A Forecast assumptions

The forecast was made on the basis of data known as of 9 April 2009. Neither political decisions, newly released statistics nor world financial or commodity markets developments could be taken into account after this date.

A.1 External environment

Compared with the central projection, risks of further worsening of the world economy's state, as expressed in the January forecast, turned real. Financial market crisis has spilled over the real economy, the euro area and the US economy have been in recession since the second and the third quarters of 2008, respectively. The US economy is absorbing consequences of dramatic events on the financial markets and the government is bustling about rehabilitating and restructuring of banks.

Advanced economies' problems have deepened, extending to emerging economies too. Volume of the world trade fell steeply and industrial production fell in many countries too. On the other hand, inflation comes close to zero.

Considerable uncertainty is connected with concerns about effectiveness of adopted and implemented measures of fiscal and monetary policies in the most-hit countries. Under current state of knowledge, it is still difficult to estimate depth and duration of global economy's turmoil. As seen in the following table, this uncertainty has affected also large international organizations' forecasts resulting in downward adjustment of forecasts.

Our projection stems from the assumption that no more negative events will occur on the financial markets and financial sector crisis will not deepen. Similarly as in the January forecast, real economy's turmoil is expected to persist in global terms till 2010.

Graph A.1.1: **Growth of GDP in EA12**
QoQ growth in % (adjusted for seasonal and working day effects)
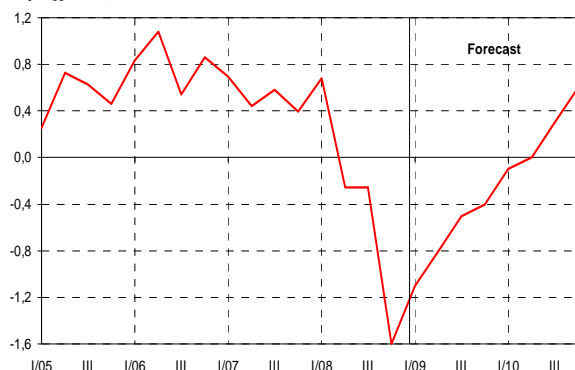
Table A.1.1: **Forecasts of the GDP growth for the euro area in 2009, by international institutions**
in %

month of issuance	
IMF	
November 08	-0,5
January 09	-2,0
March 09	-3,2
April 09	-4,2
OECD	
November 08	-0,6
March 09	-4,1
EC	
November 08	0,1
January 09	-1,9
ECB	
September 08	0,6 to 1,8
December 08	-1,0 to 0,0
March 09	-3,2 to -2,2

Unfavourable development of external environment is and obviously will be **the main cause of crisis symptoms in the Czech economy** in the following period.

Taking into account extremely high volatility of oil prices in 2008 it is also very difficult to estimate its future price development. It seems to be certain that the price is also considerably influenced by other factors than only fundamental ones.

Dollar prices of Brent oil fell sharply in the second half of 2008, stabilizing in the first quarter of 2009. For the next period, a scenario of recovery of medium-term tendency to moderate growth was chosen. In the conditions of global economic cooling a fall in demand can be expected, which can be however compensated by supply restrictions by means of either cuts in OPEC's production quotas or by economic reasons of producers with higher extraction costs.

Graph A.1.2: **Dollar Prices of Brent Crude Oil**
in USD per barrel
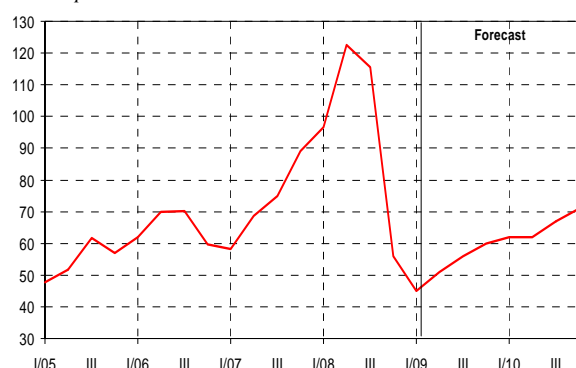
For more details on external environment, see chapter C.8.

A.2 Fiscal policy

Government institutions sector performed well in the previous two years but these results had been influenced especially by cyclical peak.

However, ongoing economic crisis brings worsening of results, revealing again structural deficiencies on the spending side of the general government.

Under preliminary CZSO data, general government deficit reached **1.5 % in 2008,** which is by some 1.4 p.p. better than set by the initial fiscal target. However, compared with previous assumptions, a major YoY worsening of performance was seen in 2008.

At present general government deficit is expected to reach **4.5 % of GDP in 2009.** Compared with the Czech Republic's spring notifications of deficit and debt, expected deficit worsened by 0.5 p.p. Due to vote of no confidence on the government, the notified deficit did not cover measures approved by the government but not adopted by the parliament as their adoption had been very uncertain in that time. Due to lowered risk of non-adoption these government-approved measures are now included in the size of the general government deficit. Adopted measures and their fiscal impact can be found in box A.1.

Box A.1: Overview of the government's National Anti-crisis Plan measures and their impacts on general government in 2009 *(annual basis)*

Measures	R&E of the General Gov. ESA 95 (in CZK bn)		
	Rev.	Exp.	(R-E)
I. Realised and approved measures			
1. Integration of resources from reserve funds		-1,5	**1,5**
2. Increase in guarantees to small and medium-sized enterprises	-0,5		**-0,5**
3. Support of agriculture entrepreneurs		2,3	**-2,3**
4. Increase in the Program of Countryside Development		0,3	**-0,3**
5. Investments in R&D above the framework approved by the state budget		0,3	**-0,3**
6. Increase in investments into traffic infrastructure		7,2	**-7,2**
7. Increase in public sector wages	0,4	2,7	**-2,3**
8. Increase in expenditures on direct payments - co-financing		1,0	**-1,0**
9. Decrease in the social security contribution paid by employees by 1. p. p.	-18,4		**-18,4**
10. Decrease in the rate of the CIT	-6,0		**-6,0**
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 export			**0,0**
14. Fiscal impulse of a support of R&D		1,9	**-1,9**
15. Decrease in advance payments on income taxes			**0,0**
16. Broadening of the VAT deduction on personal vehicles	-2,4		**-2,4**
17. Abolition of advances for taxpayers with less than 5 employees		1,0	**-1,0**
Total			**-42,1**

II. Measures so far not approved or not realised			
1.	Reductions for employers on SSC and the contribution for the state employment policy	-18,0	**-18,0**
2.	Faster depreciation in the 1st and 2nd depreciation group	-9,4	**-9,4**
3.	Guarantee and a support of small and medium-sized enterprises´ credits	2,1	**-2,1**
4.	Subsidy programme of an energy buildings´ demandingness reduction	0,0	**0,0**
5.	Boost of the subsidy programme "PANEL"	0,6	**-0,6**
6.	Expenditure increase in the provision of transport services	2,0	**-2,0**
7.	Decrease of VAT on selected services	-6,4	**-6,4**
	Total		**-38,5**

Impacts of the mentioned measures are calculated under ESA 95 methodology. From this reason, they may differ from actual claims to public financing. E.g. an increase in CEB capital will take the assumed CZK 2bn but in ESA 95 it is a financial operation having no impact on the balance, because one financial asset (financial means – decline) is just exchanged for another (the state's stock in CEB – increase). Similarly involvement of means from reserve funds to cover the state budget deficit will represent a source of financing for the state budget but it is not recognizable under ESA 95. Neither postponement of advance payments representing dropout in cash tax receipts means a change in the size of accrual taxes. In the case of reduction in VAT rate on selected services, a yearly impact is given. However only its half size is included in the size of reported deficit as this change is assumed to be effective from mid-year.

In connection with the government's National Anti-crisis Plan, positive impact of tying of individual chapters' operational costs is not mentioned as these means will be used to cover increased claims on social mandatory expenditures.

It is however probable that due to parliamentary parties' agreement and election cycle, further anti-crisis or pre-election measures will be adopted that will further deepen the given deficit. Presently, due to situation, the MoF is not able to estimate, which of various proposed measures will be eventually approved, when they will be implemented and what will be their fiscal costts. Whatever the extent of adopted measures, their financing need not be easy in future years. As absorbing capacity of the bond market as tax-collection potential of the country will be hit by ongoing crisis.

For more details on general government till 2008, see chapter C.7.

A.3 Monetary policy and exchange rates

Monetary policy of the CNB is based on inflation targeting regime. Inflation target is defined as YoY increase in the CPI. Till the end of 2009 it is set at 3 % with tolerance band of ± 1 p.p. while from January 2010 a new target is set at 2 %. Inflation target is set as medium-term with monetary-policy horizon of 12–18 months.

Dramatic decline in cost- and demand-related pressures has deviated risks of the present forecast toward anti-inflationary course. The CNB therefore proceeded to key interest rate cutting, supporting thus i.a. economic activity.

However, effectiveness of monetary policy is partially reduced by increased risk premia.

The latter contribute to higher spreads between inter-bank rates and monetary-policy ones. In the beginning of 2009 spreads started reducing though still keeping at increased levels (see Box C.2 for more).

Graph A.3.1: **PRIBOR 1Y**
in %
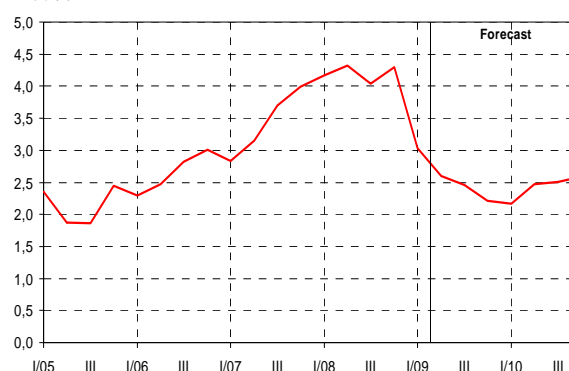
For more details on interest rates, see chapter C.6.

As of 21 July 2008, a historic record of the **exchange rate** of CZK 22.97/EUR was reported. Following steep correction, caused by outflow of financial investment from emerging markets, resulted in weakening of the exchange rate up to CZK 29.47/EUR on 17 February 2009. Average value in March 2009 was CZK 27.23/EUR, which means the exchange rate was weaker by full 5.2 per cent compared with the trend value. The

depreciation could help exporters to cope better with drop in external demand.

Graph A.3.2: **Exchange Rate CZK/EUR**
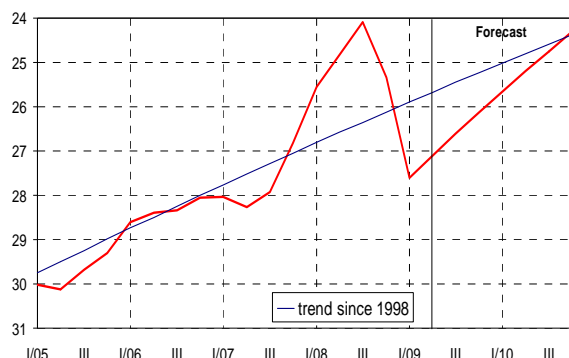
Adopted scenario assumes that in the second quarter of 2009 the exchange rate will reach CZK 27.10/EUR. In the following period long-term tendency toward moderate nominal and real appreciation should be restored with trend value reached by the end of 2010.

A.4   Structural policies

National Anti-crisis Plan

On 8 January 2009 government's **National Economic Council** was established, whose main task is to analyze risks and impacts of the current crisis and to propose appropriate measures to minimize them. The Council prepared proposals to solve the crisis resulting in the National Anti-crisis Plan (NAP) approved by the Czech government on 16 February 2009. Details on NAP measures are summed up in Box A.1.

Business environment

On 13 February 2009 the Chamber of Deputies of the Czech Parliament adopted **act on basic registers** defining contents of key registers of public administration (register of population, register of legal entities, self-employed physical persons and public authorities, register of territorial identification, addresses and real estates and register of rights and duties) and setting rights and duties connected with their creation, use and operation. The given registers will replace the existing system of uncoordinated and often duplicate databases kept by various authorities, resulting in acceleration of administration processes and shrinking of administration apparatus. The act should become valid as of 1 July 2010.

Education, science and research

At present **Reform of the Research, Development and Innovation System** is being implemented, aimed at simplification of administration, more effective use of public funds

for R & D and higher contribution of research, development and innovation to the Czech economy. Within this reform, the Chamber of Deputies of the Czech Parliament adopted an amendment to the **act on support of research and development from public funds.** It simplifies the state support system, reduces number of authorities allocating state means for science and research and should also lead to more effective use of financial means from structural funds and EU framework programmes.

Energy and climate changes

Ministry of Industry and Trade is preparing a new **energy conception**, in which outlook for the Czech energy is given up to 2050. The conception allows for higher use of nuclear and renewable energies and for breaking the extraction limits. The conception will include also Programme of the Czech Republic's Energy Resistance representing a response to recent dropout in Russian gas supplies. The conception should be finished in September 2009.

Labour market

Several persisting structural problems (motivation to work, discrimination of certain groups of workers, insufficient harmony of education system with changing demands of the labour market and low regional and professional mobility) are being joined by economic crisis problems, solution of which should be helped by stabilization measures given in Box A.1.

Strengthening of economic activity was the aim of amendments to the **act on employment and act on assistance in material poverty,** increasing interconnection of job seekers' material-security claims with system of assistance in material poverty and introducing stricter rules of active employment policy. The period of support in unemployment was shortened by one month while unemployment benefits were increased – for the first two months it amounts to 65 % of average net monthly earning reached in the last job, for the next two months to 50 % and for the remaining part of period of support to 45 %. Way of payment of material-poverty assistance benefits has changed: now they are provided in the form of vouchers for purchase of goods from 35 % at least and 65 % at most.

As regards **health insurance** system, payment of benefits was abolished for the first three calendar days while during the fourth through fourteenth day of sickness benefits will be paid out by an employer. The measure is to eliminate sick pay abuse and to reduce sickness rate in the CR, which is above Europe's average in the long run. The changes were accompanied with cut in social contribution rate by 1.0 p.p. (in 2010 by further 0.9 p.p. for some employers). Also contributions paid by employees were cut by 1.5 p.p. (employers

now pay pension and health contributions only) with personal income tax rate and size of tax allowances being preserved.

The **first stage of pension reform** extended gradual increase of the statutory retirement age up to 65 years for men and 62-65 years for women depending on the number of brought-up children. Furthermore, it extended necessary time of insurance to 35 years and excluded time of studying from alternative periods of insurance.

It re-considered also definition of full and partial disablement, introducing three degrees with differing size of pension paid. It strengthened **motivation of older persons** to work by means of more severe cuts in old-age pensions in case of early retirement and by growth of percent term of old-age pension in case of concurrence of employment and drawing a full or partial pension.

B Economic cycle

### B.1   Position within the economic cycle

Potential product, specified on the basis of calculation by means of Cobb-Douglas production function, indicates the level of GDP with average use of production factors. Growth of potential product describes possibilities of long-term sustainable growth of the economy free of imbalances. It can be broken down into contributions of labour force, capital stock and total factor productivity. Output gap identifies cyclical position of the economy, expressing the relation between GDP and potential product. Concepts of potential product and output gap are used for cyclical analysis and calculation of the general government structural balance.

Under current conditions, when breakthrough changes of macroeconomic indicators occur, results of these calculations show high volatility due to used techniques of time series filtering (endpoint problem). So they need to be treated very cautiously.
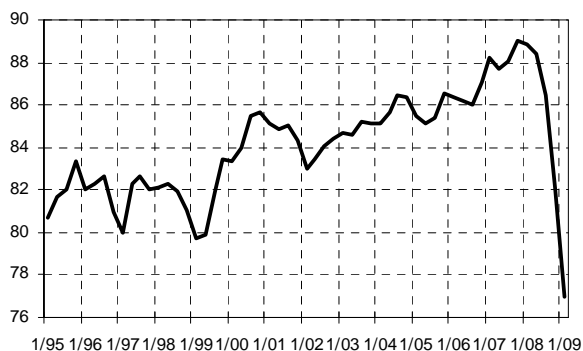
Graph B.1: **Output Gap**
in % of GDP
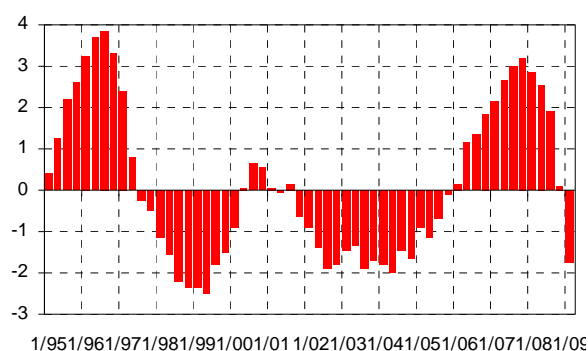
Graph B.2: **Potential Product Growth**
in %, contributions in percentage points
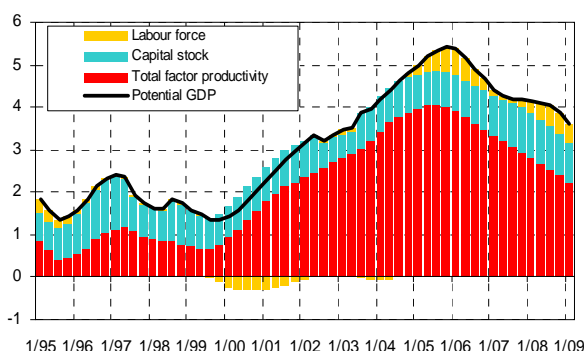
Graph B.3: **Utilisation of Capacities in Industry**
in %

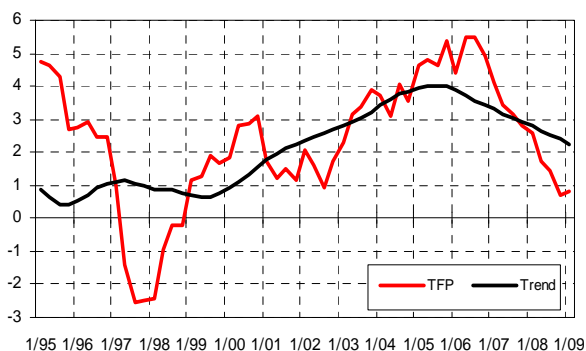Graph B.4: **Total Factor Productivity**
YoY growth in %

Table B.1: **Output Gap and Potential Product**

		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Output gap	*per cent*	0,0	-0,2	-1,5	-1,6	-1,7	-0,6	1,0	2,7	1,8	-1,7
Potential output	*growth in per cent*	1,7	2,6	3,3	3,7	4,5	5,2	5,0	4,3	4,0	3,6
Contributions:											
TFP	*percentage points*	1,2	2,0	2,5	3,0	3,7	4,0	3,7	3,1	2,6	2,3
Fixed assets	*percentage points*	0,8	0,8	0,7	0,7	0,8	0,8	0,9	1,0	1,1	0,9
Participation rate	*percentage points*	-0,5	-0,4	-0,1	-0,2	-0,2	0,2	0,2	-0,2	0,0	0,1
Demography [1]	*percentage points*	0,2	0,2	0,2	0,2	0,2	0,2	0,3	0,3	0,4	0,3

[1] *Contribution of growth of working-age population (15-64 years)*

Ongoing economic crisis has had fundamental impact on **output gap** developments. The latter was some 1.9 % of potential product in the third quarter of 2008 while in the fourth quarter it fell to zero and in the first quarter of 2009 it is estimated to have been deeply negative (-1.7 %). Such dramatic changes are without parallel in the Czech history.

Extended negative output gap is reflected in the economy by means of drastic fall in the use of production capacities in industry to the lowest level since the fourth quarter of 1994, steep rise in rate of unemployment, reduction in the number of vacancies and inflationary pressures.

Economic turmoil in the fourth quarter of 2008 and first quarter of 2009 resulted in slowdown of observed **total factor productivity** YoY growth below 1 %. Its trend growth amounts to 2.2 %.

Slowdown in growth of trend total productivity reflects directly in YoY growth of **potential product,** slowing down to 3.6 % in the first quarter of 2009. Breakdown of economic crisis impacts into structural and cyclical components will depend especially on duration of the crisis.

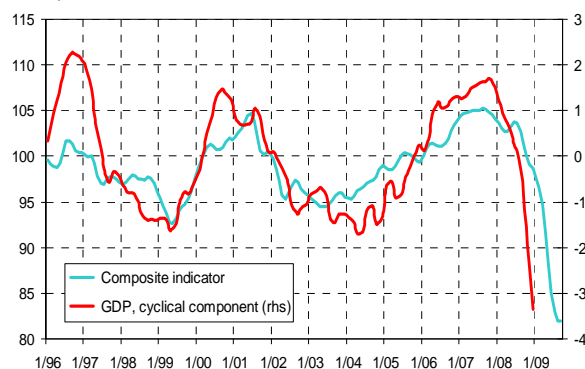**B.2   Leading composite indicator**

Leading composite indicator is set up based on 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 has been made in construction of leading composite indicator since December 2008. Presently, indicator is set up from those business cycle indicators that showed a high level of correlation with average lead of six months.

Graph B.5: **Composite Leading 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 signals YoY decline in GDP for the first half of 2009. Relative cyclical component estimated by statistical decomposition of GDP time series showed a negative value as soon as in the fourth quarter of 2008 due to sharp slowdown in growth dynamics in the last quarter of 2008. Signalled YoY decline in GDP in the first half of 2009 will thus result in further reduction of relative cyclical component of GDP. Higher volatility of estimated relative cyclical component of GDP is caused by change in seasonal adjustment method applied by the CZSO.

For the last two months – August and September – composite indicator reaches approximately the same values. As regards structure of composite indicator, change in its development is caused by three-month outlook of export demand in industry and six-month outlook of economic situation in industry. Taking into account that this optimism is based on ongoing or planned measures to boost the economy, impact of which will be obviously limited with regard to time, such development of indicator cannot be taken as a stable signal so far.

11

B.3   Individual business cycle indicators

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

The surveys share a common characteristic: respondents' answers do not give a direct quantification but use more general expressions (such as better, the same, worse, or growing, not changing, falling etc.). Tendencies are reflected in business cycle balance, which is a difference between answers „improvement" and „worsening", expressed in per cents of observations (see Methodology of the CZSO[1]).

Aggregate indicator of confidence is presented as weighted average of seasonally adjusted indicators of confidence in industry, construction, selected services and consumer confidence indicator. Weights are set up as follows: indicator of confidence in industry is assigned weight of 40 %, construction and trade 5 % both, selected services 30 % and consumer confidence indicator 20 %.

Graph B.6: **Confidence Indicators**
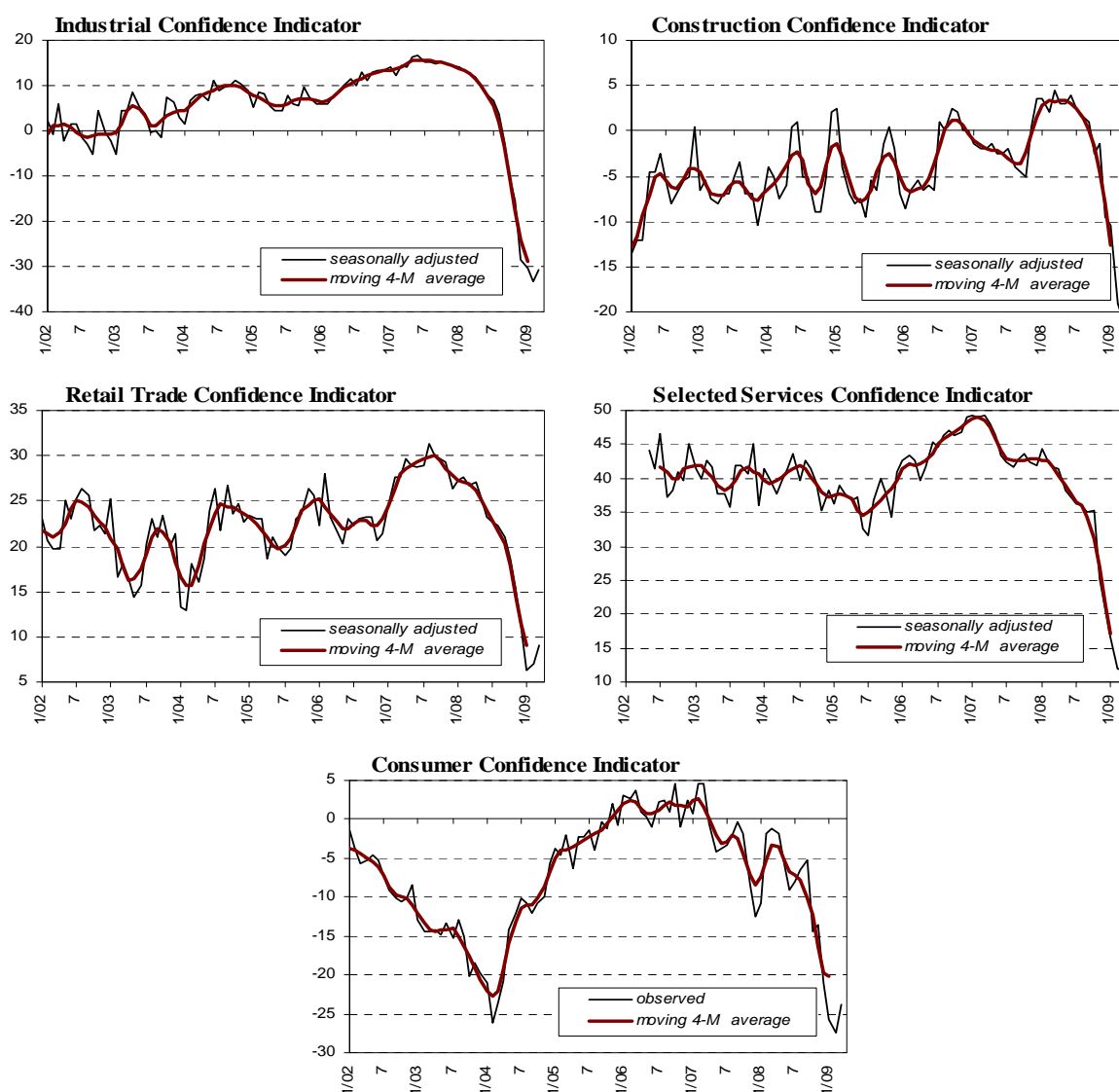
In early 2009 further deepening of economic problems was seen in the business sphere. In **industrial and construction businesses,** assessment of both current economic situation and demand worsened in the first quarter. In the second quarter respondents expect recovery in industry as regards pace of production activity and employment, and a slowdown in construction with. employment unchanged. Expectations as regards economic situation improved negligibly in three-month and six-month horizon.

Slowdown in total economic activity in the CR manifested itself also in answers of respondents in **trade** and **selected services** by worsened assessment of the current economic situation. When assessing expected development of economic situation in next three and six months, only respondents in trade are optimistic.

Consumer confidence stopped worsening in March and grew slightly. For the next twelve months consumers expect improvement of total economic situation and no changes in their financial situation. Share of respondents expecting an increase in employment has slightly fallen but still remains high.

Graph B.7: **Aggregate Confidence Indicator**
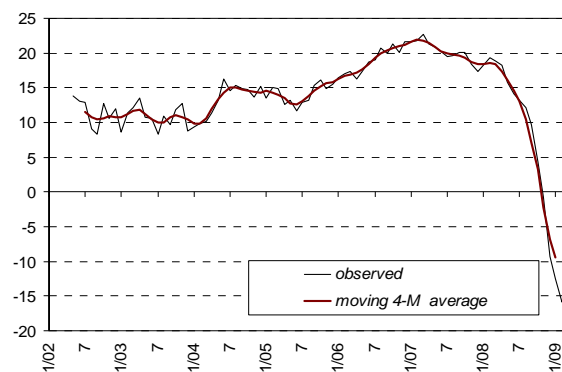
On the basis of business cycle indicators it can be assumed that economic activity further slowed considerably in the first quarter of 2009, indicating possible moderate chain improvement in the second and especially in the third quarter of 2009.

C Forecast of macroeconomic indicators

Data from the previous forecast from January 2009 are marked 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 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 Prelim.	2009 Forecast	2010		2008	2009 Previous forecast	2010
Gross domestic product	*increase in %, const.pr.*	6,3	6,8	6,0	3,2	-2,3	0,8		4,0	1,4	2,1
Consumption of households	*increase in %, const.pr.*	2,5	5,4	5,3	2,8	0,9	0,9		2,9	3,2	3,0
Consumption of government	*increase in %, const.pr.*	2,9	-0,7	0,4	0,9	1,8	1,2		1,5	0,5	0,0
Gross fixed capital formation	*increase in %, const.pr.*	1,8	6,5	6,7	3,1	-4,9	-0,2		4,5	-0,2	2,0
Contribution of foreign trade to GDP growth	*p.p., const.pr.*	4,6	1,6	1,0	2,1	-1,6	0,5		2,9	-0,7	0,2
GDP deflator	*increase in per cent*	-0,3	0,9	3,6	1,7	1,9	0,7		1,3	1,8	1,8
Average inflation rate	*per cent*	1,9	2,5	2,8	6,3	1,1	0,9		6,3	1,3	2,1
Employment *(LFS)*	*increase in per cent*	1,2	1,3	1,9	1,6	-1,0	-1,6		1,5	-0,3	-0,8
Unemployment rate *(LFS)*	*average in per cent*	7,9	7,1	5,3	4,4	6,1	7,5		4,4	5,2	5,9
Wage bill *(domestic concept)*	*increase in %, curr.pr.*	6,9	8,0	9,3	8,4	2,7	2,3		8,1	4,2	5,3
Current account / GDP	*per cent*	-1,3	-2,6	-3,2	-3,1	-2,9	-2,6		-2,8	-1,8	-1,7
Assumptions:											
Exchange rate CZK/EUR		29,8	28,3	27,8	24,9	26,9	25,0		25,0	25,6	24,7
Long-term interest rates	*% p.a.*	3,5	3,8	4,3	4,6	4,3	4,5		4,6	3,8	3,8
Crude oil Brent	*USD/barrel*	54	65	73	98	53	66		98	55	69
GDP in Eurozone (EA-12)	*increase in %, const.pr.*	1,8	3,0	2,6	0,8	-3,3	-0,5		0,9	-1,0	-0,7

C.1   Economic output

The Czech economy reached cyclical peak in the third quarter of 2007 proceeding then to the stage of slowdown of GDP growth. In the fourth quarter of 2008 a breakthrough occurred and crisis symptoms from external environment fully affected domestic economy. We thus witness materialization of risks, the previous Forecast warned about.

Under recent CZSO data, YoY increase of **real GDP** reached 0.2 %[2] *(compared with MoF estimate of 2.8 % from January 2009)* in the fourth quarter of 2008. Not only at first sight alarming deviation of **2.6 p.p.** is somewhat relativized by comparison of QoQ results of seasonally adjusted GDP, which is considered to be the most important indicator of economic dynamics. It fell by 0.9 % *(fall by 0.2 %)* in the fourth quarter of 2008 where predicting error was „mere" **0.7 p.p.**

Explanation of this apparent paradox is easy. The CZSO has revised at the same time QoQ increases of previous quarters of 2008: the first quarter from 1.0 % to 0.6 %, second quarter from 1.0 % to 0.7 % and third quarter from 0.9 % to 0.3 %. Total deviation based on revisions is thus **1.4 p.p.** Besides, obviously due to new method of seasonal adjustment[3], seasonal coefficient changed for the fourth quarter, YoY, by unprecedented **0.5 p.p.** In

up-to-now valid time series from 1997, the maximum difference in seasonally adjusted and non-adjusted YoY growths was 0.4 p.p.

For the entire year 2008, YoY growth of GDP slowed to 3.2 % *(4.0 %)*.

Available monthly business-cycle statistics indicate QoQ fall in GDP about 1 % in the first quarter of 2009. Real decline of GDP in this quarter, which is regarded as nearly certain, would confirm that the Czech economy was in recession from October 2008 to March 2009 at least.

Revision of the current course of time series, worse-than-expected outcome of the fourth quarter of 2008, worsening of assumptions on future developments of the world economy and reassessment of risks to further developments make us change fundamentally our opinion on central projection (the most probable outcome i.e. mode of probability distribution) of economic development in 2009. Annual real GDP should fall by 2.3 % *(increase by 1.4 %)*. Detailed discussion of expected course of GDP development and present view of its risks is given in Box C.1.

Central projection of GDP growth for 2010 is 0.8 % *(2.1 %)*. Risks of given estimates are deviated downward although less than in the previous Forecast.

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[2] *Seasonally adjusted YoY growth of GDP was 0.7 %..*
[3] *To better eliminate effects of especially calendar variations, the CZSO has started to use the so-called indirect method of adjustment, similarly as in advanced countries.*

Box C.1: Discussion of the course of real GDP growth and its risks in 2009 - 2010

Risks related with global financial and economic crisis have materialized. Table A.1.1 describes process of worsening of macroeconomic forecasts of the eurozone. Graph D.1 shows a similar situation for the Czech economy. In spite of it, high rate of uncertainty persists. With available knowledge it is very difficult to forecast further course of global turmoil impacts on the Czech economy and its response.

For better orientation of Macroeconomic Forecast's users, probability distribution is given for growth of yearly real GDP in 2009 stemming from the current state of knowledge. Also fan chart of probabilities of QoQ growths of GDP to the end of 2010 has been added. (*QoQ growths are more suitable for analysis of economic development than commonly used YoY growths as they respond immediately without any delay. On the other hand, they are critically dependent on the quality of seasonal adjustment of time series.*)

Within equally broad intervals, economic decline by **–2.7 to –1.9 %** is considered the most probable (see Graph C.1.1). Nevertheless, neighbouring intervals have similar probability albeit slightly lower. Risks are still slightly deviated toward worse development. Confidence interval of 75 % can be set in broad range of **–4.0 % to –1.1 %.**

Graph C.1.1: **Distribution of probabilities of the real GDP growth for 2009**

density in %
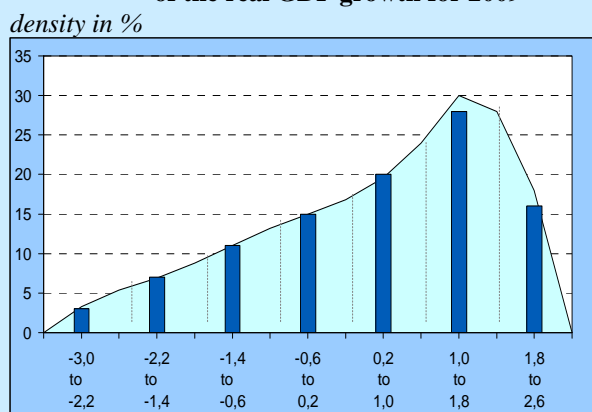
Graph C.1.2: **Distribution of probabilities of QoQ growth of the real GDP**

in % (nonannualized)
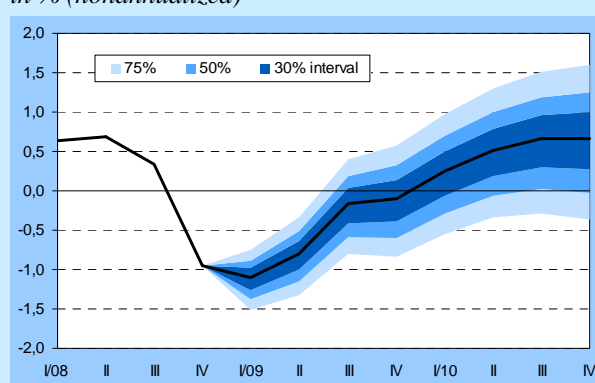
As regards course of economic cycle, it can be judged from available information that deepest QoQ slump was obviously seen in the first quarter of 2009. The economy thus should have met criterion for recession i.e. QoQ decline in the period of two subsequent quarters at least.

Over the year, QoQ declines should abate. As regards duration of recession, three scenarios can be formulated with roughly similar probability.

Optimistic scenario allows for end of recession roughly in mid-year 2009. It would be the so-called V-type of recession characterized by short and steep slump followed by relatively fast recovery. Implementation of this scenario is conditioned by improvement of situation in neighbouring countries and by positive response of the economy to proposed NAP measures.

Central projection presently inclines to medium scenario of the economy's transition to growth approximately at the turn of year 2009 and 2010.

Implementation of the third scenario – continuation of recession over 2010 and possibly longer – would bring considerable worsening of structural characteristics of the economy and deep social problems.

Crisis development will reflect in **nominal indicators** too. Slowdown of nominal GDP dynamics, which from 9.8 % in 2007 slowed to 5.0 % (*increase by 3.2 %*) in 2008, is going on. For 2009 decline by 0.4 % (*increase by 3.2 %*) is estimated. Should this forecast fulfil, it would mean the first nominal decline of GDP in history of market economy in the CR. In 2010 growth by 1.5 % (*3.9 %*) is expected.

Although trade unions are assumed to prefer keeping employment to wage growth, profitability of the business sector will occur in the income structure of GDP. Growth of gross operational surplus

collapsed from 10.0 % in 2007 to mere 1.0 % (*2.2 %*) in 2008. For 2009 a decline of gross operational surplus is expected by 2.6 % (*increase by 2.2 %*) while for 2010 increase by 1.5 % (*2.9 %*).

Impacts of changes in terms of trade are illustrated by means of indicator **real gross domestic income (RGDI)** reflecting income situation of the Czech economy. It fell by 0.9 % (*decline by 0.5 %*) in the fourth quarter of 2008. For entire 2008 RGDI increased by 1.7 % (*1.9 %*). In 2009 decline by 1.6 % (*increase by 2.0 %*) is expected and in 2010 increase by 0.7 % (*2.0 %*) could be seen.

Expenditures on GDP

Household consumption has not been hit by the crisis so far although after considerable growth in previous years it has been loosing its dynamics since early 2008. YoY growth of real **household expenditures on final consumption** slowed in the fourth quarter of 2008 to 2.5 % (*3.0 %*). For entire 2008, increase in household consumption reached 2.8 % (*2.9 %*).

Further growth of consumption could be counteracted by households' efforts to save to cover risks related with the crisis; also an increase in unemployment could have its gradual impact. On the other hand, government anti-crisis measures and low inflation could help boost household consumption.

In 2009 household consumption could grow by 0.9 % (*3.2 %*) and become thus a stabilizing segment of the economy. In 2010 growth by 0.9 % (*3.0 %*) is expected.

Government expenditures on final consumption fell by 0.2 % (*growth by 1.0 %*) in the fourth quarter of 2008. In 2008 increase of government consumption reached 0.9 % (*1.5 %*). In the following period, austerity behaviour of government institutions is still expected as regards both government sector employment and purchase of goods and services. In 2009 government consumption is expected to grow by 1.8 % (*0.5 %*). In 2010 real government consumption should increase by 1.2 % (*stagnation*).

In the fourth quarter a volume of **gross fixed capital formation** increased by 0.3 % (*2.0 %*) YoY. It results from contrasting tendencies. While purchases of transport means and other machines grew in YoY terms by 12.0 % and 11.3 %, respectively, investments in housing collapsed by 26.9 %. Pace of growth of investment reached 3.1 % (*4.5 %*) in 2008.

In the current uncertain situation it is necessary to allow for reconsideration or postponement of many investment intents in the private sector. Willingness of foreign investors to invest and reinvest profits from doing business in the Czech Republic will depend on their situation in domestic countries. Ongoing decline in investment in housing construction is expected too. On the other hand, decline could be moderated by some NAP measures (VAT refund for company cars, faster depreciation of new investments, acceleration of highway construction) as well as infrastructure investment with contributions from EU funds could help moderate decline. In 2009 volume of investment could fall by 4.9 % (*decline by 0.2 %*) and in 2010 by further 0.2 % (*increase by 2.0 %*)

In 2008 positive contribution of **foreign trade** in goods and services to real GDP growth reached 2.1 p.p. (*2.9 p.p.*) even with very unfavourable external conditions and record-breaking exchange rate of the koruna. Positive development in the first

three quarter prevailed over dropout in the last quarter. However, in 2009 this indicator will be fully affected by global recession impacts – a contribution of –1.6 p.p. (*-0.7 p.p.*) is expected. In 2009 contribution should reach +0.5 p.p. (*+0.2 p.p.*).

C.2 Prices of goods and services

Consumer prices

YoY growth of consumer prices slowed to 2.2 % (*2.0 %*) in the first quarter of 2009. Disinflation development thus corresponds to January forecast.

In the first quarter inflation was pulled by administrative measures mainly, whose average contribution was 2.6 p.p. (*2.9 p.p.*), which is by 1.7 p.p. less than in the first quarter of 2008. It was due to many one-off measures adopted in early 2008 fading away, especially as regards an increase in reduced VAT rate from 5 % to 9 % and introduction of regulation charges in healthcare. For the remaining part of 2009, no pro-inflationary administrative measures are expected.

Market inflation was negative in the first quarter with contribution of –0.4 p.p. (*-0.9 p.p.*). It was helped especially by low prices of oil and food in comparison with the same period of previous year.

As regards March data, the most important YoY increase was seen in the section of alcoholic beverages and tobacco (by 9.9 %) especially due to growth of prices of tobacco products (by 14.8 %), and in the section of housing (by 9.4 %) where especially prices of regulated rent (by 27 %), gas (by 24.3 %) and electricity (by 11.6 %) increased. On the other hand, prices in section of transport (by 8.8 %) and food and soft drinks (by 1.1 %) were lower in YoY terms.

Especially due to expected lower contribution of administrative measures and negative market inflation for entire **2009** it is estimated that disinflation trend will continue and that average rate of inflation will reach 1.1 % (*1.3 %*) with December price increase over the year by 0.5 % (*1.1 %*).

In comparison with previous forecast, a considerably lower contribution of administrative measures to YoY inflation amounting to 0.7 p.p. (*1.9 p.p.*) is expected. Transfer of some services with high share of human labour especially in the section of catering and accommodation from basic to reduced VAT rate (by 0.6 p.p.) should have by far the biggest impact. Also estimates of expected influence of regulated rent (by 0.1 p.p.), prices of gas (by 0.2 p.p.) and heat (by 0.2 p.p) were lowered.

Negative contributions of market inflation will be further caused by rather low prices of food[4], oil and other raw materials. Also appreciation of the exchange rate of the koruna against USD and EUR over the year, position of the Czech economy facing

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[4] *For 2009 no major fluctuations in harvests are expected.*

negative output gap, YoY decline in output and resulting expected growth of unemployment, lower pace of wage growth and worse sentiment to consume will have anti-inflationary impacts.

Low inflation should thus become an important factor stabilizing household consumption.

In 2010 average rate of inflation should be at some 0.9 % (*2.1 %*). In comparison with the past scenario, persisting low pace of growth of consumer prices will be caused especially by lower 1.6 p.p. contribution of administrative measures (*2.4 p.p.*). Expected decline of electricity prices, extension of process of regulated rent increasing till 2012 and ongoing influence of transfer of some consumer basket items in reduced VAT rate should be seen here. As regards market segment, appreciation of the exchange rate, constantly low level of demand, higher unemployment and, depending on global demand development, lower prices of oil and other raw materials, should have anti-inflationary effects.

Deflators

YoY growth of **gross domestic expenditure deflator,** which is a comprehensive indicator of inflation in the economy, slowed to 3.1 % (*3.9 %*) in the fourth quarter of 2008 due to prices of household consumption and construction investment. Annual average for 2008 was 3.7 % (*4.0 %*).

With general easing of inflationary pressures, its growth should further slow in 2009 to 1.1 % (*1.2 %*) while in 2010 it should reach 1.0 % (*2.0 %*).

Growth of **implicit GDP deflator** reached 1.9 % (*0.4 %*) in the fourth quarter of 2008. Slower growth as against the gross domestic expenditure deflator is given by worsening of terms of trade by 1.5 % (*decline by 3.9 %*); over 2008 GDP deflator grew by 1.7 % (*1.3 %*). In 2009 effect of considerable slowdown in wage dynamics will obviously prevail over improvement of terms of trade and so growth by 1.9 % only (*1.8 %*) can be expected. In 2010 growth by 0.7 % (*1.8 %*) is expected.

C.3   Labour market and households

Employment
(Labour Force Survey definitions – LFS)

YoY, employment grew by 1.3 % (*1.0 %*) in the fourth quarter of 2008. Contrary to previous period, its growth was concentrated on sector of services while in formerly very active manufacturing a decline by 0.6 % was recorded.

Rate of employment kept growing too in YoY terms. From the age view, mostly higher-age categories had the highest share in its increase.

Due to reduction in jobs in industry there was a slight QoQ decline in total number of registered foreign workers over the first quarter of 2009. By the end of March 341 thousand of working foreigners were registered.

YoY, supply of labour (labour force) grew by 44 thousand persons with increase in the employed amounting to 66 thousand and shrinkage of the unemployed amounting to 22 thousand. Decline in the ratio of labour force to working-age population has stopped for the first time since the second quarter of 2006.

In the following period economic recession should manifest itself fully also as regards demand for labour. Real economic problems and concerns about them will lead to shutting unprofitable businesses down and following redundancies.

To moderate economic and social consequences of cuts in employment, various programmes are under preparation. Especially as regards the most endangered low-income groups, cuts in social security contributions paid by an employer could help. This measure is being prepared under NAP and could save 50 to 70 thousand jobs. Also maximum cooperation of workers, businesses and authorities is expected when preserving and generating jobs. Neither higher use of shortened working hours can be excluded so that the jobs would be preserved.

In 2009 YoY decline in employment by 1.0 % (*0.3 %*) is expected. As employment often lags behind the economic cycle, we assume problems in this area to peak as late as in 2010 with decline by 1.6 % (*0.8 %*).

Unemployment
(MLSA statistics and LFS)

Rate of unemployment reached its minimum (sa) in August 2008, since then the registered unemployment has been growing. In early 2009 the situation gradated and the registered unemployment was growing by unprecedented pace.

Concurrently with an increase in new job seekers, a number of vacancies was falling (extremely small job creation, change in the structure and approach of job seekers to taking jobs on).

Growth of unemployment hit the entire republic with intensity depending on importance of reduced or shutdown businesses for the given region and on possibility or impossibility to substitute promptly lost jobs.

In the following period growth of unemployment will continue. Potential of employment agencies as regards active employment policy will obviously run into necessity to ensure, first and foremost, funds for unemployment benefit payment. Possible extension of unemployment benefit provision would help solve momentary difficult social situation of individuals but not the problem of unemployment in specific place or region and can, paradoxically, mean a risk for growth of unemployment strengthening.

Internationally comparable general rate of unemployment under LFS should increase to 6.1 % (*5.2 %*) in 2009 and to 7.5 % (*5.9 %*) in 2010.

Average rate of registered unemployment should increase to 7.6 % (*6.3 %*) in 2009 and to 9.1 % (*7.0 %*) in 2010[5].

Wages

Under preliminary CZSO data, YoY growth of wage bill under national accounts slowed to 6.5 % (*6.2 %*) in the fourth quarter of 2008, as expected. In this connection it was rather surprising that average wage growth under registration statistics was substantially higher than expected, by 8.3 % (*6.0 %*). It was probably given as by statistical effect (lower comparison basis caused by transfer of bonus payments from the fourth quarter of 2007 to the first quarter of 2008) as by higher growth contribution of the non-business sector.

Combination of faster commencement of economic recession and slower reaction of wage dynamics reflected in higher-than-expected pace of growth of unit labour costs by 4.5 % (*2.3 p.p.*). Even considerably higher-than-anticipated effect of caps on social security contributions failed to reverse this growth. However, in the period of start of recession rapid growth of unit labour costs certainly does not increase inflationary risks.

According to signals from businesses, a moderate growth of average wage can be expected in 2009, stemming from effort to maintain as many jobs as possible, which may suppress growth of consumer prices. In the non-business sphere, salaries will grow thanks to partial compensation of their real decline in 2008.

As the impact of ongoing recession on labour market will be substantially deeper, a major slowdown of wage dynamics to 2.7 % (*4.2 %*) is expected in 2009 compared with the previous forecast. In 2010 wage bill should grow by 2.3 % (*5.3 %*).

Average gross nominal monthly wage should increase by 4.0 % (*5.1 %*) in 2009 and similarly (*6.4 %*) in 2010.

Households

In 2008 development of household sector account was characterized by high nominal dynamics of disposable income given especially by fast contributions of wage growth and cuts in tax burden.

Not only in period of growth but even in the fourth quarter of 2008 a high preference of consumption to savings was shown. As regards consumption goods, taking advantage of bargain prices and purchases of new goods cannot be excluded.

In the years 2009 and 2010 a very moderate growth of employee compensations taking into account economic growth and low inflation is

expected. It is true that household disposable income will be positively influenced in 2009 by cuts in social security contributions but consumption is assumed to be very restrained and households are expected to prefer savings so as to eliminate potential risks related with possibility of loss of job.

C.4   External relations
(Balance of payments definitions)

External imbalance, expressed by **ratio of current account (CA) to GDP,** did not practically change in 2008 compared with the previous year, reaching –3.1 % (-3.2 % in 2007). Lowering of trade balance surplus was offset by increase in balance of services surplus to the same extent (0.6 p.p.). After hitting its minimum of –8.6 % of GDP in the second quarter of 2008 (in annual terms), balance of income deficit stopped worsening, reaching –7.8 % at the end of the year.

Lower pace of growth of exports and imports since early 2008 was connected especially with rapid strengthening of the koruna. **Trade balance** surplus kept increasing till the third quarter up to 3.7 % in yearly total.

From October 2008, however, a steep breakthrough occurred. Pace of growth of imports surpasses exports and trade balance surplus is decreasing. Unfavourable external environment is is generating a general reduction in demand.

For the first time since the second quarter of 2002, YoY decline of export markets[6] by 0.4 % (*growth by 2.1 %*) was recorded in the fourth quarter of 2008. Besides, export performance, indicating share of Czech goods in export markets, worsened dramatically by 10.6 % (*worsening by 3.0 %*). It was caused by structure of the Czech exports rather than by loss of competitiveness. Such development resulted in dropout of real export of goods by 10.9 % (*decline by 0.9 %*).

It led to considerable slump of nominal exports by 13.7 % and imports by 9.0 %. Trade balance ended in deficit for the first time since 2004 and for entire 2008 its ratio to GDP fell to 2.8 % (*3.0 %*) from 3.4 % in 2007. It thus became the most important factor of arrival of economic recession (see chapter C.1).

The worst situation was obviously in the first quarter of 2009 when YoY dropout in exports by some 21 % is estimated as in real as in nominal terms.

With regard to very unfavourable outlook of the world economy, export markets are estimated to shrink by some 7.7 % (*0.4 %*) in 2009 and by 0.9 % (*growth by 2.2 %*) in 2010. With regard to structure of our exports (high share of motor vehicles) further

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[5] *Increased use of possibility to work to a limited extent concurrently with registration with the employment agency may be reasons for an increase in difference between the given statistics.*

[6] *Weighted average of growth of goods import by seven most important trade partner countries (Germany, Slovakia, Poland, Austria, France, United Kingdom and Italy).*

worsening of export performance can be expected although favourable surprises in the form of car-scrapping scheme effects in neighbouring countries cannot be excluded.

In connection with global economic recession prices of raw materials and especially of oil fell considerably, which partially improves trade balance. In 2009 deficit of the fuel part of balance (SITC 3) is expected to fall to some –2.7 % of GDP (*-2.5 %*) from –4.4 % in 2008.

It is expected that surplus of the non-fuel part of balance will reduce to 3.5 % of GDP (*4.3 %*) 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 1.7 % of GDP[7] (*2.7 %*). In 2010 trade balance surplus in the same size is expected (*2.5%*), where moderate recovery of foreign trade and higher prices of oil should be mutually compensated.

Balance of services surplus has been growing moderately since 2003, reaching 2.2 % of GDP in 2008. This growth was connected especially with higher revenues of the so-called other services, especially as regards computers and trade services. Contribution of transport remains stable while surplus of balance of tourism with fall in receipts since the second quarter and fall in expenditures in the second half-year is falling. In the period of economic recession, further similar lowering of intensity of active and passive tourism can be expected. In total slow growth of balance of services surplus is expected also in short-term outlook.

Balance of income deficit, including reinvested and repatriated profits of foreign investors, has been deepening steadily since mid-year 2006, reaching historic minimum of –8.6 % of GDP in the second quarter of 2008. Lower YoY net outflow of yields from foreign direct investment was recorded as early as in the second half of 2008. Similarly outflow of compensations for work of foreigners employed in the CR should not rise.

Ratio of **current account deficit** to GDP is expected to reach –2.9 % (*-1.8 %*)[8]. Forecast for 2010 is –2.6 % of GDP (*-1.7 %*). At first sight paradoxical forecast of deficit reduction is given by the fact that effect of lower prices of oil, slowdown in real import (lower growth of domestic demand and high import intensity of exports) and lesser outflow of income should prevail over export dropout.

C.5 Demographic trends[9]

Under preliminary data, dynamic growth of the Czech population kept on by the end of 2008, reaching 0.8 %.

Positive balance of migration kept on high level of 72 thousand persons and was the highest since World War II except for 2007.

Natural increase of population continued rising, reaching 15 thousand persons, which had been best result since population explosion in 1980. Total fertility[10] grew in 2007 to 1.44 compared with minimum of 1.13 in 1999. Although it is still very far from reference value of 2.04 ensuring long-term stability of the population, such developments mean a certain promise for the future. Average life expectancy approximated 80 years for women and nearly 74 years for men in 2007.

From economic view, the Czech population thus has a very favourable structure with high share and growing number of working-age population.

However, due to shrinking demand for workforce, lower immigration can be expected in 2009 and, consequently, slight worsening of demographic structure.

It is still true that the CR is at the beginning of **population ageing process.** For the first time in Czech history, number of people younger than 20 years was lower in 2007 than number of population in the age category 60+.

On the contrary, number and share of seniors in the population will grow thanks to demographic structure and further lengthening of average life expectancy. Demography thus represents economic risk in the medium and long run.

C.6 Interest rates

In the first quarter of 2009 the **CNB** proceeded to cutting limit interest rate for 2W repo operations by 0.25 p.p. to 1.75 %. Room for further reduction of monetary-policy rate is opening together with expected appreciation of the koruna, falling inflation and falling interest rates in the euro area. So further easing of monetary conditions is expected in 2009.

When the CNB bank board takes decisions on policy rates setting, context of **ECB** monetary policy plays an important role. ECB's board of governors cut the main refinancing rate in total by 1.00 p.p. during the first quarter of 2009 and by next 0.25 p.p. in April to 1.25 %. In connection with worsening outlook of economic activity and anti-inflationary

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[7] *Costs on transport and insurance of imported goods amounting to some 0.9 % of GDP, which cannot be assigned to individual items from available sources, represent another item.*

[8] *Worsening of current account forecast stems mostly from downward revision of balance of investment income.*

[9] *Results of the CZSO demographic projection from late 2003 differ distinctly from the current data on population development. Therefore the projection is based on data from late 2008 and on our own calculations proceeding on high variant of demographic projection.*

[10] *Number of life-born children per one woman, should her fertility remain the same for her entire reproduction period as in the given year.*

pressures in euro area, further decline of interest rates is expected. Also the ECB assesses the situation similarly and does not take the current rate as a cap. Interest spread between the CR and euro area reached 0.25 p.p. in March, extending to 0.50 p.p. in April.

US **Fed,** as another important institution affecting the world economy, left the key interest rate for refinancing operations in the lowest possible target band of 0-0.25 %. Therefore other monetary-policy measures were adopted to boost the economy, such as purchase of mortgage bonds, government bonds, extension of credit facilities. At present interest differential between the CR and US is at the level of 1.50-1.75 %.

Situation on the Czech inter-bank rate market has stabilized slightly thanks to falling risk premia. Average **PRIBOR** 3M rate reached 2.7 % in the first quarter 2009. For 2009 it is estimated at 2.2 % (*unchanged*) and for 2010 at 2.3 % (*unchanged*). However, expected growth of three-month inter-bank rate will be compensated by further fall in risk premium.

Yield to maturity of 10-year government bonds for convergence purposes, corresponding to the Maastricht criterion for interest rates, has been growing since February 2009, reaching 4.6 % over the first quarter of 2009. However in the first half of 2009 the yield is expected to decrease slowly and afterwards to grow moderately following upon outlook of growing interest rates. For 2009 thus

average level of yields is estimated at 4.3 % (*3.8 %*) and for 2010 at 4.5 % (*3.7 %*).

Average interest rates from deposits of households and non-profit institutions reached 1.6 % in the fourth quarter of 2008. In the next period a slight decline can be expected on average to 1.3 % (*1.4 %*) in 2009 and to 1.2 % (*unchanged*) in 2010. The forecast is based on assumptions of delayed response (partial rigidity) of interest rates to change in 2W repo rate and maintenance of deposit structure.

Average interest rate from credits to non-financial businesses were 5.6 % in the fourth quarter of 2008. For the first quarter of 2009 they are estimated to fall to 5.1 % due to effect of February cut in policy rate and reduction in credit spread (risk premium). In 2009 interest rates from credits will probably reach average level of 4.9 % (*4.7 %*) and 5.0 % (*4.3 %*) in 2010.

Average interest rates from new credits to non-financial businesses are falling slowly since May 2008, reaching 5.2 % in the fourth quarter of 2008. No major changes occur in the structure of credits. In the case of **households** average interest rates from new credits increased especially in early 2009. Growth was partially caused by change in structure of granted credits where due to shrinking volume of housing credits, weight of more expensive credit cards increased.

Box C.2: Impact of economic problems on Czech financial sector and on macroeconomic developments

Financial crisis and subsequent world economy recession has hit the Czech economy too. It is true that financial sector does not suffer from direct effects of the crisis but nevertheless it is not isolated from external environment.

Banking sector

The Czech banking sector remains in good shape despite unfavourable economic situation. Banks are sufficiently capitalized (capital adequacy of banking sector was 12.33 % as of 31 December 2008). Compared with 2007, profits shrank by nearly 3 % to CZK 45 661 mil. in the past year but ratio of post-tax profit to Tier 1 capital still surpasses 20 %. Exposure of banks to „toxic" assets is negligible and quality of their credit portfolio good. Banks have not granted credits in foreign currencies to a higher extent.

There is a tension on inter-bank money market since October, albeit abating slowly over time. Three cuts in rates made by the CNB by 1.75 p.p. in total helped moderate it. It stems from October survey of average daily money-market turnovers that banks are not willing in fact to lend larger volumes of money for a period longer than one week. Moreover, in the end of October, money market rates (especially of longer maturities) got off the corridor set out by discount and Lombard rates. Return to this band was slow although yearly PRIBOR still exceeds Lombard rate. Spread between PRIBOR and PRIBID rates remains between 20 and 45 basic points. Banks practically do not use 2W repo tenders from mid-January. As regards 3M repo tender, the CNB was asked for funds only three times, shortly after launching of this possibility in November 2008. Surplus of liquidity is still characteristic for the Czech banking.

Value of newly granted credits[11] to households (Graph C.2.1) has been falling for a fourth month running. Only credit cards have kept positive although weakening YoY dynamics. New credits on consumption, purchase of housing property and other credits show YoY shrinkages. The last two categories show declines exceeding 20 % and 30 %, respectively.

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[11]*Data on development of new credits to households and non-financial businesses are as of 28 February 2009.*

Graph C.2.1: **New loans to households**
YoY changes, in %
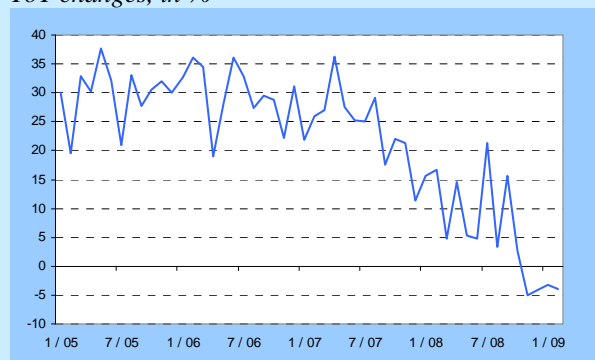
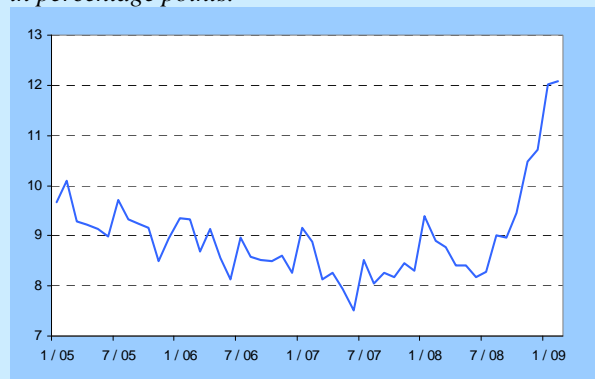Graph C.2.2: **New loans to firms**
YoY changes, in %
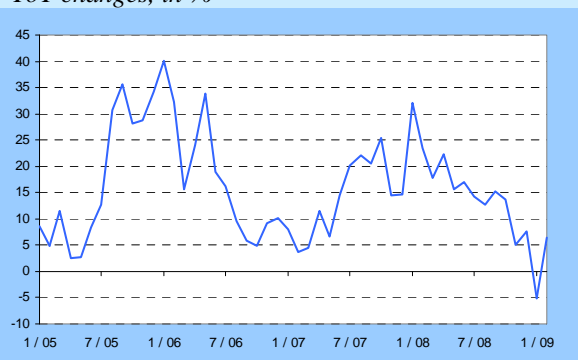
Source: CNB

In January 2009 new credits to non-financial businesses recorded first YoY contraction in the monitored period but a month later they returned to black numbers (Graph C.2.2). Account-current credits keep growing by more than 10 % in YoY terms. On the other hand, other credits to CZK 30 mil. contract YoY by more than 30 %. Other credits over CZK 30 mil. are rather volatile with YoY losses and increases taking turns, nevertheless losses are more significant than increases.

Interest rates on new credits to households and non-financial businesses are described in more detail in chapter C.6 but in combination with other appropriate rate they may also serve as an indicator of risk premium and preference of bank liquidity. Choice of interest rate, with which comparison is then made, is a key problem. Under usual circumstances, some money market rates would be suitable candidates, such as 3M or 6M PRIBOR. With regard to non-standard situation on this market, 2W repo rate seems to be a better variant. Spread between 2W repo rate and money market rates is usually quite stable. Taking into account existing conditions on money market, „normal" development of money market rates can be approximated by means of 2W repo rate[12].

From data as of 28 February 2009, growth of risk premium and preference of bank liquidity is visible[13]. Company credits show a considerable growth of risk premium and preference of liquidity from October 2008, household credits as soon as from July (see Graphs C.2.3 and C.2.4). Especially as regards households, these outcomes are to certain extent influenced by change in structure of new credits. Should the structure of new credits be fixed on the average of 2005 and should interest rates be recalculated accordingly, our conclusions (growth of risk premium and preference of liquidity) would not change.

Graph C.2.3: **Spread between interest rate on new loans to households and 2W repo rate**
in percentage points.

Graph C.2.4: **Spread between interest rate on new loans to firms and 2W repo rate**
in percentage points.
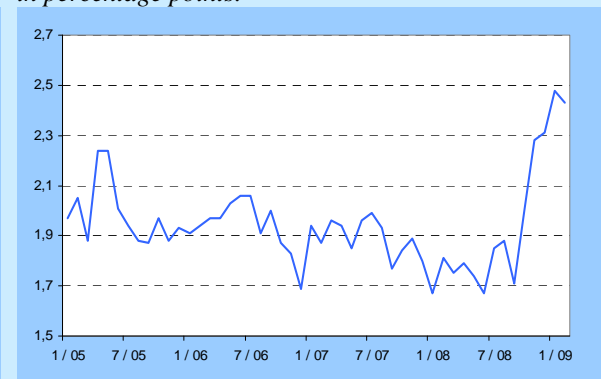
Source: CNB

Consequently, it can be summed up that the Czech banking sector is healthy, liquid and prefers provision of lesser volume of more expensive credits to creditworthy clients. The question is, how such behaviour will affect future dynamics of investment, operational financing of firms dependent on credits and partially also on household consumption.

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[12] *Consequently, the aim is not to establish absolute level of risk premium and preference of liquidity but only their changes over time.*

[13] *Unofficial sources, e.g. interviews with bank representatives in daily press, point also to stricter assessment of creditworthiness of clients, higher demands on credit hedging etc.*

> **Capital market and wealth effect**
>
> Wealth effect, induced by steep fall of stock prices and related assets, especially mutual investment funds (MIFs), is another factor that could also affect household consumption.
>
> It is estimated that from July 2008 to February 2009 household savings in the form of securities and MIF shares shrank by CZK 77.5bn. This sum represents approximately 3 % of total household savings but is not identical with loss suffered by households due to market developments. On the basis of data of the Association for the Czech capital market on net sales of MIF shares it is assumed that in the mentioned period households sold their shares for CZK 19.5bn, shifting them probably into less risky liquid assets (money in circulation, demand deposits).
>
> Taking into account the above-mentioned development on stock markets in March and first half of April and very low elasticity of consumption in relation to stock prices changes, the existing wealth effect is not considered significant. Neither decline in housing prices should affect household consumption considerably. Property speculation or financing of consumption by mortgage credits is not widespread in the Czech economy

C.7 General government

Under CZSO preliminary data, **general government deficit in 2008** reached CZK 54.0bn, which was 1.5 % of GDP. In comparison with January preliminary estimate of the MoF the general government balance was approximately by 8.4bn worse.

From technical view, part of this worsening is due to shifting of part of excise tax receipts from tobacco products from 2008 to 2007. Thanks to this CZSO change in methodology, one-off improvement of deficit was seen in 2007 and worsening in 2008. Moreover, general government deficit can be slightly further increased in case of lower settlement of advance payments regarding corporate income tax, paid in this year.

From economic view, especially effect of economic recession can be seen here, which could have been observed on revenue side of the general government as early as in later 2008. Compared with previous expectations, lower receipts were seen especially as regards VAT and social security contributions.

For **2009** considerable deepening of general government is expected to some CZK 167bn, i.e. 4.5 % of GDP. For the first time since 2005 thus Maastricht convergence criterion of 3 % general government deficit will be exceeded. It can be expected that in 2009 considerable deepening of the general government deficit will not be unusual for EU27 states and so the Czech Republic certainly toes the line. Nevertheless, such deficit is absolutely unsustainable in the long run and it will be of key importance for all EU states to control state of their budgets again.

General government accounts in 2009 will be influenced especially by ongoing economic crisis. It will be seen especially on revenue side where quite a strong dropout of tax receipts is expected. They will get deep below 2008 level. A considerable dropout is expected in VAT, social security contributions and corporate income tax where many businesses will have considerably lower profits or will even report losses. With regard to generally lower sensibility of employee salaries to economic cycle than of

company profits, dropout of personal income tax will be lower but not negligible.

The expenditure side will be burdened especially with higher growth of social benefits but also with one-off government discretionary measures to boost the economy, as shown in Box A.1.

General government debt reached CZK 1 105.8bn at the end of 2008, which was 29.8 % of GDP. Compared with 2007, however, it recorded a relatively considerable growth surpassing by far general government deficit, which should have been the main determinant of government debt development in the long run. It is thus obvious that many unexecuted expenditures were uneconomically covered by means of bond issue.

Thanks to worsened performance in 2009, considerable growth of general government debt to CZK 1 250bn is expected, which is 33.9 % of GDP.

For more information on general government performance see Fiscal Outlook of the MoF, due to be released in May 2009.

C.8 World economy

The world economy is in recession with US economy as its epicentre. With regard to global character of recession and drop in world trade it cannot be assumed that Asia's economies would be able to balance this slump, although growth of China's economy is still estimated at above 6 %. Inflation is close to zero and prices of oil oscillate near USD 50.

The US economy has been shrinking since the third quarter of 2008 (QoQ, by 0.1 % in the third quarter and by 1.6 % in the fourth quarter). Rate of unemployment grew from 4.8 % in February 2008 to 8.5 % in March 2009, a maximum in 25 years. Recession was helped by sharp fall in household consumption (QoQ, by 1 % in the third quarter and by 1.1 % in the fourth quarter) influenced by fall in property prices (price of housing has fallen by nearly 30 % since summer 2006). Prices are stable with inflation falling from July 5.6 % to 0.0 % in January and 0.2 % in February and so concerns of deflation appear.

Both the government and Fed try to boost recovery by many actions starting from autumn USD 700bn package to rehabilitate banks, followed by another USD 787bn fiscal stimulus package from the new administration, purchase of toxic assets from banks, guarantee takeover, monetary policy etc. Slight indications of demand recovery have really appeared – since January 2009 decline of household consumption has stopped and orders of durable goods increased in February. Real estate market shows preliminary indications of slowdown in price decline. However, increased cautiousness is needed when assessing these signals.

Nevertheless, banks and their persisting unwillingness to lend are the key problem. Government actions have shown readiness not to let fail any big bank but the Treasury secretary's plan of bank sector restructuring received only mixed welcome. Its success depends on whether banks are made to reveal and sale bad assets. Time, or political support of possible further government actions, is a critical factor.

Expected change in US real GDP is reduced to –2.8 % (*-1.2 %)* in 2009 while in 2010 to –0.2 % (*-0.5 %)*.

Euro area (EA12) is in recession since the second quarter of 2008 (change of GDP by –0.2 % in the second and third quarters and –1.6 % in the fourth quarter). Especially large economies, mainly Germany (change of GDP by –0.5 %, -0.5 %, -2.1 %, respectively), suffer from recession. Many economies depend on exports impaired by low foreign demand. The economy is also slowing due to tighter credit conditions and property market slump. Rate of unemployment grew further to 8.5 % in February, which had reflected in consumption dropout. Retail sales have stagnated or fallen since February 2008 and in February 2009 they fell by 0.6 % MoM. In early 2009, situation was worsened by two-digit slump in industrial production. In January it was by 16.0 % and in February 18.4 % YoY, in Germany in January 17.6 % and in February 20.6 %. After peaking in July at 4.0 %, inflation in EA12 started slowing to reach 1.2 % in February with March estimate at 0.6 %. The ECB then cut interest rate to 1.25 %.

Further decline in orders in industry indicates at present that fall will. It confirms that the idea of "decoupling" of European economy from the US was unsubstantiated. Recovery in the EU shall be obviously somewhat lagging behind the US. Another key assumption is that no major crisis of European banks will occur.

Also European governments launched fiscal stimulus packages although smaller than the US (e.g. Germany's package amounts to EUR 82bn). This difference was discussed at G20 meeting in April 2009. Discussions resulted in approval of an increase of funds and the role of the IMF in the solution. The Fund will receive USD 250bn to support free trade and extra budget injection amounting to USD 750bn.

For 2009 change of GDP in EA12 is estimated at –3.3 % (*-1.0 %)* and for 2010 at further –0.5 % (*-0.7 %)*.

Central European economies have been growing faster than Western Europe in the long run but high share of industrial production and dependence on export to EU will also here lead to decline in economic output.

Slovak economy grew at a fast pace of 6.4 % even in 2008. With regard to high share of export, especially of cars, decline in GDP can be expected in 2009. It is indicated already by steep YoY fall of industrial production from November (by 29.1 % in January). From 1 January 2009 Slovakia is a member of the euro area, which leads to somewhat different conditions as in positive as in negative direction (e.g. somewhat overvalued currency).

Change in GDP in 2009 is estimated at –2.0 % (*growth by 3.4 %)*. In 2010 growth by 0.5 % (*3.2 %)* should follow.

Poland's economy grew by 4.8 % in 2008. In the first three quarters of 2008 it grew dynamically by 1.0 % QoQ but in the last quarter it slowed to 0.3 %. Similarly as in Slovakia, growth was pulled by foreign investment inflow and household consumption. It is obvious that also here external development will lead to GDP decline. Much will depend on resistance of household consumption and developments in Russia and Ukraine.

For 2009 change in GDP is expected at -1.8 % (*growth by 2.5 %)* and for 2010 stagnation (*growth by 2.3 %)*.

Price of oil has dropped since summer to the current level of some USD 50 per barrel. To estimate price development is difficult due to many conflicting factors. It is true that global recession leads to fall in demand but inability is seen increasingly on the side of production to increase oil extraction and, moreover, commodities become again subjects of investment. Price of oil is also influenced by OPEC regulation albeit with a mixed success.

Our forecast assumes for moderate growth of price above the current level in the nearest quarters. For 2009 price is estimated at USD 53 (*USD 55)* per barrel of Brent oil, for 2010 at USD 66 (*USD 69)*. In longer horizon it is probable that the price will grow above USD 80 i.a. due underinvestment of the sector in the period of lower prices.

C.9 International comparisons[14]

Comparisons of economic output of individual countries are made in PPS. PPS is an artificial currency unit expressing quantity of goods that can be bought on average for one euro on the EU27

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[14]*Comparisons for the period to 2008 are based on Eurostat statistics. Since 2009, our own calculations are used based on real exchange rates.*

territory after exchange rate conversion for countries that use other currency than the euro.[15]

When adjusted by current **purchasing power parity,** process of CR's economic convergence toward EA12 average shows stable tendency similarly as in other Central European economies except for Hungary. With regard to persisting lead of economic dynamics even in the period of synchronous economic recession, this tendency should not be disrupted even by the current situation but a slowdown could possibly occur.

In 2009 Czech Republic's GDP p.c. should reach some 20 200 PPS, which corresponds to 74 % 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 p.c. then reaches some EUR 13 200 in 2009, which corresponds to 47 % of EA12 levels. Compared with 2008 thus a decline occurs given by the correction of inappropriate appreciation of the exchange rate.

Comparative price level of GDP should reach some 64 % of EA12 average in 2009. Exchange rate correction will be seen here in YoY decline by 5 p.p. Such movement, given by depreciation of nominal and subsequently also real exchange rate, 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 even more vigorous.

Situation of countries with fixed exchange rate (Baltic states) or of Slovakia after adoption of the euro is different. With non-existence of the exchange rate channel and with expected positive inflation spread against EA12 they will face further increase in comparative price level and strengthening of real exchange rate. In case of Slovakia it can be even expected that for the first time since 1997 its comparative price level will exceed the Czech one and Slovakia will thus become more „expensive" country than the CR.

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[15]*E.g. PPP CZK 17.63 CZK/PPS in 2008 expresses the fact that for 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 future developments of the Czech economy. Forecasts of 15 institutions are continuously monitored from publicly available sources. Of these, 7 institutions are domestic (CNB, domestic banks and branches of foreign banks, investment companies) and others are foreign (European Commission, OECD, IMF, The Economist's panel of forecasters, foreign banks).
   The forecasts are summed up in the following table.

Table D.1: **Consensus Forecast**

| | | *March 2009* | | | *April 2009* |
		min.	*max.*	*consensus*	*forecast MoF*
Gross domestic product (2009)	*%, const.pr.*	**-3,5**	**2,5**	**-0,8**	**-2,3**
Gross domestic product (2010)	*%, const.pr.*	**0,9**	**4,4**	**1,9**	**0,8**
Average inflation rate (2009)	*%*	**0,9**	**2,1**	**1,6**	**1,1**
Average inflation rate (2010)	*%*	**1,9**	**2,7**	**2,2**	**0,9**
Average monthly wage (2009)	*%*	**1,9**	**4,0**	**3,3**	**2,7**
Average monthly wage (2010)	*%*	**2,7**	**5,7**	**3,9**	**2,3**
Current account / GDP (2009)	*%*	**-3,6**	**-1,7**	**-2,7**	**-2,9**
Current account / GDP (2010)	*%*	**-3,3**	**-1,0**	**-2,2**	**-2,6**

   Till mid-year 2008, consensus forecasts of **GDP** growth for 2009 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 institutions assume that the Czech economy's performance will fall by 0.8 % in 2009. The MoF forecast is in accordance with these tendencies although forecast dynamics is considerably 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 **inflation rate** for 2009 allow for average inflation of 1.6 %. The MoF forecast comes close to minimum from monitored forecasts.

   For 2010 most institutions assume that inflation will stabilize closely above the new 2 % inflation target of the CNB. The MoF still forecasts inflation at the lower end of CNB tolerance band.

   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 3.3 % in 2009 and by 3.9 % in 2010. Contrary to consensus, the MoF expects lower growth of average wage in 2009 and slowdown, not acceleration, of growth in 2010.

   Forecasts of **ratio of current account of balance of payments to GDP** range from –2.8 % to –2.3 %. The MoF forecast is slightly more pessimistic compared with the consensus.

Graph D.1: **Forecast of Real GDP Growth for 2009**
in %
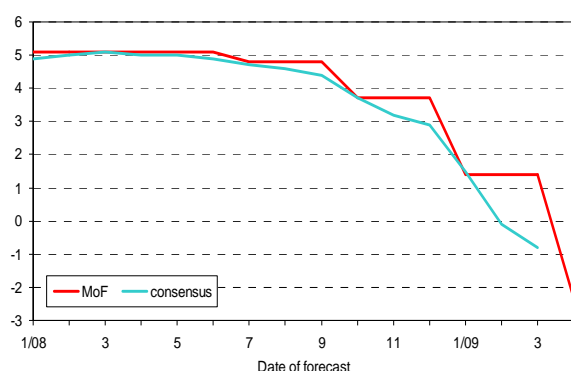
Graph D.2: **Forecast of Aver. Inflation Rate for 2009**
in %