

B Economic Cycle

B.1 Position within the Economic Cycle

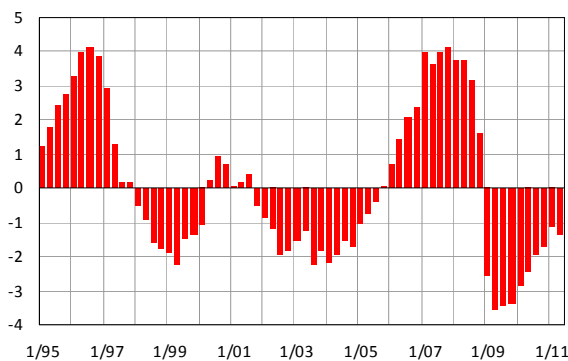
Potential product (PP), specified on the basis of a calculation by means of the Cobb–Douglas production function, indicates the level of GDP to be achieved with average utilisation of production factors. Growth of PP expresses possibilities for long-term sustainable growth of the economy without giving rise to imbalances. It can be broken down into contributions from 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 PP. The concepts of potential product and output gap are used to analyse economic development and to calculate the structural balance of public budgets.

Under current conditions, when abrupt changes in the level of economic output have occurred, it is very difficult to distinguish the influence from deepening of the negative output gap from a slowing in PP growth. The results of these calculations display high instability and should be treated very cautiously. **We also point out that the listed calculations will be adjusted in the next forecast according to the revision of the quarterly national accounts by CZSO (see Chapter E).**

Sources of tables and graphs: CZSO, CNB and Ministry of Finance's own calculations.

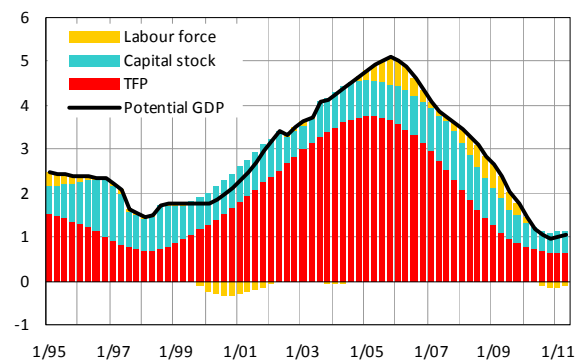
Graph B.1.1: Output Gap

in % of potential GDP



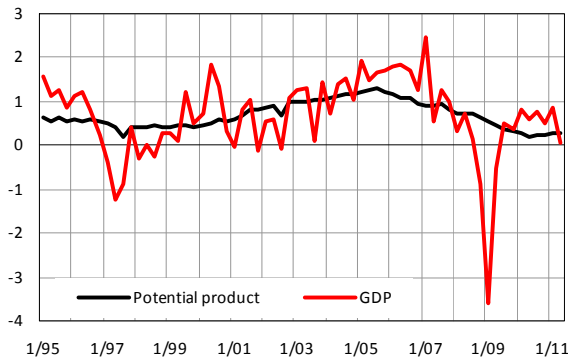
Graph B.1.2: Potential Product Growth

in %, contributions in percentage points



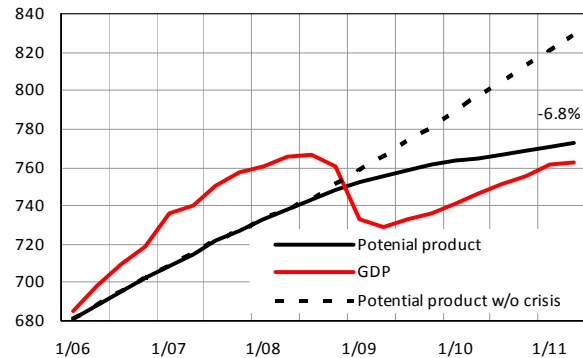
Graph B.1.3: Potential Product and GDP

QoQ growth in %



Graph B.1.4: Levels of Potential Product and GDP

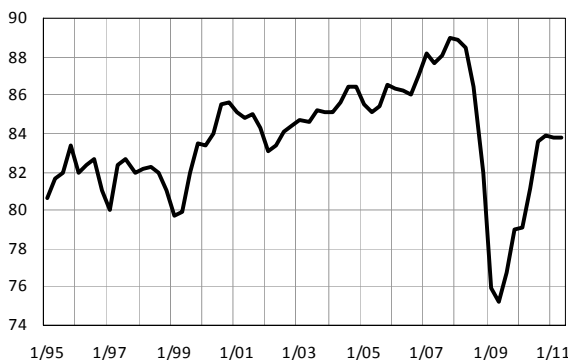
in bill. CZK of 2000



Note: „Potential product w/o crisis“ in graph B.1.4 is a hypothetical level of PP steadily growing from Q4/08 by the average QoQ growth of years 2001–2007.

Graph B.1.5: Utilisation of Capacities in Industry

in %



Graph B.1.6: Total Factor Productivity

YoY growth in %

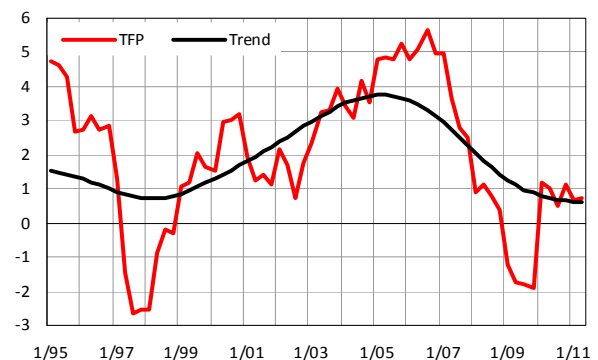


Table B.1: **Output Gap and Potential Product**

		2002	2003	2004	2005	2006	2007	2008	2009	2010	2011 Q1–Q2
Output gap	<i>per cent</i>	-1.4	-1.5	-1.5	-0.5	1.3	3.8	3.1	-3.1	-1.9	-1.2
Potential output	<i>growth in %</i>	3.3	3.7	4.5	5.2	4.8	3.7	3.1	2.0	1.1	1.0
Contributions:											
TFP	<i>perc. points</i>	2.5	3.0	3.7	4.0	3.5	2.5	1.7	0.9	0.6	0.6
Fixed assets	<i>perc. points</i>	0.7	0.7	0.8	0.8	0.9	1.1	1.0	0.7	0.5	0.5
Participation rate	<i>perc. points</i>	-0.1	-0.2	-0.2	0.2	0.2	-0.2	0.0	0.3	0.2	0.2
Demography¹⁾	<i>perc. points</i>	0.2	0.2	0.2	0.2	0.3	0.3	0.4	0.2	-0.2	-0.4

¹⁾ Contribution of growth of working-age population (15–64 years)

Economic recession in the turn of 2008 to 2009 induced a deeply negative **output gap**. According to current calculations, it reached ca –3.5% in the second quarter of 2009, thus indicating the lowest utilisation of economic potential in the post-transformation period. In the first quarter of 2011, the output gap eased to just under –1%. In the second quarter, GDP was almost unchanged and the output gap again expanded to –1.4%.

As a result of the deep recession and ensuing slow recovery, the YoY growth of **potential product** fell to as low as 1% in 2010. In view of the aforementioned instability in the calculations, however, we believe that this estimate substantially underestimates the reality.

The PP component most seriously affected was **total factor productivity** (TFP). The recession led to YoY decline in TFP by 1.8% in 2009. Even during the following recovery, four quarters of QoQ decline in TFP were recorded, resulting in a slowdown in YoY growth of the trend TFP to 0.6% in the second quarter of 2011. By comparison, a peak of 3.8% was reached in 2005.

A deep drop in investment activity led to a decrease in **capital stock's** contribution from 1.1 p.p. in 2007 to 0.5 p.p. in 2010 and in the first half of 2011.

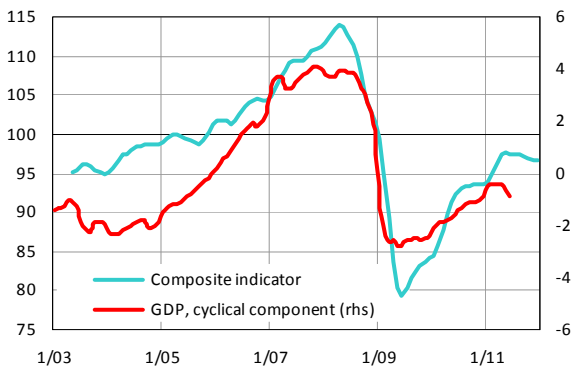
The labour supply is starting to be affected markedly by decrease in the number of working-age inhabitants, which stems from the process of population ageing as well as from a significant drop in immigration versus the situation recorded during 2006–2008. In the first half of 2011, the contribution of demographic development to potential GDP growth was significantly negative, reaching –0.4 p.p. The participation trend, measured as the ratio of labour force to the number of inhabitants aged 15–64 and which paradoxically accelerated its growth during the recession in 2009, has thus far only partly compensated the demographic development.

Graph B.1.4 illustrates that the recession and slow overcoming of its consequences have so far resulted in a loss of ca 6.8% in the potential product level.

B.2 Composite Leading Indicator

The composite leading indicator is compiled from the results of business cycle surveys that fulfil the basic demands made on leading cyclical indicators: that they are economically significant, demonstrate statistically observable leading relationships with regard to the economic cycle, and are regularly available on a timely basis. Since October 2010, the indicator is compiled from those business cycle indicators that have shown a high level of correlation with an average lead time of three months.

Graph B.2.1: Composite Leading Indicator
average 2000 = 100 (lhs), in % of GDP (rhs)
synchronized with cyclical component of GDP based on statistical methods (Hodrick-Prescott filter)



For the second quarter of 2011, the composite indicator was signalling stagnation in GDP's relative cyclical component. Data published in September 2011 did not confirm this signal, however, as GDP's relative

cyclical component dropped significantly. With the publication of new data, moreover, the indicator shows a slight lag versus its standard lead. Without knowing the "real" course of the relative cyclical component (the published data are only preliminary so far, and will certainly be subject to revision), however, the issue cannot be dealt with systematically. Based upon past experience, it is probable that the update of national accounts data would bring the relative cyclical component and composite indicator back into harmony.

For the third and fourth quarters of 2011, the indicator signals a decrease in GDP's relative cyclical component, especially due to the influence of lower expectations in industry and business.

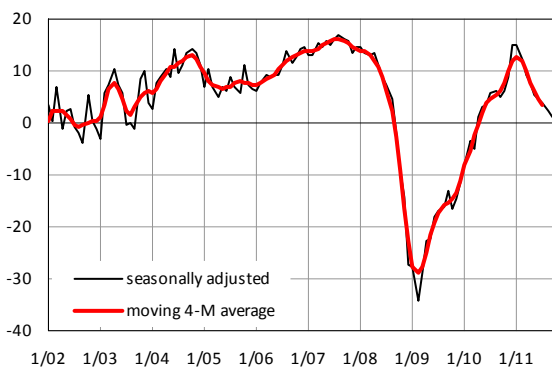
B.3 Individual Business Cycle Indicators

Business cycle indicators express respondents' views as to 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 the quick availability of results reflecting a wide range of influences that shape the expectations of economic entities.

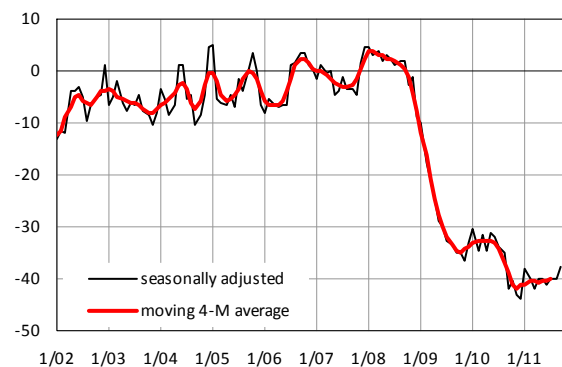
The surveys share a common characteristic in that respondents' answers provide not direct quantification but rather use more general qualitative expressions (such as better, the same, worse, or growing, not changing, falling, etc.). Tendencies are reflected in the business cycle balance, which is the difference between the answers "improvement" and "worsening", expressed in percentages of observations.

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

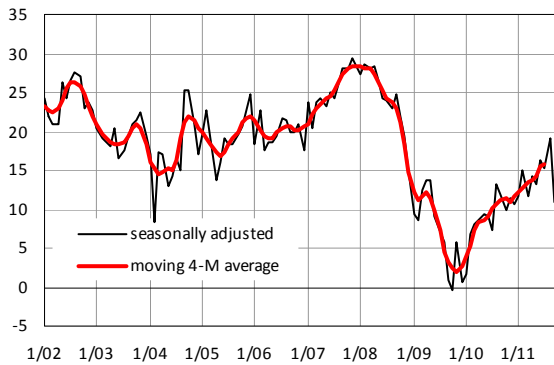
Graph B.3.1: Industrial Confidence Indicator



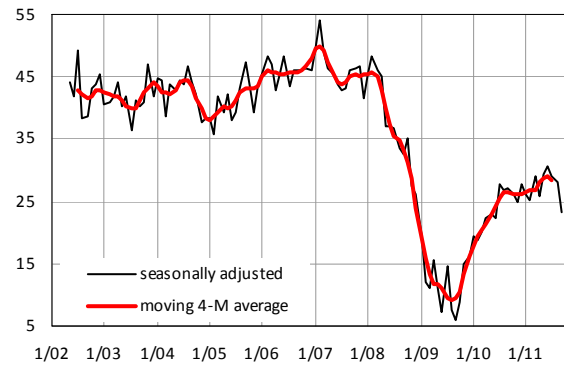
Graph B.3.2: Construction Confidence Indicator



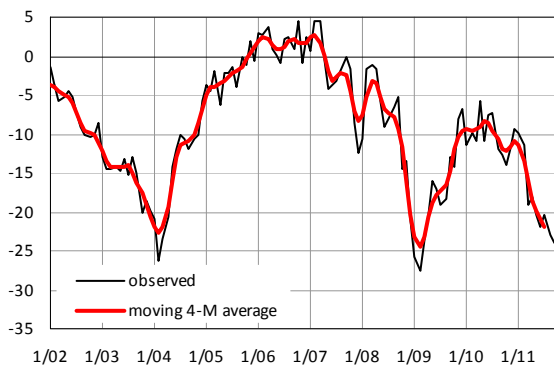
Graph B.3.3: Retail Trade Confidence Indicator



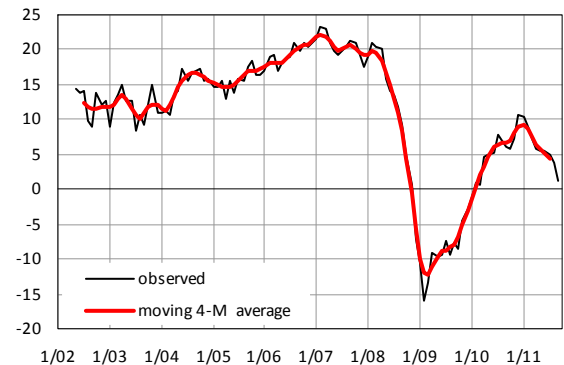
Graph B.3.4: Selected Services Confidence Indicator



Graph B.3.5: Consumer Confidence Indicator



Graph B.3.6: Aggregate Confidence Indicator



According to respondents in **industrial** enterprises, confidence again did not cease to decline in the third quarter of 2011. Although their evaluation of the current economic situation has slightly improved, their assessment of overall as well as foreign demand continued to decline. The outlook for the fourth quarter also is rather sceptical. Respondents expect a slowdown in the rate of production activities with almost stable employment. This is also reflected by a worsening assessment of the economic situation on three- and six-month horizons.

In **construction**, the situation relatively stabilised, although the assessment of overall demand remained low. For the fourth quarter of 2011, however, respondents are expecting moderately optimistic development. They anticipate improvement in both construction activities as well as employment. They estimate that contracts will provide for 8.4 months of work. The assessment of the economic situation also improves slightly.

Judging from respondents in **retail trade**, there was a decrease in the evaluation not only for the current economic situation, but also for the future.

Respondents in selected **services** sectors have the same assessment of the current economic situation. Their three-month horizon, however, evaluates the economic situation as one of modest growth, but with flat demand and a declining number of employees. Over a six-month horizon, their evaluation of the economic situation begins to decrease.

According to the September survey, the **consumer** confidence indicator continued to fall. Consumers expect that not only will the overall economic situation worsen in the coming 12 months, but that their own financial situations will as well. In addition to lingering fears of rising prices, the number of respondents expecting an increase in unemployment is rising and the number of those who plan to save is decreasing.

Based upon the individual business cycle indicators, it can be assumed that QoQ growth will continue to be low in the third and fourth quarters of 2011. Demand development remains especially at risk.