



NÁRODNÁ BANKA SLOVENSKA  
EUROSYSTEM



# MEDIUM-TERM FORECAST

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## SUMMARY

An increase in GDP in the second quarter of 2009 partially offset the sharp decline recorded at the start of the year, reflecting developments in final consumption as well as in net exports. Even so, economic growth was lower than expected and therefore the full-year GDP forecast had to be revised substantially downwards. The economic slump is expected to result in redundancies and slower growth in compensation per employee, with an accompanying decline in household disposable income. As a consequence of this development – as well as the decrease in consumption at the beginning of the year amid weaker consumer confidence – household final consumption is assumed to fall. Gross fixed capital formation is expected to have a substantially negative effect on GDP growth, owing to the decline in company profits (and hence also in investment activity) in the first half of this year. This decline should be mitigated to some extent by the launch of investments in PPP infrastructure projects at the end of 2009. In the first half of the year, GDP was also weighed down by destocking of goods and materials, but in subsequent quarters, as economic activity revives, stocks are expected to be replenished or moderately increased. As for net exports, the second half of the year should see global demand recover to slightly higher levels than projected in the previous forecast and, in conjunction with this, a revival in the economy's export performance.

In line with the previous forecast, export performance in the medium-term horizon is expected to continue rising as world demand picks up. Net exports should therefore be driving up GDP in 2010 and 2011. Output growth in these years is expected to bring about a gradual increase in employment and a moderate rise in compensation, leading to an upturn in household final consumption. The acceleration of economic growth in 2010 should also be supported by the continuing replenishment, or moderate increase,

of stocks. Economic growth in 2011 should be slightly higher, partly owing to the launch into production of a new car model. A gradual recovery over the medium term will also be reflected in a faster rise in consumer prices.

Compared with the previous forecast (MTF-2009Q2), a more pronounced decline in the domestic part of the economy is expected, while foreign demand should improve slightly as a result of developments in the first half of the year. Within domestic demand, the decrease in investments is expected to be more severe, particularly given the current developments and drop in household final consumption. In the medium-term horizon, economic activity should revive as projected in MTF-2009Q2, though at a slightly faster pace.

As stated in previous forecasts, HICP inflation is assumed to decline steadily and bottom out in October 2009, after which its dynamics should begin to accelerate. This reflects mainly the slowdown in economic activity in 2009 and its gradual revival in 2010 and 2011. This could give rise to a progressive increase in the pace of consumer price growth.

The risks to the forecast for the real economy are balanced. One of the most significant risks is the end of the effects of stimuli introduced by foreign governments (e.g. scrapping schemes), which in coming periods could lead to a slower ("W" shaped) revival in economic activity. On the upside there is the potential implementation of further PPP packages, which this forecast does not take into account. A two-way risk to the forecast is that foreign demand will develop differently than expected. The forecast for consumer prices faces a risk from developments in regulated energy prices as of January 2010 and an upside risk from a faster economic revival as well as from the exchange rate movements of neighbouring currencies.



## TECHNICAL ASSUMPTIONS AND THE INTERNATIONAL ENVIRONMENT

The technical assumptions for the medium-term forecast and the international economic environment were taken from the ECB's September forecast (ECB Staff Macroeconomic Projections for the Euro Area).<sup>1, 2</sup>

The assumption about short-term interest rates is of a purely technical nature. The overall average level of short-term rates is projected at 1.3% for 2009 and 1.6% for 2010. The market expectations for euro area ten-year government bond yields imply an average level of 4.1% in 2009 and 4.3% in 2010. The projection takes into account signs of improvement in financing conditions and assumes that, over the projection horizon, the spreads between the short-term bank lending rate and the EURIBOR will narrow further. Similarly, credit supply conditions are assumed to ease over the horizon. The projection assumes

Compared with the ECB's June forecast, the September forecast assumes higher oil prices in both 2009 and 2010. Prices of non-energy commodities should rise more sharply than was projected in June (a more moderate fall in 2009). At the same time, the September projection assumes a slightly stronger effective exchange rate of the euro against the US dollar (appreciating by 0.1% in 2009 and by a further 0.6% in 2010).

The current economic outlook continues to be driven by the impact of the ongoing financial and economic crisis. Although global trade has plunged since the turn of the year, it is expected to begin reviving and to get back to positive figures. Overall, world GDP outside the euro area is projected to fall by 1.2% in 2009, but to grow by 2.7% in 2010. Reflecting the developments

**Table 1 Technical assumptions (year-on-year changes in %, unless otherwise indicated)**

	Forecast from	Forecast for the period		
		2008	2009	2010
Oil (USD/barrel)	June 2009	99.9	54.5	65.5
	September 2009	99.9	62.4	78.8
Non-energy commodities	June 2009	3.5	-24.7	9.2
	September 2009	3.5	-21.4	17.1

Source: ECB.

a gradual increase in the average oil price in both 2009 and 2010. Prices of non-energy commodities are assumed to fall in 2009, but to rise in 2010. As for the EUR/USD exchange rate, it is projected at the average levels prevailing in the two-week period ending on the cut-off date, which implies a rate of 1.38 in 2009 and of 1.43 in 2010.

in global trade, foreign demand for euro area exports is expected to drop by 13.0% in 2009, before recovering in 2010 to achieve a moderate increase of 1.1%. In 2011, NBS assumes an increase in commodity prices comparable to that in 2010 and a continuing modest revival in the world economy.

<sup>1</sup> The technical assumptions about energy and non-energy commodity prices are based on market expectations, with a cut-off date of 14 August 2009.

<sup>2</sup> More detailed information about the ECB projection is available at [www.ecb.int](http://www.ecb.int).



## MEDIUM-TERM FORECAST FOR THE EURO AREA

Real GDP growth has been negative since the second quarter of 2008. Following its strong contraction in the first quarter of 2009, real GDP growth declined only slightly in the second quarter. In line with recent short-term economic indicators and surveys, GDP is expected to continue to stabilize in the second half of the year, before gradually recovering in the course of 2010. This development should be supported by the revival of exports. Domestic demand is expected to benefit from the fiscal impulse measures implemented, a cyclical increase in inventories, and the measures taken to facilitate the functioning of the financial system. The recovery is, however, expected to be uneven, given the temporary nature of some of the supporting factors, and rather sluggish, given the weakness of global activity and the high level of uncertainty. Investment is expected to decline until mid-2010, while private consumption is projected to be dampened by rising unemployment and weak consumer confidence.

Compared with the June projection, the ranges projected for GDP have been adjusted upwards, with a more moderate decline in 2009 and an increased probability of economic revival in 2010.

The rate of HICP inflation to a large extent reflects the base effects of energy prices, but although these will reverse in coming months, the weak economic outlook for the euro area is expected to keep price pressures contained. Compensation per employee, which registered a strong increase in 2008, is expected to decline significantly in 2009 and to recover slowly thereafter.

The ranges projected for the annual rate of increase in the overall HICP in 2009 and 2010 have also been adjusted slightly upwards with respect to those of June 2009, reflecting mainly upward revisions to energy prices and, to a lesser extent, the revision to the GDP growth projection from that stated in the previous forecast.

**Table 2 Projections of selected euro-area indicators (average year-on-year changes in %)**

	Projection from	Projection for the period		
		2008 <sup>1)</sup>	2009	2010
HICP	June 2009	-	0.1 – 0.5	0.6 – 1.4
	September 2009	3.3	0.2 – 0.6	0.8 – 1.6
Real GDP	June 2009	-	-5.1 – -4.1	-1.0 – 0.4
	September 2009	0.6	-4.4 – -3.8	-0.5 – 0.9
Private consumption	June 2009	-	-1.3 – -0.5	-1.1 – 0.3
	September 2009	0.3	-1.3 – -0.5	-0.8 – 0.6
Government consumption	June 2009	-	1.4 – 2.0	0.9 – 1.7
	September 2009	1.9	1.4 – 2.0	1.0 – 1.8
Gross fixed capital formation	June 2009	-	-12.3 – -10.1	-6.1 – -2.1
	September 2009	-0.2	-12.1 – -9.9	-5.2 – -1.2
Exports (goods and services)	June 2009	-	-16.6 – -14.0	-2.0 – 1.0
	September 2009	0.9	-16.2 – -13.6	-0.6 – 2.4
Imports (goods and services)	June 2009	-	-13.8 – -11.2	-3.0 – 1.4
	September 2009	1.0	-13.6 – -11.0	-2.3 – 2.1

Source: ECB.

<sup>1)</sup> Actual data.



# MEDIUM-TERM FORECAST FOR SLOVAKIA

## THE REAL ECONOMY

### CURRENT ACCOUNT

In the balance of payments **current account**, the most significant differences during the first half of the year were recorded in the **trade balance**, which had a lower than expected deficit. The improvement in the trade balance stemmed from the fact that the steeper than expected decline in exports was accompanied by a still sharper drop in imports. This arose because of lower gas imports, destocking in the economy, and lower investment imports. Given the projected upturn in foreign demand, the level of exports and imports is expected to rise. Imports should be stimulated by import-intensive exports, as well as by the restocking projected to take place during the gradual revival of the economy. They are, however, expected to be reversely affected by lower imports of final consumption goods, in turn reflecting the sharper decline in domestic demand and the reduction in investment imports owing to a re-evaluation of the effects of PPP projects (see Box). Imports in the second half of the year should be positively affected by lower imports of gas, although given that this year's decline in gas imports was partly caused by the purchasing strategy of importers, its positive effect on the trade balance in the second half of the year is not expected to be so substantial. Taking these factors into account, the full-year trade deficit for 2009 is assumed to decline (compared with the previous forecast). The coming years should see the trade balance gradually improve amid stronger foreign demand and as a result of domestic demand growing at a more moderate pace compared with the June forecast.

The full-year level of exports and imports for 2009 is expected to be adversely affected by actual developments in the first half of the year. In 2009, the decline in the year-on-year dynamics of exports and imports is assumed to exceed 20%, but in 2010 and 2011 a gradual return to positive dynamics may be expected.

The trade balance projection is most at risk from the adverse effects of the ending of stimulus

measures introduced by foreign governments, which may show up in a slower revival of domestic production and exports. In connection with the overall revival of the Slovak economy, there is also uncertainty about the assumed restocking and gas imports.

Compared with the previous forecast, the **balance of services** is expected to perform more negatively from 2009 to 2011, owing to actual developments in the first half of 2009 that were reflected in lower revenue on services as well as in higher expenditure on services. By contrast, in comparison with the previous forecast, no change is expected in the **balance of current transfers**, which should improve in the projection horizon, nor in the **balance of income deficit**, which should increase only slightly.

The **current account to GDP** ratio is assumed to improve in all years in comparison with MTF-2009Q2, while the current account balance in the projection horizon is expected to record a gradual year-on-year improvement in line with the previous forecast.

### LABOUR MARKET

**Compensation per employee** rose sharply in the first half of 2009, due to the effect of severance payments arising from mass redundancies, as well as to a marked decline in the number of employees. In line with expectations, the total amount of employee compensation in the economy declined in comparison with the previous quarter, but because of the marked drop in employment, compensation per employee increased significantly. Given what has actually happened, as well as the announced redundancies (albeit on a smaller scale than in the first half of 2009), the assumption in MTF-2009Q3 is that compensation per employee will rise more sharply than projected in the previous forecast. In 2010, the rise in employee compensation should slow down amid expected caution in the negotiation of collective agreements. Scope for stronger wage growth is not assumed, given the low-



inflation environment of 2009, the decline in labour productivity, and the financial results of firms. Compensation per employee in 2010 should also reflect the base effect of higher severance payments in 2009. For that reason, compensation is assumed to rise more slowly than projected in MTF-2009Q2. In line with the previous projection, compensation growth in 2011 is expected to accelerate in response to the revival of economic activity and the accompanying rise in labour productivity.

Owing to persisting mass lay-offs and the considerable downturn in economic activity, **employment** in 2009 is expected to decline more sharply than projected in MTF-2009Q2. Recent employment developments have reflected mainly the decline in short-time jobs, but the coming periods could see a reduction in the number of fixed-contract employees, too. The lower rate of unemployment compared to that projected in MTF-2009Q2 is a result of how unemployment developed in the first half of 2009, when the number of economically inactive persons rose. In the years ahead, the gradual revival in economic activity will feed through into the employment figures, too, albeit not as quickly as projected in the previous forecast.

The labour market projection for the period 2009-2011 is most at risk from shifts in the revival of the domestic and foreign economies.

## GDP

GDP grew in the second quarter of 2009, thereby partly offsetting the economic downturn recorded in the first quarter. The main drivers of the quarter-on-quarter growth were net exports and the final consumption of general government and of households, which was in turn supported by one-off effects (car scrapping schemes). The GDP growth was, however, lower than had been expected by the central bank, owing to the decrease in investments and inventories. The coming period should see a gradual revival in the economy amid the expected strengthening of foreign demand, though to lower levels than those stated in the previous forecast. As a result, however, of the weaker economic growth in the second

quarter, the full-year decline in GDP for 2009 will be steeper than projected in the previous forecast.

The medium-term forecast for GDP for the period 2010-2011 takes into account the slightly more optimistic situation in the world economy. Compared with MTF-2009Q2, global demand is expected to recover gradually in 2010, which should in turn support growth in the export performance of the Slovak economy and its further acceleration in 2011. In line with the previous forecast, another boost to economic growth is expected from the launch of production of a new car model in 2011.

### *Domestic demand*

**Household final consumption** in 2009 is assumed to decline in comparison with 2008 as a consequence of slower growth in disposable income; this is related to labour market developments (a slower increase in compensation per employee and a fall in employment) as well as to the decrease in consumer confidence recorded at the turn of the year as a result of the financial crisis. The drop in private consumption in the first quarter of 2009 underwent a moderate correction in the second quarter, partly due to the introduction of a scrapping scheme for the purchase of vehicles. The sharp decline in final consumption in the first half of the year will, however, be reflected in a full-year decline in household consumption expenditure in comparison with MTF-2009Q2, which, in conjunction with the moderate rise in disposable income, will result in a rise in the savings ratio. The coming years are expected to see a slightly accelerated increase in household final consumption at the quarter-on-quarter level as a consequence of labour market developments. Compared with MTF-2009Q2, however, household final consumption will be more subdued because of the slower revival of labour market indicators.

The forecast for **fixed investments** takes into account the fact that investment in the second quarter declined more sharply than in the previous quarter and than NBS had expected. The effect of weaker foreign demand on companies' profits and the accompanying cut-back of their investment activities will mean that

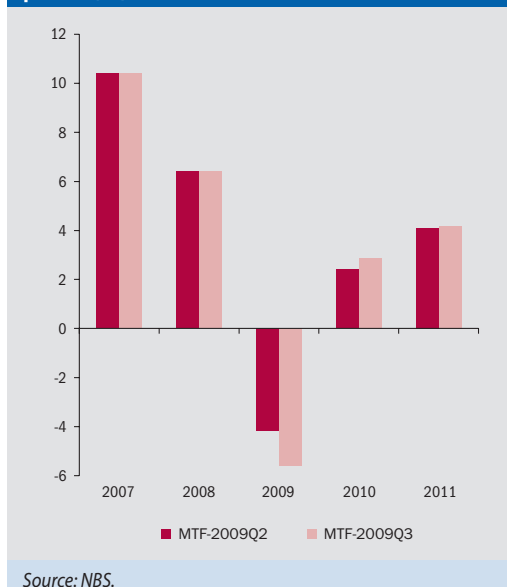
investment for 2009 as a whole falls more sharply compared with the previous forecast. On the positive side, investment activity is expected to be boosted by investment in the car industry and also by investment in PPP infrastructure projects, though their impact, compared with that projected in MTF-2009Q2, has been shifted following a re-evaluation of when they will start to be implemented. In the medium-term horizon, the rise in investments in machinery and construction is assumed to accelerate slightly as a result of the economic revival.

The first half of 2009 saw substantial destocking, as inventories of goods and materials were consumed amid uncertainty over future orders. Firms were therefore scaling back production and at the same time seeking to minimize the amount of funds tied up in inventories. This probably weighed down on imports, and, paradoxically at a time of declining foreign demand, mitigated the negative effect of net exports on the Slovak economy. Thus the fall in GDP was in large measure driven by domestic demand, including inventories. As the economy gradually revives, it is assumed that there will be restocking in the coming period, particularly in 2010, which should in turn support GDP growth. The retention or increasing of inventories in future will, after their sharp decline this year, make a positive contribution to GDP growth in the years ahead.

#### Net exports

The first half of 2009 saw a marked decline in exports and imports of goods and services owing to the slowdown in global demand. Compared with the previous forecast, foreign demand is assumed to recover slightly more quickly, accompanied by a faster rise in exports and imports. Net exports are expected to have a dampening effect on economic growth in 2009. This negative contribution will, in comparison with the previous forecast, be more moderate largely because of the upturn in net exports recorded in the second quarter of 2009. With 2010 and 2011 expected to bring continued strengthening of foreign demand, export performance should rise and net exports should make a positive contribution to GDP growth. A further boost to export performance is expected in 2011, when

**Chart 1 Forecast for GDP growth at constant prices (%)**



the production of a new car model is launched. But since the car in question will be lower range, the contribution to GDP is not expected to be on a par with that of previous investments in the automobile industry. Compared with MTF-2009Q2, global demand is assumed to revive more quickly and this will have a positive effect on the trade balance.

In the current forecast, the risks to future GDP growth may be seen as balanced.

The GDP forecast faces a downside risk from the ending of the effects of stimulus measures (e.g. scrapping schemes) introduced by foreign governments, which in coming periods could lead to economic activity reviving more slowly than currently projected. Also in question is the effect of the necessary consolidation of public finances on both domestic and foreign demand.

An upside risk for the economy is the implementation of further PPP project packages, which the current forecast does not take into account.

The forecast also faces a two-way risk from the future development of foreign demand.



## Box 1

### INFORMATION ON THE CURRENT STATE AND IMPLEMENTATION OF PPP PROJECT PREPARATIONS AND CONSTRUCTIONS IN REGARD TO THEIR INCORPORATION IN THE MEDIUM-TERM FORECAST

As part of the preparations for implementing PPP projects, earmarked sections of dual carriageways and highways have been divided into three packages that are being prepared and implemented separately. The current state of the preparations for each of these packages is as follows:

#### **Package No. 1 (D1 highway, sections Dubná Skala – Ivachnová, Jánovce – Jablonov, Fričovce – Svinia)**

The concession contract between Slovakia (represented by the Slovak Ministry of Transport, Posts and Telecommunications) and Slovenské diaľnice, a.s. (a consortium of Bouygues Travaux Publics SA, Colas SA, Doprastav, a.s., Intertoll-Europe ZRt., Mota-Engil SA, and Váhostav-SK a.s.) was entered into on 15 April 2009. On 20 May 2009, Minister Ľubomír Vážny signed an addendum to this contract (the adjustment of handover deadlines for each section in 2011 and the projected deadline for financial closure of the project, as well as the incorporation of additional comments of the financing banks), following its approval by the Slovak Government (Resolution No. 369/2009). The financial closure of package No. 1 is supposed to be finalized before 15 October 2009, but there remains a risk, given the current financial and economic crisis, that the deadline will not be met owing to possible problems in finding financing commercial banks and in settling the financial coverage of the package.

#### **Package No. 2 (R1 dual carriageway, sections Nitra – Tekovské Nemce, northern bypass of Banská Bystrica)**

The concession contract with GRANVIA, a.s. was signed on 23 March 2009 and the first addendum to the contract was signed by the Minister on 20 April 2009. The original deadline for financial closure (30 June 2009) has been put back several times, with financing banks requesting the government to provide co-financing for the project up to an amount equal to 90% of their loan. a second adden-

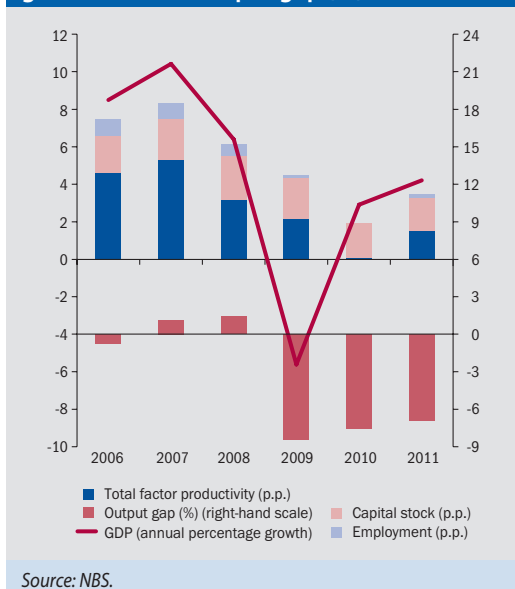
dum, approved on 17 July, assumes an increase in the original price and in the annual charge, which the government will transfer to the concessionary following the R1 construction. The government, however, will not give any of the guarantees that the banks originally insisted on. The three R1 sections should be completed between August and October 2011, and the Banská Bystrica northern bypass, in July 2012. The project was financially closed on 27 August 2009 with a final price tag of €1.757 billion and annual repayments set at €125.3 million. Since this represents a realistic disbursement for the R1 project, the concessionary could have been fully started on construction from the next day. Realistically, however, construction is expected to begin probably during the fourth quarter of 2009.

#### **Package No. 3 (D1 highway near Žilina, sections Hričovské Podhradie – Lietavská Lúčka, Lietavská Lúčka – Višňové, Lietavská Lúčka – Žilina and Višňové – Dubná Skala)**

This is a project for approximately 29 km of highway, including a 7.5 km tunnel between Višňové and Dubná Skala. Public procurement for package No. 3 began in April 2008 with the publication of a notice in the Journal of the European Union (No. 2008/S 80-108302) and in the Journal of the Office for Public Procurement (No. 82). The deadline for submission of bids by applicants was set for 11 May 2009. The only bid submitted within this time limit was from a consortium of Hochtief PPP Solutions GmbH, Alpine Bau GmbH, FCC Construcción S. A., and Western Carpathians Motorway Investors Company GmbH.

Given the uncertainty surrounding the settlement of financial coverage of the first PPP package and the initial stage of preparations for the third PPP package, the forecast takes into account only the effects of implementing the second PPP package, and the projection horizon for these effects is six months later than in MTF-2009Q2.

**Chart 2 Contributions to potential GDP growth and the output gap (%)**



### GDP POTENTIAL AND THE OUTPUT GAP

In this NBS medium-term forecast, the ongoing economic crisis is reflected not only in the demand side of the economy, but also in the slowdown of the economy's potential. Nevertheless, a negative level shift is not yet being assumed for any of the production factors, which means that potential GDP is continuing to grow moderately without any drop in its level. The situation is different on the demand side, of course, where real GDP is declining sharply in 2009 as a result of the global slump in trade. This in turn is causing the negative output gap to widen to -8.4% in 2009, which will be followed by a turnaround and gradual narrowing of the negative GDP gap.

Compared with the pre-crisis period, growth in the economy's potential is expected to slow down sharply in 2009 and 2010, before accelerating again in 2011.<sup>3</sup> In view of the supply-side structure of GDP, it is evident that weaker investment demand will show up in, among other things, the slower accumulation of capital. Over the full projection horizon, capital growth is expected to exceed 3%, though compared with June's forecast that represents a slight slowdown. The fall in employment in the first half of 2009 was partially reflected in its potential component. Potential employment is

not, however, expected to follow the decline in real employment, but should rise minimally before gradually reviving towards the end of 2010. Even in 2010, employment is not expected to contribute to potential GDP growth, but in 2011 the labour market should contribute 0.2 p.p. to economic growth. As for total factor productivity (TFP), it is expected to slow down sharply. In 2010, when potential GDP is expected to rise by 1.9%, the contribution of TFP to its growth is assumed to be close to zero. The gradual revival of the economy, accompanied by the recovery of investment activity and improvement in the labour market will also feed through to potential GDP, which in 2011 is expected to record growth of 3.5%.

### HICP

Inflation in Slovakia has continued to decline in recent months. From April to July 2009, it fell from 1.4% to 0.6%. The recent rate of HICP inflation has been marked by a slowdown in the dynamics of almost all HICP subcomponents (except for energy prices). The sharpest drop was in the dynamics of food prices (particularly prices of processed foods), the cause being base effects (the relatively sharp rise in prices in the same period of the previous year) and the most recent movement in agro-commodity prices (milk prices). In the basic structure of inflation, there was also deceleration in prices of non-energy industrial goods and prices of services, which were affected by the slowdown in economic activity and in demand. As a consequence, import prices fell. a source of downward pressure on prices, especially prices of non-energy industrial goods, was the currency devaluations in neighbouring countries and the "shopping tourism" that followed them, as well as the strong competitive environment in the domestic retail market. The moderate slowdown in prices of services was a consequence of price developments in recreational and personal services, housing and transportation, which reflected the relatively low energy prices and base effects (in the case of restaurants – the effect of food price developments a year before). The negative development of energy commodity prices led to an increase in fuel prices. Because of these factors, actual inflation in recent months was lower than projected in MTF-2009Q2 .

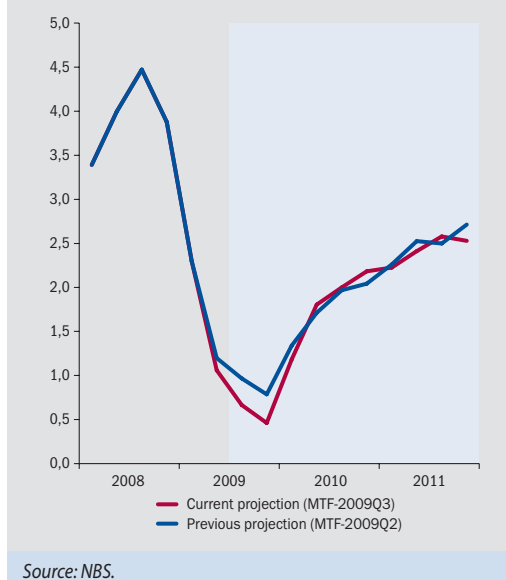
<sup>3</sup> The outlook for annual data on potential GDP growth is distorted by the so-called carry-over effect (where because of the high quarter-on-quarter dynamics in 2008, the average growth of potential GDP will be higher in 2009 than in 2010). Although the situation seems different in view of annual aggregates, the largest slowdown in the economy's potential is being recorded in 2009. Beyond this horizon, the pace of growth is expected to rise gradually and the supply side to consolidate.

Like previous forecasts, this forecast assumes that inflation will decline gradually and bottom out in October 2009 (0.4 %). It should then accelerate moderately, up to 0.6% in December 2009, and continue rising to 2.2% at the end of 2010 and 2.5% in December 2011. Although this trend is driven by all inflation components, the main factor is the gradual revival of economic activity in 2010 and 2011, which is expected to see consumer prices rise at a gradually faster pace.

Compared with MTF-2009Q2, the latest forecasts for annual average inflation in 2009, 2010 and 2011 are, respectively, lower, unchanged and slightly lower. In 2009, the average rate is expected to be affected by a slower increase in prices of food and non-energy industrial goods and by a sharper decline in economic activity. The lower inflation dynamics in 2009 are expected to feed through to 2010 (especially in the first half of the year), though they should be offset by the faster economic revival (inflation dynamics accelerating in the second half) than that projected in MTF-2009Q2. Therefore the average inflation forecast for 2010 is unchanged, and, in comparison with the previous forecast, 2011 is not expected to see a marked change in the average annual rate of increase in the HICP.

Looking at food prices as a component of inflation, their dynamics are expected to be lower in particular at the end of 2009 and beginning of 2010, but also in the long-term horizon, considering the developments of recent months as well as the assumption of lower prices of food commodities (pigs, wheat, milk, maize). Recent developments in prices of non-energy industrial goods have reflected the stagnation in international trade and the efforts of producers to cut costs in order to stay competitive, and therefore the dynamics of prices of non-energy industrial goods in the horizon 2009-2010 are expected to be lower in comparison with the previous forecast. In 2011, by contrast, the dynamics should be higher owing to the revival of global demand. As for energy prices, an acceleration in the dynamics of fuel prices continues to be assumed. The development of energy commodity prices in 2009 could enable the Regulatory Office for Network Industries (ÚRSO) to adjust certain energy prices for households in January 2010. Since, however, there has been no official statement on the future development of regulated en-

Chart 3 Projected inflation (%)



ergy prices, the current forecast for 2010–2011 assumes that these prices will stay at the 2009 level. In prices of services, the downturn in economic activity has not shown up as projected in the previous forecast, and therefore the expected dynamics of these prices for the period 2009–2010 is higher.

The average increase in administrative prices is expected to be 5.4% in 2009, 3.0% in 2010 and 2.7% in 2011 (in MTF-2009Q2, it was 5.0% in 2009, and 2.7% in both 2010 and 2011). Their development in 2009–2010 stems from the sharper than projected rise in prices of water, sewerage, health care and postal services in the final months of 2009. Likewise, excise taxes on cigarettes are assumed to rise and to add 0.2 of a percentage point to the overall inflation rate for the period from September 2009 to January 2010. This forecast does not take account of the current draft bill of the Ministry of Finance that aims to increase excise duties on alcohol, since at the time the forecast was being prepared, this draft bill was still being circulated for comments. The final form of the bill will be clear only after it has been debated in parliament.

Overall inflation excluding energy and unprocessed foods (core inflation) is expected to average 1.8% in 2009, 2.6% in 2010, and 3.0% in 2011.

**Table 3 Comparison of HICP inflation forecasts  
(year-on-year changes in %; average for the period)**

	2008	2009	2010	2011
MTF-2009Q1	3.9	1.7	2.0	2.9
MTF-2009Q2	3.9	1.3	1.8	2.5
MTF-2009Q3	3.9	1.1	1.8	2.4

Source: NBS.

**Table 4 Comparison of HICP inflation forecasts  
(year-on-year changes in %; end-of-year figures)**

	2008	2009	2010	2011
MTF-2009Q1	3.5	1.4	2.4	3.3
MTF-2009Q2	3.5	0.9	2.1	2.7
MTF-2009Q3	3.5	0.6	2.2	2.5

Source: NBS.

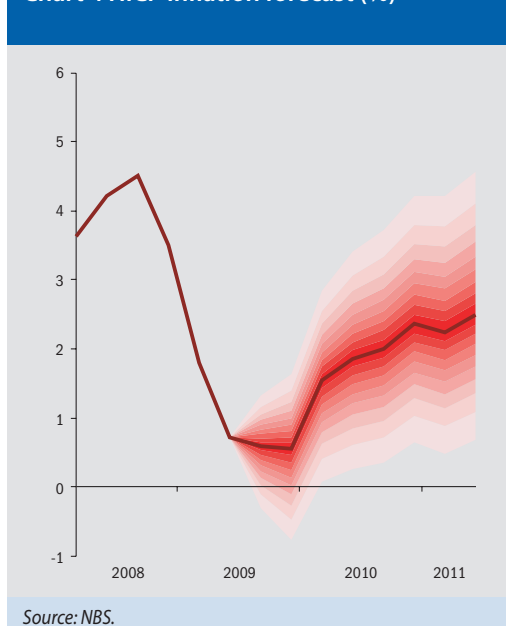
The risks in the current inflation forecast for 2009 are predominantly on the downside, since the decline in global economic activity may lead to another greater-than-expected fall in demand, with repercussions on consumer prices. Another risk is the assumption for the development of regulated energy prices as from 2010.

The current forecast does not take into account the likely increase in indirect taxes on alcohol, which from March 2010 could be adding around 0.06 of a percentage point to the overall inflation rate.

In the medium-term horizon, on the other hand, upside risks predominate. The stronger economic revival is expected to feed through to a faster rise in commodity prices and import prices, thereby putting upward pressure on consumer prices. Another risk is the exchange rate developments in the currencies of neighbouring countries (Czech Republic, Poland, Hungary), strengthening of which could lead to higher imported inflation.

According to the evaluation of the risks, the medium-term forecast for inflation can be considered realistic. None of the selected factors affecting inflation are reporting a significant risk. Compared with the previous forecast, the degree of risk attached to particular factors has

**Chart 4 HICP inflation forecast (%)**



Source: NBS.

even declined slightly for the whole projection horizon.

Overall, the effect of the surveyed risk factors on the inflation rate is projected to be -0.12 of a percentage point as at the end of 2009 (compared to -0.10 p.p. in MTF-2009Q2), 0.07 p.p. as at the end of 2010 (0.08 p.p. in MTF-2009Q2) and 0.19 p.p. as at the end of 2011 (0.18 p.p. in MTF-2009Q2).

**Table 5 Medium-term forecast (MTF-2009Q3) – main macroeconomic indicators**

	2008	2009	2010	2011	2009	2010	2011
	Actual	Forecast			Difference versus MTF-2009Q2		
<b>Prices (annual percentage changes)</b>							
HICP inflation (average)	3.9	1.1	1.8	2.4	-0.2	0.0	-0.1
CPI inflation (average)	4.6	1.8	2.3	3.1	-0.3	-0.2	0.2
ULC (compensation per employee at current prices / labour productivity ESA95 at constant prices)	5.3	8.9	-1.7	1.5	3.0	-1.7	-0.2
Labour productivity ESA95 (GDP at constant prices / employment ESA95)	3.5	-3.8	3.1	3.8	-1.0	0.6	0.1
Compensation per employee (current prices)	9.0	4.8	1.3	5.3	1.7	-1.1	-0.1
<b>Economic activity (annual percentage change; unless otherwise indicated)</b>							
Real GDP	6.4	-5.6	2.9	4.2	-1.4	0.6	0.1
Final consumption of households	6.1	-1.3	-0.6	3.3	-2.3	-0.8	-0.3
Final consumption of general government	4.3	4.8	3.3	2.9	2.6	1.2	0.1
Gross fixed capital formation	6.8	-10.4	2.9	1.4	-1.7	-0.3	-0.6
Exports of goods and services	3.2	-17.6	6.0	6.7	0.9	5.2	0.0
Imports of goods and services	3.3	-17.4	6.0	4.3	-0.3	5.8	-0.9
Gross real disposable income of households	7.2	1.2	0.7	3.2	-1.7	-0.1	0.1
Output gap (% of the potential output)	0.5	-8.4	-7.6	-6.9	-0.8	-0.3	0.2
<b>Labour market</b>							
Employment, based on ESA95 (annual percentage change)	2.8	-1.9	-0.2	0.4	-0.4	-0.1	0.1
Unemployment rate, LFSS-based (%)	9.6	11.2	11.9	11.9	-0.3	-0.1	-0.2
<b>Balance of payments</b>							
Economic openness (% of GDP)	166.8	136.7	139.5	140.3	-0.9	5.3	5.0
Balance of trade (% of GDP)	-1.1	-1.0	-0.9	0.8	2.0	1.6	2.3
Balance of services (% of GDP)	-0.7	-1.4	-1.2	-1.1	-0.3	-0.2	-0.3
Current account (% of GDP)	-6.5	-5.8	-5.0	-2.9	1.7	1.4	1.9
Current and capital account (% of GDP)	-5.3	-4.2	-3.0	-0.8	1.7	1.3	2.0

Source: NBS.

Note: LFSS stands for Labour Force Sample Survey.



## GDP DECLINE IN THE LIGHT OF A DEMAND OR SUPPLY SHOCK

The major disruptions that the economic crisis has brought about in the Slovak economy confirm that this crisis is demand-side in nature. The extent to which the crisis is afflicting or has afflicted the supply side of the economy, too – or whether at all – cannot yet be reliably determined. This means that equilibrium trends, as well as the current position of the economy, include a large degree of uncertainty, though this will in time be easier to identify. These structural disruptions in fact represent a breakdown of all conventional statistical methods, and even of more sophisticated methods based on economic models. It is therefore necessary to make informed adjustments based on the information available. The output gap and potential GDP are immeasurable variables and their values differ according to the type of method used and the information available or to their interdependence on other indicators of economic development. The data available at present are limited and inaccurate. The degree of uncertainty is ultimately reflected in the fact that opinions on the current state of the output gap and the level of potential output vary considerably.

The supply side of the economy may, in the current situation, be assessed in basically two ways.

1) The economic crisis is predominantly of a demand-side nature, and the supply side of the economy is affected only marginally – potential is not declining, though while the crisis lasts it may increase more slowly than it did in the pre-crisis period, and, once the crisis has receded, it may increase at the same pace as before the crisis, or more slowly or more quickly. This possibility means opening a substantially negative output gap, while the return to equilibrium levels requires the rate of growth in real GDP to be outperforming the rate of growth in potential GDP over the long term. At the same time, it means that the economy will have long-term deflationary pressures or that the sensitivity of the price level to the cyclical position of the economy has been changed by the crisis.

2) The crisis is affecting the supply side of the economy – potential output is undergoing a downward level shift during the crisis, and, once the crisis has receded, its pace of growth may be higher, lower or the same as it was before the crisis. In this case, the output gap need not be very substantial and it should take a much shorter time to close. In order for this possibility to be considered, however, it is necessary to specify which factors are expected to cause the decline in potential output.

The standard approach to the quantification of potential output involves a dual factor output function, the inputs for which are two production factors (labour and capital) and their total productivity (TFP – total factor productivity). If the economy's potential should then decline, the cause must be a change in one or more of these inputs.

In the case of capital, this may be an increase in the depreciation rate resulting from the economy's restructuring or a large amount of extraordinary depreciation arising from corporate bankruptcies. In our conditions, however, restructuring of the economy cannot yet be contemplated and information about extraordinary depreciation is not available. NBS is therefore not yet changing its hitherto assumptions regarding capital stock – the only consequence of the crisis appears in lower investments, which means that the capital stock is increasing more slowly than in previous years, but it is not declining. Potential employment is determined by the size of the workforce and the natural rate of unemployment (NAIRU). The effects of the crisis itself in this period should not affect the number of economically active persons. a slight rise in the NAIRU may reflect the return of workers from abroad. a further increase in the NAIRU may be expected in the event of restructuring the economy, which is not so far taking place. Therefore, in the current situation, a marked drop in potential employment would be unaccountable.

As regards TFP, the crisis is undoubtedly causing a decrease in the pace of technological progress. Lower expenditure on science and research along with lower investments in new technologies are



slowing down growth in total factor productivity, or causing the stagnation of technology. The reason for the sharp decline in total factor productivity would again, however, require an observed restructuring of the economy and the subsequent reallocation of resources from high-productivity sectors to low-productivity sectors, and this has not so far been happening here.

The NBS forecast only partially projects the economic crisis on to the supply side of the econ-

omy – through the slowdown in the growth of potential compared with the assumptions of the pre-crisis period. As outlined above, however, the problems related to this view, the large degree of uncertainty, and the future development that may bring arguments supporting a decline in the level of potential through one or more output function inputs, permit the possibility of subsequent forecasts taking a different view of the assumptions for the output gap and potential output.

