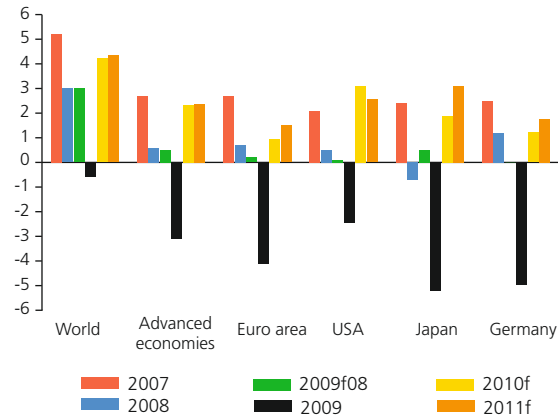


CHART II.1

Economic growth worldwide and in the advanced economies

(year-on-year growth in %; outturns and October 2008 and April 2010 forecasts)



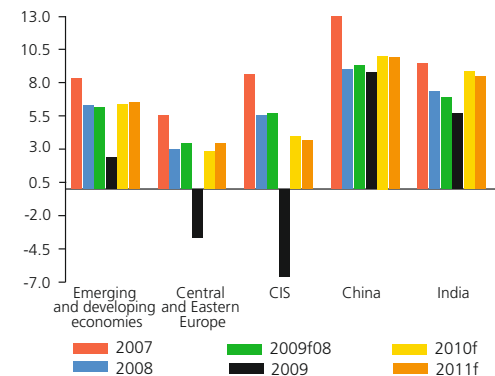
Source: IMF (World Economic Outlook, April 2010)

Note: 2009f08 is the October 2008 forecast for 2009.

CHART II.2

Economic growth in emerging and developing countries

(year-on-year growth in %; outturns and October 2008 and April 2010 forecasts)



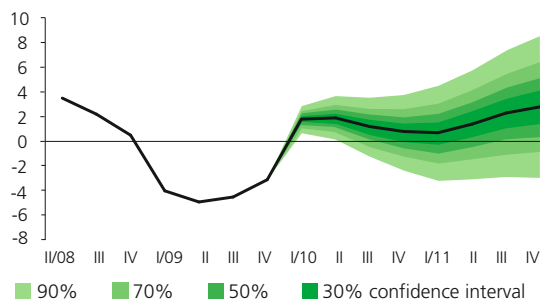
Source: IMF (World Economic Outlook, April 2010)

Note: 2009f08 is the October 2008 forecast for 2009.

CHART II.3

Actual and projected economic growth in the Czech Republic

(%; CNB May forecast)



Source: CNB

2 THE REAL ECONOMY

2.1 THE MACROECONOMIC ENVIRONMENT

The external macroeconomic situation was dominated in 2009 by an unexpectedly strong recession. After the acute phase of the financial crisis ended, the global economy started to recover gradually in the second half of the year. This fragile recovery, however, is based not only on renewed private sector confidence, but also on vigorous supportive economic policy measures. Some countries' banking sectors are not yet fully stabilised and may face a lack of funds for lending in future years. Decreased availability of loans may also arise as a result of growing regulatory uncertainty. Escalating government debt in many countries may then exert upward pressure on loan rates, which would – against a backdrop of slower income growth – increase real debt servicing costs. The next two years can therefore still be regarded as a period of strong risks. Although the Czech economy was not hit directly by the financial crisis, it was unable to avoid the impacts of the global shocks. In 2010, it will still be exposed to the lagged adverse effects of the recession. The Czech economy remains very stable as regards its external balance. In the light of historical experience, this implies a risk of renewed fundamentally unjustified appreciation of the koruna. The financing of the Czech government debt could proceed without any substantial difficulties in the next few years. It cannot be ruled out, however, that the issuing conditions will deteriorate unexpectedly as a result of increased nervousness in the financial markets in the event of difficulties in other countries. From the medium-term perspective, however, Czech public finance poses a substantial risk to financial stability.

The unexpectedly strong contraction in economic activity is being followed by a very slow recovery

After weakening noticeably in 2008 H2, the global economy slid into recession in 2009 for the first time in several decades. The size of the contraction can be described as very unexpected, as shown by the differences between the end-2008 forecasts and the actual situation the following year (see the third and fourth columns in Charts II.1 and II.2). In October 2008 the IMF forecast was still assuming that global output would grow by 3% in 2009, but in reality it shrank by 0.6% (see Chart II.1). This was largely due to a sharp fall in economic activity in advanced Western economies, which include the Czech Republic.¹ The economic downswing in developing and emerging countries was much smaller on average, but showed large cross-country differences. Some large economies in this group continued to show relatively strong economic growth (see Chart II.2), whereas others shrank quite sharply. Developments in the Czech Republic and its neighbouring countries confirmed a high degree of synchronisation of the business cycle in the Central European region with the euro area cycle.

¹ The breakdown of countries into groups is given in the statistical appendix of the World Economic Outlook (April 2010). The Czech Republic is classed as an advanced country, not a CEE country.

Turning to the Czech Republic's external environment, the unfavourable factors included not only a recession in Germany and other advanced EU countries, but also an unexpectedly sharp decline in production in the broadly defined CEE region, which had been showing dynamic growth in previous years. Current forecasts² expect an upswing in global economic activity in the next two years, although it will be quite uneven across countries and regions. The prospects for the Czech economy over the next two years are generally subdued. This is due mainly to expectations that economic activity in Germany and the euro area as a whole (the key region for sales of domestic products and services) will grow, but at markedly slower rates than before the crisis.

The Czech economy was unable to avoid the impacts of the global shocks

The Czech economy entered the global financial crisis and the subsequent recession in relatively good condition. It had no major macroeconomic imbalances and its financial system was robust in terms of both solvency and liquidity. The global financial turmoil thus affected the domestic economy to only a limited extent and the financial system remained stable throughout the period and, unlike in many other countries, did not need financial support from the government or central bank (see section 4.1). However, as a small open economy with an industrial and export orientation, it was unable to avoid the impacts of the global shocks. The sharp fall in external demand led to a decline in industrial production and subsequently to a relatively strong decrease in GDP.³ The economy thus went into recession in 2008 Q4, and in 2009 Q1 its total output dropped by a dramatic 4.1% quarter on quarter. A weak recovery began in Q3. The halt in the GDP decline, or the renewal of modest growth, was linked primarily with a partial recovery in external demand. This recovery was due partly to the car-scrapping incentives introduced in some European countries. In 2009 as a whole, GDP dropped by 4.1%.

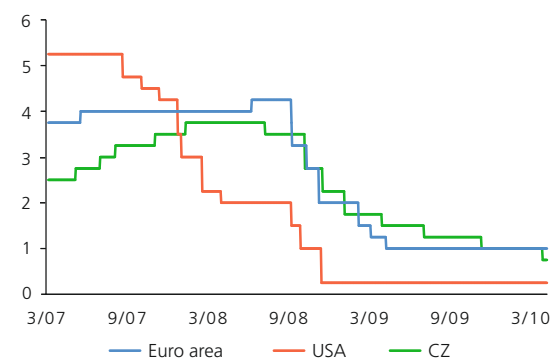
Unemployment will rise until mid-2011 despite a modest recovery

The Czech economy should see a gradual renewal of economic growth in the next two years. In its May forecast the CNB expects GDP growth of 1.4% in 2010 and 1.8% in 2011 (see Chart II.3). The recovery will be uneven, however, as external demand will fall temporarily. Along with further growth in unemployment, which reacts to a decline in demand with a lag, the recovery is expected to have an asymmetric W shape. The general unemployment rate (or registered unemployment rate),

- 2 The April IMF forecast and the April Consensus Forecasts (a publication containing the average estimates of a broad representative sample of analysts and forecasters, whose forecasts for the external environment are used by the CNB) expect the advanced countries (including the Czech Republic) to follow a similar path over the next two years. Charts II.1 and II.2 use IMF estimates, as they, unlike the Consensus Forecasts, cover the whole global economy.
- 3 Domestic exports of goods and services peaked in 2008 Q3. In 2009 Q1 and Q2 they fell by more than 15% year on year. Industrial production decreased at even somewhat higher rates in the first two quarters of 2009.

CHART II.4

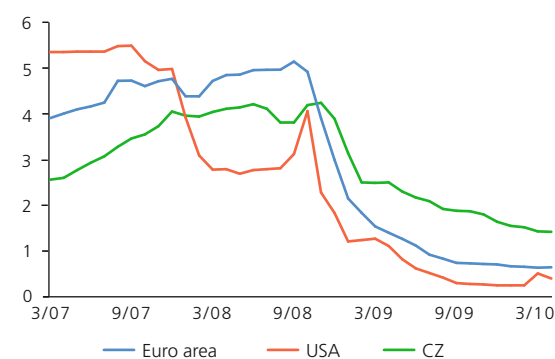
Monetary policy rates since the start of the financial turbulence (%)



Source: Thomson Datastream

CHART II.5

Three-month market rates since the start of the financial turbulence (%)

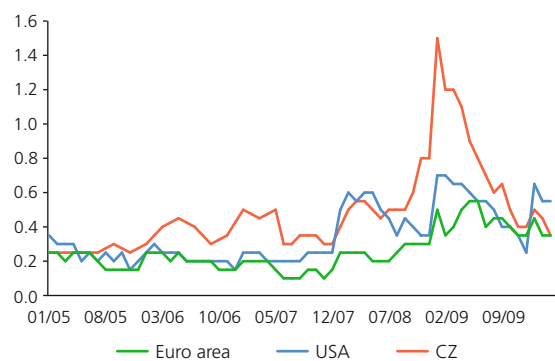


Source: Thomson Datastream

CHART II.6

Uncertainty regarding expected GDP growth in selected economies

(mean deviation of GDP growth estimates for given and next year from Consensus Forecasts; in percentage points)



Source: Consensus Forecasts, CNB calculation

which will rise from an average of 6.7% (or 8.1%) in 2009 to 8.6% (or 10.3%) roughly in mid-2011, will, together with lower growth rates of both wages and non-wage income compared to previous years, have an adverse effect on consumer demand and will result in an increase in the default rate of loans provided to the household sector, including the house purchase loan segment (see section 2.3).

Monetary policies remain easy

The key central banks continued to ease their monetary policies⁴ during 2009 and have left their monetary policy rates at historically low levels in 2010 (see Chart II.4). The reduced monetary policy rates also affected short-term money market rates (see Chart II.5), although not proportionally in all countries (see section 3.1). The low interest rate environment is contributing significantly to the ability of financial institutions, corporations and households to cope with the impacts of the crisis and recession.

In the final months of 2009, international and national authorities opened a debate regarding the timing of the exit from their supportive economic policies. The debate is focused on how quickly central banks should raise their key rates and when their unconventional liquidity-providing facilities for banking sectors should be discontinued. The prevailing view in central banks is that the low interest rate environment should be maintained for some time to come for the economic recovery to continue and banking sector stability to be preserved.

A marked rise in interest rates could have a destabilising effect

The continuation of easy monetary policy is supported by weak demand-pull inflationary pressures reflecting the existence of a negative output gap and highly subdued credit growth as well as very modest wage growth in an environment of high unemployment. Any sizeable interest rate growth in the next few years – irrespective of whether it is generated by tighter monetary policy, discontinuation of support policies, the impacts of even unjustified concerns about a future rise in inflation, or by loss of confidence in governments' ability to repay loans – could become a risk factor in some countries as regards the stability of financial institutions. The current environment is allowing banks to finance relatively cheaply and achieve a yield level enabling them to cope with loan impairment losses and the decline in the value of securities holdings. This applies above all to banks in countries that were hit hard by the crisis.

The recovery is still weak and dependent on economic policy support

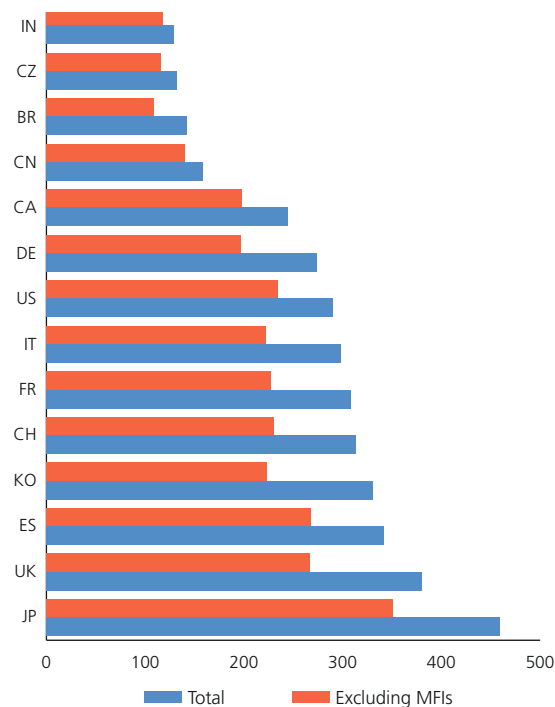
Although the acute phase of the global financial crisis is now history,

4 The CNB lowered its monetary policy rate (the two-week repo rate) four times in 2009, by a total of 1.25 p.p. In the first few months of 2010, the CNB's monetary policy rate remained at 1%. At the beginning of May the monetary policy rate was cut further to 0.75%.

CHART II.7

Total gross debt of economies

(% of GDP)



Source: McKinsey and CNB calculation for CZ

Note: Total gross debt is the sum of the debt of households, corporations, government and financial corporations. Data for the end of 2008 and for CZ for the end of 2009. MFIs – monetary and financial institutions.

there are still many risks which could significantly slow the global economy or take it back into recession and which could cause the weak economic growth in Western economies to become a longer-term phenomenon. Concerns about a profound and protracted recession or depression subsided in mid-2009 and the uncertainty surrounding future economic growth decreased considerably both for the world economy as a whole and for the Czech economy (see Chart II.6). However, this cannot be interpreted as meaning that the risks associated with the fall in economic activity and its impact on the balance sheets of corporations, households, governments and subsequently financial institutions has disappeared. The current lower uncertainty regarding economic growth in advanced economies going forward simultaneously implies a high degree of agreement that the economic recovery will be slow and weak. There is also a broad consensus that the modest increase in economic activity ongoing since mid-2009 is based not only on renewed private sector confidence, but also on radical supportive economic policy measures.

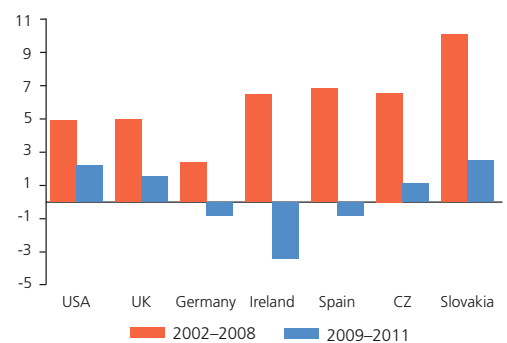
The need to reduce debt will have an adverse effect on demand

Demand in Western economies and particularly in the EU will be subdued in the long term by the need for economic agents to reduce their debt, which increased in virtually all sectors in the previous decade. Chart II.7 summarises gross debt levels in the form of loans received and bonds issued by individual sectors.⁵ These sectors have many assets vis-à-vis other sectors and in some cases also vis-à-vis other countries and their net debts may thus be much lower. Owing to changes in market variables (property, stock, bond or currency prices), however, debtors in all sectors may be hit by an increase in the value of debt relative to assets either through a decrease in the value of assets (for example if stock or property market bubbles burst) or a rise in the value of debt (for example due to currency depreciation where the debt is issued in foreign currency). Similarly, a decrease in income in a situation where the debt level remains constant and interest rates fall much less than the rate of income growth can be a severe shock to debtors. Overall, therefore, the gross debt level can be one of the yardsticks for assessing the potential stress of debtors if the economy takes a turn for the worse. Even a small change in the parameters affecting the debt burden or the capacity to repay debts can have a relatively large impact on highly indebted sectors.

The overall indebtedness of economic sectors in the Czech economy is low relative to the per capita GDP level, but the output of the Czech economy may be indirectly adversely affected by its strong links with those euro area economies whose debt is high. However, the favourable situation of the Czech economy is being decreased by a rising investment position deficit (see Chart II.20) and lower financial strength to maintain market confidence owing to its lower per capita GDP relative to

CHART II.8

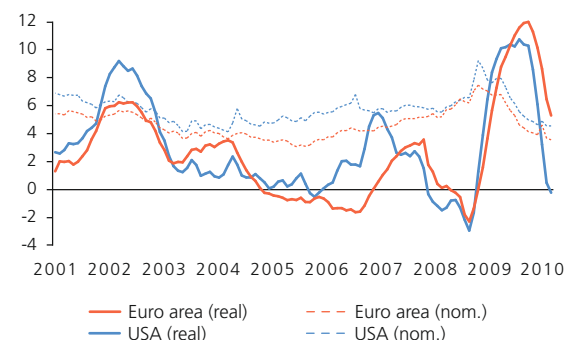
Nominal GDP and forecast for nominal GDP (average year-on-year growth in %)



Source: IMF (World Economic Outlook, April 2010)

CHART II.9

Nominal and real interest rates on corporate debt in the euro area and USA (%)



Source: Merrill Lynch Corporate Indices, Thomson Datastream

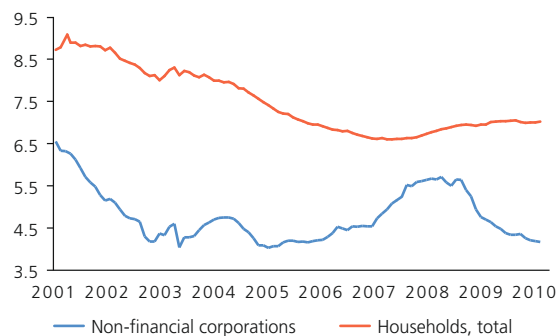
Note: Corporate bond yields in the euro area and the USA (adjusted for current producer price inflation in the case of real rates).

5 The data are taken from McKinsey (2010): *Debt and Deleveraging: The Global Credit Bubble and its Economic Consequences*, McKinsey Global Institute, January 2010.

CHART II.10

Interest rates on loans

(% p.a. on total stock of loans)



Source: CNB

Note: Interest rates on overdrafts are not included in the case of households

CHART II.11

Approximation of deviation of real interest rates from the long-term average

(% p.a.)

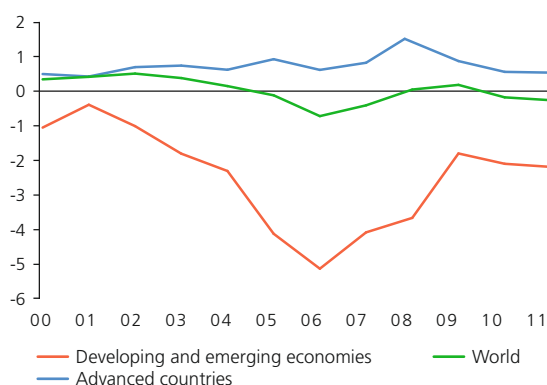


Source: CNB

CHART II.12

Difference between investments and gross national savings

(% of GDP)



Source: IMF (World Economic Outlook, April 2010)

the advanced economies given in Chart II.7. It cannot be ruled out that household and corporate loan demand and subsequently also consumer and investment demand will fall significantly in countries with high debt levels. This factor is bolstering the strong downward revision of expectations regarding future income connected not only with lower sales of goods and services, but also with pressures on employees' wages and corporate selling prices. If we proxy income growth with nominal GDP, the 5–10% annual increases in nominal income seen for many years now would be replaced by a period of negative or very low growth in many countries (see Chart II.8). This could be a strongly adverse factor from the point of view of debt repayment ability.

The private sector will face higher real debt servicing costs

The financial condition of households and particularly of corporations could be favourably affected to a certain extent by a decline in nominal lending rates. Low nominal income growth rates mean, however, that real debt servicing costs may be very high for many indebted entities in the period ahead. This applies above all to sectors that had excess capacity in the previous period. Real interest rates on corporate loans in the euro area are still relatively high, while an upturn in industrial producer price inflation in the USA – generated also by depreciation of the dollar – has already led to a marked decline in real interest rates (see Chart II.9).⁶ In the Czech Republic in 2009 average interest rates decreased only on loans to corporations, while those on loans to households showed a slight increase (see Chart II.10). Taking into account the evolution of prices and income in these sectors, we can state, however, that real debt servicing costs have increased and will probably remain high relative to the long-term average in 2010. They should return to their usual levels in 2011 (see Chart II.11)⁷.

Banks in some countries may not have sufficient funds for lending

One of the most discussed factors that might hinder economic recovery in the EU in the coming period is banks' ability to meet the private sector's potentially renewed demand for loans. Banking sectors in many countries are still suffering from a shortage of funding liquidity, as indicated by excessively low deposit-to-credit ratios in some countries (see Chart IV.4). Many banks in these countries are thus still having to rely on funding obtained from central banks or through government-guaranteed bond issues. Although it can be assumed that governments and central banks will discontinue their support policies very slowly,

⁶ Real interest rates calculated as the difference between current rates on loans to corporations (or corporate bond yields) and current producer price inflation are a very rough approximation of real corporate debt costs. In economies importing energy-producing materials and commodities, an increase in the prices of these commodities can significantly distort the actual growth in producers' selling prices.

⁷ Real interest rates are approximated for the two main categories of loans of Czech banks (loans to households for house purchase and loans to corporations). Interest rates on loans for house purchase are adjusted for year-on-year growth in gross disposable income of households. Interest rates on loans to corporations are adjusted for industrial producer price inflation. The average is calculated for 2000–2009 and the outlook for 2010–2011 is created by using Baseline scenario data and by keeping interest rates constant at the December 2009 level.

banks in some countries may have difficulties refinancing their liabilities as a result of this exit.⁸ The growing need of governments to raise funds to finance public deficits, which may start limiting the availability of funds for private sector financing and exert upward pressure on lending rates, is an ever increasing threat (see Box II.1).⁹ The acuteness of this threat is only partially reduced by falling growth in demand for loans from private entities and a modest global excess of savings over investment, which should continue over the next two years (see Chart II.12).

Problems on the credit supply side may reduce economic potential

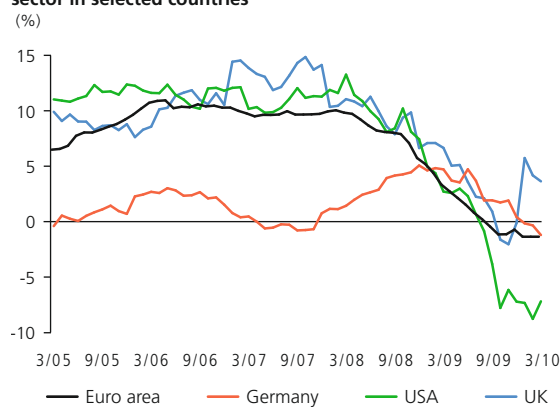
A marked change in loan dynamics occurred in 2009. Rates of growth of loans to the private sector were very low in Western economies and growth in loan portfolios virtually halted in some countries (see Chart II.13). Bank lending growth in the Czech economy stayed positive (see Chart II.14), but differed markedly across sectors (see sections 2.2 and 2.3). The sharp slowdown in lending activity in 2009 was due largely to a decline in private entities' demand for loans resulting from their lower economic activity and a sharp rise in uncertainty. If, however, the worse access to loans caused by the above supply-side factors on the part of banks persists in future years after demand for loans recovers, the financial conditions for households and corporations will deteriorate, negatively affecting consumer and investment demand. More costly and less available loans would also result in a slowdown in the creation of new supply capacity and in the postponement of the structural adjustment of economies. This would generate higher structural unemployment. Ultimately, it could significantly delay the return of economic activity to its previous path.

Insufficient capital and regulatory uncertainty are medium-term risks

A shortage of regulatory capital could gradually become an important barrier to lending to the private economy. This shortage could arise not only due to continued losses from NPLs and impaired securities, but also because of regulatory pressure to increase capitalisation. The behaviour of financial institutions may also be fundamentally affected by the high degree of uncertainty associated with planned international regulations and liquidity and capital requirements (see Box 6 in section 4.1). Over the next few years, when the new regulations and requirements will first be discussed, then enacted and then implemented, the uncertainty and administrative burden may be reflected not only in limited lending,

CHART II.13

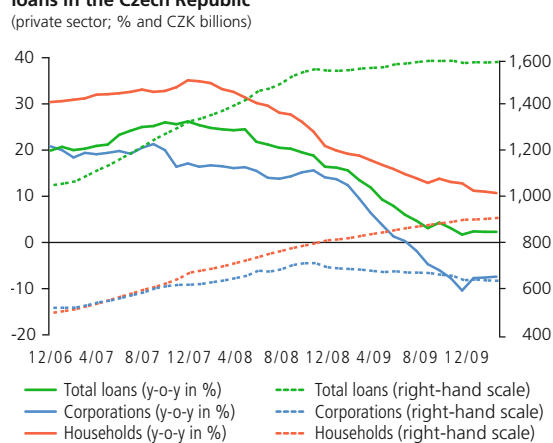
Rates of growth of loans to the private sector in selected countries



Source: Thomson Datastream

CHART II.14

Year-on-year growth rates and stocks of bank loans in the Czech Republic



Source: CNB

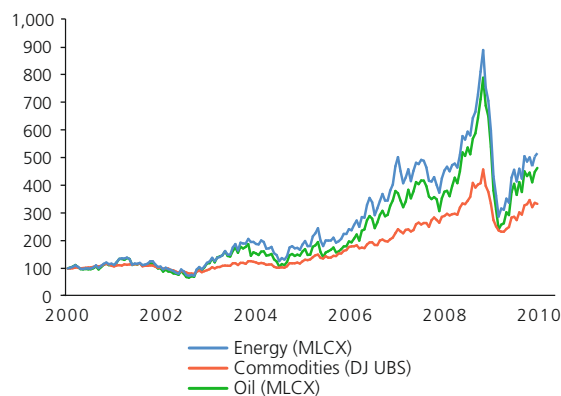
⁸ Concerns regarding the sufficiency of funds are also linked with other factors. One of these is that large international banks will have to refinance a large volume of maturing resources in the next few years. The IMF's Global Financial Stability Report (April 2010) estimates that debt securities worth almost USD 3,000 billion will mature in large European banks in the next three years. The complex situation for banks in some countries also stems from the fact that it remains difficult for them to acquire funds from the financial markets, as some market segments (particularly asset securitisation) are still not functioning properly and are still experiencing heightened risk aversion (see section 3.1).

⁹ Growth in long-term market rates would also lead to a rise in rates on house purchase loans. Combined with high unemployment, this would lead to an increase in housing loan defaults and in forced sales of property.

CHART II.15

Energy and commodity price indices

(1995 = 100)

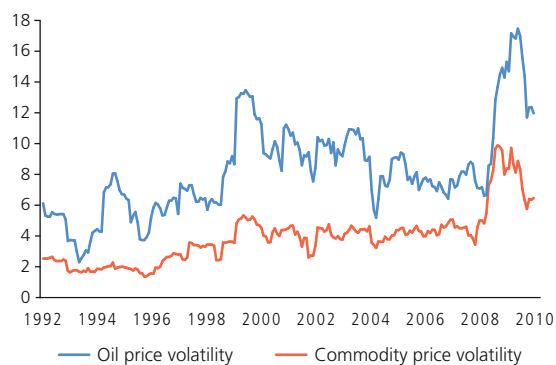


Source: Thomson Datastream

CHART II.16

Energy and commodity price volatility

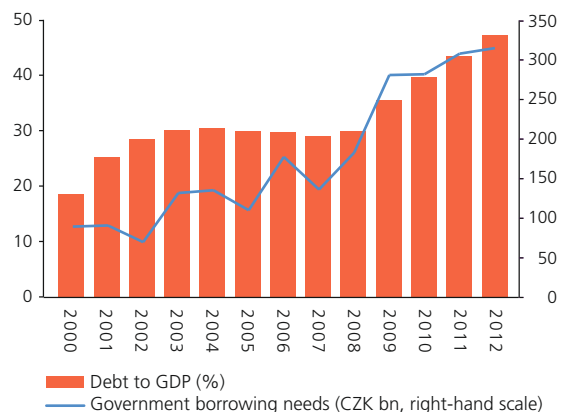
(standard deviations, moving 12M)



Source: Thomson Datastream

Note: MLCX Crude Oil Spot Index for oil, DJ UBS-Spot Commodity Index for commodities.

CHART II.17

Government debt-to-GDP ratio and gross government borrowing needs

Source: CZSO, CNB, MF CR

Note: CNB estimates used for debt-to-GDP ratio for 2010–2012 and MF CR estimates used for central government borrowing needs.

but also in a weaker focus on risk management as managers of financial institutions pay more attention to regulatory issues.

Growth in prices of commodities and energy-producing materials may become a major adverse factor

The reaction of commodity and energy-producing materials prices to the renewed increase in economic activity in Western economies and the continuing dynamic growth in Asian emerging economies represents a renewed risk. Prices of energy-producing materials remained at relatively high levels during the global recession (see Chart II.15). If the prospects for a recovery in Western economies lead to a renewal of their pre-crisis price levels, and if prices of other commodities increase as well, this would represent a negative supply shock for economies with weakened demand. Such a shock would lead to a downswing in economic activity and in cost-push inflationary pressures. It would also create a tricky situation for monetary authorities. If they responded to the cost-push inflation by raising interest rates, there would be another negative shock to demand. Risks related to energy and commodity prices are also being indicated by the increased volatility of these prices in recent years (see Chart II.16).

The risks related to Czech public finance are gradually rising

Owing to the decline in GDP and some budgetary measures, the public finance deficit increased by more than 3 p.p. to 5.9% of GDP in 2009. The rise in the deficit combined with a 1.5% decline in nominal GDP caused the government debt-to-GDP ratio to rise by more than 5 p.p. to 35.4% in 2009 (see Chart II.17). If further consolidation measures are not taken (beyond those effective since 2010), the public finance deficit will remain well above the Maastricht reference value in the coming years and government debt will exceed 47% of GDP at the end of 2012. This will be accompanied by increased issuance of government bonds in the financial markets (see Chart II.17). In 2007 the total gross government borrowing need had been CZK 135 billion, whereas in 2009 it was almost CZK 280 billion and from 2011 it is expected to exceed CZK 300 billion.¹⁰ The financing of Czech government debt could proceed without any major difficulties in the next few years, however, as Czech banks have sufficient funds and face lower demand for loans by corporations. Moreover, foreign investors diversifying their bond portfolios may be interested in buying the debt of stabilised non-euro area countries in addition to euro area countries' bonds. It cannot be ruled out, however, that the issuing conditions will deteriorate unexpectedly as a result of increased nervousness in the financial markets in the event of difficulties in other countries (as was the case in the southern periphery of the euro area at the end of April 2010) or that domestic banks will decide to diversify their public debt holdings internationally.

¹⁰ For details see the Czech Ministry of Finance document *Funding and Debt Management Strategy for 2010*, December 2009.

Should the Czech Republic be exposed to protracted weak economic growth and solve its tricky fiscal situation by increasing government debt and raising taxes and social security contributions, it may gradually become a stagnating, high-cost economy which is viewed as risky. As a result, its long-term potential would deteriorate, its capacity to repay its accumulated debts¹¹ would decrease, its financial sector's ability to withstand risks would fall and its external balance would deteriorate. For this reason, credible fiscal consolidation focused on the expenditure side of public finance should become a priority in the present situation. Further budget-intensive fiscal expansion would probably be of limited effectiveness and could undermine confidence in Czech public finance sustainability (see Box 1) and ultimately also external economic stability and financial system stability (see section 4.2).

Box 1:

PUBLIC FINANCE SUSTAINABILITY FROM THE INTERNATIONAL PERSPECTIVE

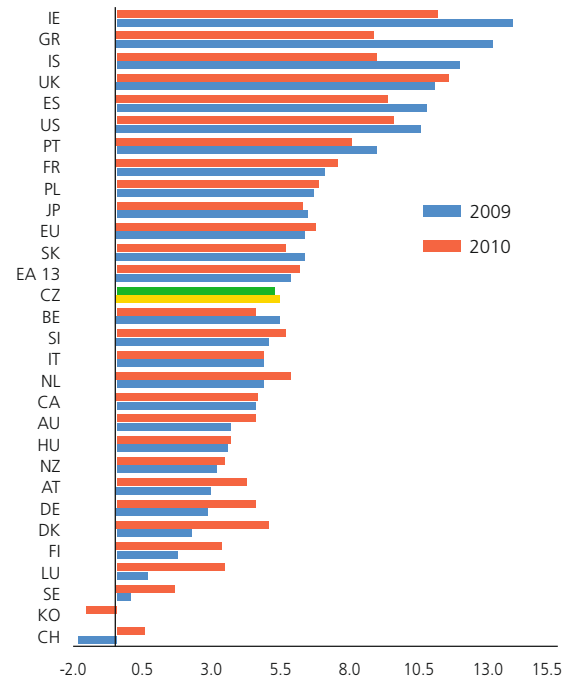
High public finance deficits (see Chart II.1 Box) and sharply rising government debt in advanced countries (see Chart II.2 Box) are the main risks to financial stability going forward. The last decade is exceptional in that government debts and the structural public finance problems were already increasing in advanced countries in the years of strong economic growth before the crisis. During the crisis, tax income fell sharply, most governments spent vast amounts of public money on demand-oriented anti-recession measures (beyond automatic stabilisers) and some governments were also forced to use public funds to solve problems in their financial systems. Part of credit risk was also shifted from banks to governments by the fact that governments provided large guarantees for bank bond issues and implicitly for bank deposits. Although these guarantees do not primarily lead to any payments from government funds and to any rise in deficits, they pose a significant risk.

The high deficits are being reflected in a greatly increased government debt level, which will very probably approach 100% of GDP in many advanced countries after 2011. In some countries, including the USA, this limit will be exceeded. Financing the rising debt will drain large amounts of funds from the international financial markets. In the event of a loss of confidence in the ability of some governments to continue financing their debts smoothly, adverse impacts could arise in the form of rising long-term interest rates even in relatively stable countries such as the Czech Republic whose government debt is

11 On the basis of projections of economic growth and interest rates on public debt, a Deutsche Bank study ranks the Czech Republic among the countries with potentially the highest need for consolidation measures if public debt is to be kept at a sustainable level. See Deutsche Bank (2010): *Public Debt in 2020. A Sustainability Analysis for DM and EM Economies*.

CHART II.1 BOX

Public finance deficits of advanced countries in 2009 and 2010
(% of GDP)



Source: ECB, IMF
Note: Excludes Norway, which reports high surpluses (9.7% in 2009 and 10.8% in 2010).

CHART II.2 BOX

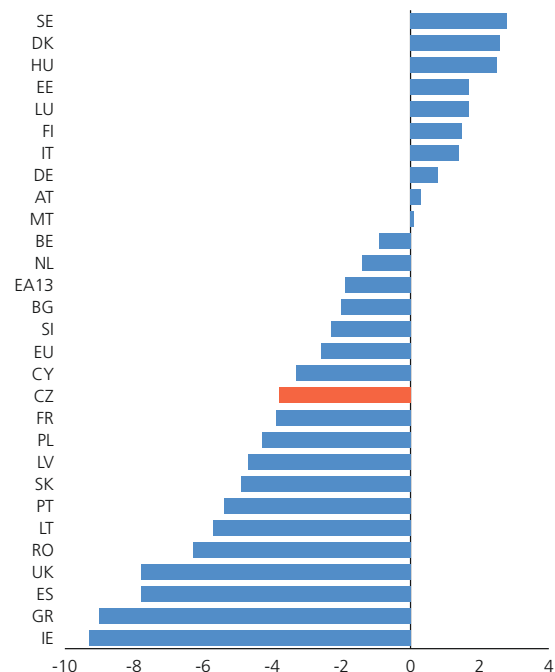
Government debt-to-GDP ratios
(%; 2009 and estimates of change between 2005 and 2012)



Source: OECD, EC

CHART II.3 BOX

Cyclically adjusted primary budget balances in the EU
(2009; % of GDP)



Source: EC
Note: European Economic Forecast, Spring 2010

not yet so high. The increased long-term interest rate volatility could then generate higher exchange rate volatility via capital flows. Last but not least, countries with higher government debt levels would be permanently exposed to the risk of contagion from other countries whose debt position sustainability comes into question. This was confirmed at the end of April 2010, when Greece's problems spilled over to Portugal and Spain. Another clear lesson from the Greek crisis is that financial markets are asymmetrically far less tolerant to small countries showing public finance deficits than to large ones.

The increased and rising government demand for savings in the coming years may thus lead not only to rising interest rates on government bonds, but also to limited availability of lending resources for the private sector and to rising interest rates on loans to corporations and households. The fiscal problems will then be further escalated directly by an increase in interest rates on government bonds and indirectly by a decline in economic activity due to "costly" loans to the private sector through a worsening of the budget revenue side.¹²

In a situation of slow economic growth and rising government debt financing costs, the fiscal sustainability of governments of advanced countries is becoming a significant challenge for many advanced countries, which need to undertake fundamental structural reforms. These reforms must necessarily involve a pronounced decrease in primary public budget deficits (i.e. deficits excluding debt servicing interest costs).¹³ This will be accompanied, at least initially, by a negative demand shock weakening economic growth. Without credible fiscal consolidation, however, the negative demand shock would ultimately happen anyway via rising interest rates due to the increased risk of government default on bond redemption, to the crowding-out effect of government demand for savings or to growth in inflation expectations and the related responses from central banks. In other words, the supportive fiscal policies are having two contrary effects – one increasing demand via government and private expenditure and the other pushing it down via higher lending rates. In a situation of rising debt and heightened nervousness in the financial markets, the overall effect of the supportive fiscal policies may be negative, particularly

¹² Greece found itself in this situation in 2010. The country's imprudent fiscal policy was masked for a time by high demand for government bonds linked with banks' ability to obtain liquidity through operations with the ECB. Banks demanded government bonds of their countries and then used them as collateral in operations with the ECB. Not surprisingly, Greek banks were very active in this practice and Greece experienced the highest net increase in liquidity supply in the euro area in 2006–2009 (see Chart 1.19 on p. 22 of the IMF's Global Financial Stability Report, April 2010).

¹³ For example, for the Czech government debt-to-GDP ratio to stabilise at levels just above 40% after 2011, the cyclically adjusted primary deficit (estimated at roughly 3% in 2009) would probably have to decrease to almost zero. Given the present expectations of future macroeconomic trends, this would require a reduction in expenditure, an increase in taxes, or a combination of the two of around CZK 100 billion.

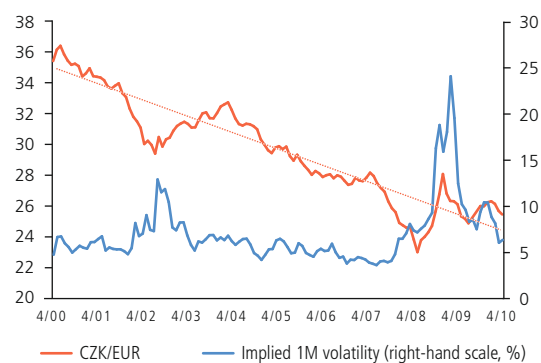
for small open economies, even in the relatively short term.¹⁴ This risk is another argument for relatively fast and maximally credible progress with fiscal consolidation.

By international comparison within the group of advanced countries, Czech public finance still seems relatively sound and less vulnerable to changes in sentiment in international financial markets. As regards deficits, the Czech Republic in 2009 ranked among the advanced economies with lower deficits (see Chart II.1 Box) and this is likely to remain the case in 2010. Similar or better values compared to the relevant groups of countries can be found for the Czech Republic in the case of other fiscal indicators as well. At the end of last year the share of debt held by foreign creditors was 10% (euro area average 44%, Greece 79%), the share of short-term debt with maturity of up to one year was 14.7% (euro area average 13.3%), the share of the foreign currency component of the debt was 8.6% (non-euro area countries 40%) and debt servicing costs were 1.4% of GDP¹⁵ (euro area average 3%).

Based on the above data, the Czech government debt may currently seem relatively problem-free, but its fast rate of growth is a warning signal from the medium-term perspective. In recent years, the Czech Republic has belonged to the group of countries with a rapidly rising gross government debt-to-GDP ratio (see Chart II.2 Box). The worsening fiscal trend in the Czech Republic is also indicated by the estimated cyclically adjusted primary public finance balance, which was higher for the Czech Republic than the EU and euro area averages in 2009 (see Chart II.3 Box). In this situation, the view of Czech public finance sustainability could change fundamentally in a negative direction in just a few years' time.

CHART II.18

The koruna exchange rate and its volatility



Source: CNB calculation based on CNB data
Note: The dotted line shows the long-term trend.

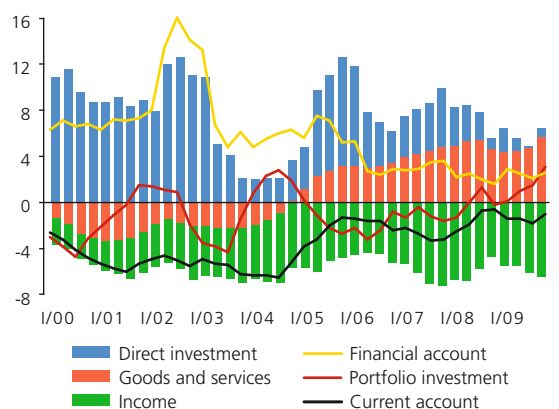
¹⁴ New empirical analyses dealing with governments' expansionary expenditure policy have found that its effectiveness is decreasing (see, for example, Burriel, P., de Castro, F., Garrote, D., Gordo, E., Paredes, J., Pérez, J. (2009): *Fiscal Policy Shocks in the Euro Area and the US. An Empirical Assessment*, ECB Working Paper 1133, December 2009, or Kirchner, M., Cimadomo, J., Hauptmeier, S. (2010): *Transmission of Government Spending Shocks in the Euro Area: Time Variation and Driving Forces*, Tinbergen Institute Discussion Paper 10-021/2, February 2010. Government expenditure multipliers are usually less than one even in the short run and fall to zero or turn negative in just a few years. The multipliers also decrease with growing government debt. These results suggest that although fiscal consolidation based on government expenditure cuts will have a negative effect on economic growth in the short term, this effect will be quite limited and short-lived. In countries with high government debt it may even be positive in the short run.

¹⁵ The net interest costs of servicing the Czech national debt calculated on a cash basis were CZK 45 billion last year, at an average interest rate of just under 4%.

CHART II.19

The balance of payments

(% of GDP)



Source: CZSO, CNB

Note: Annual moving totals of balance of payments components and nominal GDP.

TABLE II.1

FINANCING OF THE EXTERNAL POSITION OF THE CZECH ECONOMY

CZK billions	2009	2010	2011
<i>Financing of current account</i>	-30	-30	-35
– current account (deficit)	37	40	50
– reinvested earnings	-67	-70	-85
<i>Amortisation of external debt</i>	135	95	137
– debt service	174	142	192
– interest paid	-39	-47	-42
<i>Short-term debt as of 31 December 2009*</i>	499	417	417
<i>Capital account surplus</i>	-41	-38	-38
Financing need in CZK billions	563	444	481
Financing need in USD billions**	29.9	23.6	25.6
FX reserves (as of 31 December 2009)	764	764	764
FX reserves***/financing need	136 %	172 %	159 %

Source: CNB

Note: Current account and reinvested earnings – CNB May 2010 forecast.

Data on debt amortisation – CNB estimate based on an analysis of the Czech Republic's investment position.

The financing need is made up of the items in italics (interest paid is already included in the current account).

* Short-term debt as of 31 December 2008 used for 2009.

** Calculations based on average exchange rate for February 2010 (18.82 CZK/USD).

*** FX reserves level as of 31 December 2009 (CZK 764 billion) used in each case.

A fundamentally unjustified appreciation of the koruna is still a significant risk

The stabilisation of the macroeconomic environment in 2009 was also fostered by a calming of the situation in the currency markets. From August 2007 to August 2008 the koruna sharply appreciated, but in mid-September 2008, after the collapse of Lehman Brothers, it strongly depreciated. This was due to a sharp growth in aversion to the risks of CEE countries. However, thanks in part to extensive communication by the Czech authorities, investors relatively quickly included the Czech Republic in the category of sound advanced economies. The koruna then eliminated a large part of its depreciation and since spring 2009 has remained relatively stable – despite occasional fluctuations – at levels that can be considered consistent with the fundamental characteristics of the Czech economy and the long-term trend (see Chart II.18). The partial weakening from the excessively strong pre-crisis levels helped domestic corporations to cope with the effects of the fall in external demand (see the assessment of developments in the exporter segment in section 2.2). According to prevailing market expectations, the koruna will appreciate very slowly in the period ahead. A survey of forecasts of world analysts and forecasters in *Foreign Exchange Consensus Forecasts* in April 2010 stated that the koruna-euro exchange rate is expected to be 25.24 at the end of July 2010 and 24.61 at the end of April 2011 (18.83 and 18.56 respectively for the koruna-dollar exchange rate).

A potential renewed and fundamentally unjustified appreciation of the koruna associated with a renewed search for yield by investors must be regarded as an ever-present risk. This risk can be derived from historical experience and also from the fact that from the macroeconomic point of view the Czech economy is highly stable and even its public finances may seem relatively sound (see Box II.1).

External stability remains a strong point of the domestic economy in the short run

The external stability of the Czech economy strengthened during 2009, and this trend should continue over the next two years. Thanks mainly to an increase in the trade surplus, the current account deficit decreased to 1% of GDP (see Chart II.19). Assuming exchange rate stability, the CNB expects it to stay close to this level in 2010 and 2011 (1.1% and 1.3% of GDP respectively). Trade in goods and services will then be in a sizeable surplus. So, including the capital account surplus associated with the positive net flows between the Czech Republic and the EU, the overall external financing need will only slightly exceed the short-term debt level, which, in a standard situation, can be financed largely from short-term external assets of the private sector.

Compared to 2009, the total need will thus decrease in the next two years¹⁶ (see Table II.1). Nevertheless, the investment position recorded a deterioration, which deepened further in 2009. Including the net FDI inflow, however, it remains at the positive levels usually seen in previous years (see Chart II.20). The situation is similar for gross external debt, which continues to be 80% covered by banking sector assets and more than 60% covered by net foreign assets (see Chart II.21). The Czech economy thus remains highly stable as regards its external balance.

Alternative economic scenarios

Potential alternative future macroeconomic paths together with the risks identified became the basis for the alternative economic scenarios used in section 4.2 to test the resilience of the Czech financial sector. The paths of key variables in each scenario are shown in Charts II.22a–d. The evolution of other variables relevant to the stress tests in relation to the evolution of the macroeconomic environment (credit growth, the default rate, the NPL ratio¹⁷ and property prices) will be presented for each scenario in the following sections of this Report.

The **Baseline Scenario** corresponds to the CNB's official May macroeconomic forecast published in Inflation Report II/2010. It predicts a gradual recovery of the real economy, which will be temporarily interrupted in the second half of this year and renewed in the second half of 2011. The scenario also assumes that monetary-policy relevant inflation will return to the inflation target from below over the entire forecast horizon, the exchange rate will be stable with a modest appreciation in 2011 and short-term interest rates will gradually increase.

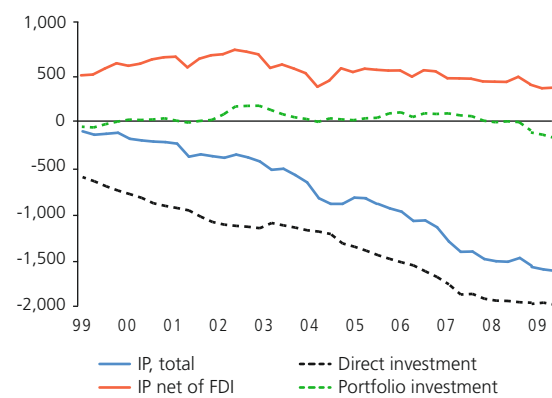
The **Return of Recession** stress scenario captures the risk of a longer-lasting W-shaped recession, i.e. a further substantial decline in GDP in 2010 and partly also in 2011. The fall in domestic GDP will be generated mainly by a greater weakening of external demand (for example due to inappropriately selected exit strategies from support policies in the major economies). Domestic corporations and households will be faced with an adverse trend in their income, reflected in a decline in consumption and investment. The exchange rate will remain broadly stable. Given the very weak inflationary pressures, short-term interest rates will be at very low levels. Increased financial market sensitivity to foreign and domestic fiscal risks will, however, prevent a decline in both long-term interest rates and rates on client loans.

¹⁶ Gross external financing need is calculated as the sum of the current account deficit, repayments of long-term external debt principal and existing short-term external debt. It is an approximation of the amount of foreign currency funds to cover the estimated external financing need in the given year. The calculation of the external financing need is part of the analyses of the sustainability of the external balance of the economy. For more details see Financial Stability Report 2008/2009, Box 1.

¹⁷ Both the default rate and NPL ratio relate to an identical event, i.e. a breakdown in a debtor's payment discipline. Whereas the default rate is a (usually forward-looking) flow indicator focused on a particular time interval (see the Glossary), the NPL ratio is a stock indicator describing the level of NPLs at a given point in time.

CHART II.20

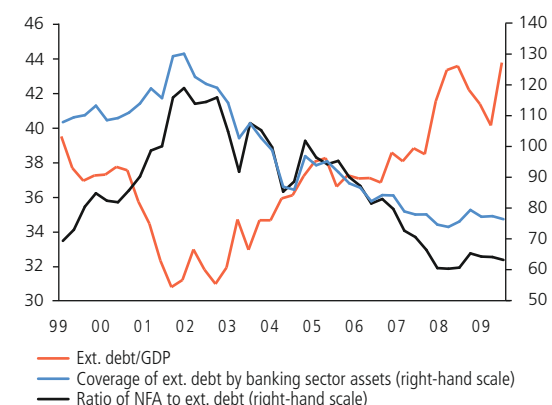
The investment position of the Czech Republic (CZK billions)



Source: CNB

CHART II.21

Ratio of the gross external debt of the Czech Republic to GDP and its coverage by the external assets of financial institutions (%)

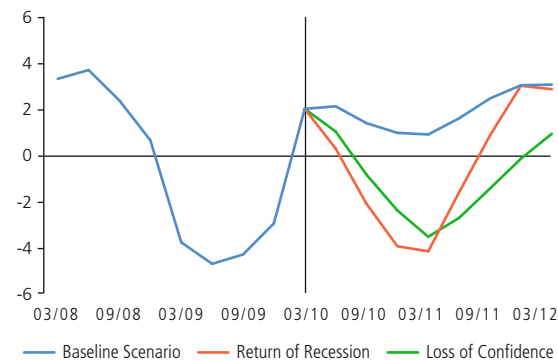


Source: CNB

Note: Assets of the banking sector (including the CNB) and net external assets of the financial sector.

CHART II.22A

Alternative scenarios: real GDP growth (%)

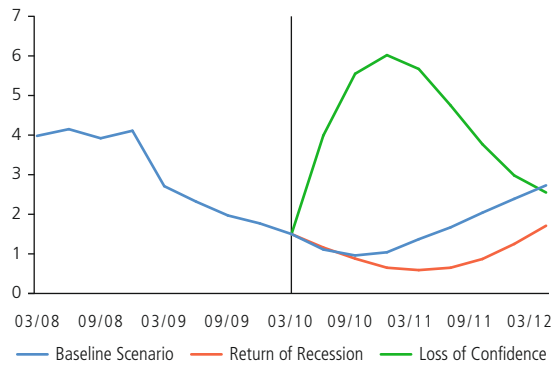


Source: CNB

CHART II.22B

Alternative scenarios: 3M PRIBOR

(%)



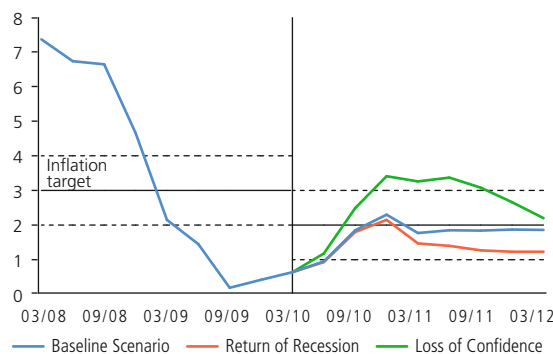
Source: CNB

The **Loss of Confidence** stress scenario simulates the potential combination of weak economic growth (relative to the *Baseline Scenario*) and adverse developments in the financial markets and subsequently also in the financial sector. The Czech economy will slide back into a relatively strong recession, which will exacerbate its public budget problems. Concerns about public finance sustainability will generate a negative reaction from the financial markets. There will be a loss of investor confidence, the yields demanded on Czech government bonds will increase and the koruna will depreciate sharply. This depreciation will lead to a sizeable rise in potential inflationary pressures, to which monetary policy-makers will react by raising short-term interest rates. Client interest rates will thus also rise significantly. This, together with the unfavourable income situation and growing unemployment, will be reflected in a rise in corporate and household defaults. At the same time, owing to pessimistic expectations, the property market situation will start to deteriorate markedly in excess of the projection, depending on the evolution of the macroeconomic environment (see section 3.2). A weak economic recovery will start towards the end of 2011.

CHART II.22C

Alternative scenarios: inflation

(%)

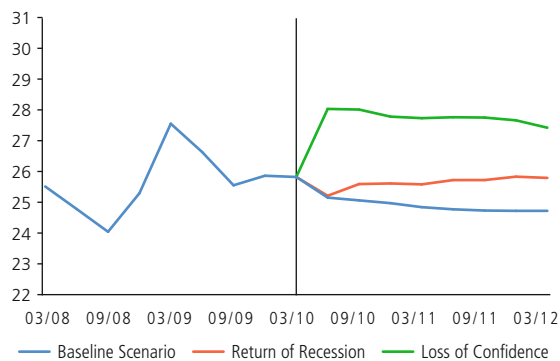


Source: CNB

CHART II.22D

Alternative scenarios: exchange rate

(CZK/EUR)



Source: CNB

2.2 NON-FINANCIAL CORPORATIONS

The situation in the corporate sector worsened significantly in 2009 compared to previous years. However, some indicators in recent months are suggesting a modest recovery and a start of a reversal in the negative trend. A possible return of recession in Western European countries is still the biggest risk to the corporate sector.

Corporations' financial results deteriorated in 2009

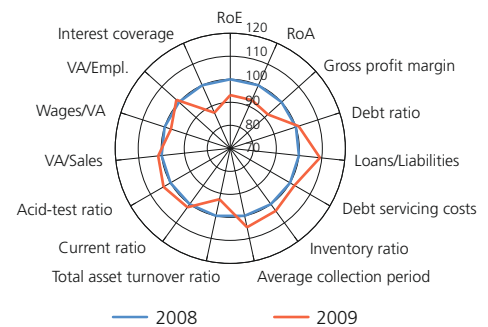
Corporations faced a dramatic fall in external and later also domestic demand, especially in 2009 H1. This was reflected in their financial results for 2009. However, the economic decline hit corporations with varying intensity. Large foreign-controlled corporations coped best and were even able to slightly increase their profits compared to the previous year. They were probably aided in this by measures such as car-scrapping incentives introduced in some European countries. By contrast, domestically controlled corporations recorded a year-on-year decline in profit. Overall, the corporate sector's profit fell slightly year on year and its profitability indicators worsened. Corporate solvency, which had also deteriorated at the start of the economic crisis, started to improve gradually in late 2009 and showed a year-on-year increase thanks mainly to a fall in short-term liabilities. Some improving indicators of the activity of non-financial corporations also suggest a potential positive change in economic trend (see Chart II.23).

The negative output gap is exerting upward pressure on credit risk and unemployment

Corporations responded to the negative demand shock by cutting costs, production, margins and prices (see Box 2). This reaction, creating an environment characterised by very slow nominal income growth, reflects the formation of a wide actual or perceived negative output gap. Those corporations which invested in the Czech Republic for example around 2005 – in line with the optimistic expectations following EU entry and assuming that annual real GDP growth rate would be 5% in future years – will probably be confronted with substantially lower output levels. If real GDP grows in future years according to the *Return of Recession* and *Loss of Confidence* stress scenarios (see the end of section 2.1), the gap between actual and originally estimated potential GDP will reach even 20% by the end of 2011 (see Chart II.24). The difference between the previously expected and subsequently lower sales will generate risks associated with the repayment of loans obtained in the pre-crisis rapid economic growth phase. It will also result in further growth in unemployment owing to dismissals of employees that corporations are currently employing in the hope of a recovery in demand. This may increase credit risk in the segment of loans to households (see section 2.3).

CHART II.23

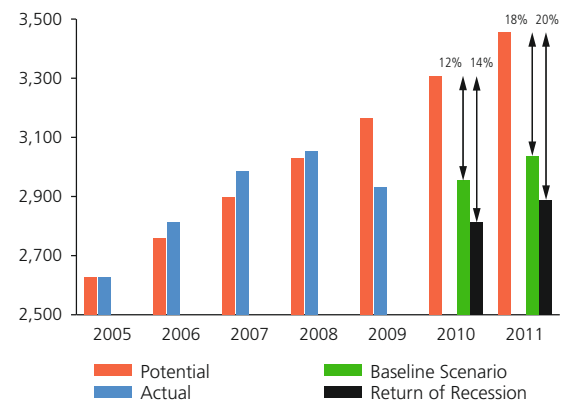
Key financial indicators for non-financial corporations
(2008 = 100; index > 100 = improvement; index < 100 = deterioration)



Source: CZSO, CNB

CHART II.24

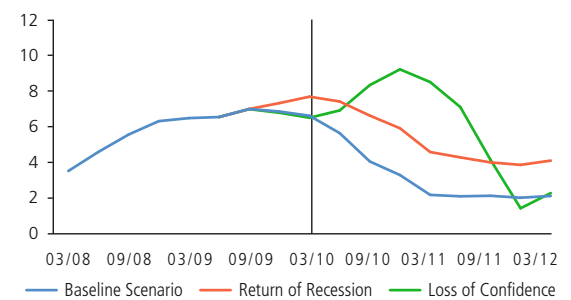
Potential and actual GDP according to 2005 expectations compared to the alternative scenarios
(CZK billions; constant prices)



Source: CNB

CHART II.25

12-month default rate on bank loans to corporations
(%)



Source: CNB

Note: Given that the 12M default rate is calculated as a forward-looking indicator, the values for the individual scenarios differ from 2009 Q3 onwards.

TABLE II.1 BOX

COMPANIES HIT STRONGLY OR VERY STRONGLY BY THE ECONOMIC CRISIS IN INDIVIDUAL AREAS

(weighted proportion of responses in %)

	Reduced demand for products and/or services	Problems financing activities through usual financial channels	Customer payment problems
Total	52.1	27.2	34.4
manufacturing	66.4	30.9	36.3
other industries*	37.0	23.4	32.4
small enterprises	37.2	31.2	45.1
medium-sized enterprises	52.0	22.5	40.0
large enterprises	55.9	28.7	29.0
exporters	75.4	29.1	31.6
non-exporters	41.0	26.1	36.1

Source: CNB

Note: * construction, trade, hotels and restaurants, transport and communication, and real estate, rental and business activities.

Small enterprises (20–49 employees), medium-sized enterprises (50–199 employees), large enterprises (200 employees or more).

Exporters: Companies that obtained more than half of their income from the sale of their main product in 2006 through sales in foreign markets.

TABLE II.2 BOX

IF THE REDUCTION OF COSTS IS OF ANY RELEVANCE WHEN YOUR FIRM FACES A SLOWDOWN IN DEMAND, HOW IS THIS GOAL ACHIEVED?

(weighted proportion of responses in %)

	2007	2009
Reduce base wages	0.0	3.9
Reduce flexible wage components	18.3	25.1
Reduce the number of permanent employees	18.7	42.9
Reduce the number of temporary or other employees	26.6	37.5
Adjust the number of hours worked per employee	3.5	12.2
Reduce non-labour costs	42.4	54.6

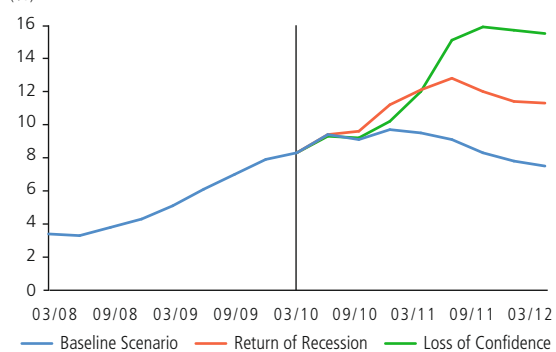
Source: CNB

Note: Reactions to current crisis; responses obtained in June and July 2009 (2009 column). Responses to hypothetical question about how firms react to a negative demand shock, obtained in autumn 2007 (2007 column).

CHART II.26

NPL ratio for bank loans in the non-financial corporations segment

(%)



Source: CNB

Box 2:**CORPORATIONS' RESPONSE TO THE ECONOMIC CRISIS**

In September and October 2007 the CNB conducted a business survey on wage and price-setting behaviour.¹⁸ A total of 399 firms from the business sector (excluding power generation and financial intermediation) with 20 or more employees took part in the survey. These firms were contacted again in June and July 2009 and asked to answer several questions in order to obtain information about the impact of the financial and economic crisis on corporations and about corporations' cost-cutting reaction.¹⁹ In all, 241 corporations responded to the survey update.

The crisis had hit corporations primarily through lower demand. The risks of secondary insolvency and a credit crunch were also high in the corporate sector, but less significant than the factor of lower demand (see Table II.1 Box). 52% of corporations had been hit strongly or very strongly in the area of demand, 34% were experiencing strong or very strong customer payment problems, and 27% were having problems financing activities through the usual financial channels. The results also showed that the manufacturing corporations, large enterprises and exporters had been affected more strongly by lower demand. By contrast, small enterprises had been hit harder by secondary insolvency risk.

Corporations had responded to the crisis most frequently by cutting costs (89% of corporations). In addition to cost cuts, 49% of corporations had reduced production, 40% had lowered margins and 34% had accepted lower prices. Compared to the original 2007 survey, when corporations had answered how they would react to an unexpected drop in demand, they had responded less often with price and margin cuts in the actual crisis.²⁰

Other data (see Table II.2 Box) reveal that the most important cost-cutting strategy was a reduction in non-labour costs (55% of corporations). Labour costs had been cut by reducing the number of permanent (43%) and temporary employees (38%) and also by cutting the number of hours worked per employee (12%). A quarter of corporations had cut bonuses and 4% had reduced base wages.

18 The survey results are given in Babecký, J., Dybczak, K., Galuščák, K. (2008): *Survey on Wage and Price Formation of Czech Firms*, CNB Working Paper 12/2008.

19 Some of the questions were intentionally left the same as in the original 2007 survey to enable an assessment of how corporations were reacting to the lower demand during the crisis compared to their intended reaction to unexpectedly weaker demand in a standard situation.

20 According to the original 2007 survey, 51% of corporations would have reacted to an unexpected fall in demand by cutting prices and 54% by reducing margins.

Credit risk increased

A pronounced increase in corporate sector credit risk is evidenced by the 12-month default rate,²¹ which increased in 2009 H2 (see Chart II.25). However, it should gradually decrease over the two-year horizon for the *Baseline Scenario* according to the CNB's internal model and stabilise at levels around 2%, which corresponds to the 2007 average.²² This is also reflected in an increase in the share of non-performing bank loans, which are rising during 2010 in all the scenarios considered (see Chart II.26). Nonetheless, the widely used leading indicator of corporate sector creditworthiness indicates an overall deterioration of the financial soundness of corporations over the one-year horizon (see Chart II.27).²³

Worse corporate solvency is also indicated by a rising number of insolvency petitions filed in 2009 (see Chart II.28).²⁴ The CNB's internal model²⁵ indicates, however, that the number of insolvency petitions filed should decrease slightly in the period ahead for the *Baseline Scenario*. The annual rise in insolvencies in the Czech Republic (57%) was more than twice the average in Western European countries (22%), but much lower than in the Western European countries hit hardest by the crisis – Spain (94%) and Ireland (81%).

The recession is affecting export-oriented firms in particular

The negative demand shock had a major effect on export-oriented firms. Lower sales compared to the very optimistic pre-crisis expectations were reflected in loan repayment problems for many exporters. This led to faster growth in the non-performing bank loan ratio compared to the non-financial corporations sector as a whole (see Chart II.29). The pre-crisis values of this indicator had been much lower for exporters than for the overall non-financial corporations sector, but the trend reversed at the end of 2009 (8.25% for the 700 largest export-oriented firms compared to 7.8% for the sector as a whole). The available data from the Central Credit Register also suggest that exporters are dealing with exchange rate volatility through natural hedging to a greater extent

21 Compared to Financial Stability Report 2008/2009, a methodological change has been made in the calculation of this indicator (see section 4.2).

22 The main macroeconomic factors used in the corporate sector default rate model are the change in GDP, external demand, investment, the exchange rate and inflation. The cost side of non-financial corporations' balance sheets in the model is represented by the change in interest rates.

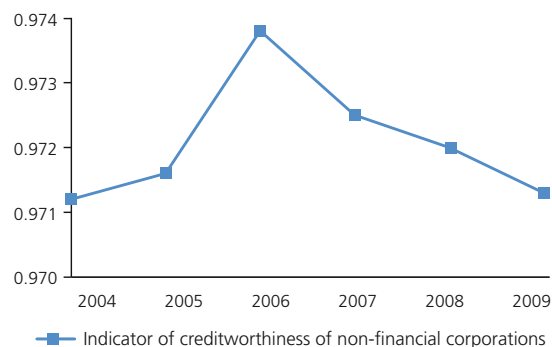
23 This indicator, based on financial indicators covering the profitability, indebtedness, liquidity and activity of firms, evaluates corporations' resilience to potential bankruptcy over the next 12 months – see Jakubík, P., Teplý, P. (2008): *Scoring as an Indicator of Financial Stability*, Financial Stability Report 2007, CNB, pp. 76–85.

24 The history of insolvencies in 2008 and partly also in early 2009 was affected by a new insolvency act. The postponement of its date of effect from June 2007 to January 2008 led to an extraordinary number of petitions being filed at the end of 2007. Many firms and creditors were probably waiting for the new act before filing their petitions but were ultimately probably unable to delay it any longer and so an unusually large number of petitions was filed at the end of the year.

25 The model of the number of insolvencies in the economy uses consumption and investment growth, change in external demand, real interest rates, change in the real exchange rate and change in real wage costs. For more details on the model estimation methodology, see Jakubík, P., Seidler, J. (2009): *Corporate insolvency and its macroeconomic determinants* (in Czech), *Ekonomický časopis*, No. 7, Vol. 57, pp. 619–633.

CHART II.27

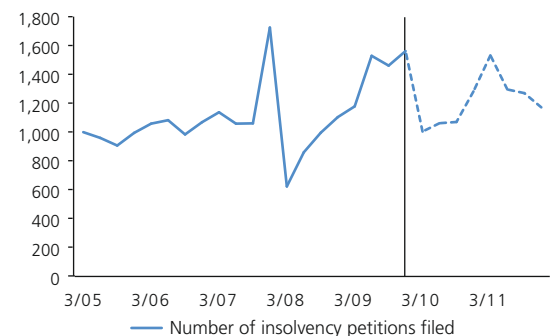
Indicator of creditworthiness of non-financial corporations



Source: CNB

CHART II.28

Corporate insolvencies

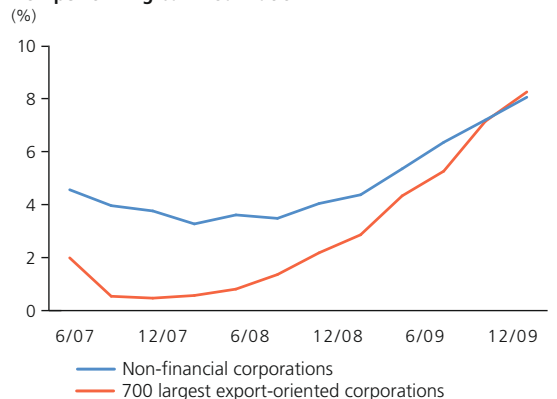


Source: Czech Ministry of Justice, CNB

Note: A new insolvency act took effect on 1 January 2008.

CHART II.29

Non-performing bank loan ratio

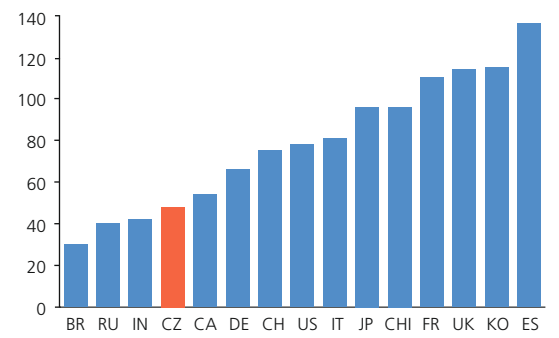


Source: CNB (CCR)

CHART II.30

International comparison of ratios of debt of non-financial corporations to GDP

(2008 data; % of GDP)

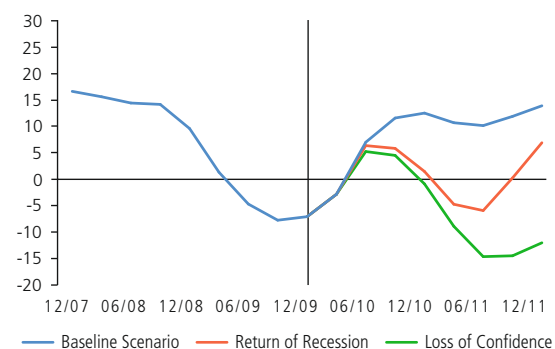


Source: CNB, McKinsey

CHART II.31

Year-on-year growth in loans to non-financial corporations

(%)

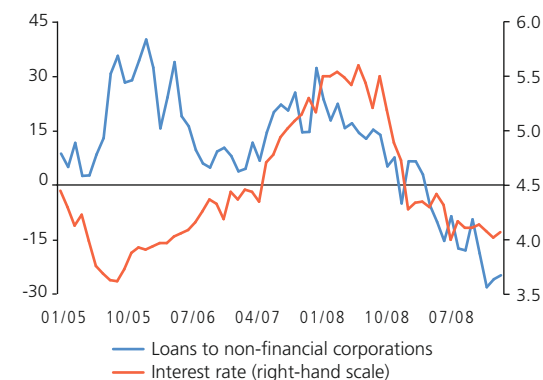


Source: CNB

CHART II.32

Loans to non-financial corporations

(new business; y-o-y growth in % and interest rate in %)



Source: CNB

than in the past. The share of foreign currency bank loans in total loans received by the 700 largest export-oriented firms was about 38% at the end of 2009 (compared to less than 34% at the end of 2007), which is about double the average for the non-financial corporations sector.

The aggregate corporate debt ratio is still relatively low in international terms

Corporate credit risk is being partly moderated by a modest year-on-year decline in corporations' average debt due to falling short-term liabilities and rising equity. The ratio of net debt (loans + bonds – financial assets) to EBITDA decreased year on year (6.6% in 2009 compared to 7.1% in 2008). Similarly, the net debt ratio to PBTDA dropped to 7% in 2009 from 7.4% in 2008. However, the average ratio of debt to income (EBIT) increased slightly (to 2.1% in 2009 from 1.9% in 2008), while the average debt-to-sales ratio was stable (at roughly 11% in both 2009 and 2008). By contrast, estimated nominal debt servicing costs fell year on year. This was facilitated by a reduction in interest rates on corporate loans in 2009 (see Chart II.23). Conversely, the ratio of interest paid to income (EBIT) generated rose to 9% in 2009 (from 7.8% in 2008). At the end of 2009, the aggregate debt ratio of non-financial corporations decreased in relation to both GDP (46% in 2009 as against 48% in 2008) and the sector's total financial assets (39% in 2009 as against 40% in 2008). The debt of the Czech corporate sector thus remains relatively low in international terms (see Chart II.30).

The slowdown in corporate loans is primarily due to falling demand for operating loans

The weaker economic activity and tighter non-interest lending standards were reflected in a decrease in the rate of growth of bank loans in the corporate sector despite falling interest rates (see Charts II.31 and II.32). This was due mostly to a decline in short-term loans, linked mainly with falling production and declining demand for operating loans. The available data also indicate that corporations partly replaced bank loans and loans from other financial intermediaries with borrowings from affiliates and – in the case of large corporations – also by bond issues of their own.²⁶ The overall slowdown in corporate loans was thus not as significant as the data on bank loans might suggest. One risk generated partially by corporations' worse access to loans is that of delayed payments to trading partners, which may in turn generate secondary corporate insolvency. However, the average delay in payments in the Czech Republic in 2009 was comparable with that in Germany and much lower than in some CEE countries.²⁷ From this perspective, the risk of secondary insolvency of Czech corporations currently appears to be quite low.

²⁶ Affiliates comprise both resident and non-resident companies, parent companies in particular. In addition, corporations issued an extraordinary volume of bonds last year, but their value is comparatively low (about 14% at the end of 2009) relative to the total debt (loans and bonds).

²⁷ According to data from Creditreform, the average payment delay in 2009 was 12 days in the Czech Republic, 16 days in Germany, 20 days in Slovakia, 30 days in Hungary and a full 93 days in Poland. The average settlement period is 36 days in the Czech Republic, 27 days in Germany, 28 days in Slovakia, 60 days in Hungary and 30 days in Poland.

2.3 HOUSEHOLDS

Besides the corporate sector, the economic downturn also hit the household sector in 2009 through its impact on households' balance sheets. The worsening labour market situation, which is adversely affecting consumption and households' ability to repay their debts, remains the main risk going forward. A rise in the number of households whose financial income does not cover their debt repayments, combined with a marked rise in unemployment may, via its impact on consumption, have a negative feedback effect on the economy as a whole.

Growth in unemployment and a rising default rate is creating a risk of an additional decline in aggregate demand

The fall in GDP started to be reflected in rising unemployment and falling nominal income growth in 2008 H2. The household default rate then started increasing with a slight lag. The adverse evolution of these indicators is having a negative additional impact on aggregate consumption and will hinder the economic recovery in the period ahead. Internal estimates put the aggregate feedback effect on economic growth at around 0.7% of annual GDP for the *Baseline Scenario* and up to 1.5% of annual GDP for the adverse scenarios (*Return of Recession* 1.5%, *Loss of Confidence* 1.3%). Of this total, the default effect would account for roughly 0.5% and 0.6% of annual GDP respectively and the rest would be caused by the rise in unemployment.²⁸ The sharp rise in unemployment, coupled with a rising default rate due also to the decline in nominal income, would lead to an additional fall in aggregate demand, which would further worsen the situation in the corporate sector. This effect could be quite strong in the highly adverse scenarios.

The biggest risk for the household sector is the labour market situation and the evolution of nominal income

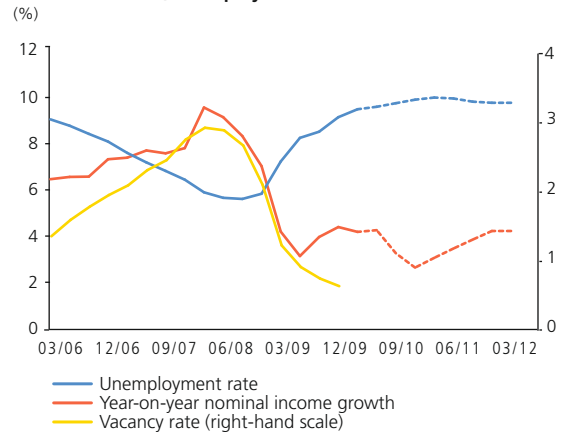
The labour market situation and the evolution of nominal income will remain the principal risk for the household sector going forward. During 2009, corporations responded to the sharp fall in demand by cutting the numbers of permanent and temporary employees (see Box 2). This trend was felt most strongly in 2009 H1 (see Chart II.33). In the first phase of lower economic growth (in 2008 H2) corporations primarily laid off less qualified workers, but after the next phase started the reduction in employment affected all professions.²⁹ As the economy gradually recovers, corporations can be expected to create new jobs, causing the labour market situation to start improving gradually in 2011. Despite the expected upswing in demand for labour, long-term unemployment – unlike short-term unemployment – could keep rising

²⁸ The feedback effect of rising unemployment on aggregate consumption is based on the assumption of a different marginal propensity to consume between employed and unemployed households.

²⁹ In 2009 Q1, the average unemployment benefit paid rose by CZK 271 to CZK 5,739 compared to the previous quarter (however, there was also a rise in unemployment benefits effective from January 2009).

CHART II.33

Nominal incomes, unemployment and vacancies

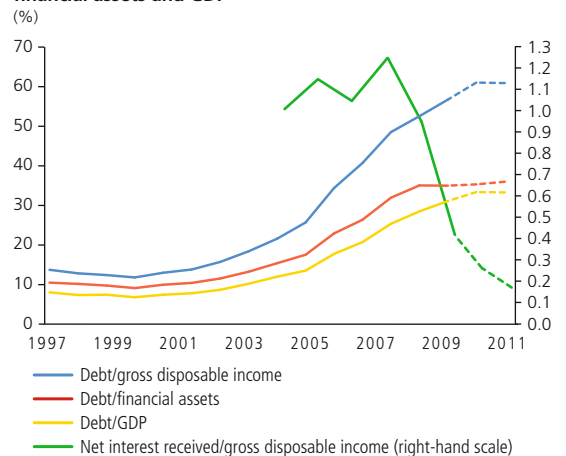


Source: Czech Ministry of Labour and Social Affairs, CNB

Note: Seasonally adjusted data; prediction according to Baseline Scenario.

CHART II.34

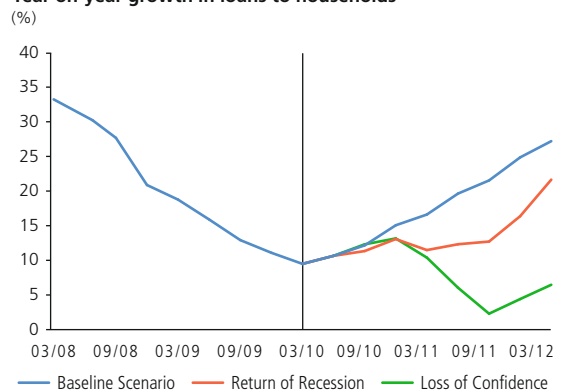
Ratios of household debt to gross disposable income, financial assets and GDP



Source: CNB

CHART II.35

Year-on-year growth in loans to households



Source: CNB

CHART II.36

Loans to households for house purchase

(new business; y-o-y growth in % and interest rate in %)

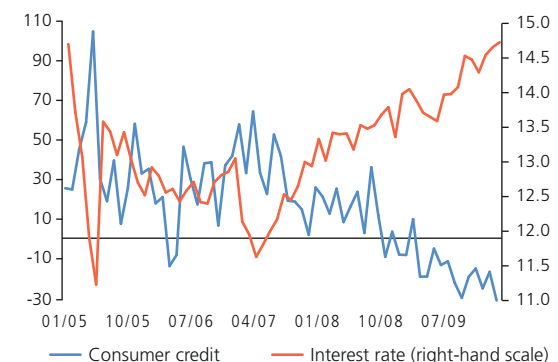


Source: CNB

CHART II.37

Consumer credit to households

(new business; y-o-y growth in % and interest rate in %)

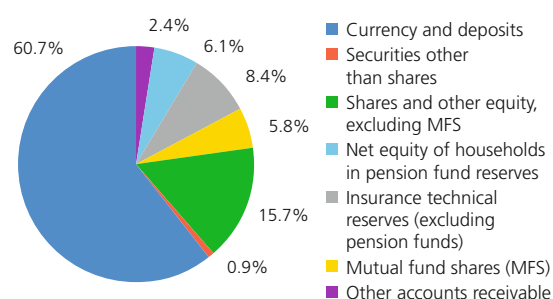


Source: CNB

CHART II.38

Financial assets of households in 2009

(%)



Source: CNB

during 2011.³⁰ In the *Baseline scenario*, the registered unemployment rate should increase by around 0.5 p.p. in 2010 and decline modestly by approximately 0.2 p.p. in 2011. In the adverse scenarios, the rise could be as much as 2.4 p.p. in 2010 and 0.8 p.p. in 2011.

The pace of growth in debt slowed

The adverse macroeconomic situation and the deteriorating situation in the corporate sector, together with the growing uncertainty regarding future household disposable income, are slowing the rate of growth of household debt. New loans for house purchase and consumption were showed strongly negative year-on-year growth in 2009 (see Charts II.36 and II.37). The composition of house purchase loans has shifted towards longer maturities in recent years. The ratio of debt to gross disposable income reached 54% in 2009 (52% in 2008) and that of debt to GDP amounted to 30% (28% in 2008), while that of debt to financial assets remained unchanged at 35% in 2009 compared to 2008 (see Chart II.34).³¹ In the *Baseline scenario*, the pace of lending to the household sector should cease to decline in mid-2010. Nevertheless, in contrast to the corporate sector, growth in lending should remain positive in all the scenarios considered (see Chart II.35). The rapid rise in debt in the past may also have been due to subsidies and tax support for debt financing of property purchases (in particular deductions of interest from the tax base), which create the illusion of a lower financial burden associated with loan repayments. It can meanwhile be assumed that such support is highly ineffective in terms of making housing affordable, since it is already contained in prices and eliminating it could cause property prices to fall or loan costs to decline.

Debt servicing costs increased

Rising debt servicing costs are an adverse factor for households in debt. Owing to a gradual tightening of bank lending standards, average interest rates on bank loans to households increased in the last two years. This trend was observed for both bank consumer credit (see Chart II.37) and house purchase loans (see Chart II.36). The rise in household debt servicing costs is confirmed by growth in average interest rates on the total volume of bank loans to households.

A sharp rise in the number of insolvent households cannot be ruled out

The falling income and flat debt interest costs are reducing households' financial reserves and causing the default rate to rise. According to a simple microeconomic simulation of the balance sheets of indebted

30 The total number of vacancies in the pre-crisis period was around five times the figure at the end of 2009 (151,000 on average in 2008 Q2, compared to 33,000 in 2009 Q4).

31 By international comparison Czech household indebtedness is still lower than that in EU countries (debt-to-GDP ratios in 2008: Germany 61%, Ireland 109%, Greece 50%, Spain 84%, France 51%, Italy 39%, Netherlands 119%, Austria 52%, Portugal 96%, United Kingdom 99%).

households, around 6.5% of families with mortgage loans (roughly 1.6% of the population) would not be able to repay their debts in the *Baseline Scenario*. However, in the adverse scenarios, up to 20% of this set of families (5% of the population) could get into this situation – 13% of families (3.3% of the population) in the *Return of Recession* scenario and 20% of families (5% of the population) in the *Loss of Confidence* scenario. A negative shock to the income side of the balance sheet was modelled using a fall in nominal income and a rise in unemployment. The expenditure side was encumbered by a rise in interest rates. An assumption of constant minimum living costs was used to calculate the financial reserve.³² Unlike in this simulation, the impacts of adverse macroeconomic developments on households' budgets would in reality be dampened by households' financial asset holdings.³³

Households still have more financial assets than liabilities at the aggregate level

At the aggregate level, households still have more financial assets than liabilities and remain net recipients of interest payments. However, in the last year there has been a sharp decline in net interest received due to a growing difference between interest rates on loans and deposits. On the other hand, the ratio of financial liabilities to assets fell and aggregate financial liabilities currently make up around 37% of households' financial assets. Moreover, approximately 60% of financial assets are held by households in the form of deposits and currency, which are not subject to capital loss risk (see Chart II.38). The financial asset location distribution is little changed from the pre-crisis situation, with just a partial shift out of investment funds and into bank deposits and currency (a 5.8% share at the end of 2009, compared to 7.7% in mid-2008).

The credit risk of households is set to continue rising next year

Credit risk growth is indicated by the 12-month default rate, which was fluctuating around 5% for bank loans during 2009 (see Chart II.39).³⁴ The results of the internal macroeconomic model for all the scenarios considered suggest that in contrast to the corporate sector, this indicator will fall only slightly in 2010 H2 and will not return to its 2008 value even at the two-year horizon. Some improvement should be recorded in 2011, when the indicator for the *Baseline Scenario* could stabilise around 5%. The rising credit risk is also reflected with a lag in growth in bank NPLs (see Chart II.40). A similar trend can be seen for non-bank loans. According to the available statistics, the non-bank NPL ratio rose

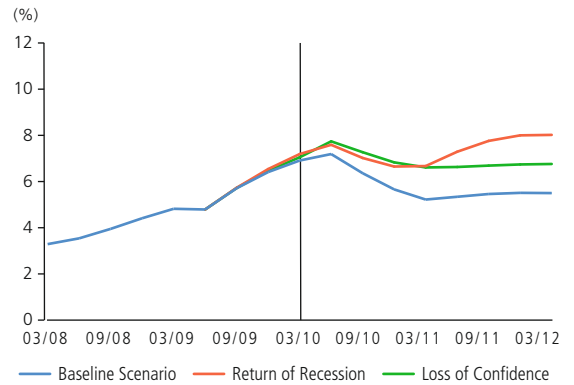
³² The microeconomic simulation of households' budgets was based on the income distribution of households with mortgages calculated from CZSO data. Given the absence of information on the distribution of mortgage loan amounts, these values were simulated using households' income and the average household mortgage loan amount.

³³ No information is available on the distribution of financial wealth between indebted and non-indebted households. It can be assumed, however, that the financial asset holdings of indebted people will tend to be lower.

³⁴ The 12-month default rate for past periods is calculated using data from the Banking Client Information Register operated by the Czech Banking Credit Bureau.

CHART II.39

12-month default rate of households (%)

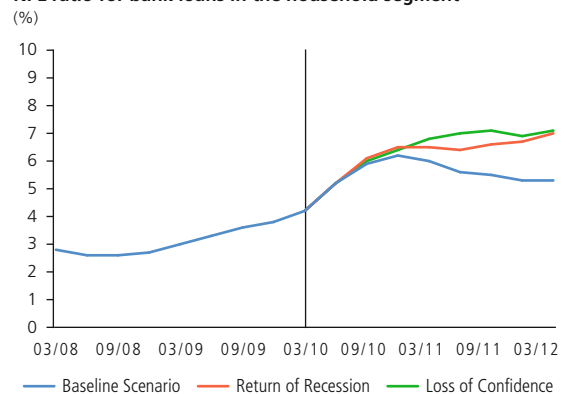


Source: CNB

Note: Given that the 12M default rate is calculated as a forward-looking indicator, the values for the individual scenarios differ from 2009 Q3 onwards.

CHART II.40

NPL ratio for bank loans in the household segment (%)

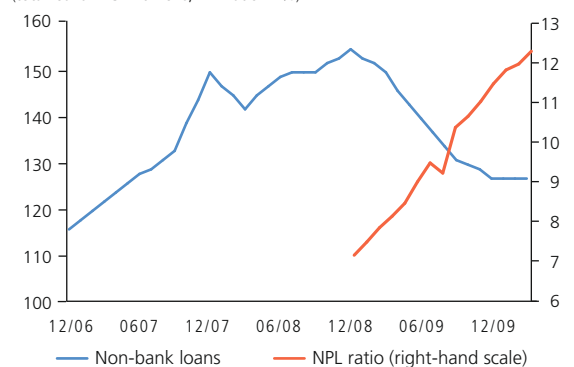


Source: CNB

CHART II.41

Non-bank loans to households

(total loans in CZK billions; NPL ratio in %)

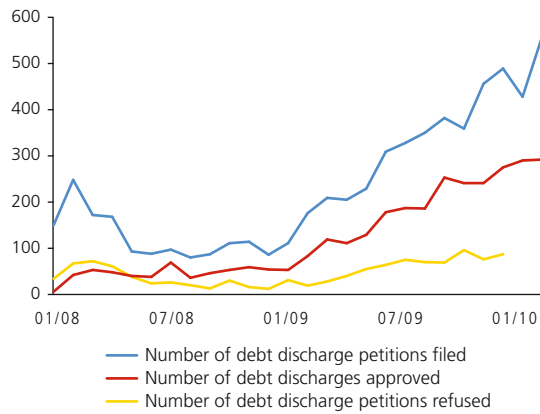


Source: SOLUS, CNB

Note: The total volume of NPLs is only approximate.

CHART II.42

Discharge of debts of private individuals (monthly data)



Source: Creditreform s.r.o., CNB calculation

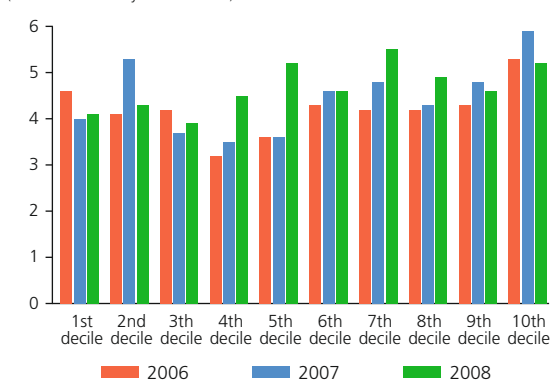
steeply during 2009 to its current value of around 13% (April 2010, from around 7% in January 2009).³⁵ This increase was due not only to a sharp rise in new NPLs (the estimated 12-month default rate for January 2010 was 6%, compared to 5% in January 2009), the vast majority of which are consumer loans, but also to a nominal decline in non-bank loans provided to households (see Chart II.41).³⁶

The number of personal bankruptcies surged

This trend also corresponds with the number of discharge petitions filed.³⁷ The sharp rise in discharge petitions (personal bankruptcies) was due to both the adverse economic situation and to the fact that households are gradually starting to make use of the option of debt discharge. The appropriate level for the Czech economy can be assumed to be 8,000–9,000 petitions a year. Czech households might reach this level in the second half of this year.

CHART II.4 BOX

Households' debt burden (ratio to net money income in %)



Source: CZSO

Box 3:

HOUSEHOLDS' DEBT BURDEN AND LOAN REPAYMENTS

Given households' growing problems with making loan repayments this box examines households' debt burden in more detail. It is based on CZSO data for 2008.³⁸ The data thus cover only the initial period of the global financial crisis. Nevertheless, they may signal risks that could slow the expected recovery in economic activity.

In 2008, consumer credit was obtained by 20% of households and house purchase loans by roughly 13% of households. Consumer credit is used to the greatest extent by households from the two lowest-income groups, whereas house purchase loans are obtained most often by households from the two high-income groups. While the take-up of loans in these groups increased in 2008, medium-income households borrowed to a lesser extent. The volume of new loans is the highest in the case of high-income households. The debt burden of households, as measured by the ratio of repayments to income, increased by 0.2 p.p. compared to 2007 to 4.8% in 2008. It increased among medium-income households and in some low-income households owing to the decline in income (see Chart II.4 Box).³⁹ This indicates a rise in households' vulnerability.

35 The calculation of the NPL ratio and the 12-month default rate is based on data from the SOLUS register. The CNB started using these statistics this year.

36 The 12-month default rate for non-bank loans is at similar levels as the default rate of bank consumer loans.

37 The option of debt discharge is based on Act No. 182/2006 Coll., on Insolvency and Methods of Resolution Thereof (Insolvency Act), which took effect on 1 January 2008.

38 The data come from the EU-SILC *Living Conditions 2008* survey conducted in 2008 H1 and published in 2009 Q4, and from the CZSO's household budget statistics for 2008.

39 Recent data from the household budget statistics show that the debt burden of households increased by a further 1 p.p. to 5.8% in 2009.

In 2008, as in the previous year, repayment problems were reported by 1.1% of households in the case of consumer credit and 0.3% of households in the case of house purchase loans. Problems with repaying these loans were reported by medium-income households and, in the case of house purchase loans, by households in the two lowest-income deciles (see Charts II.5 and II.6 Box). The two lowest-income groups of households had above-average difficulties making repayments of all types of loans. The contraction in economic activity and worsening labour market situation recorded in 2009 subsequently reduced households' ability to repay loans. The NPL ratio jumped by 1 p.p. in the past two years to approximately 4% (January 2010). Moreover, roughly 67% of households had difficulties making ends meet with their income.

Although the proportion of households obtaining loans increased in 2008, particularly in the case of house purchase loans, problems making loan repayments rose as well. The deteriorating macroeconomic environment in 2009, which is no longer covered by the analysed data, later further worsened households' financial situation and their ability to repay loans.

CHART II.5 BOX

Problems making consumer credit repayments

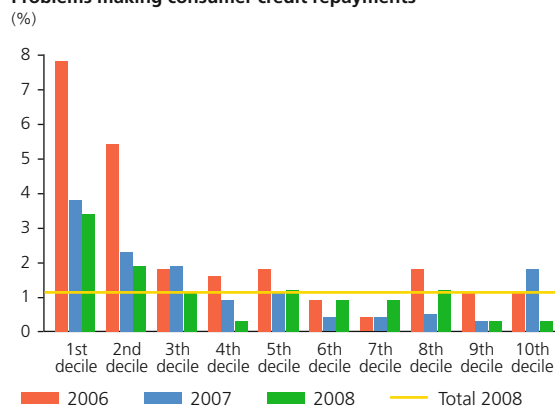


CHART II.6 BOX

Problems making housing loan repayments

