

B Economic Cycle

B.1 Position within the Economic Cycle

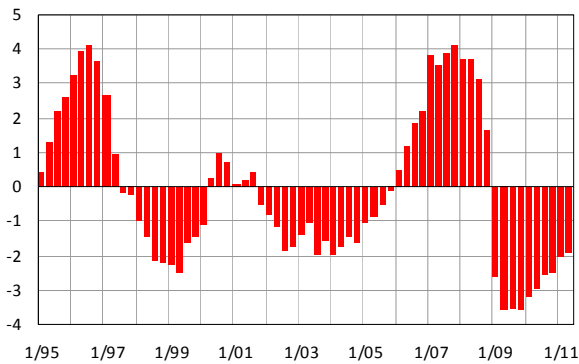
Potential product (PP), specified on the basis of a calculation by means of the Cobb–Douglas production function, indicates the level of GDP to be achieved with average utilisation of production factors. Growth of PP expresses possibilities for long-term sustainable growth of the economy without giving 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, however, 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 thus display high instability and should be treated very cautiously.

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

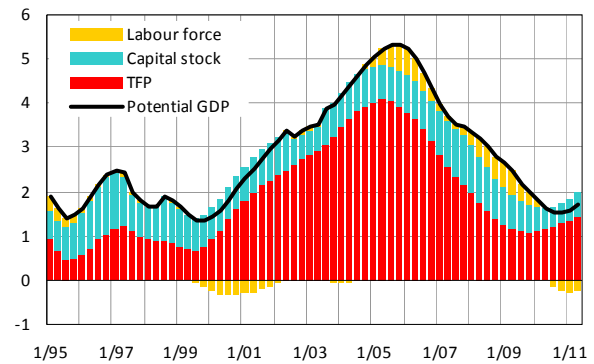
Graph B.1.1.: Output Gap

in % of potential GDP



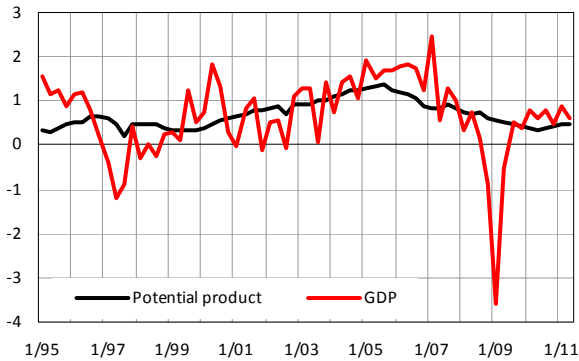
Graph B.1.2: Potential Product Growth

in %, contributions in percentage points



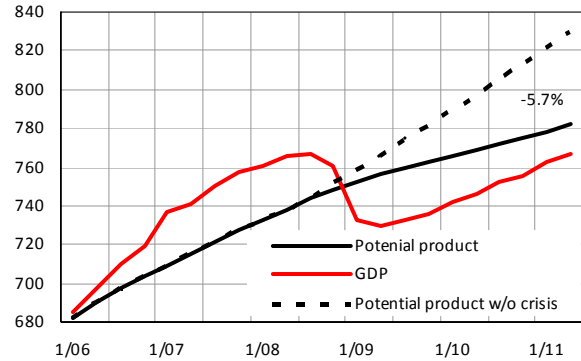
Graph B.1.3: Potential Product and GDP

QoQ growth in %



Graph B.1.4: Levels of Potential Product and GDP

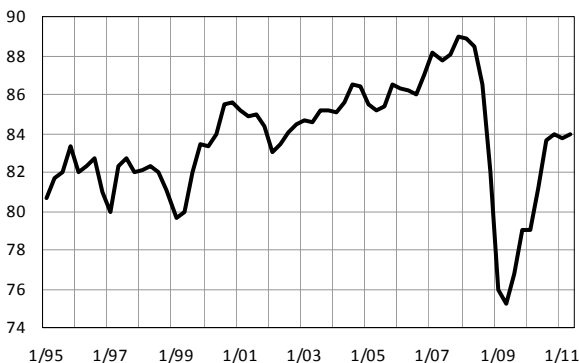
in bill. CZK of 2000



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 %

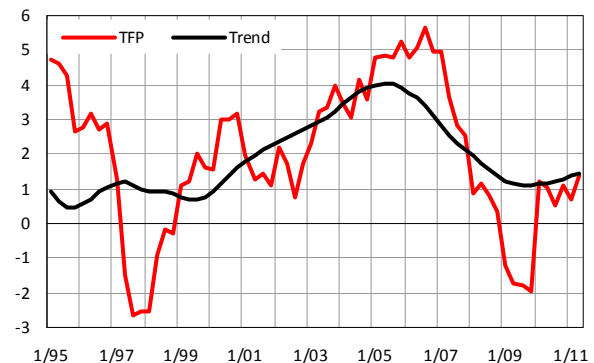


Table B.1: **Output Gap and Potential Product**

		2002	2003	2004	2005	2006	2007	2008	2009	2010	2011 Q1–Q2
Output gap	<i>per cent</i>	-1.4	-1.5	-1.6	-0.6	1.3	3.7	3.1	-3.4	-2.7	-2.0
Potential output	<i>growth in %</i>	3.3	3.7	4.5	5.2	4.8	3.7	3.1	2.3	1.6	1.7
Contributions:											
TFP	<i>perc. points</i>	2.5	3.0	3.7	4.0	3.5	2.5	1.7	1.2	1.2	1.4
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	0.1	0.1
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 from the turn of 2008 to 2009 gave rise to a deeply negative **output gap**. According to the current calculations, it reached ca –3.4% in 2009, thus indicating the lowest utilisation of economic potential in the post-transformation period. Since the beginning of 2010 the intensity of economic recovery has moderately exceeded the growth of potential product, and in the second quarter of 2011 the output gap reached circa –1.8%.

This development also confirms other indirect indicators. The decreasing unemployment rate still remains above the long-term average. Likewise, it is possible to explain the low inflation rate (also in an international comparison) in part by the absence of demand impulses.

The YoY growth of **potential product** fell to as low as 1.6% in 2010. In view of the aforementioned instability in the calculations, however, we believe that this estimate probably underestimates the reality. On the other hand, our computations show that the QoQ growth already reached a minimum during 2010.

The PP component most seriously affected was **total factor productivity** (TFP). The recession led to YoY decline in TFP by 1.8% in 2009 and slowing of the TFP trend growth rate to 1.2% in 2009 and 2010. In 2011, however, TFP's trend growth showed signs of

recovering. The intended increase in labour market flexibility should improve the situation substantially. TFP growth, which is now rather low by international comparison, should become the main source of recovery in PP growth dynamics.

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 quarter of 2011.

The labour supply is starting to be affected markedly by the decrease in the number of working-age inhabitants, which stems from the process of population ageing as well as from the significant drop in immigration versus the situation recorded in 2006–2008. 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.

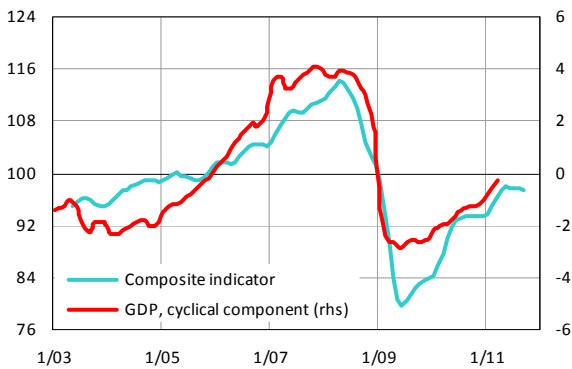
Graph B.1.4 illustrates that the recession and gradual overcoming of its consequences have so far resulted in a loss of ca 5.7% in the PP level.

Future PP development will depend on the pace of economic recovery. To close the negative output gap and re-accelerate potential growth, the economy will need to achieve constantly higher rates of real GDP growth relative to PP.

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 showed 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 first quarter of 2011, the composite indicator signalled that actual GDP was nearing its trend value, and hence that GDP's cyclical component was growing. Data published in June 2011 supported this indication.

For the second quarter of 2011, the indicator signals further growth in GDP's cyclical component, influenced especially by heightened expectations in the retail trade and services sector. According to the composite indicator, GDP's cyclical component should stagnate in the third quarter of 2011.

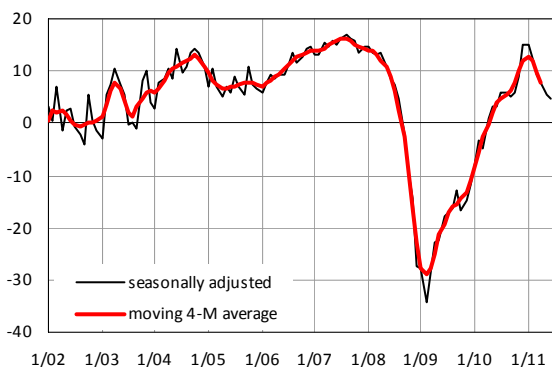
B.3 Individual Business Cycle Indicators

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.

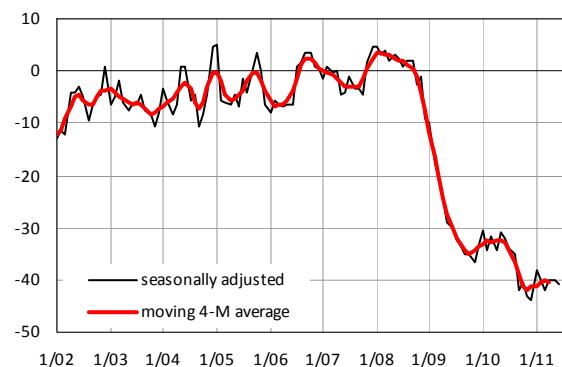
The surveys share a common characteristic in that respondents' answers provide not direct quantification but rather use more general qualitative expressions (such as better, the same, worse, or growing, not changing, falling, etc.). Tendencies are reflected in the business cycle balance, which is the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

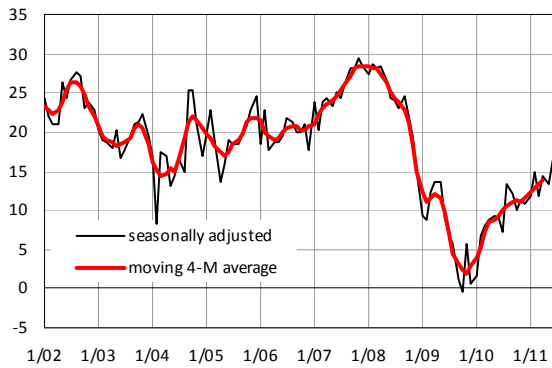
Graph B.3.1.: Industrial Confidence Indicator



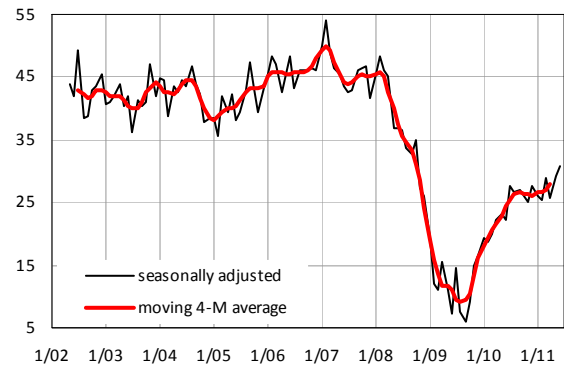
Graph B.3.2: Construction Confidence Indicator



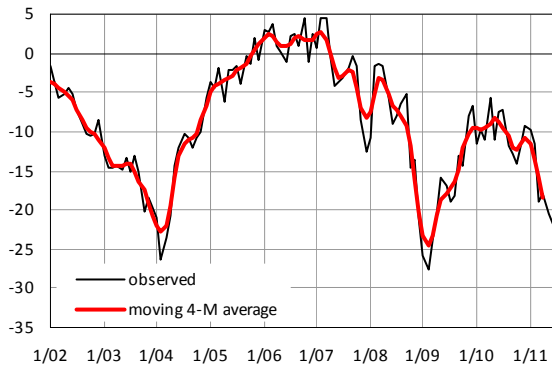
Graph B.3.3: Retail Trade Confidence Indicator



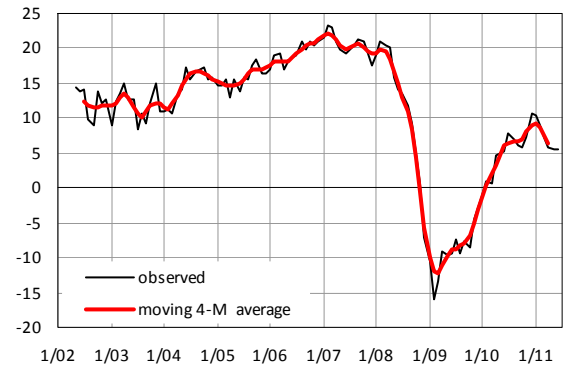
Graph B.3.4: Selected Services Confidence Indicator



Graph B.3.5: Consumer Confidence Indicator



Graph B.3.6: Aggregate Confidence Indicator



Confidence in **industry** started to decline in 2011, following gradual growth in 2010. Respondents began evaluating economic development in enterprises more cautiously. Their assessment of the current economic situation moderately weakened in the second quarter, as has the assessment of overall demand. A levelling off was recorded only in relation to foreign demand. Respondents expect a slight improvement in the growth of production activity for the third quarter of 2011, but they are cautious regarding employment. This growth has thus far not affected assessments of the future economic situation.

Neither were respondents too optimistic regarding **construction** in the second quarter. The low assessment of demand rather stabilised, while the view on the current economic situation declined. Respondents expect a slower pace of construction activities at nearly stagnating employment for the third quarter of 2011. A moderate improvement occurred in the assessment for development in the economic situation, especially on the six-month horizon.

In the **retail trade** and selected **services** segments, respondents boosted their assessment of the current

economic situation. Accordingly, they also expect the economic situation to improve on the three-month and six-month horizons. They expect continued growth in demand for services.

According to the June survey, the **consumer confidence** indicator continued to fall. Above all, consumers expect the overall economic situation to worsen in the coming 12 months. Expectations regarding their own financial situations have stagnated for the time being, although fears of price increases in the coming 12 months remain high. The proportion of respondents who expect unemployment to rise is also increasing.

Based upon the individual business cycle indicators, it can be assumed that QoQ growth could slow in the second quarter of 2011 and grow moderately in the third. Demand development remains a risk.