility of short-term interest rates increased. Government bond market transactions began to be carried out through brokers instead of market makers, but trading volumes remained unaffected. The stock index fell in line with the declines seen on stock markets abroad. The koruna's exchange rate showed a sharp increase in volatility and depreciated significantly towards the end of last year. In October 2008, there was also a one-off jump in cash in circulation owing to increased demand for cash among corporations and households. However, overall cash holdings have already started returning to their long-term upward trend. This event underlined the need for thorough stress testing of banks, focused on the risk of a liquidity outflow.

In response to the declining demand and falling inflation pressures, the CNB lowered its monetary policy rate cumulatively by 2.25 percentage points between August 2008 and May 2009. The monetary policy easing led to a decline in money market rates, albeit to a lesser extent. The CNB responded to the fall in market liquidity by introducing liquidity-providing repo operations with government bonds as eligible collateral and thus partly calmed the situation in this market.

Despite slowing appreciably, credit growth in the Czech Republic was relatively high in 2008. By the start of 2009, however, newly extended loans were falling year on year, which will be gradually reflected in a decline in total loan growth. Interest rates on loans to non-financial corporations tracked rates on the interbank market and saw a decline especially in 2008 H2. By contrast, rates on household loans were edging up right until the first quarter of this year. Lending standards were also tightened in non-interest components such as required loan collateral, the proportion of own financing and the income required for a particular loan size or instalment amount.

The economic and asset market developments also affected the non-bank financial institutions sector. Mutual funds suffered significant losses due to declining asset prices, leading to a flight to bank deposits. Insurance companies and pension funds were minimally affected by toxic assets, but saw a marked increase in losses due to asset revaluation, a trend that continued into 2009 Q1.

The heightened uncertainty in international financial markets was reflected in a decrease in investor confidence in the CEE region. This was a response to concerns about the sustainability of some countries' external positions and about the stability of banking systems in which a substantial proportion of loans are denominated in foreign currencies and provided by foreign parent companies. The result was a sharp rise in risk aversion to the CEE region as a whole, manifesting itself in depreciating currencies, rising government debt financing costs and falling stock markets. Although assessing countries based on their geographical position regardless of their economic differences is an artificial analytical construction, countries whose economic characteristics did not show the aforementioned factors were unfortunately also affected by this decline.

The use of this artificial analytical construction had an adverse effect on the Czech economy and its currency in late 2008 and early 2009. The year-long phase of rapid appreciation was replaced by a phase of depreciation from September 2008 to February 2009. Even though the resulting depreciation of the koruna may seem strong, the exchange rate essentially returned to its long-term modest appreciation trend. The exchange rate fluctuations negatively affected the financial condition of exporters. In the longer term, however, the weaker koruna should impact positively on firms' profitability.

Different adverse macroeconomic developments stemming from analyses of trends and weak spots abroad, in the domestic economy and in the financial sector were incorporated into alternative scenarios used to test the financial sector's resilience. The alternative scenarios take into consideration the possibility of a further decline in the external and domestic economies, the still tense situation on global financial markets, and property market risks in the Czech Republic. The banking sector's liquidity was also tested.

**... and the CNB responded by easing monetary policy and by implementing measures to bolster market liquidity**

**Credit growth gradually fell and the credit conditions tightened slightly**

**Asset market developments affected the results of insurance companies, pension funds and mutual funds**

**In late 2008, confidence in the CEE region declined ...**

**... manifesting itself in a depreciation of the koruna, although this essentially represents a return to the long-term modest appreciation trend**

**The future risk scenarios take into consideration the possibility of a further decline in economic activity, the tense situation on financial markets, and the property market situation**

### Risks to financial stability

#### **Many countries will record a significant slowdown in lending to the private sector or an absolute credit contraction**

The global financial market situation remains a significant risk factor. Banks and other financial institutions in the USA and some EU economies suffered considerable losses and were forced to increase their regulatory capital, often with the help of government money. Given the rising credit portfolio losses caused by the recession, this situation can be expected to continue in 2009. Coupled with the limited functioning of other credit market segments, that will lead to a substantial slowdown or an absolute contraction in lending to the private sector in some countries. This factor will have an adverse impact on the world economy and may slow the onset of the economic recovery.

#### **The restoration of confidence in financial institutions is not being aided by some of the steps being taken by authorities at the European level**

In countries hit directly by the financial crisis, confidence in the stability of the financial system was not restored to a satisfactory extent despite extensive government interventions and the easing of the financial conditions by central banks. The stabilisation of the situation in the financial systems of some European countries may be delayed by political pressures for an immediate and fundamental Europe-wide change in financial market regulation in an effort to prevent future crises in a situation where the authorities have still not succeeded in eliminating the risks of the current crisis and where the financial markets have not yet fully absorbed its impacts. Similarly risky are the efforts to change the accounting standards so as to optically improve financial institutions' balance sheets instead of taking effective action to clean them up.

#### **Corporations are exposed to high real interest rates**

The global increase in credit and liquidity risk in the financial markets adversely affected the functioning of the interest rate transmission channel of monetary policy. Despite the decline in monetary policy rates, there was a rise in the yields demanded on corporate bonds and the nominal interest rates demanded on bank loans provided to risky corporations in most advanced countries. In combination with a substantial slowdown, or an absolute decline in producer prices, corporations using external financing may face a significant tightening of the financial conditions. This factor may foster an increase in corporate bankruptcies and bank credit losses and an escalation of the credit crisis.

#### **The increased aversion to emerging economies and to the CEE region persists**

The CEE economies will undergo a tough test in 2009 and 2010. A strengthening of the perceived risks in this region coupled with overly pessimistic expectations regarding its economic situation constitutes a major risk going forward. In more vulnerable countries, difficulties with banking system stability, problems with balance of payments financing and the acceptance of programmes of assistance from supranational institutions cannot be ruled out. If these problems were to cause panic sales of assets in a particular currency, the strong depreciation pressures could spill over to other currencies.

#### **Czech corporations have so far maintained access to bank loans, but the situation may worsen**

Thanks to the fact that Czech corporations have relatively low debt ratios by international comparison, the slowdown in growth in corporate loans has so far been more moderate than in most EU countries. However, a continuing decline in Western European economies with a considerable knock-on effect on external demand for Czech firms' products may change this situation. A significant rise in the number of insolvencies in the corporate sector and growth in credit losses in the banking sector would greatly reduce creditors' willingness to lend to non-financial corporations.

The considerable slowdown in economic growth will lead to a significant increase in the public finance deficit in the years ahead. The CNB estimates that the ratio of public debt to GDP may rise as high as 39% at the end of 2010. Of course, this will be accompanied by increased issuance of government bonds on financial markets. In this situation, the Czech Republic, like many other relatively small economies, is exposed to the risk of rising interest rates on government debt. Massive government demand for savings might increase private entities' debt financing costs as well. Monetary policy would have limited options for offsetting the tightened financial conditions.

**Growth in government debt might increase the price of money for private entities as well**

The domestic property market trends identified as risky in the 2007 Financial Stability Report continued into 2008. All types of residential property continued to show rapidly rising prices. At the end of 2008, the ratios of apartment prices to average wages were close to their historical highs in most regions. The possibility of apartment prices being overvalued in relation to households' ability to repay house purchase loans from their incomes is thus a significant risk going forward. Signs of an absolute decrease in residential property prices appeared at the end of 2009 Q1, and a more substantial decline cannot be ruled out.

**A more substantial decline in residential property prices cannot be ruled out**

House purchase loans in the Czech Republic have so far been a less risky component of loans to households. The loan-to-value (LTV) ratio for the total stock of house purchase loans remained very favourable at the end of 2008. However, over the last three years new mortgage loans with LTV ratios of around 80%–90% have routinely been provided. These loans may thus become problematic in the event of default and a parallel decline in property prices.

**Mortgage loans extended over the last three years seem riskier**

The Czech commercial property market saw a combination of record-high planned supply and a decline in realised demand. This was reflected in a fall in prices and a rise in the vacancy rate. In mid-2008, the logistics and industrial property market saw a virtual halt in new construction. Developers have so far mostly responded to the decline in demand by either temporarily suspending or completing stopping project implementation. However, the deferred implementation of projects increases the default risk. This risk is being reinforced by tighter bank lending conditions.

**The commercial property segment is in a difficult situation**

With regard to the risks identified, the resilience of the domestic financial system was assessed by means of stress tests on banks, insurance companies and pension funds using three alternative adverse scenarios entitled "Europe in recession", "market nervousness" and "economic depression". A stress test was also performed on banks' balance-sheet liquidity. The first scenario is considered by the CNB to be the most probable. In the other two scenarios, the intensity of the fall in economic activity is amplified. The "market nervousness" scenario is also used to test the impact of pressures for a rapid depreciation of the exchange rate due to regional contagion.

**The domestic financial system was exposed to both expected and highly unlikely shocks in stress tests**

### Assessment of the financial sector's resilience

**According to the stress tests the Czech banking sector still seems resilient to a wide range of risks**

According to the stress tests, the Czech banking sector is resilient to the market, credit and some other risks undertaken despite the highly pessimistic settings of the worst alternative scenario. However, if the economy developed in line with the alternative scenarios, some banks would suffer losses which might require capital injections from shareholders. The CNB and the Ministry of Finance have prepared a preventive amendment to the Act on Banks which simplifies the process of increasing a bank's capital and enables the central bank to respond more flexibly to banks' problems using some new instruments.

**Insurance companies and pension funds are particularly sensitive to a larger increase in long-term interest rates**

The stress tests indicate good resilience of insurance companies and pension funds to a downturn in economic activity in all the scenarios. However, any further growth in long-term yields and thus a fall in bond prices would have adverse effects. Such a development would generate a need for a larger capital increase by shareholders, particularly in the pension fund sector. The decline in economic activity in 2009 will be reflected to some extent in the insurance sector, primarily in a fall in demand for insurance and thus lower growth in premiums written in both the life and non-life insurance segments.

**The domestic financial system showed the least resilience in the "market nervousness" scenario, which causes a fall in GDP and a rise in interest rates**

The biggest stress to the Czech financial system was the "market nervousness" scenario, which would necessitate capital injections into the financial system of around CZK 23 billion (0.6% of GDP). Underlying this impact is a combination of significant losses due to the credit risk of banks and losses from a decline in bond and stock prices in other financial institutions. The other scenarios have smaller impacts – the "Europe in recession" scenario would require new capital of CZK 14 billion and the "economic depression" scenario new capital of CZK 22 billion – since the shocks in these scenarios lead to a fall in interest rates and thus to a rise in prices of bonds, which reduces the other losses.

**The stress tests of banking sector liquidity also indicate a relatively high level of resilience**

One of the risks that might arise if the highly adverse scenarios materialise is heightened nervousness on domestic financial markets. This might happen particularly if some banks fall below the regulatory threshold for the capital adequacy ratio. The panic would then be reflected in bank runs and in problems in asset markets. However, the stress test of balance-sheet liquidity indicates a relatively high resilience of the banking sector to market and balance-sheet liquidity risk. Although the simulations of strong shocks cover all liquid components of banks' balance sheets simultaneously, and despite the fact that the assumptions of the tests are severe, no bank gets into a situation where it would be unable to repay its obligations by restructuring or liquidating part of its portfolio.

### **Factors contributing to the Czech financial system's resilience**

The Czech financial system entered the recession in a good starting situation. Most institutions maintained solid profits in 2008. The Czech banking sector's strong position is supported by high profitability, good balance-sheet liquidity, a high deposit-to-loan ratio and a very low proportion of foreign currency loans. The Czech banking sector is the only one in Central and Eastern Europe with a positive net external position and is thus independent of external funding.

The Czech banking sector is sufficiently capitalised. In March 2009, its capital adequacy ratio was 12.9% and its Tier 1 capital adequacy was only slightly lower. By international comparison, the sector has a very good capital ratio, i.e. a relatively high ratio of capital to non-risk-weighted assets. The Czech Republic has not been forced to adopt measures to bolster the solvency of the banking sector and has merely increased the deposit insurance limit in response to developments in other European countries.

The external position of the Czech economy is strong and the chances of it being exposed to sharp depreciation pressures due to problems in other economies in the region are thus relatively small. This risk is further decreased by investors' growing ability to differentiate between individual economies in the region. The Czech Republic, Slovakia and Poland are now, together with Slovenia, viewed as the most stable economies in the entire region. The robustness of the external position is evidenced, among other things, by a large output surplus for 2008 and an expected improvement in the current account this year and the next. The domestic economy's external financing need should moreover be covered safely by current funds without the need to use foreign exchange reserves.

CNB monetary policy should continue to foster stabilisation. The CNB's macroeconomic forecast dating from the beginning of May 2008 predicts a significant fall in inflation. Accordingly, monetary policy rates and domestic short-term money market rates should remain at low levels over the next two years. This will act as a significant anti-cyclical factor.

**The starting position of the financial system, and particularly of the banking sector, is very good**

**The banking sector entered 2009 sufficiently capitalised**

**The external position of the Czech economy is strong, increasing its resilience to contagion risks linked with developments in the CEE region**

**CNB monetary policy should remain accommodative, which will have stabilising effects**