

## Main factors of changes of new Macroeconomic Forecast

This Macroeconomic Forecast takes into account all data and facts known as of October 9, 2009. That's why it differs from macroeconomic framework of draft 2010 State Budget and Budgetary Outlook for years 2011 and 2012

The July Forecast expected real GDP to grow by 0.3 % in 2010. After adopting the deficit cutting measures, the budgetary documentation was supplemented with their macroeconomic effects that were expected to lower economic growth in 2010 by -0.8 p.p. A simple sum of these numbers (July Forecast + package effect) would thus imply economic decline of 0.5 %.

However, this figure did not take into account new facts regarding the external environment, inflation and labour market known after closing date of the July Forecast, as well as the estimate of the effects of deficit cutting steps. These were summarized and quantified during October 2009.

Main factors behind changes in the Forecast are:

- measures to stabilize public budgets
- significantly more positive situation abroad
- decrease in inflation pressures
- signal role of cutting wages in the government sector
- changes in individual indicators in 2009 due to regular revisions or differences between actual and expected developments

### Summary of changes in main growth indicators:

		July Forecast	package	new facts	October Forecast
<b>Gross domestic product</b>	<i>increase in %, const.pr.</i>	0,3	-0,8	0,8	0,3
<b>Household consumption</b>	<i>increase in %, const.pr.</i>	0,7		-2,0	-1,3
<b>Gross capital formation (incl. stocks)</b>	<i>increase in %, const.pr.</i>	-1,7		0,8	-0,9
<b>Contribution of Foreign Trade to GDP growth</b>	<i>percentage points</i>	0,2		1,2	1,4

It is clear from the table that the structure of growth should change markedly. Due to recovery in partner countries on the side of exports and domestic demand restriction caused by the budget consolidation package on the import side, foreign trade should become the ruling growth component (increase by 1.2 p.p. to 1.4 p.p.). GDP growth in EA12 for 2010, which was expected in the July Forecast at around -0.2 %, was revised upwards to +0.9 %. Moreover, growth parameters of EA12 are visibly better in H2 2009 than originally expected. This fully corresponds to substantially higher than expected development of trade balance surplus in last months. The main factor, then, will be the improvement in trade balance, assuming similar development of oil prices and exchange rate as in the July Forecast.

With the exception of change in inventories, stabilization steps will negatively impact on all components of domestic demand. On one hand, the overall impact on the growth of household consumption (-2.0 p.p.) results from restrictive effects of the package (including its inflationary impact due to increase in indirect taxes). On the other, inflationary effect of the package will be mitigated by antiinflationary environment (higher negative output gap), which will reduce the fall in consumption. We also expect the increase in saving rate to slow down as confidence of households in domestic economy gradually restores. This should also positively impact on household consumption.

The contribution of increase in VAT rates and excise taxes to average rate of inflation was estimated at 1.0 p.p., which would *ceteris paribus* (compared with the July Forecast) imply inflation around 2.1 % in 2010. However, we can observe noticeable reduction in inflation pressures because of highly competitive environment, greater downward flexibility of prices and lower wage growth. It is estimated that these factors could compensate for increase in VAT rates and excise taxes in an amount of 0.7 p.p., so that the average rate of inflation should increase to 1.4 %, i.e. by 0.3 p.p. only. An argument supportive to this view is the downward revision of YoY inflation estimate for December 2009 by 0.5 p.p. (compared with the July estimate), which will fully show itself in the average rate of inflation in 2010.

The impact of the consolidation package on total wage bill, including the effect of cutting wages in the government sector, was estimated at -1.9 p.p. However, slower growth of labour costs (wages) could lead to slowdown of employment decline and reciprocally hinder the rise in unemployment. This is the way how the effects of stabilization measures should be, to a great extent, compensated in this area.

The October Forecast estimates the resulting real GDP growth at around 0.3 %. Equality of July and October estimates is purely accidental, since adopted stabilization measures and especially the rapid change in external environment alter the structure of growth significantly.

A closer look at the structure of nominal tax bases reveals that increasing the estimate of growth in the October Forecast, compared with the draft 2010 State Budget (including the package), and taking into account expected lower growth of total wage bill will not bring higher tax revenues.

## A Forecast assumptions

The forecast was prepared on the basis of data known as of **9 October 2009**. No political decisions, newly released statistics, or global financial or commodity market developments could be taken into account after this date.

### A.1 External environment

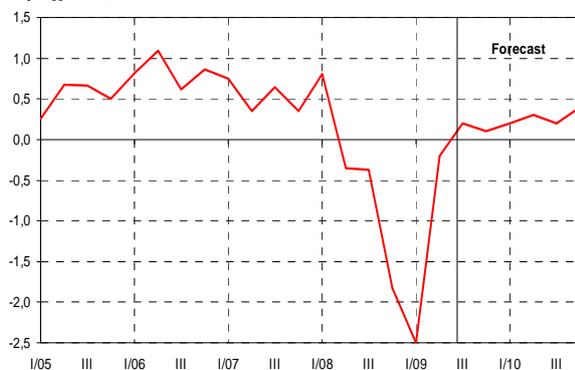
World economic slump is expected to abate or stop in the second half of 2009. Many pro-growth measures in the US, Europe and China have resulted in moderation of a slump in global trade. Inflation has been brought close to zero, and the price of oil has begun to grow once again.

All countries that are important trade partners of the Czech Republic (excluding Poland) are deeply hit by the economic crisis. However, recession has been abating and in case of Germany it has already stopped.

Again, our projection is based on an assumption that no more distinct negative events will occur on financial markets. In 2010 a **transition to slow growth** is expected in global terms.

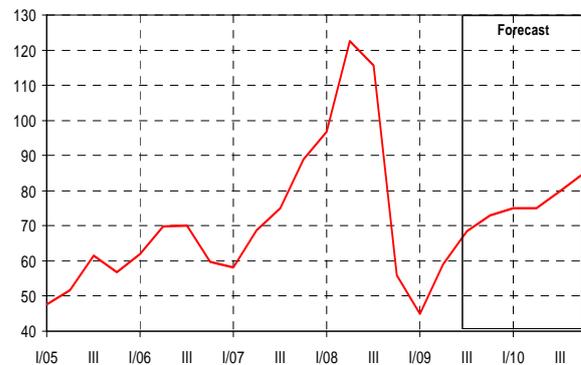
#### Graph A.1.1: Growth of GDP in EA12

QoQ growth in % (adjusted for seasonal and working day effects)



**Dollar prices of Brent oil**, which had fallen sharply in the second half of 2008, stabilized in the first quarter of 2009 and began to rise again in the second quarter. Lower demand is compensated by supply restrictions due either to cuts in OPEC's production quotas or to economic reasons among producers with higher extraction costs. An influence from speculation can also be seen. Since high price growth at the turn of 2007 and 2008 it has been obvious that also other than fundamental factors have their strong impact. For the coming period, similarly as in the July forecast, a scenario of ongoing tendency to price growth was chosen.

Graph A.1.2: Dollar Prices of Brent Crude Oil in USD per barrel



For more details on the external environment, see chapter C.8.

### A.2 Fiscal policy

In previous years, the general government deficit was positively influenced by the peak phase of the economic cycle. However, the ongoing economic recession has resulted in worsening outcomes since 2008 and revealing structural deficiencies on the expenditure side.

Under October data, general government deficit will reach **6.6 % of GDP in 2009**. It is 1.1 p.p. worse than in the previous Macroeconomic Forecast. The reason is deeper-than-expected economic decline and related ongoing cut in estimate of tax receipts in this year. Fiscal policy stance for **2010** corresponds to planned general government deficit of **5.3 % of GDP**.

These expected values can be regarded as realistic, should the following conditions be fulfilled: i) lower-than-expected growth of the economy will not be recorded, ii) structure of growth/decline of individual items and factors effecting GDP will not differ significantly from the state expected in this publication, iii) no further stimulating/restrictive measures will become effective, iv) unexpected time discrepancies between revenues and expenditures of the general government will not occur<sup>1</sup>.

When assessing the fiscal policy stance in 2009 and 2010 it is necessary to realize that expenditure frameworks valid for these years had been set 2007, i.e. in period of the highest boom

<sup>1</sup> As regards this point, indications already exist that yield from sale of allocated amount units of carbon emissions could be fully realized in 2009. Reported 2009 deficit could be then improved, which would be fully compensated by worsening of deficits in the following years, equalling to expenditures of Green Light to Savings programme.

## A. Forecast assumptions

and were only minimally changed afterwards. Consequently, their setting partially reflected the then optimistic expectations regarding future developments. Nevertheless, the higher level of planned spending means strengthening of importance of automatic stabilizers in the critical years 2009 and 2010.

This reality as well as the fact that in the CR as continental Europe's country automatic stabilizers are traditionally of high importance was not taken into account too much when planning stimulation measures for 2009 described in Table A.2.1. Consequently, it resulted in flagrant surpassing of Maastricht criterion for general government deficit.

The same can be said about 2010. Long-term considerable exceeding of deficit criterion could reduce CR's confidence considerably and then increase costs of government debt financing or possibly even hamper government bonds sale and thus hold up or make fully impossible

implementation of some government expenditures. From this reason the government proposed and the Parliament approved austerity package for 2010 mainly (see Table A.2.2), aimed to reduce general government deficit to the mentioned 5.3 % of GDP.

It is characteristic for long-term internal situation of the CR that all adopted measures are more of ad hoc character. Consequently, they do not form a part of longer-term plans destined for public finance sustainability. It is also confirmed by the fact that the CR has no plan of fiscal consolidation after 2010 including technique to achieve a medium-term fiscal objective as it committed itself to the EC. With regard to legislation in force, the Macroeconomic Forecast is based on time restrictions of spending measures, i.e. on their effect in 2010 only.

*For more details on general government, see chapter C.7.*

## A. Forecast assumptions

Table A.2.1: **Stimulation Measures for 2009**

Measures		ESA 95, CZK bn.		
		2009		
		ESA 95		
		Rev	Exp	Balance
<b>I. Realised and approved measures</b>				
1.	Integration of resources from reserve funds		-1,5	1,5
2.	Increase in guarantees to SMEs		0,4	-0,4
3.	Support of agriculture entrepreneurs		2,0	-2,0
5.	Increase in the Program of Countryside Development		0,3	-0,3
6.	Investments in R&D above the framework approved by the state budget		0,3	-0,3
7.	Increase in public sector wages	0,4	2,7	-2,3
8.	Increase in expenditures on direct payments - co-financing	0,0	1,0	-1,0
9.	Decrease in the social security contribution paid by employees	-18,4		-18,4
10.	Decrease in the rate of the CIT	-6,6		-6,6
11.	Increase in the base capital of the Czech Export Bank			0,0
12.	Increase in the insurance coverage of the Export Guarantee and Insurance Corporation (EGAP)			0,0
13.	Change of the law on the insurance of a state-supported			0,0
14.	Fiscal impuls of a support of R&D		1,8	-1,8
15.	Decrease in advance payments on income taxes	0,0		0,0
16.	Broadening of the VAT deduction on personal vehicles	-2,5		-2,5
17.	Abolition of advances for taxpayers with less than 5	0,0		0,0
18.	Subsidy programme of an energy buildings' demandingness			0,0
19.	Boost of the subsidy programme "PANEL"		0,6	-0,6
20.	Expenditure increase in the provision of transport services		3,2	-3,2
21.	Increase of investments in traffic infrastructure in state ownership for economic boost in 2009		7,2	-7,2
22.	Guarantee and a support of SME's credits		2,1	-2,1
23.	Decrease of VAT on selected services			0,0
24.	Faster depreciation in the 1st and 2nd depreciation group	-9,4		-9,4
Total I.				-56,6
<b>II. Law on economic growth boosting and social stability</b>				
1.	Reductions for employers on SSC	-18,0		-18,0
2.	Higher tax credit for children	0,0		0,0
3.	Higher allowance for children		0,2	-0,2
4.	Scrapping premium for old cars*		0,0	0,0
Total II.				-18,2
Total I. + II.				-74,7

\* The government has been authorized to launch the scheme by the law but its implementation is not allowed for.

Table A.2.2: Stimulation Measures for 2010

Measures for 2010		ESA 95 (mld. Kč)		
		Rev	Exp	Balance
<b>I. Saving measures</b>				
1.	Property taxes	3,0	0,0	<b>3,0</b>
2.	Income tax	0,1	0,0	<b>0,1</b>
3.	Excise tax	10,9	0,0	<b>10,9</b>
4.	VAT	13,4	0,0	<b>13,4</b>
5.	Social security contributions and state employment policy	31,0	0,0	<b>31,0</b>
6.	State social support	-0,6	-0,6	<b>0,0</b>
7.	Sickness benefit	0,0	-2,4	<b>2,4</b>
8.	Employment	0,0	-3,5	<b>3,5</b>
9.	Health insurance	-4,5	0,0	<b>-4,5</b>
Total I.		53,3	-6,5	<b>59,8</b>
<b>II. Other measures</b>				
1.	Salaries	-2,3	-5,4	<b>3,1</b>
2.	Other	-7,5	-17,7	<b>10,2</b>
Total II.		-9,8	-23,1	<b>13,3</b>
Total I.+II.		43,5	-29,6	<b>73,1</b>

### A.3 Monetary policy and exchange rates

CNB's monetary policy is based on an **inflation-targeting** regime. Inflation target is defined as the YoY increase in the CPI. Through the end of 2009, it is set at 3 % with a tolerance band of  $\pm 1$  p.p., while a new target is set at **2.0 %** from January 2010. Inflation target is set for the medium term with a monetary policy horizon of 12–18 months.

Macroeconomic Forecast is based on an assumption of ongoing decline in market interest rates pulled down mainly by decreasing risk premium. Beginning of 2010 could bring a slight growth of bank rates reflecting expectations of further economic recovery but still dampened by decreasing inter-bank spreads.

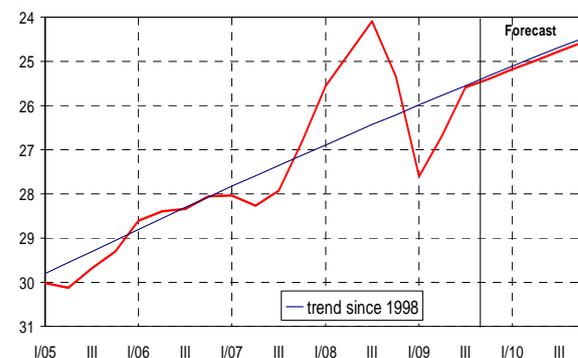
Graph A.3.1: PRIBOR 3M  
in %



For more details on interest rates, see chapter C.6.

As of 21 July 2008, a historic record of the **exchange rate** was reported at CZK 22.97/EUR. A subsequent steep correction, caused by the outflow of financial investments from emerging markets, resulted in the exchange rate's weakening to CZK 29.47/EUR on 17 February 2009. The average value in September 2009 was CZK 25.35/EUR, which had approximately corresponded to the trend value.

Graph A.3.2: Exchange Rate CZK/EUR  
quarterly averages



The adopted scenario assumes that in the fourth quarter of 2009 as well as over 2010 the exchange rate will hover around average value of CZK 25.40/EUR, tending toward moderate nominal and real appreciation corresponding to long-term trend.

### A.4 Structural policies

#### Business environment

On 3 July 2009 president of the CR signed the **Act on Free Movement of Services**. The

regulation transposes into the Czech legal order the Directive on Services in the Internal Market, which liberalizes substantially provision of services within EU. The Act will become effective on 28 December 2009.

Planned measures reducing administrative burden of entrepreneurs include an amendment to the **Tax and Fee Administration Act**. It exempts small and medium-size businesses from the obligation to keep a logbook for recording expenditures related with trips made with a company car. The Act is to become effective as of 1 January 2010.

### *Financial market*

**An amendment to the Act on Capital Market Undertakings**, transposing several EC directives into the Czech legal order, came into effect on 1 August 2009. The Act amends the rights and obligations of firms and other entities whose securities are traded on capital markets. Inter alia, the mentioned amendment improves considerably position of a retail client on the capital market and puts an end to the national stock exchanges' monopoly on trade in securities.

On 4 September 2009 **an amendment to the Banks Act** became effective to allow the state to take over banks that would encounter serious difficulties. The amendment i.a. simplifies process of increasing a bank's capital and enables the CNB to respond more flexibly to the banks' current problems.

European Directive on Payment Services in the Internal Market, harmonizing conditions of payment services provision within the EU, was transposed into the Czech legal order by means of **Act on System of Payment**. Shortening of time of bank transfers is the main contribution of the Act, which will come into effect on 1 November 2009.

### *Taxation*

On 13 July 2009 the Czech government adopted **draft amendment to the Act on VAT and draft amendment to the Act on Excise Tax**. To apply for VAT refund will be possible in e-form only and also accompanying documents of the goods liable to excise tax should be electronic only. The amendment of VAT Act is aimed at setting rules preventing tax evasion and tax avoidance, while draft amendment to the Act on Excise Act is aimed at shaping a legal framework of electronic system within the EU, which should control transport of goods liable to excise tax. Amendment to the VAT Act should come into force from January 2010 and amendment to the Act on Excise Tax from April 2010.

At present a comprehensive reform of tax system is under preparation, including reforms of income and property taxation, reform of tax process and institutional reform. Within tax process adjustment, an Act on Tax Order was adopted, reducing administrative costs and simplifying administrative process, limiting some powers of the minister of finance (remission of taxes), and introducing a new concept of tax execution. The Act enters into force on 1 January 2011.

### *Energy and climate change*

**An amendment to the Energy Act**, which took effect on 4 July 2009, specifies more exactly rate of control over energy market, creates space for an agreement between customer and supplier, regulates sanctioning of illegal customers and simplifies thus business activities in the energy industry.

An amendment to the **Act on Excise Tax** introduces boosting of bio-fuels of the first and second generations. Pure bio-fuels and also share of bio-component in high-percent bio-fuels will be tax-exempt, while share of fossil fuels in mixture will remain burdened with full rate of excise tax. The Act entered into force on 1 October 2009.

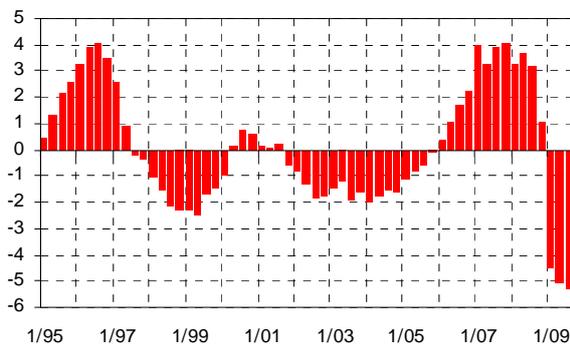
## B Economic cycle

### B.1 Position within the economic cycle

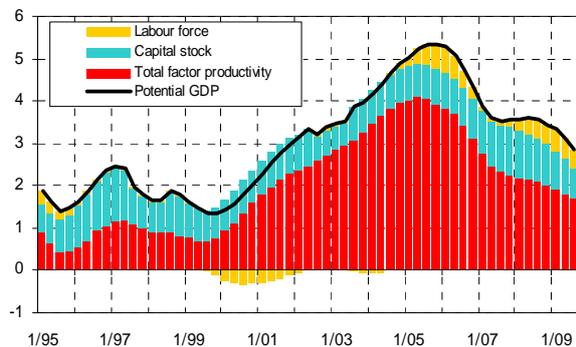
Potential product, specified on the basis of calculation by means of the Cobb-Douglas production function, indicates the level of GDP achieved with average use of production factors. Growth of potential product represents possibilities for long-term sustainable growth of the economy free of imbalances. It can be broken down into contributions of the labour force, capital stock, and total factor productivity. The output gap identifies the cyclical position of the economy and expresses the relationship between GDP and potential product. The concepts of potential product and output gap are used to analyze economic development and to calculate the structural balance of the general government.

Under current conditions, however, when steep changes in the level of economic output are taking place, it is very difficult to distinguish a deepening of the negative output gap from a slowdown in potential product growth. Results of these calculations thus display high instability and should be treated very cautiously.

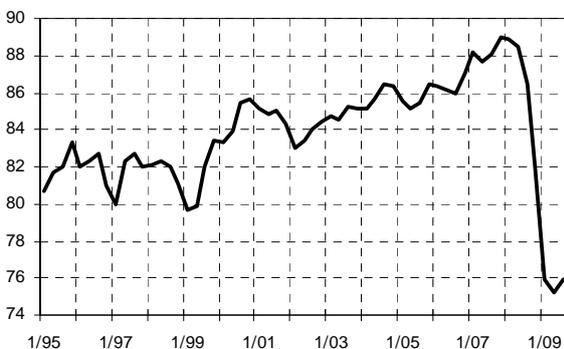
Graph B.1: Output Gap  
in % of potential GDP



Graph B.2: Potential Product Growth  
in %, contributions in percentage points



Graph B.3: Utilisation of Capacities in Industry  
in %



Graph B.4: Total Factor Productivity  
YoY growth in %

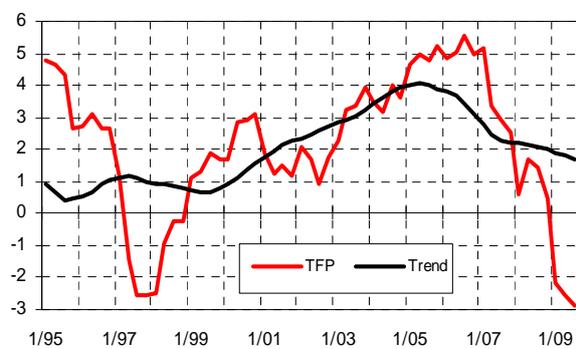


Table B.1: Output Gap and Potential Product

		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
		<i>Forecast</i>									
<b>Output gap</b>	<i>per cent</i>	0,1	-0,1	-1,5	-1,6	-1,6	-0,6	1,3	3,7	2,9	-5,1
<b>Potential output</b>	<i>growth in per cent</i>	1,7	2,6	3,3	3,7	4,5	5,2	4,8	3,6	3,5	3,0
<b>Contributions:</b>											
<b>TFP</b>	<i>percentage points</i>	1,3	2,0	2,5	3,0	3,7	4,0	3,5	2,5	2,1	1,8
<b>Fixed assets</b>	<i>percentage points</i>	0,7	0,8	0,7	0,7	0,8	0,8	0,9	1,1	1,0	0,8
<b>Participation rate</b>	<i>percentage points</i>	-0,5	-0,4	-0,1	-0,2	-0,2	0,2	0,2	-0,2	0,0	0,3
<b>Demography<sup>1)</sup></b>	<i>percentage points</i>	0,2	0,2	0,2	0,2	0,2	0,2	0,3	0,3	0,4	0,2

<sup>1)</sup> Contribution of growth of working-age population (15-64 years)

It is obvious that ongoing economic crisis has plunged the economy into a deep negative **output gap**. According to current calculations, it was below  $-5\%$  in the third quarter of 2009, which indicates the lowest utilisation of economic potential in the post-transformation period.

The increasing negative output gap is reflected in the economy by means of the extremely low utilisation of production capacities in the industry, steep rise in the unemployment rate, reduction in the number of vacancies and decrease in inflationary pressures.

**Total factor productivity (TFP)** is the component of the potential product that was hit most. Since the beginning of 2009 economic

problems have led to YoY decline in observed TFP, which was seen in slowdown of its trend growth below  $2\%$  compared with  $4\%$  in 2005. Impacts on growth of **capital stock** are less important. On the contrary, labour supply, measured as ratio of labour force to the number of population aged 15-64 years, accelerates its growth in 2009.

Slowdown in growth of trend total productivity reflects directly in YoY growth of **potential product**, which at present is probably closely below  $3\%$ . Further development of potential product will depend especially on the duration of unfavourable economic situation.

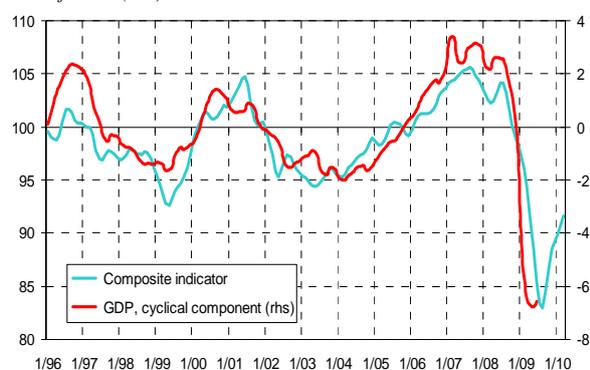
### B.2 Leading composite indicator

*Leading composite indicator is compiled from the results of business cycle surveys meeting basic demands made on cyclical leading indicators – economic significance, statistically observable relation to the course of economic cycle ahead of time and timely and regular availability.*

*Based on an analysis of relations between individual business cycle indicators and cyclical component of real GDP, a change was made in construction of leading composite indicator in December 2008. Presently, the indicator is compiled from those business cycle indicators that show a high level of correlation with average lead of six months.*

**Graph B.5: Leading Composite Indicator**

average 2000=100 (lhs)  
synchronized with cyclical component of GDP based on statistical methods (Hodrick-Prescott filter)  
in % of GDP (rhs)



Leading composite indicator signalled a YoY decline in GDP for the second quarter of 2009. This signal was confirmed by the development of a relative cyclical component that showed deepening of its negative value. Its change as shown in the graph cannot be taken seriously at present. Estimate of cyclical component of GDP is encumbered with an error stemming from end-point problem and it is also

an estimate based on the first estimation of quarterly national accounts made by the CZSO.

For the third quarter of 2009 the indicator signals a turn in relative cyclical component of GDP.

Approximately for the entire second half of 2009 and first quarter of 2010, the indicator suggests a significant slowing in the decline in Czech economy's performance.

In evaluating this signal, however, it is necessary to take into account the composite indicator's structure. The rise in its value in the second half is due to the growth of selected business cycle indicators in the industry (especially three-month outlook of export demand and six-month outlook of economic situation). This was obviously caused by ongoing or completed measures to boost the economy, impact of which will be however limited with regard to time.

It is also necessary to draw attention to the fact that business cycle indicators, on which the indicator is based, obviously could not absorb information related with effects of planned measures to cut public finance deficit in 2010.

Higher volatility of estimated relative cyclical component of GDP is caused by change in seasonal adjustment method used by the CZSO.

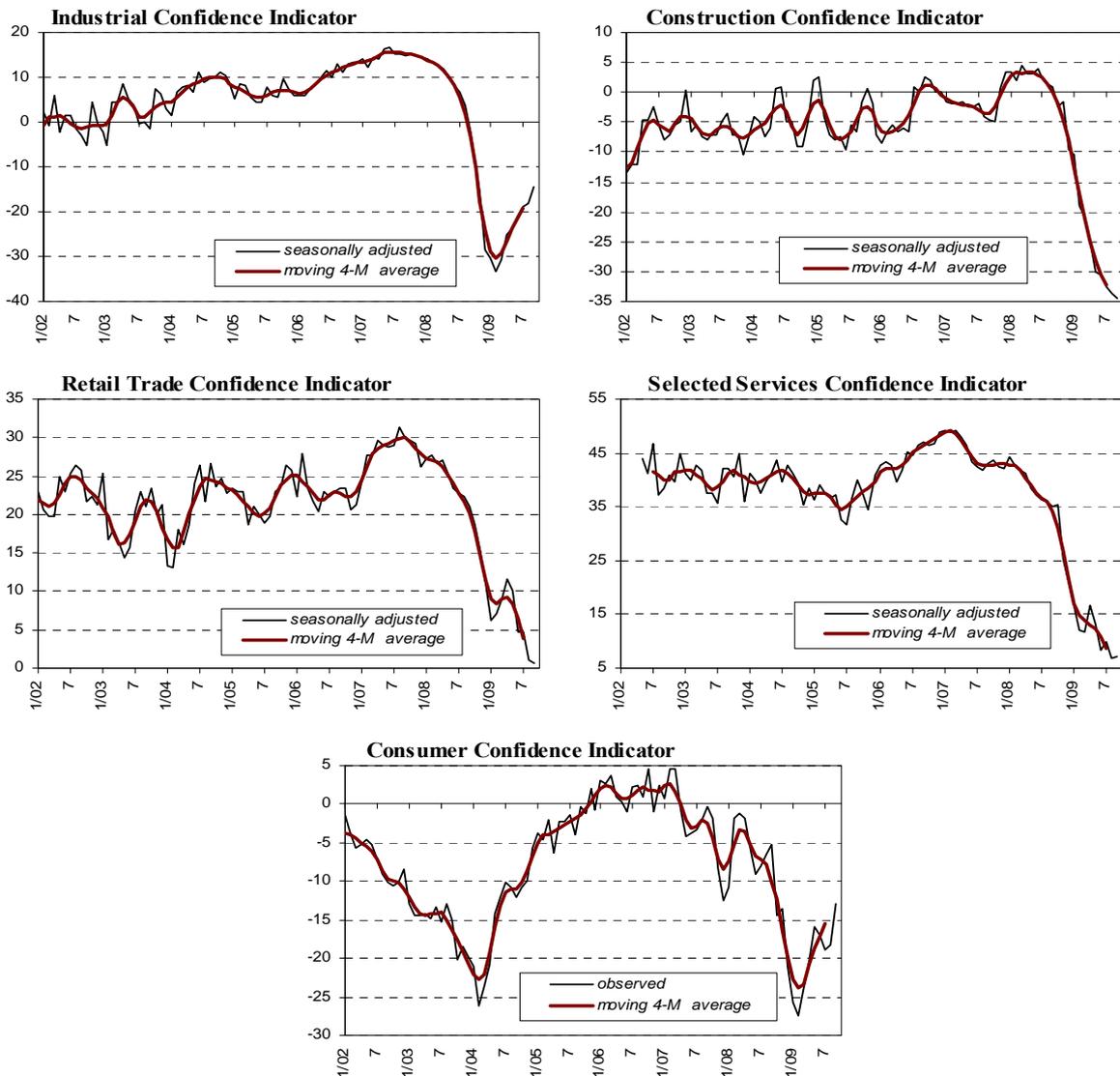
**B.3 Individual business cycle indicators**

Business cycle surveys express respondents' views of the current situation and short-term outlook and serve to identify in advance possible turning points in the economic cycle. The main advantage lies in quick availability of results reflecting a wide range of effects shaping expectations of economic entities.

The surveys share a common characteristic: respondents' answers do not provide a direct quantification but use more general qualitative expressions (such as better, the same, worse, or growing, not changing, falling, etc.). Trends are reflected in business cycle balance, which is the difference between answers „improvement“ and „worsening“ expressed in per cents of observations (see Methodology of the CZSO).

Aggregate indicator of confidence is presented as weighted average of seasonally adjusted indicators of confidence in industry, construction, trade, selected sectors of services and of consumer confidence. Weights are established as follows: indicator of confidence in industry is assigned a weight of 40 %, those for construction and trade 5 % each, that for selected services 30 %, and for consumer confidence 20 %.

Graph B.6: Confidence Indicators



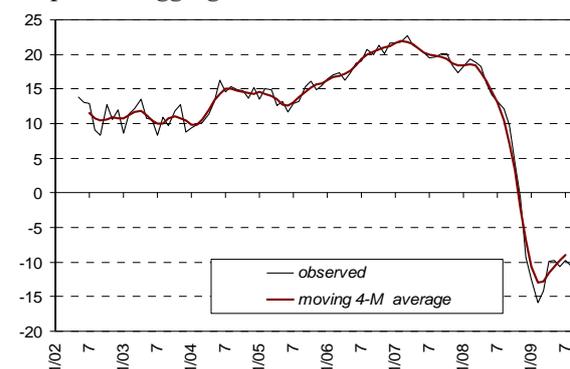
In the third quarter of 2009 both **industrial and construction businesses** improved slightly their assessment of the current economic situation. However, evaluation of other indicators differed. While in industry aggregate and foreign demand started rising in respondents' views, in construction it is still seen as low. For the fourth quarter respondents expect further increase in production activity and

employment recovery in industry, and slowdown in construction activity with decline in employment in construction. Expectations as regards economic situation in three- and six-month horizons improved negligibly in industry and slightly worsened in construction. The improvement in industry is more visible on a shorter horizon and is obviously based on measures already adopted to boost the economy.

As regards **trade** and selected **services**, economic problems deepened further, although less vigorously. Respondents worsened especially their assessment of the current economic situation. However, their assessment of expected development of economic situation in three- and six-month horizons was already slightly optimistic.

**Consumer** confidence slightly increased in September. As follows from the survey, consumers expect improvement of total economic situation and negligible improvement of their financial situation over the next twelve months. Share of respondents expecting an increase in unemployment has fallen but still prevails.

Graph B.7: Aggregate Confidence Indicator



On the basis of economic entities' opinions it can be assumed that slowdown in economic activity was dampened in the third quarter, too (especially in industry). The survey indicates possible moderate chain improvement for the fourth quarter of 2009.

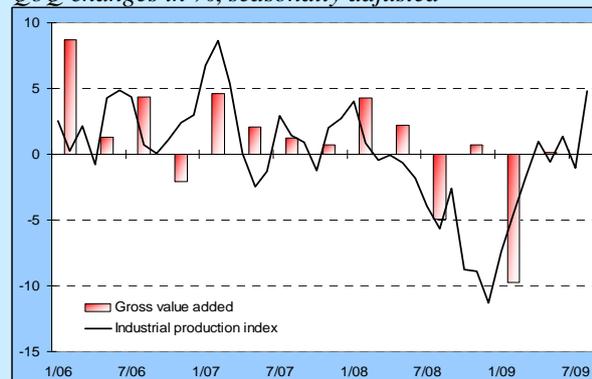
**Box B.1: Position of the Czech economy within the business cycle**

In the second quarter of 2009 real GDP grew by 0.1 % QoQ. Technically speaking, the Czech economy thus has got out of recession. Such conclusion, however, can be influenced in future not only by retroactive data revision made by the CZSO<sup>2</sup>, but also by further development of GDP. The box aims to answer the question, whether the Czech economy is still in recession, or in recovery, or somewhere between these two stages of the business cycle.

The Czech economy has not avoided recession due to high level of its openness and trade links with other EU countries. It has noticeably reflected in industrial production (Graph B.1.1), which has been falling in year-on-year terms since July 2008. QoQ changes in gross added value in industry indicate that the deepest slump occurred in the first quarter of 2009. By contrast, changes in monthly IPIs compared to the period three months earlier<sup>3</sup> indicate that the deepest decline in industry occurred as early as in December 2008. Since April 2009 QoQ changes have been close to zero and in August IPI grew by 4.8 % QoQ. The promising development is however made relative due to low correlation of both indicators. Moreover, industrial production development was favourably influenced by fiscal measures in some EU countries (car-scraping schemes). Their gradual termination thus will represent an unfavourable shock for the industry, which could be nevertheless more than compensated by approaching slight recovery of external economies.

Graph B.1.1: Industry

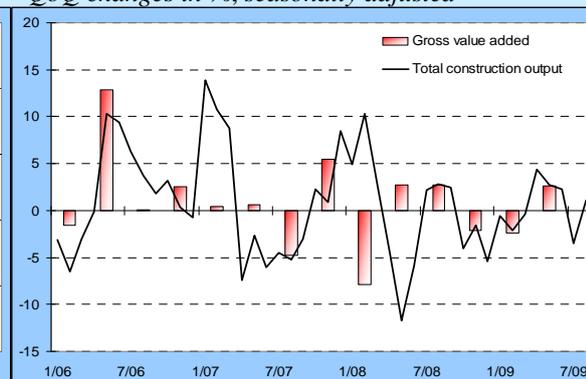
QoQ changes in %, seasonally adjusted



Source: CZSO, own calculations

Graph B.1.2: Construction

QoQ changes in %, seasonally adjusted



Source: CZSO, own calculations

Results in construction are also affected by low confidence of households and firms in further economic development. Although the situation has improved compared with the period at the turn of this and past year (Graph B.1.2), optimism is not justified as the construction production stays afloat thanks to civil engineering

<sup>2</sup> See for more about this issue in Box C.1 in Macroeconomic Forecast of the Czech Republic from July 2009.

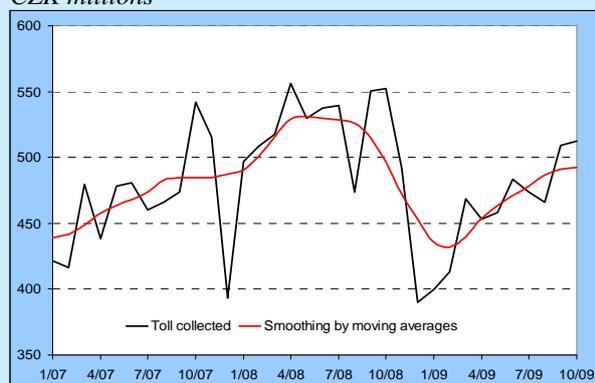
<sup>3</sup> Thus calculated indices are indicated as quarter-on-quarter ones in the following text.

construction, while building construction pulls total construction production downward. Draft budget of the State Fund of Transport Infrastructure for 2010 allows for an increase in revenues and expenditures by more than 30 % compared with 2009 but even these funds fail to cover financing needs of transport infrastructure (CZK 24.2bn is missing). Other risks related with transport construction financing include e.g. drop in assumed revenues due to lower collection of taxes (CZK 3.5bn) or necessity to negotiate a new loan from EIB over 2010 to ensure co-financing of TOP projects<sup>4</sup> from 2011.

Lower activity in industry and construction is reflected i.a. in related sector of transport and storage. Monthly indices of receipts of transport and storage firms for the third quarter will be available in mid-November only but their development can be deduced from data on toll collection on motorways and high-speed roads subject to tolls (Graph B.1.3)<sup>5</sup>.

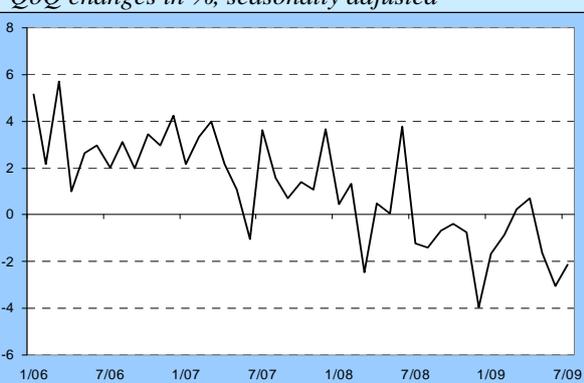
The thing is that YoY indices of receipts of transport and storage firms show a relatively high degree of correlation with collected toll index. It is true that the latter does not achieve past years' levels nevertheless pace of YoY declines has been moderating. In QoQ view on seasonally non-adjusted data<sup>6</sup> then toll collection has been growing for several successive months.

**Graph B.1.3: Toll Collected**  
CZK millions



Source: Road and Motorway Directorate,  
own computations

**Graph B.1.4: Retail Sales (NACE 45+47)**  
QoQ changes in %, seasonally adjusted



Source: CZSO, own computations

Retail sales (NACE 45 + 47), affected by labour market development (chapter C.3) and state of economic entities expectations (chapter B.3), have shown YoY decreases for ten consecutive months with pace of decline not slowing. QoQ indices, exclusive of March and April 2009, present a pessimistic picture too (Graph B.1.4). When broken down in detail, a diversification occurs. While in section *Trade, repairs and maintenance of motor vehicles* (NACE 45) year-on-year (some 10 per-cent decrease in sales) and quarter-on-quarter changes have stabilised, in section Retail trade (NACE 47) the tendency to slowdown in growth and subsequent declines is constant.

Real economy is influenced by state of financial sector<sup>7</sup>, and vice versa. Despite unfavourable economic development the Czech banking system remains in good shape. Banks are sufficiently capitalized (in the second quarter the capital adequacy was 13.7 %) and profitable. Profit after tax reached in the first two quarters approximately the same amount as in the same period of 2008. Banking sector is still characterized by surplus of liquidity, which the CNB withdraws in regular repo operations. Banks do not take advantage of possibility to get liquidity in two-week or three-month repo tenders. Distrust still persists on the money market, as demonstrated e.g. by development of spreads between reference PRIBOR rates and 2W repo rate. They still remain distinctly above long-term average although they fell compared with the period at the turn of the year. Also survey of average daily turnovers (newly with a quarterly periodicity, the last survey made in July 2009) has shown that the banks are not willing to borrow for a period exceeding three months. Growth of share of outstanding credits in total credits, which reached 6.6 % for company credits (YoY growth by 3 p.p.) and 3.6 % for household credits (growth by 0.9 p.p.) in August 2009, remains a risk.

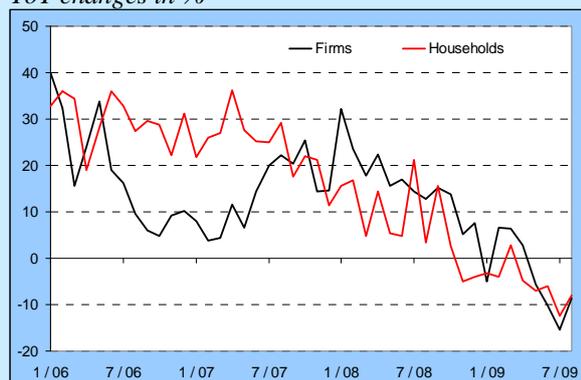
<sup>4</sup> *Transport Operational Programme.*

<sup>5</sup> *Data for October 2009 is an estimate.*

<sup>6</sup> *Length of time series of toll collection is not sufficient for seasonal adjustment e.g. by TRAMO/SEATS method.*

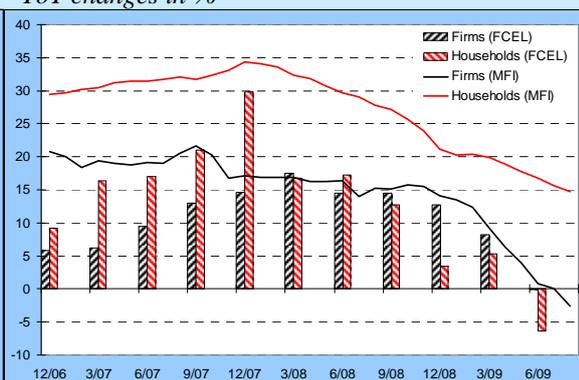
<sup>7</sup> *As the Czech economy is the so-called „bank dependent economy“, our focus is on monetary financial institutions and financial asset intermediaries only.*

Graph B.1.5.: New Koruna Bank Loans  
YoY changes in %



Source: CNB

Graph B.1.6.: Total Loans to Firms and Households  
YoY changes in %



Source: CNB

Note: MFI = monetary financial institutions, i.e. banks, money-market funds and cooperative saving banks  
FCEL = other asset financing intermediaries such as companies providing financial leasing, factoring, consumer credits, sale on instalment etc.

The current economic situation is reflected not only in demand for credits but also in banks' attitude to individual applicants for credits. Banks are stricter in their evaluation of client's ability to repay the loan properly in future and ask for a higher risk premium. Volume of new koruna credits, provided by banks to households and firms (Graph B.1.5), is lower YoY for several consecutive months (also with regard to the fact that the comparison basis is high thanks to strong growth in past years). Stock of credits, provided to firms and households by asset financing intermediaries, fell in June in year-on-year terms<sup>8</sup> for both groups (Graph B.1.6). Total indebtedness of households (sum of credits from MFI and FCEL) thus was ever rising in June, albeit at slower pace, while indebtedness of firms stagnated in essence (YoY growth in June 0.6 % only).

On the basis of analyzed indicators we can conclude that at present no major recovery of domestic economic activity can be expected. It is true that recovery abroad can help industrial production but other indicators will probably show further worsening. It applies especially to household consumption where development on the labour market is the decisive factor. Also impacts of a „package“ for 2010 state budget consolidation need to be taken into account. In general the current state of the Czech economy and probably also outlook for several future quarters could be described as „waving near the bottom“.

<sup>8</sup> Data on credits provided by asset financing intermediaries are not available on monthly basis.

## C Forecast of macroeconomic indicators

Data from the previous forecast from July 2009 are in italics. Data in the tables covering years 2011 and 2012 are indicative, outlining only the direction of possible developments and as such are not commented on in the following text.

Development of the main macroeconomic indicators and their forecasts are summed up as follows:

Table C.1: Main Macroeconomic Indicators

		2005	2006	2007	2008	2009	2010	2008	2009	2010
					<i>Prelim.</i>	<i>Forecast</i>		<i>Previous forecast</i>		
Gross domestic product	<i>increase in %, const.pr.</i>	6,3	6,8	6,1	2,7	-5,0	0,3	3,0	-4,3	0,3
Consumption of households	<i>increase in %, const.pr.</i>	2,5	5,2	5,0	3,4	0,7	-1,3	2,7	1,1	0,7
Consumption of government	<i>increase in %, const.pr.</i>	2,9	1,2	0,7	1,6	2,0	-1,0	1,7	1,3	0,5
Gross fixed capital formation	<i>increase in %, const.pr.</i>	1,8	6,0	10,8	-1,1	-7,8	-3,9	-0,1	-5,7	-1,5
Contribution of foreign trade to GDP growth	<i>p.p., const.pr.</i>	4,6	1,5	1,1	1,5	-1,0	1,4	1,9	-1,8	0,2
GDP deflator	<i>increase in per cent</i>	-0,3	1,1	3,4	1,7	2,7	0,2	1,6	2,8	1,0
Average inflation rate	<i>per cent</i>	1,9	2,5	2,8	6,3	0,9	1,4	6,3	1,1	1,1
Employment (LFS)	<i>increase in per cent</i>	1,2	1,3	1,9	1,6	-1,3	-1,9	1,6	-1,8	-2,1
Unemployment rate (LFS)	<i>average in per cent</i>	7,9	7,1	5,3	4,4	6,5	8,4	4,4	6,8	8,5
Wage bill (domestic concept)	<i>increase in %, curr.pr.</i>	6,9	7,9	9,4	8,7	-0,3	-1,1	10,8	1,0	1,0
Current account / GDP	<i>per cent</i>	-1,3	-2,6	-3,1	-3,1	-1,4	0,4	-3,1	-2,0	-0,9
<i>Assumptions:</i>										
Exchange rate CZK/EUR		29,8	28,3	27,8	24,9	26,3	24,9	24,9	26,8	25,5
Long-term interest rates	<i>% p.a.</i>	3,5	3,8	4,3	4,6	4,9	4,3	4,6	4,5	4,4
Crude oil Brent	<i>USD/barrel</i>	54	65	73	98	61	79	98	62	79
GDP in Eurozone (EA-12)	<i>increase in %, const.pr.</i>	1,8	3,0	2,6	0,8	-4,0	0,9	0,8	-4,3	-0,2

### C.1 Economic output

In the fourth quarter of 2008 the Czech economy was fully affected by the economic crisis and entered into recession. In the period between the third quarter of 2008 and first quarter of 2009, seasonally adjusted **real GDP** fell by 6.0 % (compared with 5.1 % from database valid in time when the July forecast was prepared). QoQ decrease for the first quarter of 2009 was updated from 3.4 % to 4.8 %, which was the biggest revision for the period when the CZSO had published seasonally adjusted data.

In the second quarter of 2009 the decline obviously stopped. Seasonally adjusted GDP grew by 0.1 %, QoQ (compared with decline by 0.1 % estimated in the July forecast). With regard to the fact that this increase is of minimum value, it cannot be said unambiguously whether the Czech economy's recession has already ended (see Box B.1 for more).

Effects of economic slump ending in the countries of our main trading partners as well as of boosting measures of the Czech government are gradually seen. Due to revision of previous quarters it means YoY decline by 5.8 %<sup>9</sup> (decline by 4.8 %).

In the third and fourth quarters of 2009 the economy should start recovering moderately. Forecast of QoQ growth for the mentioned quarters was increased by 0.5 p.p. to 0.4 % and 0.5 %, respectively. In spite of it, due to revision of first-

quarter data annual real GDP for entire 2009 should record decline by 5.0 % (4.3 %).

Tendency to moderate growth should be interrupted in early 2010 only when impact of stabilization measures should be reflected in one-off QoQ decline. The forecast of GDP growth for 2010 is 0.3 % (unchanged). Restrictive impacts of stabilization measures and improved outlook of external environment should be then mutually compensated. Such compensation should be seen also in fundamental change in the structure of economic growth. Contribution of foreign trade should become the key factor instead of household consumption.

Drop in the **real gross domestic income (RGDI)** reflecting income situation of the Czech economy is considerably lower compared with real GDP. Due to improvement in terms of trade it fell by 4.2 % YoY "only" (2.8 %) in the second quarter of 2009. In 2009 decline by 3.7 % (decline by 2.9 %) is expected while in 2010 it could stagnate (growth by 0.4 %).

Decline in real dynamics is reflected also in development of **nominal GDP**, the key variable for fiscal forecasts. In the second quarter of 2009 a decline by 2.4 % YoY (1.8 %) was recorded where improvement in terms of trade failed to compensate real economy shrinkage. For 2009 decline in GDP in current prices is estimated at 2.4 % (decline by 1.7 %). Fulfilment of this forecast would mean the first nominal decline in GDP in history of market economy in the CR. In 2010 growth by 0.6 % (1.2 %) is expected.

As regards **income structure of GDP**, drop in the business sphere profitability is expected. An

<sup>9</sup> In the following text data are given without seasonal adjustment, if not specified otherwise.

## C. Forecast of macroeconomic indicators

increase of gross operational surplus fell from 9.3 % in 2007 to mere 1.9 % (0.6 %) in 2008. In the second quarter of 2009 gross operational surplus fell by 3.5 % YoY (*decline by 3.7 %*), while for entire 2009 decline by 3.9 % (*decline by 2.8 %*) is expected. In 2010 stagnation is assumed (*increase by 1.4 %*).

The forecasts are still related with high rate of uncertainty ensuing especially from external environment development and also from the economy's response to measures aimed to stabilize the general government. Impacts of data revisions on past economic development can be also relevant.

### **Expenditures in GDP**

A dominant component of the steep decline in economic output on the side of expenditures was **change in inventories**. It contributed with 4.4 p.p. to YoY lowering of seasonally adjusted GDP by 5.5 % in the second quarter of 2009. It stems from Graph 1.7 that dynamics of change in inventories was the decisive factor of GDP development of the last three quarters. In tightened economic conditions and pressure on cash-flow maintenance, businesses were obviously motivated to reduce inventories. Nevertheless we fail to explain such a huge decline in inventories in a satisfactory fashion. At the same time, uncertainty regarding future development of inventories increases uncertainty of forecasts of other macroeconomic indicators.

YoY growth of real **household expenditures on final consumption** reached 1.5 % (*1.5 %*) in the second quarter of 2009. Further growth of consumption will be counteracted by falling employment and ensuing worsening income situation of households. Also households' efforts to generate risk-covering savings will have their effects. On the other hand, low rate of inflation could help increase household consumption. In 2009 household consumption could rise by 0.7 % (*1.1 %*) and remain thus a stabilizing segment of the economy.

From early 2010 effect of stabilization measures to maintain public finance balance will be seen. Ensuing lowering of household disposable income could have impact on household consumption growth amounting to -2.8 p.p. In 2010 decline in household consumption by 1.3 % (*growth by 0.7 %*) is expected.

**Government expenditures on final consumption** rose by 2.6 % (*1.8 %*) in the second quarter of 2009. Extraordinary expenditures connected with EU presidency had partial share in it. Government consumption is expected to rise by 2.0 % (*1.3 %*) in 2009.

In accordance with adopted stabilization measures austerity behaviour of government institutions is expected as regards both employment in the government sector and purchases of goods and services. In 2010 decline in real government consumption by 1.0 % (*growth by 0.5 %*) is expected.

Volume of **gross fixed capital formation** fell in the second quarter of 2009 by 7.2 % YoY (*6.3 %*). Purchases of vehicles recorded the greatest decrease with an 18.3 % drop while investment in other machines decreased by 14.2 %. Investment in housing fell by 7.0 % and in other constructions by 1.2 % only.

In the current uncertain situation it is necessary to take into account that many investment plans will be reconsidered or postponed. Restructuring of production capacities will gradually take place, which is however a longer-term process. Willingness of foreign investors to make new investments or reinvest profits from their business operations in the CR will depend on their situation in their home countries. At the same time, economic performance of businesses will be negatively affected by stabilization measures.

We anticipate that investments in housing construction will continue to fall. After market overheating in 2007 and 2008, situation should gradually return to trajectory sustainable in the long run. With regard to household situation, trajectory deviation in the opposite direction can be rather expected.

On the other hand, fall in investment could be mitigated by some NAP measures (VAT refund for company cars, faster depreciation of investment assets, acceleration in highway construction) and by infrastructure investments with contributions from EU funds. Volume of investment could drop by 7.8 % (*decline by 5.7 %*) in 2009. In 2010 further decline by 5.9 % (*decline by 1.5 %*) is expected.

In 2008 positive contribution of **foreign trade** (FT) in goods and services to growth of real GDP reached 1.5 p.p. (*1.9 p.p.*) despite very unfavourable external conditions and record-breaking strong exchange rate of the koruna.

In the first quarter of 2009 – period of the deepest drop in our trading partners' demand – a negative contribution of FT to growth of seasonally adjusted GDP of -1.6 p.p. was recorded. In the second quarter this contribution abated to -0.9 p.p.

In the second and third quarters of 2009 export and thus also FT contribution to GDP development was obviously positively influenced by foreign governments' measures, especially as regards car industry support. This effect, however, needs to be taken as temporary one. On the other hand, indications of the end of slump for our main trading partners appear. For entire 2009, contribution of -1.0 p.p. (*-1.8 p.p.*) is expected.

In 2010 positive effect of domestic demand reduction due to stabilization measures as well as of ongoing recovery in partner countries should be seen. FT contribution should be distinctly positive, amounting to 1.4 p.p. (*0.2 p.p.*).

### C.2 Prices of goods and services

#### Consumer prices

Consumer price level was the same in September 2009 as in September 2008 (*compared with forecast of YoY growth by 0.5 %*). Distinctly disinflation trend is in agreement with all this year's forecasts but its intensity is stronger. Especially permanently falling prices of food and also constantly low prices in the section of transport are the main factors of this development. Common contribution of sections of food and soft drinks and of transport to the August value was -1.6 p.p. On the other hand, contribution of administrative measures was positive, amounting to 1.5 p.p.

Food prices have been decreasing YoY already for ten successive months, reflecting thus not only situation on the global market but also development of prices of domestic agriculture producers. In July prices of food fell as much as 6.5 % YoY, which was the maximum since August 1999. At present they hover below the level from October 2007 when the Czech economy was standing on the very threshold of strong wave of price increases. For the remaining part of the year it is estimated that prices of food remain more of stable with a possibility of growing slightly at the end-year<sup>10</sup>.

Prices in the section of transport are affected as by falling prices of cars responding to economic slump as by level of fuel prices, which keep on falling in YoY terms. Basic effect of oil and fuel prices, influenced in the same period of the previous year by July record-breaking values, has been fading away. Starting from November, prices of oil should again start pushing the consumer price level up slowly. However, a major reflection in prices will be hampered by YoY stronger exchange rate of the koruna to the US dollar.

Administrative measures should have no further strong impacts on consumer prices except for October cut in gas prices by 2.8 % (with expected impact of -0.1 p.p.), which is the third consecutive price cut after that of April (3.0 %) and July (6.1 %). Total contribution of administrative measures in this year is thus estimated at 1.1 p.p. (0.7 p.p.).

Markedly weakening economic activity due to the drop in foreign demand, the economy's position in negative output gap, worsening situation on the labour market, low pace of wage growth and uncertainty concerning future development also create space for only a very limited inflation.

With regard to given facts and assumptions, average rate of inflation is estimated at 0.9 % (1.1 %) in 2009 with an increase in prices over the year by 0.2 % (0.7 %). Net inflation should thus remain negative just as in the previous course of the year.

In 2010 average rate of inflation should hover around 1.4 % (1.1 %) with prices increasing over the year by 1.9 % (2.1 %).

Contribution of administrative measures is the main factor of an increase in average inflation forecast. In 2010 it will be formed especially by the government package to cut the state budget deficit, whose total impacts on CPI are estimated at 1.0 p.p. On the other hand, as against the previous forecast lower growth of regulated rent is expected (by 17.3 % with an impact of 0.3 p.p.) and also prices of gas should rise only slightly. Contribution of administrative measures will be dampened especially by electricity prices, which should fall by some 7.0 % (impact of -0.3 p.p.) from the beginning of the year, by subsidizing effect of gas price cuts from 2009 and also expected transfer of selected services with high share of human labour from the basic to reduced rate of VAT (contribution of -0.1 p.p.) For the purposes of this forecast, we allow for the measure to become valid from 1 April 2010. Total contribution of administrative measures should be 1.3 p.p. (0.9 p.p.) in 2010.

Merely a slow recovery of the Czech economy, still worsened conditions on the labour market, and moderate growth of average nominal wages will all hinder growth of prices on the demand side. They will be joined also by an effect of stronger exchange rate of the domestic currency. On the contrary, on the supply side expected growing prices of oil (together with low comparison basis from the first half of this year) and slow return of world and domestic prices of food to the growth stage will have pro-inflationary effects.

#### Deflators

YoY growth of **gross domestic expenditure deflator**, which is a comprehensive indicator of price development in the economy, slowed to 1.8 % (0.8 %) in the second quarter of 2009 due to lower inflation for household consumption. The difference in reality against the forecast results from the fact that expected decline in prices for change in inventories did not occur.

With general easing of inflationary pressures, growth of prices of gross domestic expenditures in 2009 should slow further to 1.3 % (*unchanged*), in 2010 it should reach 0.7 % (0.9 %).

Growth of **implicit GDP deflator** reached 3.5 % (3.2 %) in the second quarter of 2009. Compared with gross domestic expenditure deflator, it is influenced by growth of terms of trade by 2.5 % (3.3 %). In 2009 the effect of wage dynamics slowdown will obviously outweigh the effect of the improvement in terms of trade and so growth by mere 2.7 % (2.8 %) can be expected. In 2010 growth by 0.2 % (1.0 %) is expected.

<sup>10</sup> CZSO estimates allow for an average level of this year's harvest.

### C.3 Labour market and households

Labour market is hit strongly by unfavourable economic situation.

In principle, all statistics demonstrate, beside considerable losses of jobs, also efforts of businesses in operation to keep maximum number of their regular workforce in activity, but in many cases at the expense of temporary shortened working hours and cuts in wages. Due to decline in demand, redundancies, and reduction of scale of production and of working hours, growth of average wage slowed considerably and the wage bill decreased in year-on-year terms.

#### *Employment*

Under Labour Force Survey (LFS), employment fell in the first half of 2009 by 0.7 % YoY, out of which in the second quarter by 1.2 % (1.5 %) especially due to fall in the number of employees by 1.8 % (2.2 %). The number of people working in the primary and secondary sectors continued to decline, especially in manufacturing. Similarly as in the previous quarter, this decline was partially offset by an increase in the number of persons employed in the tertiary sector.

Tendency to growth of supply of labour has further strengthened in the second quarter, which is somewhat paradoxical phenomenon in the period of economic recession. Labour force grew YoY by 52 thousand people with shrinkage of the employed by 62 thousand and increase of the unemployed by 114 thousand. Rate of economic activity (15-64 years) thus grew YoY by 0.3 p.p. to 69.9 % and ratio of labour force to population aged 15-64 years by as much as 0.5 p.p. to 71.0 %.

Rate of employment (15-64 years) fell by 0.7 p.p. to 65.4 %. Number of the employed in higher-age categories (above 50 years) increases while lower-age categories (20-39 years) show decline in rate of employment. Partially it can be explained by education, partially by parenting, and considerable reduction of possibility of temporary jobs is also relevant, especially compared with the same period of 2008 when hunger for workforce grew considerably.

Due to reduction of jobs in industry, number of registered foreign workers has been falling since beginning of the year. 244 thousand foreign workers were registered at the end-September, which is YoY shrinkage by 16 thousand. However, number of self-employed foreigners has been increasing since the beginning of the year.

Outlook for the following period is not very optimistic. Economic problems can result in further closing of non-profitable operations and changes in legislation (especially termination of insurance premium allowances for low-income employees) will obviously lead to further layoffs. Redundant employees are however assumed to strive for creating their own business activity (by means of creating a

new working activity or complying with businesses' efforts to optimize their taxes by hiring "tradesmen" only when necessary).

In context with the current development, YoY decline in employment by 1.3 % (1.8 %) is expected in 2009. With slight economic recovery and rapid response of the labour market in 2010, decline by 1.9 % (2.1 %) is expected.

#### *Unemployment*

Rise in unemployment, after unprecedented growth from January through April, slightly slowed its pace over the third quarter of 2009. Average rate of registered unemployment reached only 8.36 % (8.6 %) in the third quarter. However, September data were less favourable, giving no reason to optimism, as together with greater inflow of new job-seekers the number of vacancies kept on decreasing. Also an increase of school-leavers was greater, due obviously not only to reduction in boosting their employment but also to practices of smaller employers using or misusing the trial period to gain a short-term cheap workforce.

Nevertheless, minor positive signals still exist. E.g. number of the unemployed that started new jobs has been growing constantly since March.

Numbers of the long-term unemployed were similar under LFS and MLSA statistics in the end of mid-year (96 thousand and 101 thousand, respectively) and their share in total number of the unemployed fell considerably in case of LFS (to 29.0 %, in case of the registered to 22 %).

As regards statistics, higher increase of registered unemployment can be still assumed due to the fact that people registered with employment agencies can legally work for a certain time, which is not allowed under LFS definition.

Eurostat's harmonized rate of unemployment reached 6.3 % in the CR in June 2009 while EU average was 8.9 %.

With regard to changes in legislation, signals from production sectors, and planned or already partially implemented reduction in jobs in budgetary sector in this year, further growth of unemployment is expected in the following period.

Internationally comparable general rate of unemployment under LFS will rise to 6.5 % (6.8 %) in 2009 and to 8.4 % (8.5 %) in 2010.

Average rate of registered unemployment should grow to 7.9 % (8.2 %) in 2009 and to 9.9 % (9.8 %) in 2010. In some months of 2010 rate of registered unemployment will probably break the 10 per-cent level.

#### *Wages*

Under preliminary data from registration statistics, steep slowdown in YoY growth of average wage as well as decline in wage bill due to lower employment was recorded in the key production sectors in the first half of 2009 due to lower demand

## C. Forecast of macroeconomic indicators

and productivity. Average wage was CZK 22,605 in the first half-year and its growth was 2.7 % (on recalculated numbers, including estimates of small businesses). The wage bill decreased by 0.5 % YoY (*growth by 1.4 %*) in the second quarter after revised growth by 1.0 % (2.6 %) in the first quarter.

On the basis of data revision for the first quarter of 2009, second-quarter results and signals from the business sphere, a very modest growth of average wages is expected in the following period, due mainly to low productivity and economic performance corresponding to recession. In the government sector the salaries will be cut considerably in 2010, which should reflect in the private sector too by means of signal effect.

With regard to expected major decline in employment in 2009 and 2010, wage bill is expected to fall by 0.3 % and 1.1 %, respectively (*growth by 1.0 %*). However, real wage drop should not be radical as the consumer price level should remain almost stable.

### **Households**

*(According to the household sector account from the quarterly national accounts)*

With fall in employment and considerable slowdown in wage growth, a significant slowdown in high nominal dynamics of disposable income can be expected from 8.5 % in 2008 to 2.9 % in 2009 and 0.6 % in 2010, despite growth of welfare incomes and cuts in taxation and social insurance contributions.

Uncertain situation and risks resulting from possibility of losing a job could lead to a change in household behaviour toward creation of savings at the expense of consumption. A moderate nominal growth of consumption is still expected in 2009 while in 2010 stagnation or decline will be recorded (-0.1 % is expected) should all the mentioned assumptions be met. Rate of gross saving should exceed 11 % in 2009 and approach 12 % in 2010.

### **C.4 External relations**

*(Balance of payments definitions)*

External imbalance, expressed by **ratio of current account (CA) balance to GDP**, reached -2.6 % (-3.0 %) on an annual basis in the second quarter of 2009 and started improving again. Falling deficit of the balance of income and better results of the trade balance contributed mostly.

Lowering of pace of growth of exports and imports since early 2008 was connected especially with rapid strengthening of the koruna. From October 2008, however, a steep breakthrough occurred in foreign trade. General worsening of world economic situation and transition from slowdown to recession caused an abrupt slump in demand and export and import volumes began to fall steeply. For the first time since the second quarter of 2002 a YoY decline

in export markets was recorded in the fourth quarter of 2008<sup>11</sup>, which continued also in 2009. In the second quarter of 2009 export markets fell by 14.7 % (12.7 %). Besides, export performance, indicating share of the Czech goods on export markets, worsened by 6.5 % (10.5 %). This resulted in an even stronger slump in real exports of goods (by 20.2 %).

It led to strong decline in nominal exports by 19.2 % and imports by 22.2%. On the other hand trade balance surplus started growing again due to faster pace of decline in imports than that of exports. In the second quarter of 2009 ratio of trade balance to GDP totalled 3.1 % (2.8 %) on an annual basis, i.e. 0.5 p.p. more in year-on-year terms.

Despite indications of world economy's improvement, only slow recovery of trade is assumed. In 2009 export markets are estimated to decline considerably by some 12.9 % (11.6 %) while in 2010 the decline should be moderate amounting to 0.5 % (1.5 %). Export performance should gradually improve too.

In connection with global economic recession prices of raw materials, especially of oil, fell sharply, which has positive impact on balance of trade. In 2009 a deficit in the fuel part of the balance (SITC 3) is expected to fall to some -2.9 % of GDP (-3.0 %) from -4.5 % in 2008.

It is expected that surplus of the non-fuel part of the balance will decrease only slightly to 6.0 % of GDP (5.2 %) in 2009. With the current fall in the deficit of the fuel part of balance, trade balance surplus (in balance of payments definitions) should reach 3.8 % of GDP<sup>12</sup> (3.0 %). In 2010 trade balance surplus is expected to reach 4.6 % of GDP (3.1 %). Effects of slight recovery of foreign trade and domestic demand restrictions should considerably outweigh higher prices of oil.

After long-term growth, surplus of **balance of services** started decreasing since early 2009. It was caused by slowdown in pace of growth of revenues and higher growth of expenditures. Transport services and tourism had their share in lower revenues in the second quarter while volume of exports of the so-called other services increased YoY. Growth of expenditures was connected with a rise in imports of other services. Such development meant decrease in ratio of balance-of-services surplus to GDP (in yearly total) as against the end of previous year when it reached the maximum level over the past seven years (2.2 %), by 0.3 p.p. With regard to persisting problems of the world economy no major changes can be expected and so, with

<sup>11</sup> Weighted average of growth of goods import by seven most important trade partner countries (Germany, Slovakia, Poland, Austria, France, United Kingdom and Italy).

<sup>12</sup> Another item is represented by costs on transport and insurance amounting to some 0.7 % of GDP, which cannot be assigned from available sources to individual items.

## C. Forecast of macroeconomic indicators

stagnation of revenues and growth of expenditures, further decline in balance-of-services surplus is assumed.

**Balance-of-income** deficit, including reinvested and repatriated profits of foreign investors, has been decreasing since the second quarter of 2008, when it reached historic minimum of -8.6 % of GDP. Since early 2009 incomes and costs have been decreasing with costs decreasing more rapidly. In the second quarter ratio of balance of income to GDP fell to yearly total of -7.2 %. Decline in outflow of profits abroad is related with lower profitability of foreign firms; outflow of compensations for foreigners' work in the CR was also lower. Maintenance of the current trend of lowering of the balance-of-income deficit is expected with the current weak recovery to continue also in the following period.

In 2009 ratio of **current account** deficit to GDP is expected to reach -1.4 % (-2.0 %). Forecast for 2010 is 0.5 % of GDP (-0.9 %). A seemingly paradoxical forecast of decreasing deficit or its transition into surplus is given by the fact that effect of lower prices of oil, slowdown in real imports (lower growth of domestic demand and high import intensity of exports) and lesser outflow of yields should prevail over export dropout.

### C.5 Demographic trends

Under preliminary data for the first half of 2009, dynamic population growth of 0.6 % YoY was maintained.

Positive balance of migration was maintained at a high level of 18 thousand people in the first half-year, representing the most important factor of population growth, although its intensity decreased in comparison with 2008.

The natural increase of population reached 4 thousand persons, which is 2 thousand less compared with the same period of 2008. These characteristics indicate that the demographic situation is closer to the trajectory of high variant of the CZSO Demographic Projection 2009 and so it was given priority before the medium variant.

In general it can be stated that the Czech population has, from economic view, still very favourable structure with high share of working-age population. However, number of population aged 15-64 years has probably reached its maximum at the turn of 2008 and 2009.

In accordance with assumptions of high variant of the projection, lower immigration can be further expected and thus also slight worsening of demographic structure. This phenomenon should be supported also by lower demand for foreign workforce due to economic crisis.

However, under our calculations a moderate decline in working-age population should be compensated for the most part by enacted extending

of the retirement age and so the economy should not suffer from lack of workforce sources.

On the other hand, the projection confirms the coming **process of population ageing**. For the first time in the Czech history, in 2007 the number of people under 20 was lower than the number of people aged 60+. In future the number and share of seniors in the population will further grow due to demographic structure and further extension of the mean lifespan. Structural share of citizens older than 65 years in total population, which was nearly 15 % in early 2009, should increase to nearly 20 % by the beginning of 2020.

### C.6 Interest rates

In accordance with the July forecast, **2W repo rate** was cut by 0.25 p.p. to 1.25 % in August 2009. Thanks to low inflationary expectations, supported by currently stronger exchange rate of the koruna, lower total inflation and interest rates, the CNB had opportunity to respond actively to deeper economic slump and boost economic activity by monetary-policy easing.

The ECB assessed the reports on stabilization of western economies prudently with regard to temporary character of some pro-growth measures, leaving interest rate for non-financial operations unchanged at 1.00 %. Interest differential between the CR and the euro area narrowed at 0.25 p.p., against the US at 1.00-1.25 p.p.

Cut in the CNB policy rate was reflected also in other interest rates of inter-bank market. Uncertainty on financial market can be however still seen in higher risk premiums, which should fall and approach the average pre-crisis level by the end of 2010. Average value of PRIBOR 3M reached 1.97 % in the third quarter of 2009. For 2009 it is estimated at 2.2 % (*unchanged*) and for 2010 at 1.9 % (2.0 %).

**Yields to maturity** of 10-year government bonds were falling in the third quarter of 2009, reaching on average 5.0 %. Their ongoing decline is expected also in the following years, which should be supported by cuts in risk premiums and closing of spreads between the Czech and European government bonds. However, growing demand for more risky financial assets can act on the yields in the opposite direction. Average yield in 2009 is then forecast at 4.9 % (4.5 %) and in 2010 at 4.3 % (4.4%).

Average interest **rates from household deposits** reached 1.41 % for the second quarter. Interest rates react to inter-bank rates development with delay and so they are expected to decline more slowly for the remaining part of 2009. On average rates should reach 1.4 % (*unchanged*) in 2009 and remain stable at 1.2 % in 2010 (*unchanged*).

Average interest **rates from credits** to non-financial businesses reached 4.63 % in the second quarter of 2009. In 2009 they should follow the

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movement of other market interest rates, amounting on average to 4.6 % (*unchanged*), and grow on average to 4.7 % (4.8 %) in 2010.

Average interest **rates from new credits** to households were growing mostly in the second quarter (even under an assumption of unchanged structure of credits). Tightening of credit conditions increased average rates to 14.0 %. Interest rates from new credits to non-financial businesses were stable in the same quarter, amounting on average to 4.4 %.

### C.7 General government

Under CZSO preliminary data, general government **deficit in 2008** reached CZK -77bn, which is -2.1 % of GDP. In comparison with preliminary CZSO data from April 2009 thus deficit was worsened by approximately CZK 23bn in 2008. Negative reassessment of tax receipts, especially for VAT and income taxes, played the key role.

In **2009** the general government deficit is expected to deepen considerably to approx. CZK -240bn, which is -6.6 % of GDP. The Maastricht convergence criterion for general government deficit of 3 % thus will be substantially exceeded after 3 years. With regard to the bad economic situation it can be at present assumed that most EU countries will have similar problems with general government performance.

In comparison with the July 2009 estimate, significant worsening of the general government deficit thus occurred by nearly CZK 42bn. The revenue side has the strongest impact where due to bad economic developments estimates of tax receipts were lowered, especially as regards corporate income tax, excise taxes and social security contributions.

The estimate takes into account a number of anti-crisis measures, which participate in extending of the 2009 deficit to a large extent (see Table A.2.2).

The current estimate is still encumbered with high rate of uncertainty, as economic conditions are difficult to estimate.

General government **debt** reached approx. CZK 1,105bn at the end of **2008**, which represents 29.9 % of GDP. Thanks to high government deficit in **2009**, a steep rise in indebtedness is expected this year. By the end of 2009 the general government deficit should reach CZK 1,284bn, which is 35.6 % of GDP.

*Detailed data on general government forecast for 2010 and outlook to 2012 will be released in Fiscal Outlook in the beginning of November 2009.*

### C.8 World economy

The world economy is still in recession but the latter is already abating. Stock markets have shown improvement since spring, China and other Asia's economies have returned to strong growth. US

economy, subject to strong incentives from the side of government and central bank, slowed its decline in the second quarter of 2009, similarly as the euro area.

The **US economy** fell by 1.6 % QoQ in the fourth quarter of 2008 and 1.4 % in the first quarter of 2009 while in the second quarter the decline slowed down to mere 0.3 %. YoY inflation fell to -1.5 % in August but MoM prices grew by 0.4 % due to a rise in fuel prices. Rate of unemployment grew to 9.7 % in August 2009, while forecasts predict its peak at some 10 %.

Recession was helped by considerable fall in household consumption in the second half of 2008. Consumption started growing again in the first quarter of 2009 thanks to government incentives including tax cuts but in the second quarter it fell again. American households start saving, which will obviously mean a big change for the world prosperity. Quality of rehabilitation of banks and of financial sector in general remains unclear. Signs of improvement are seen on the real estate market. At present a sharp discussion is under way of whether the government incentives should continue and to what extent. Also the proposed reform of health insurance is being discussed. Solution of these questions will influence performance and perception of the US economy in the long run. The dollar was weakening considerably because of these uncertainties, which helped reduce CA deficit.

Change in the US real GDP for 2009 is expected at -2.8 % (*unchanged*) and for 2010 slight growth is estimated at 1.5 % (0.4 %).

GDP fell in the **euro area (EA12)** by 1.8 % QoQ in the fourth quarter and by 2.5 % in the first quarter of 2009; in the second quarter pace of decline slowed to 0.2 %. Germany was in strong recession (QoQ declines by -2.4 % and -3.5 %) but in the second quarter of 2009 it somewhat surprisingly recorded a weak growth of +0.3 %. France recorded the same value.

Economies strongly dependent on exports of especially manufacturing products were hit by the slump most. YoY drop in industrial production was the deepest in April - 21.3 % in the euro area, even 24.1 % in Germany. However, new contracts started growing in July in month-on-month terms.

After years of decrease and stagnation household consumption has started growing in Germany. Recovery and government interventions got their full strength as late as in early summer. Relatively low unemployment and inflation boost consumption, after exhaustion of stocks orders are growing. Therefore a stronger growth is expected in the third quarter.

Rate of unemployment in EA 12 grew to 9.5 % in July 2009 (in Germany 8.3 % only from June to August, 8.2 % in September). Inflation in

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EA12 fell into negative values from June (YoY) but grew in August in month-on-month terms.

For 2009 a change in GDP of EA12 is estimated at -4.0 % (-4.3 %) and for 2010 growth by 0.9 % (-0.2 %). Risks are seen in the possibility of a new drop after pro-growth incentives are terminated.

**Central European economies** were growing faster than Western Europe for a long time but high share of industrial production and dependence on exports to the EU resulted in drop of economic output. In the second quarter of 2009 growth of EA12 is even higher than of EU27 (-0.2 % compared with -0.3 %).

High share of exports, especially of cars, as well as fall in foreign investment resulted in sharp fall of GDP of **Slovakia's economy** by 11.0 % QoQ in the first quarter of 2009. In the second quarter, however, GDP grew by 2.0 %. The crisis led to growth of average rate of unemployment above 12 %, which is the most in past four years.

A year-on-year change in GDP by -5.5 % (-4.8 %) is expected in 2009. In 2010 growth should already follow by 2.0 % (1.5 %).

So far, **Poland's economy** has recorded only negligible decline by 0.1 % in the fourth quarter and growth in the first and second quarters by 0.3 % and 0.5 %, respectively. Growth is pulled by household consumption and the size of the domestic market stabilizes the economy. It seems that Poland as the only EU country could avoid the recession.

For 2009 growth of GDP is expected at 1.0 % (0.5 %) and for 2010 at 0.7 % (*unchanged*).

**Price of Brent oil** has been hovering around USD 70 per barrel in recent months while in the first and second quarters average prices were USD 45 or 59, respectively. Such development reflects expectations of economic recovery and, besides, commodities are becoming again an object of strong investment (also because of falling dollar).

In our forecast the same average level for 2009 is given as in July, amounting to USD 61 per barrel of Brent oil and for 2010 USD 79 (*unchanged*). Similarly as in the previous forecast, growth to values above USD 80 is considered probable in the medium run. On the side of production, due to insufficient investment in the period of lower prices, inability to increase extraction considerably could be seen.

### C.9 International comparisons<sup>13</sup>

*Comparisons of economic output of individual countries are made in PPS (purchasing power*

<sup>13</sup>Comparisons for the period to 2008 are based on Eurostat statistics. Since 2009, our own calculations are used based on real exchange rates.

*standards*). PPS is an artificial currency unit expressing quantity of goods that can be bought on average for one euro on the EU27 territory after exchange rate conversion for countries that use other currency unit than the euro.<sup>14</sup>

Due to economic crisis, when adjusted by current **purchasing power parity**, process of economic convergence of the CR and other Central European countries (exclusive of Poland) toward EA12 average has stopped. Some countries (Baltic states, Hungary, Slovenia), which are hit by the crisis more than EA12 states, show even bigger or smaller decline in their relative economic level.

In 2009 Czech Republic's GDP p.c. should reach some 19 100 PPS, which corresponds to 73 % of EA12 economic output.

Alternative way of calculation by means of the current **exchange rate** takes into account a market assessment of the currency and ensuing differences in price levels. GDP of the CR p.c. then reaches some EUR 13,000, which corresponds to 47 % of EA12 level. Compared with 2008 thus a decline occurs given by correction of inappropriate appreciation of the exchange rate.

**Comparative price level of GDP** should reach some 65 % of EA12 average. Depreciation of the real exchange rate will be seen here in YoY decline by 2 p.p. Such movement could help increase price competitiveness and make overcoming of difficult situation easier. Similar development can be expected in Poland where price level decrease should be still more vigorous, amounting to more than 10 p.p.

Situation of countries with fixed exchange rates (Baltic states) or of Slovakia after adopting the euro is different. With non-existence of the exchange-rate channel and with expected positive inflation differential against EA12, they will have to face further increase in comparative price level and strengthening of real exchange rate e.g. by means of adopting measures to restrict wage development.

<sup>14</sup>E.g. PPP CZK 17.61/PPS in 2008 expresses the fact that for the given sum of Czech korunas the same set of representative goods could be bought as for 1 euro within EU27.

## D Monitoring of other institutions' forecasts

The Czech Ministry of Finance monitors macroeconomic forecasts of other institutions, engaged in forecasting of future developments of the Czech economy. Forecasts of 13 institutions are continuously monitored from publicly available sources. Of these, 7 institutions are domestic (CNB, Ministry of Labour and Social Affairs, domestic banks and branches of foreign banks, investment companies) and others are foreign (European Commission, OECD, IMF, The Economist's panel of forecasters, etc.).

The forecasts are summed up in the following table.

Table D.1: Consensus Forecast

		September 2009			October 2009
		<i>min.</i>	<i>max.</i>	<i>consensus</i>	<i>forecast MoF</i>
<b>Gross domestic product (2009)</b>	%, <i>const.pr.</i>	<b>-4,9</b>	<b>-1,5</b>	<b>-3,8</b>	<b>-5,0</b>
<b>Gross domestic product (2010)</b>	%, <i>const.pr.</i>	<b>0,3</b>	<b>1,9</b>	<b>1,2</b>	<b>0,3</b>
<b>Average inflation rate (2009)</b>	%	<b>0,6</b>	<b>1,6</b>	<b>1,1</b>	<b>0,9</b>
<b>Average inflation rate (2010)</b>	%	<b>0,3</b>	<b>2,0</b>	<b>1,2</b>	<b>1,4</b>
<b>Average monthly wage (2009)</b>	%	<b>1,8</b>	<b>2,8</b>	<b>2,3</b>	<b>2,1</b>
<b>Average monthly wage (2010)</b>	%	<b>2,2</b>	<b>4,0</b>	<b>2,8</b>	<b>0,6</b>
<b>Current account / GDP (2009)</b>	%	<b>-3,2</b>	<b>-1,4</b>	<b>-2,1</b>	<b>-1,4</b>
<b>Current account / GDP (2010)</b>	%	<b>-4,1</b>	<b>1,0</b>	<b>-2,1</b>	<b>0,4</b>

Till mid-year 2008, consensus forecasts of **GDP** growth were at the level of 5 %. Deepening of global economy problems was at first accompanied by forecasts of growth slowdown but in 2009 estimates allowing for economic slump have prevailed.

On average the institutions assume that the Czech economy's performance will worsen by 3.8 % in 2009. The MoF forecast is in accordance with these tendencies although predicted dynamics is lower. Consensus forecast is influenced by inclusion of "older" forecasts of the European Commission and OECD with lower than quarterly periodicity of release.

Current forecasts of **rate of inflation** for 2009 allow for average inflation of 1.1 %. The MoF forecast is slightly below consensus.

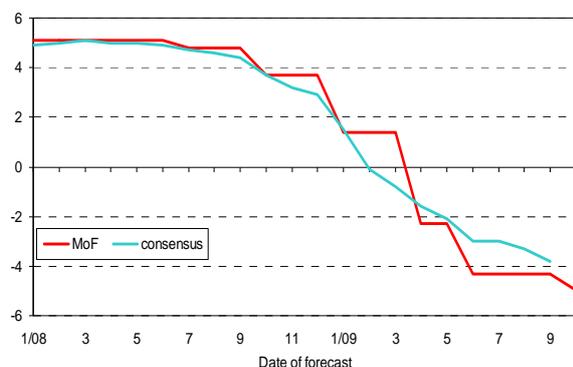
For 2010 most institutions assume that rate of inflation will only slightly increase compared with 2009. In contrast with forecasts' average the

MoF allows for average rate of inflation by 0.2 p.p. higher. However, it is necessary to take into account that so far most institutions could not include inflationary impacts of VAT and excise taxes increases into their forecasts.

At the turn of 2008 and 2009 a considerable cut in forecast of **average wage** growth for 2009 emerged. Consensus forecast allows for an increase of average wage by 2.3 % in 2009 and by 2.8 % in 2010. Neither this data includes impacts of government austerity package in 2010.

From February 2009, forecasts of **ratio of current account of balance of payments to GDP** show tendency to upward revision of estimates (lower CA deficit). The MoF forecast for 2009 is more optimistic in relation to consensus. Besides OECD the MoF is the only of monitored institutions that allows for the current account surplus in 2010.

Graph D.1: Forecast of Real GDP Growth for 2009  
in %



Graph D.2: Forecast of Aver. Inflation Rate for 2009  
in %

