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EUROSYSTÉM

Medium-term forecast

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1 Summary

Slovakia's economic growth[1] in the first quarter of 2016 was slightly higher than projected in the March 2016 Medium-Term Forecast (MTF-2016Q1). Domestic demand was probably the cause of that higher growth, given that export growth slowed after its strong performance in the fourth quarter of 2015. The investment expenditure component of domestic demand did not fall as markedly as had been expected, after its substantial increase late last year. The favourable situation in the wider economy ensured net job creation, and employment increased by 0.5%.

With the current better-than-projected trends in domestic demand expected to outweigh a slight deterioration in the external environment, the GDP forecast for 2016 has been revised up to 3.3% (from 3.2% in the previous forecast). In subsequent years, economic growth is expected to accelerate moderately, reflecting strengthening domestic demand and increasing exports. There should be a notably positive impact on GDP growth from new investments that will support export performance. GDP growth is therefore projected to be 3.5% in 2017 (0.2 percentage point higher than the previous forecast) and 4.2% in 2018 (unchanged).

Employment growth is expected to fall slightly in 2016, but, as figures for the first quarter indicate, it will remain positive. Firms are also expected to increase moderately the number of hours worked per employee, as they may begin facing an increasing shortage of skilled labour. This could put upward pressure on wages, and their growth rate is expected to accelerate slightly. But while wage growth may be stronger in 2017 and 2018, its increase in real terms should be dampened by the effect of increasing inflation.

The average annual inflation rate is expected to remain negative in 2016 (at -0.3%), owing to the impact of food and energy prices. The inflation rate excluding these components is projected at 1%. Gas prices are expected to come down even further during the course of the year. Food prices should fall in 2016 in line with agricultural commodity price developments in the European market. From the end of the year, however, the inflation rate is expected to reflect the stronger impact of domestic and import prices, as well as the impact of currently elevated oil prices. The inflation rate should therefore increase over the rest of the projection horizon and it is expected to be close to 2% by the end of the period.

The outlook for the real economy is subject to the downside risk of lower than projected growth in foreign demand. The risks to the inflation forecast are balanced.

Table 1 GDP and inflation projections (annual percentage changes)

	MTF-2016Q2			Difference vis-à-vis MTF-2016Q1		
	2016	2017	2018	2016	2017	2018
GDP	3.3	3.5	4.2	0.1	0.2	0.0
HICP	-0.3	1.2	1.8	-0.1	-0.1	-0.1
Net inflation excluding automotive fuel	1.0	1.6	2.2	0.0	0.0	-0.2

Sources: SO SR and NBS.
Note: Net inflation excluding automotive fuel refers to the HICP inflation rate excluding food, energy and administered prices. This rate is better than the headline HICP rate at reflecting domestic prices.

1 *The first-quarter GDP figure used in this Medium-Term Forecast (MTF-2016Q2) is the flash estimate released in May (0.7% quarter-on-quarter), which does not include details of the composition of GDP growth. When the GDP composition was published in June, the GDP growth rate for the first quarter, in quarter-on-quarter terms, was revised up to 0.8%.*

2 Current developments in the external environment and in Slovakia

Stronger than expected euro area growth in the first quarter

The euro area economy grew in the first quarter of 2016 by 0.5 % in quarter-on-quarter terms, after growing by 0.3% in the fourth quarter of 2015. All of the major national economies in the euro area contributed to the overall GDP growth. According to the available indicators, the first-quarter growth was driven mainly by domestic demand, with positive contributions from both consumer and investment expenditure. GDP growth accelerated more than twofold in Germany (to 0.7%) and increased also in France (0.5%), the Netherlands (0.5%) and Italy (0.3%). In Spain the growth rate remained unchanged from the previous quarter, at a solid 0.8%. The available leading indicators are not providing a clear picture of the period ahead, but it is generally expected that economic growth will slow in the second quarter. The annual HICP inflation rate in April was -0.2% (after 0.0% in March). The downward trend in energy prices remained strong, while a slowdown in services price inflation was caused in part by Easter-related calendar effects.

Slovak economic growth[2] remained strong despite a drop in investment

The Slovak economy's quarter-on-quarter growth slowed, as expected, in the first quarter[3], as the impact of EU funds absorption faded. Although GDP growth fell, it was still higher than the MTF-2016Q1 projection of 0.6%, with the investment component falling by less than had been expected. At the same, however, weak monthly figures for retail sales imply that private consumption growth undershot the projection, which had also factored in the positive impact of administrative measures (gas bill rebates and a minimum wage increase). Export growth was lower in the first quarter than in the previous period, and import growth also decelerated. Net exports, denoting the overall impact of the external environment, made a positive contribution to GDP growth in line with the MTF-2016Q1 projection.

The labour market situation improved more strongly than expected. Employment growth for the first quarter was 0.5%, which exceeded the March projection. The faster job growth is probably attributable to the robust economic situation and to job creating projects, since employment also increased in the public sector. The sectors reporting the strongest employment growth were construction and industry[4]. The unemployment rate continued to decrease. Nominal wage growth was solid in the first quarter, but despite a climate of favourable consumer sentiment and falling prices, it has yet to have a significant upward impact on private consumption. It thus seems that real income growth has passed through to the saving ratio.

The decline in the price level accelerated in the first quarter, with prices of automotive fuel and food decreasing the most. This also reflected a reduction in VAT on selected foodstuffs and the impact of deflationary energy prices. Headline inflation was less negative in April, due to increases in prices of cigarettes, certain seasonal goods, services, and in particular automotive fuel.

2 *For further details, see the "Report on the Slovak Economy – June 2016"*
3 *The GDP growth rate for the fourth quarter of 2015 was 1.0%.*
4 *Based on monthly data for selected sectors.*

3 Technical assumptions of the forecast[5]

3.1 Commodities and the exchange rate

Given the appreciation trend in the **exchange rate**[6] of the euro against the US dollar since the cut-off date for the previous forecast, this MTF-2016Q2 forecast assumes an average exchange rate of USD 1.14 per euro, around 4% stronger than the March assumption. The nominal effective exchange rate (NEER), calculated with respect to Slovakia's 15 most significant trading partners, is 0.3% higher in this forecast than in the previous forecast.

The **Brent crude oil price** in US dollars maintained an upward trend after the cut-off date for the March forecast. Based on the path implied by futures markets, the price of a barrel Brent crude oil is assumed to be USD 43.4 in 2016, USD 49.1 in 2016, and USD 51.3 in 2018.

The assumptions for the oil price in euro have been revised up, by 8% in 2016 and by around 5% in 2017 and 2018.

3.2 Foreign demand

The economic recovery in the euro area is expected to continue, supported by the ECB's accommodative monetary policy stance, low oil prices, improving labour market conditions and some fiscal easing in 2016. Progress achieved in deleveraging across sectors should also support domestic demand growth over the projection horizon. Global trade is expected to strengthen gradually and thereby support export growth. Private consumption expenditure is projected to grow strongly in 2016, and to remain resilient beyond. Nominal disposable income growth should gradually accelerate, supported by employment growth and accelerating nominal compensation per employee. Real disposable income growth is expected to accelerate in 2016, before losing momentum in 2017 and beyond, mostly reflecting the pattern of energy price inflation Low financing costs, a pick-up in loan growth and moderately rising household net worth, all reinforced by the ECB's monetary policy measures, should support private consumption and be only partly offset by the adverse impact of lower net interest receipts on disposable income. In addition, progress achieved in deleveraging should also support private consumption. A sustained recovery of residential investment is expected, supported by the projected acceleration of nominal disposable income growth and very low mortgage rates. Business investment is expected to continue its recovery, supported by the ECB's very accommodative monetary policy stance, the projected strengthening of both domestic and external demand, the need to modernise capital stock after several years of subdued investment, and the low cost and wide availability of external financing. Nevertheless, the recovery of business investment will continue to be dampened by rigidities in product and labour markets. Extra-euro area exports are projected to increase in line with euro area foreign demand, while extra-euro area export market shares are expected to remain broadly unchanged over the projection horizon. The negative output gap is expected to narrow steadily over the projection horizon, reflecting only moderate potential output growth. In annual terms real GDP is expected to grow by 1.6% in 2016 and by 1.7% in 2017 and 2018. Compared with the ECB's projections published in March, the growth forecast for 2016 has been revised up by 0.2 percentage point, the forecast for 2017 remains unchanged, and the forecast for 2018 is lower by 0.1 percentage point[7].

Amid further weakening of the global economic outlook caused by falling growth in emerging market economies and slow recoveries in advanced economies, the projections for **Slovakia's foreign demand** in 2017 and 2018 have been revised down (the projection for 2016 was not lowered, since this year's foreign demand is expected to reflect the impact of better than expected developments in 2015). The assumptions for Slovakia's foreign demand growth are 3.6% in 2016, rising to 4.3% in 2017 and 4.6% in 2018.

5 The technical assumptions of this Medium-Term Forecast are based on the „June 2016 Eurosystem staff macroeconomic projections for the euro area", with a cut-off date of 10 May 2016.

6 The bilateral EUR/USD exchange rate is assumed to remain unchanged over the projection horizon at the average level prevailing in the ten-working day period ending on the cut-off date.

7 According to the „June 2016 Eurosystem Staff Macroeconomic Projections for the Euro Area".

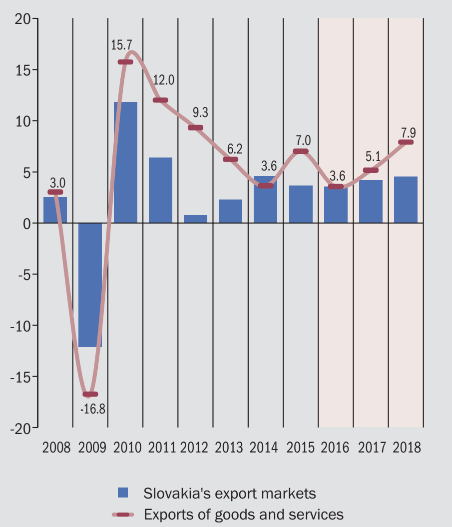
4 Macroeconomic forecast for Slovakia

4.1 Economic growth

Export growth to slow temporarily this year

Weakening foreign demand during 2016 will exert a drag on the year's export growth. Over the projection horizon, however, export growth is projected to increase, supported by accelerating foreign demand (albeit not as fast as previously projected) and, from 2018, by the launch of production at a new car plant. The economy should therefore increase its export market shares appreciably.

Chart 1 Forecast for foreign demand and for Slovak exports of goods and services (annual percentage changes; constant prices)



Sources: SO SR, ECB and NBS calculations.

Investment to reflect drop in EU funds absorption in 2016

Reduced absorption of EU funds is expected to be the main cause of significantly slower growth in investment demand in 2016. Its impact should be partly offset by private investment, which will be buoyed by a favourable economic outlook, profit growth and an accommodative monetary policy stance. Given the increasing number of flats under construction, residential investment is expected to rise. Later in the projection period, new investment in the car industry will have a positive impact, as should a scheduled reduction in corporation tax, the construction of a Bratislava road bypass, and a gradual pick-up in the absorption of EU funds.

Private consumption to pick up appreciably

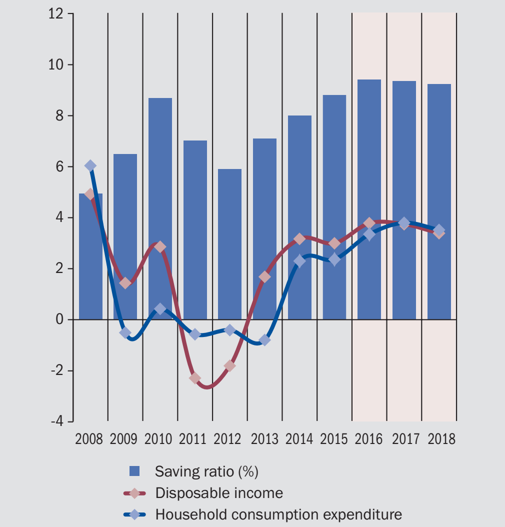
Private consumption is expected to accelerate in 2016 as the favourable labour market situation has an increasingly upward impact on income. Recent one-off administrative measures have not yet fed through to private consumption, but may do so gradually over the rest of the year. Real incomes are being driven up by falling prices and relatively strong growth in employment and in compensation per employee. Compensation is expected to be further supported in 2017 by a reduction in corporation tax. Another notable boost to private consumption is expected to be provided by 6% increases teachers' salaries scheduled for September 2016 and January 2018. The contribution of private consumption to GDP growth is expected

Table 2 Investment (annual percentage changes; constant prices)

	2015	2016	2017	2018
Gross fixed capital formation in total	14.0	0.9	5.9	5.9
– private sector	5.2	9.4	7.9	5.5
– of which excluding PPP projects[1)]	5.2	9.4	7.1	5.4
– public sector	55.3	-26.4	-3.8	8.0

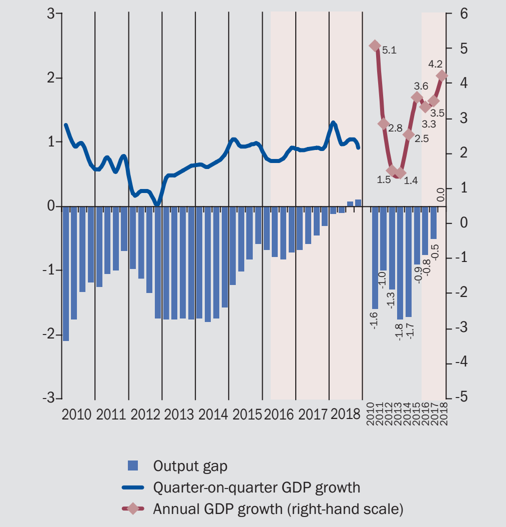
Sources: SO SR and NBS calculations.
1) NBS assumes that the Bratislava road bypass, public-private partnership (PPP) project, will, for methodological purposes, be treated not as an asset in the government balance sheet but as a private investment.

Chart 2 Household income and consumption (annual percentage changes; constant prices) and the household saving ratio (percentages)



Sources: SO SR and NBS.

Chart 3 GDP growth and the output gap (percentages)



Sources: SO SR and NBS.

to be significantly positive over the projection period. Private consumption growth is expected to slow towards the end of the period owing mainly to the projected pick-up in inflation. If the current historically high household saving ratio falls moderately, it will imply a further source of funds for private consumption.

Economic growth to exceed 3% and to accelerate in 2018

Foreign demand supported by an accommodative monetary policy stance is expected to continue accelerating throughout the forecast period, with a positive impact on investment and on Slovak exports. The economy should also benefit from robust labour market conditions, with their upward impact on income and subsequently private consumption. **Slovakia's economic growth in 2016** is projected to be **3.3%** and to be balanced in its composition. The growth rate is expected to increase moderately in **2017**, to **3.5%**, reflecting mainly the positive impact of domestic demand. **In 2018** GDP growth is expected to accelerate to **4.2%,** supported in part by the launch of production at a new car plant. The economy is assumed to grow at a pace that will result in **closure of the output gap by the end of the projection period.**

4.2 THE LABOUR MARKET

Labour market to continue improving

First quarter data indicate that employment growth will continue the favourable trend observed in 2015. The slowdown in job creation in the first three months of 2016 was more moderate than projected. This, and the fact that employers remain optimistic in their assessments of the employment situation, suggests that job growth in 2016 will be only slightly lower than the previous year. The continuing strength of employment growth over the projection period implies that some firms may face a shortage of skilled labour. This could push up wages and reduce profit margins. It is also envisaged that firms will increase hours worked per employee and employ more older people and people from abroad.

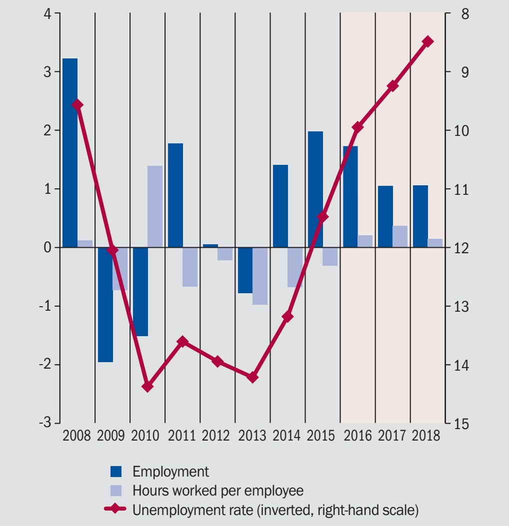
The unemployment rate is expected to continue its falling trend over the projection period, down to around 8.5% by the end of 2018.

Table 3 Wages (annual percentage changes)

	2015	2016	2017	2018
Nominal labour productivity	1.2	1.5	3.9	5.1
Whole economy – nominal	2.9	3.4	4.1	4.0
Whole economy – real	3.2	3.7	2.9	2.1
Private sector – nominal	2.8	3.0	4.3	4.1
Private sector – real	3.1	3.3	3.0	2.2
Public administration, education and health care – nominal	3.3	5.1	3.6	3.5
Public administration, education and health care – real	3.7	5.4	2.4	1.6

Sources: SO SR and NBS calculations.
Note: Deflated by the CPI. The sector ‚Public administration, education and health care' corresponds to sections O, P and Q of the SK NACE Rev. 2 statistical classification of economic activities. Nominal average wage growth in the general government sector (ESA S.13) is projected to be 5.4% in 2016, 3.7% in 2017 and 3.6% in 2018.

Chart 4 Employment, hours worked (annual percentage changes), and the unemployment rate (annual percentage changes)



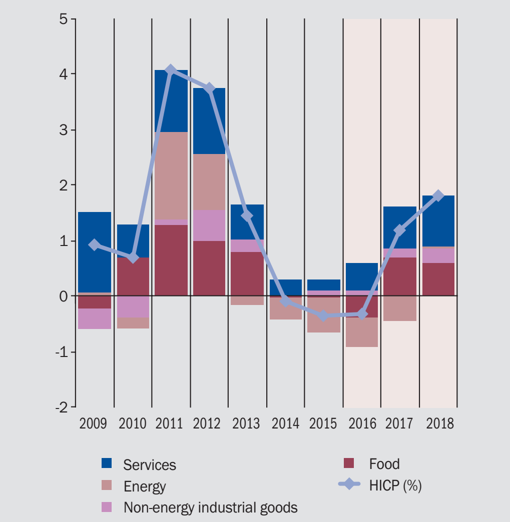
Sources: SO SR and NBS.

4.3 PRICE DEVELOPMENTS

INFLATION TO REMAIN NEGATIVE IN 2016 AS A WHOLE, BUT TO RISE GRADUALLY IN THE LAST QUARTER OF THE YEAR AND BEYOND

The average annual inflation is expected to be slightly negative in 2016 for a third successive year, reflecting external developments in commodity prices. Headline inflation should include a decline in energy prices that will be accentuated by expected gas price reductions during the course of the year. Inflation is expected to increase in subsequent years, with prices of automotive fuel and food increasing due to the fading impact of the price slump in agricultural commodities and oil. It is also expected that services price inflation will rise in conjunction with increasing demand and that imported inflation will pick up, too. Expected reductions of regulated energy prices in 2017 should exert a moderate drag on headline inflation, but as the impact of low energy commodity prices fades in 2018, inflation should approach the 2% target level.

Chart 5 Annual HICP inflation and its components (percentages; percentage point contributions)



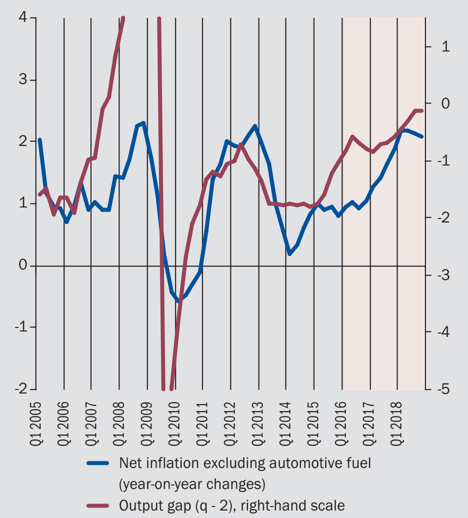
Sources: SO SR and NBS.

Table 4 Inflation components (annual percentage changes)

	Average 2004-2008 (pre-crisis period)	Average 2010-2014 (post-crisis period)	2014	2015	2016	2017	2018
HICP	4,1	2,0	-0,1	-0,3	-0,3	1,2	1,8
Food	3,6	3,1	-0,2	-0,1	-1,5	2,9	2,5
Non-energy industrial goods	0,2	0,3	0,0	0,4	0,3	0,6	0,9
Energy	8,3	2,3	-2,2	-3,9	-3,6	-3,0	0,2
Services balance	5,3	2,5	1,0	0,6	1,6	2,4	2,9
Net inflation excluding automotive fuel	1,8	1,0	0,5	0,9	1,0	1,6	2,2

Sources: SO SR and NBS calculations.
Note: The ‚neutral level' of price growth (i.e. beta-convergence) for Slovakia is estimated to be around 2.3%.

Chart 6 Net inflation excluding automotive fuel, and the output gap (percentages)



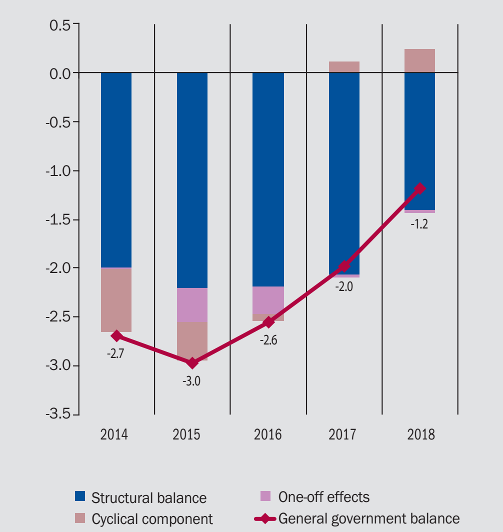
Sources: SO SR and NBS calculations.

5 Fiscal outlook

Deficit reduction stemming from the economic cycle and moderated spending growth

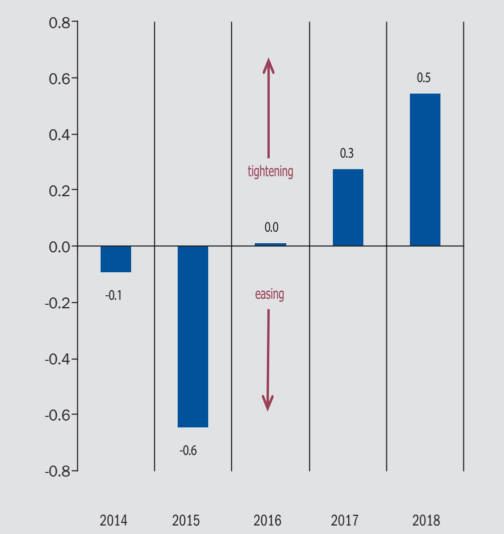
Slovakia's fiscal deficit, after hitting the excessive deficit threshold of 3.0% of GDP in 2015, is expected to fall gradually over the projection horizon, from a projected 2.6% in 2016 to 1.2% in 2018. This trend is predicated mainly on continuing economic growth supported also by domestic sectors, on a low inflation rate (inflation-indexed social expenditure) and on low interest costs. These assumptions for the fiscal outlook also take into account government plans that are expected to impact the deficit both positively and negatively. On the one hand, the retention of the special levy on regulated industries should boost revenues; on the other hand, further amendments to tax legislation (a reduction in the corporate tax rate, to 21%) are expected to dampen revenues, but to have an upward effect on private investment and wage growth. A scheduled salary increase for teachers from 1 September 2016 will contribute around 1 percentage point to public sector wage growth, and there is expected to be a further hike in teachers' salaries as of 1 January 2018. In the updated objectives of the *Stability Programme of the Slovak Republic for 2016–2019* (SP)[8], fiscal targets are lowered and achievement of the EU medium-term objective (MTO) is postponed until 2019.

Chart 7 Breakdown of the general government balance (percentages of GDP)



Sources: SO SR and NBS.
Note: One-off factors include non-cyclical effects that have a temporary impact on the general government balance and should be eliminated in the future. The principal such effect in 2015 is financial corrections to the absorption of EU funds.

Chart 8 Fiscal stance (percentages of GDP)



Sources: SO SR and NBS.
Note: Annual rate of change in the cyclically adjusted primary balance. Excluding the impact of EU funds outside the public sector.

The fiscal stance[9] had an expansive impact on the economy in 2015, owing mainly to the substantial acceleration of investment. The fiscal impact in 2016 is expected to be neutral, as the expansive effect of revenue measures should be offset by restraint on the expenditure side (not including public-private partnership arrangements). Fiscal policy is expected to be tightened in subsequent years, especially in terms of projected spending, and this should improve fiscal performance.

Falling growth in government spending

As in the previous forecast, the growth rate of general government financial consumption expenditure is expected to fall over the projection

8 *The SP fiscal deficit target remains unchanged for 2016, at 1.9% of GDP, and is set at 1.3% of GDP for 2017 and 0.4% of GDP for 2018. Compared with the previous SP, the fiscal target is eased from 2017 and MTO achievement is postponed until 2019. NBS projects a fiscal gap of 0.6% of GDP in 2016, 0.7% of GDP in 2017 and 0.8% of GDP in 2018. Further assessment of the SP is provided in this Analytical report on the Stability Programme for 2016-2019*

9 *Annual rate of change in the cyclically adjusted primary balance.*

Table 5 Fiscal developments and forecasts (annual percentage changes and at constant prices, unless otherwise stated).

	2015	2016	2017	2018
General government final consumption	3.4	2.4	1.1	1.0
Government investment[1)]	55.3	-26.4	-3.8	8.0
General government balance (percentages of GDP)	-3.0	-2.6	-2.0	-1.2
Fiscal stance[2)] (year-on-year change in percentage points)	-0.6	0.0	0.3	0.5
Gross debt (percentages of GDP)	52.9	53.5	53.3	52.1

Sources: SO SR and NBS calculations.
1) NBS assumes that the Bratislava road bypass public-private partnership (PPP) project will, for methodological purposes, be treated not as an asset in the government balance sheet but as a private investment.
2) Annual rate of change in the cyclically adjusted primary balance.

horizon, owing to restrained growth in nominal expenditure as well as to a gradual increase in inflation.

Investment activity in the public sector was far lower in the first quarter of 2016 than in the fourth quarter of 2015, due to the lower absorption of EU funds under a new EU programming period. Government investment is expected to continue falling in year-on-year terms into 2017, and is not expected to pick up again until 2018, when the absorption of EU funds gains momentum again.

Government debt expected to cross temporarily the debt brake threshold of 53% of GDP.

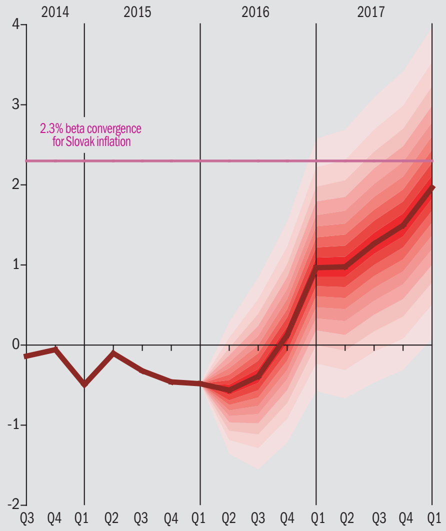
The projection for government debt in 2016 has been revised up slightly, to 53.5% of GDP. Although the government deficit is projected to fall, the funding of the deficit is not expected to use the same amount of liquid assets as in previous years. Improvements in the primary balance should have a favourable impact on funding requirements. This, together with low interest rates and, to a greater extent, nominal GDP growth, is expected to push the debt down to 52% of GDP by the end of 2018.

6 Risks to the forecast

The main risk to the outlook for the real economy over the medium term is the downside risk of lower than expected foreign demand. Another risk to the forecast could be if the United Kingdom votes to leave the European Union in a referendum being held in June. On the fiscal front, a downside risk to the deficit targets set out in the Stability Programme is the adoption of additional deficit-reducing measures.

The risks to the inflation outlook are balanced. The upside risk of a higher than projected increase in oil prices is offset by the downside risk of weaker foreign demand.

Chart 9 HICP inflation forecast (percentages)



Sources: SO SR and NBS.

Table 6 Risks to the forecast

	2016	2017	2018
GDP	Balanced	↓ Foreign demand	↓ Foreign demand
Inflation	Balanced	Balanced	Balanced

Source: NBS.

7 Comparison with the previous forecast

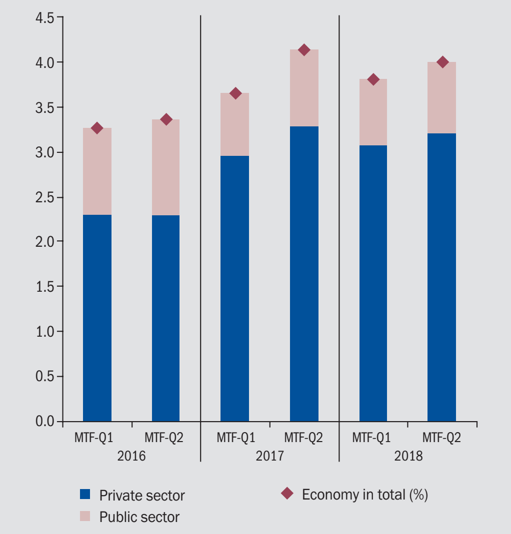
Economic growth forecast adjusted up slightly

Compared with the March Medium-Term Forecast (MTF-2016Q1), this forecast includes a **further downward revision of projected global economic** growth over the projection period, and that is reflected in a lower forecast for Slovakia's export performance. Nevertheless, the deterioration in foreign demand is more than offset by better than expected developments on the domestic side of the economy (including the labour market), and therefore the GDP projections for 2016 and 2017 have been revised up. As for the projected composition of GDP, the most marked increase is in investment demand. Private consumption over the medium term should experience a greater upward impact, via the income channel, from a labour market that is strengthening in terms of both employment and wages.

Improved labour market outlook

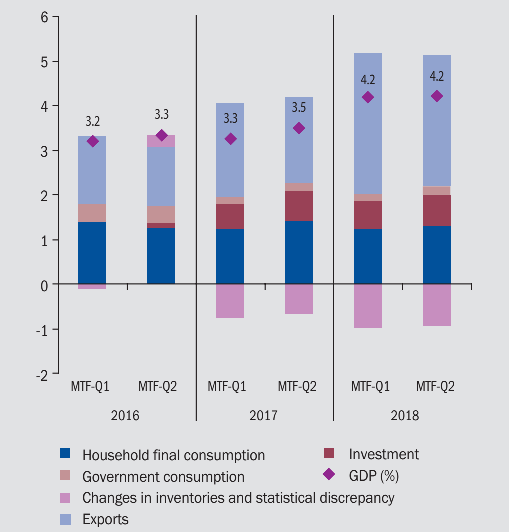
The recent situation in the labour market has been more favourable than projected in the previous forecast. As a result the projection for employ-

Chart 11 Average wage in the economy and contributions from the public and private sectors (annual percentage changes; percentage point contributions)



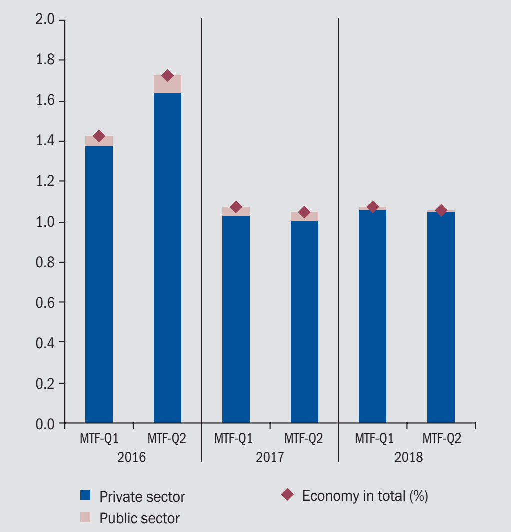
Sources: SO SR and NBS.

Chart 10 GDP growth and its components[10] (annual percentage changes; percentage point contributions)



Sources: SO SR and NBS.
Note: The item ,Changes in inventories and statistical discrepancy' includes uncategorised imports that remained after the calculation of import intensity.

Chart 12 Employment growth in the economy and contributions from the public and private sectors (annual percentage changes; percentage point contributions)



Sources: SO SR and NBS.

10 The composition of GDP growth is calculated as the contributions of components to GDP growth after deducting their import intensity. In this case the calculation uses the constant import intensity of the different GDP components (household final consumption – 30%, government consumption – 7%, investment – 50%, and exports – 62.5%). Remaining imports were included under changes in inventories and the statistical discrepancy.

ment growth in 2016 has been adjusted upwards. In addition, this forecast factors in increases in teachers' salaries scheduled for September of this year and January 2018 and an improved outlook for the domestic economy. The upward revision of the wage growth forecast also reflect the impact of an announced reduction in corporation tax, which should translate into higher business investment over the medium term.

Inflation forecast revised slightly down over the projection period

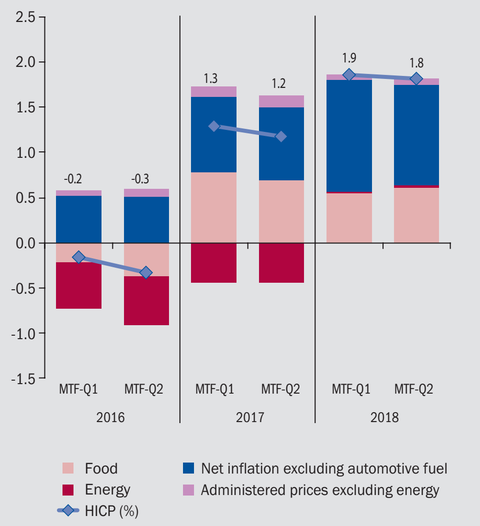
In the light of a greater than expected fall in prices in the first four months of 2016 and expected reductions in gas prices in the third quarter of the year, the average annual inflation rate forecast for 2016 is slightly more negative in this forecast than in the previous forecast. Due to lower technical assumptions for prices of agricultural commodities this year and, to a lesser extent next year, the food price inflation projections for 2016 have been revised down, and a marginally lower inflation is expected also in 2017. This is reflected in a marginal downward revision of the headline inflation projection for 2017.

Fiscal stance outlook revised to neutral for this year and less restrictive in 2017

Compared with the March forecast, the fiscal stance projection in this forecast is 0.3% tighter for 2016 – therefore neutral overall – and 0.3% less restrictive in 2017[11]. The lower inflation forecast translates into a slightly higher projection for real government consumption expenditure. That upward revision also reflects the impact of new assumptions for increases in teachers' salaries.

The revised forecast for government debt stems from a methodological change under which some firms have been recategorised as public sector entities (most notably the Slovak Rail Company – ŽSSK a. s.) and from a decrease in nominal GDP (denominator effect).

Chart 13 HICP inflation and its components (annual percentage changes; percentage point contributions)



Sources: SO SR and NBS.

Box 1

NON-STANDARD MONETARY POLICY MEASURES AND THEIR PROJECTED IMPACT ON THE SLOVAK ECONOMY

In pursuit of its price stability mandate, the European Central Bank (ECB) has been expanding its array of non-standard monetary policy measures since 2015. In particular, the expanded asset purchase programme (APP) is designed to loosen monetary policy conditions and, via transmission channels, to economic activity in the euro area; the aim is to stimulate investment activity and household final consumption, and to increase the inflation rate towards its target level. These measures were unveiled in three separate packages.

In January 2015 the ECB's Governing Council announced that it would be expanding the ECB's existing asset purchase programme (for private sector securities) to include a new public sector asset purchase programme (PSPP) that involves buying bonds issued by euro area central governments, agencies

11 Not including private sector absorption of EU funds.

and European institutions in the secondary market. The PSPP was launched in March, and the amount of combined monthly purchases in public and private securities under the expanded APP was set at €60 billion. The purchases were scheduled to be carried out until at least September 2016 and in any case until the Governing Council saw a sustained adjustment in the path of inflation that was consistent with its aim of achieving inflation rates below, but close to, 2% over the medium term.

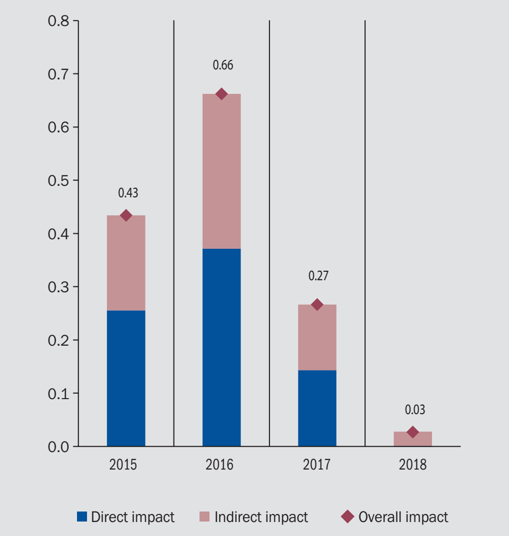
In December 2015 the ECB reassessed its non-standard measures and extended the APP monetary so that purchases will be carried out until the end of March 2017. This horizon may be extended further if necessary. The ECB also decided to reinvest the principal payments on the securities purchased under the APP as they mature, for as long as necessary

At its meeting in March 2016 the Governing Council decided to expand the monthly purchases under the APP from €60 billion to €80 billion, with effect from April 2016. These purchases should be carried out at least until the end of March 2017, and possibly longer. In addition, the APP was further expanded to include a new corporate sector purchase programme (CSPP), with purchases under the CSPP to start towards the end of the second quarter of 2016. The Governing Council also decided to launch a new series of four taarget-ed longer-term refinancing operations (TLTRO II), beginning in June 2016.

The ECB's non-standard measures may affect the Slovak economy through both direct and indirect channels. The direct channels may include depreciation of the EUR/USD bilateral exchange rate, the nominal effective exchange rate for Slovakia, and transmission effects through financial channels (such as, for example, the adjustment of interest rates or loosening of credit conditions). The indirect impact of non-standard measures on the Slovak economy should include a pick-up in export markets, assuming that the measures have a favourable effect on economic developments in the euro area.

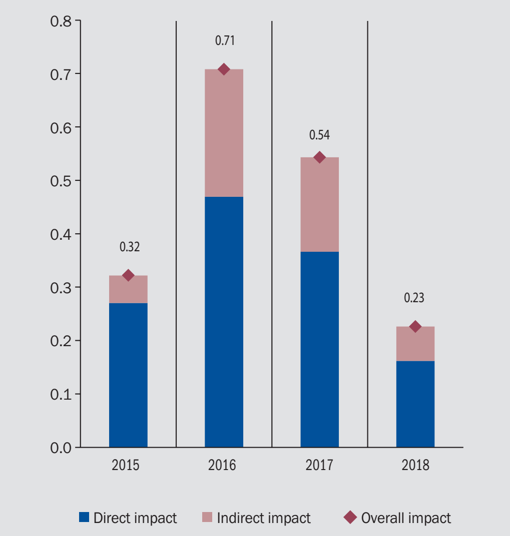
The impact of the ECB's non-standard measures (NSMs) on the Slovak economy has been estimated using a series of model simulations that factor in both the direct and secondary effects of the measures. The results are presented in the following charts.

Chart A Estimated impact of non-standard measures on GDP growth (percentage points)



Source: NBS.

Chart B Estimated impact of non-standard measures on HICP inflation (percentage points)



Source: NBS.

The overall cumulative impact of the NSMs on Slovakia's economic growth is estimated to be 1.39 percentage points, of which just under one-half of that impact is indirect (accounted for by stronger growth in the euro area).

The cumulative impact of the NSMs on the HICP inflation rate is estimated at 1.8 percentage points. This impact is largely made through direct channels.

The strongest impact is made through the exchange rate channel. In the current climate, however, actual exchange rate transmission may be lower and therefore the simulated impact on inflation may be seen as closer to the upper estimate.

Since the effects of the NSMs are estimated using model simulations, the estimates should be treated only as indicative results.

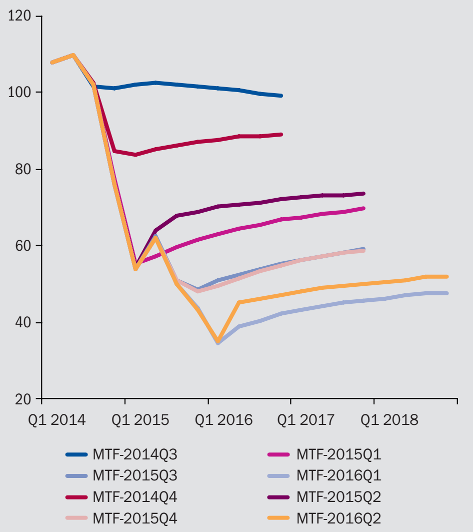
Box 2

SCENARIO OF A NON-ACCELERATING EXTERNAL ENVIRONMENT

The projected upward trajectory of inflation in Slovakia is based largely on technical assumptions for developments in the external environment[12]. NBS simply adopts most of these assumptions. For several consecutive periods now, however, it has been apparent that these assumptions, especially those for inflation, are not being fulfilled. Prices of commodities (energy and non-energy) in particular have been behaving unpredictably.

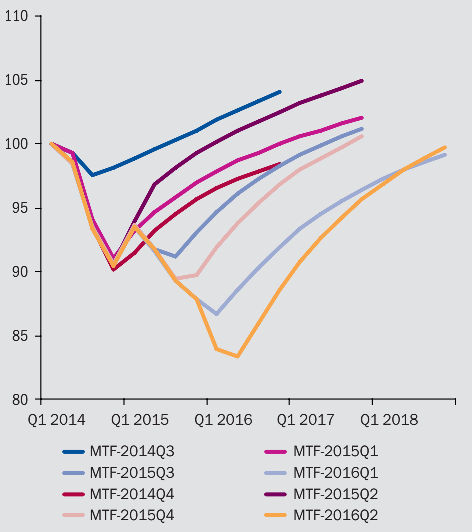
Changes in assumptions for part of the external environment

Chart A Assumptions for the oil price in NBS forecasts (USD per barrel)



Sources: Bloomberg and NBS.

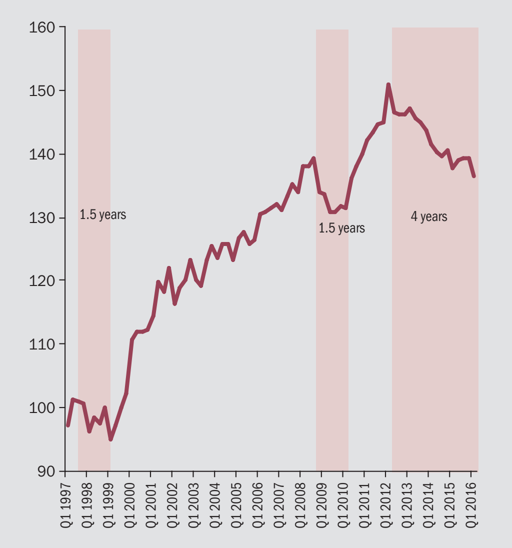
Chart B Assumptions for agricultural commodities in NBS forecasts (index: Q1 2014 = 100)



Sources: Bloomberg and NBS.

12 Assumptions for the external environment include assumptions used in the macroeconomic forecast for prices of oil, food and other foreign goods and services, for exchange rates and for foreign demand.

Chart C Import deflator (index: 1997 = 100)



Sources: NBS.

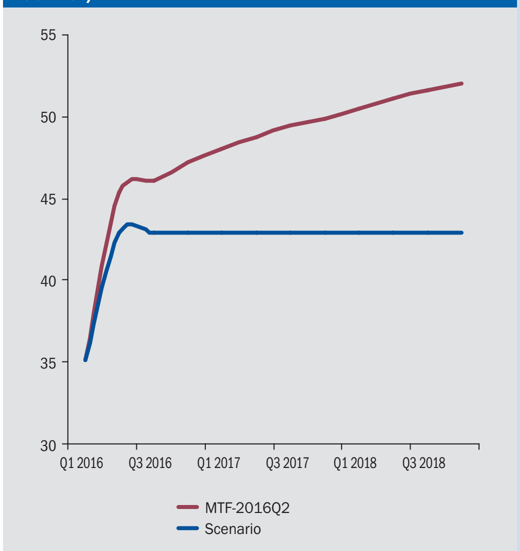
At the same time, domestic inflation is regularly overestimated in several of the subsequent periods. It may be supposed that revisions to figures for the external environment account for part of the regularly positive forecast error.

The current period of continuous decline in imported inflation in Slovakia is the fourth since 1998 and the longest in the country's history.

The purpose of the scenario presented here is to determine the extent to which current assumptions for the external environment are affecting the forecast for domestic inflation and economic growth. This scenario of a non-accelerating external environment therefore quantifies the domestic inflation rate and economic activity growth under the assumption that domestic economic indicators are not subject to any impulses from the external environment that would accelerate them and that inflation rates abroad remain at their long-standing low levels.

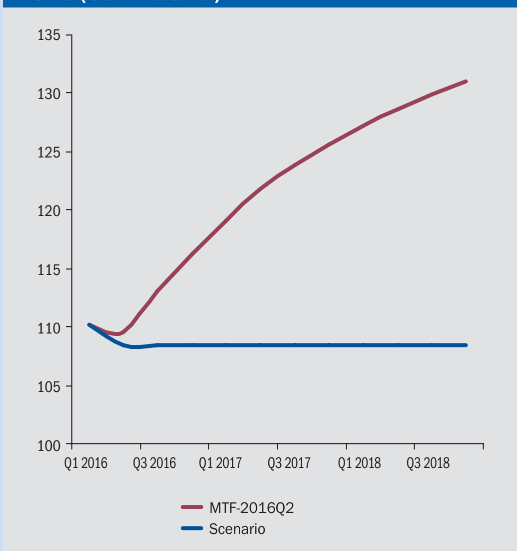
Technical assumptions of the scenario

Chart D Oil price (USD per barrel) fixed at the level of April 2016 (USD 42.86 per barrel)



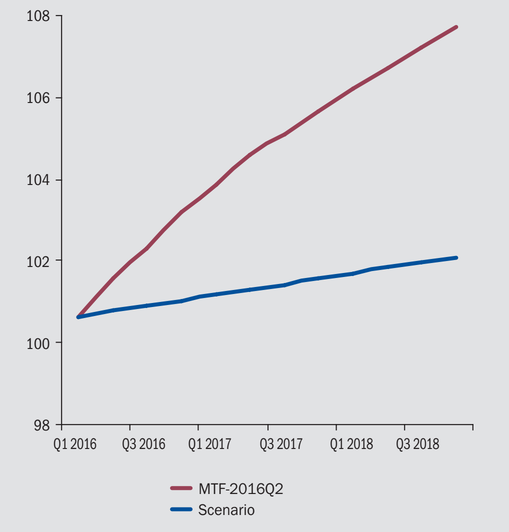
Sources: ECB, Bloomberg and NBS.

Chart E Agricultural commodity prices (index: 2010 = 100) fixed at the level of April 2016 (USD 108.49)



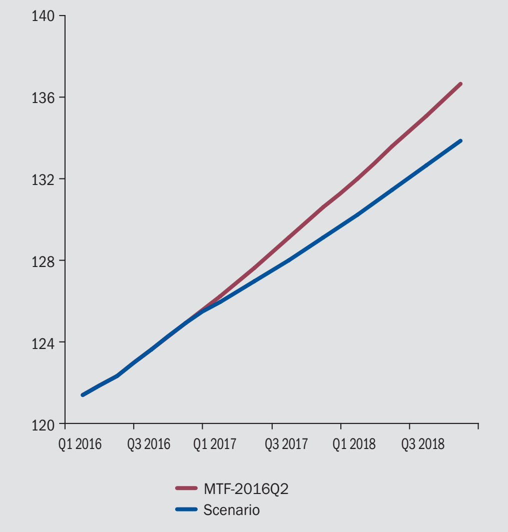
Sources: ECB, Bloomberg and NBS.

Chart F Aggregate foreign prices (index: 2010 = 100) at a growth rate fixed at the 2015 level (0.5%)



Sources: ECB, Bloomberg and NBS.
Note: Foreign prices – rival prices in imports, i.e. weighted average deflators of trading partners' exports to Slovakia.

Chart G Foreign demand (index: 2010 = 100) at a growth rate fixed at the 2015 level (3.6%)



Sources: ECB, Bloomberg and NBS.
Note: Foreign demand – weighted average amount of Slovakia's exports to trading partners.

Table A Results of the non-accelerating external environment scenario (annual percentage changes)

		2016	2017	2018
GDP	MTF-2016Q2	3.3	3.5	4.2
	scenario	**3.3**	**3.2**	**3.6**
HICP inflation	MTF-2016Q2	-0.3	1.2	1.8
	scenario	**-0.4**	**0.7**	**1.1**
HICP inflation excluding energy and food	MTF-2016Q2	1.0	1.5	1.9
	scenario	**1.0**	**1.4**	**1.5**

Sources: NBS.

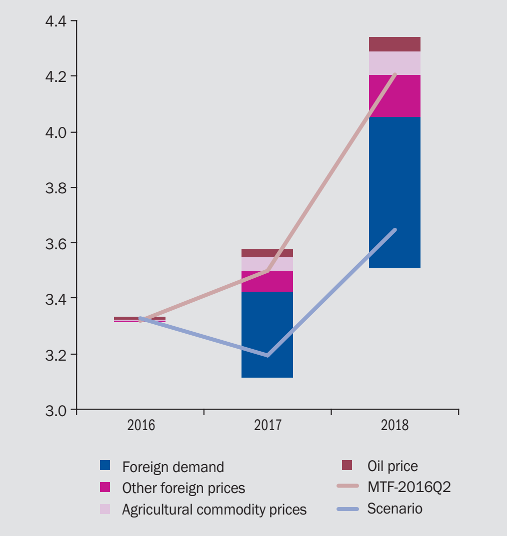
Under the non-accelerating external environment scenario, the HICP inflation is lower by 0.1 percentage point in 2016, by **0.5** percentage point in 2017 and by **0.7** percentage point in 2018. Stagnating prices of agricultural commodities and oil have the strongest disinflationary impact, not only owing to their direct weighting in the consumer basket, but also to indirect cost factors passed through to services linked to them.

Under the scenario, the HICP inflation rate excluding energy and food remains unchanged in 2016 amid slower growth rates in the external environment, but it then falls by **0.1** percentage point in 2017 and by **0.4** percentage point in 2018. The most significant transmission channel between the non-accelerating external environment and domestic inflation adjusted for energy and food prices is the demand channel – with slowing foreign demand growth having a downward impact on export performance, which in turn results in lower economic activity growth, household income and domestic demand. Lower upward pressure on the price level owing to the slowdown in foreign demand is not very significant in 2016-2017, but that is largely because the foreign demand path is almost identical with the baseline projection in this forecast (MTF-2016Q2) and in the simulated scenario at the beginning of the horizon. The strong transmission via the demand channel reaches its peak in 2018. In 2017 and 2018 inflation adjusted for energy and food prices also reflects the projected stagnation in prices of agricultural commodities and oil, due to the above-mentioned pass-through of low costs to restaurant services and other cost-related services.

In the simulation for 2016 there is no pass-through to Slovakia's economic growth from weaker growth in the external environment. In subsequent years, however, growth is the positively affected by low prices of oil and agricultural commodities, as their upward impact on income strengthens domestic demand. This impact, however, is outweighed by the downward impact of other foreign prices on net exports, through the impact of these prices on both exports and imports. Exports also come under downward pressure from non-accelerating foreign demand. The combined negative impact on GDP growth of net exports and the other factors mentioned above is 0.3 percentage point in 2017 and 0.6 percentage point in 2018. Even after deducting the impact of external assumptions, GDP growth remains relatively high in 2018, although that outlook is based on the expected launch of production at a new car plant established by Jaguar Land Rover.

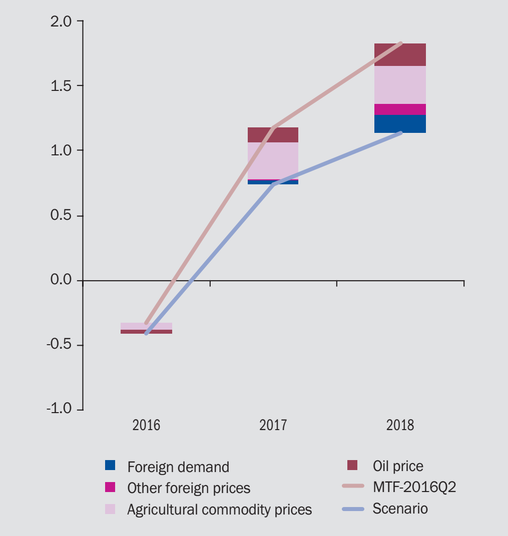
Illustrated results of the non-accelerating external environment scenario

Chart H HDP (annual percentage changes)



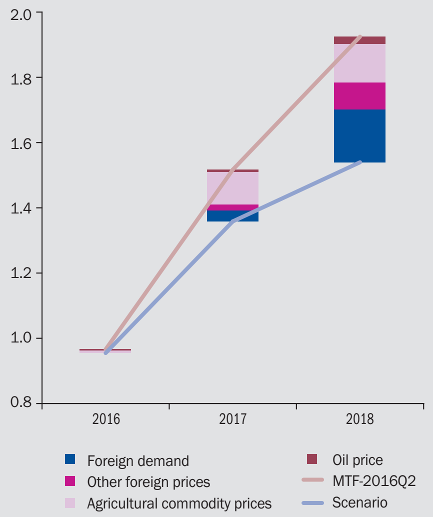
Source: NBS.

Chart I HICP inflation (annual percentage changes)



Source: NBS.

Chart J HIC inflation excluding energy and food (annual percentage changes)



Source: NBS.

It may be concluded that if the risk of a prolonged non-accelerating external environment materialises, it may well be necessary to revise down projections for growth in the domestic price level (and GDP) in line with the results of this scenario.

Table 7 Medium-Term Forecast (MTF-2016Q2) for key macroeconomic indicators

Indicator	Unit	Actual	MTF-2016Q2			Difference versus MTF-2016Q1		
		2015	2016	2017	2018	2016	2017	2018
Prices								
HICP inflation	annual percentage changes	-0.3	-0.3	1.2	1.8	-0.1	-0.1	-0.1
CPI inflation	annual percentage changes	-0.3	-0.3	1.2	1.9	-0.2	-0.1	0.0
GDP deflator	annual percentage changes	-0.3	-0.1	1.5	1.9	-0.4	-0.4	-0.1
Economic activity								
Gross domestic product	annual percentage changes, constant prices	3.6	3.3	3.5	4.2	0.1	0.2	0.0
Final consumption of households	annual percentage changes, constant prices	2.4	3.4	3.8	3.5	-0.3	0.5	0.2
Final consumption of general government	annual percentage changes, constant prices	3.4	2.4	1.1	1.0	0.1	0.1	0.0
Gross fixed capital formation	annual percentage changes, constant prices	14.0	0.9	5.9	5.9	0.7	0.9	0.4
Exports of goods and services	annual percentage changes, constant prices	7.0	3.6	5.1	7.9	-0.5	-0.5	-0.4
Imports of goods and services	annual percentage changes, constant prices	8.2	2.7	5.4	7.6	-0.6	-0.3	-0.2
Net exports	EUR millions at constant prices	4,269	5,011	5,063	5,678	6	-156	-334
Output gap	percentages of potential output	-0.9	-0.8	-0.5	0.0	-0.1	0.1	0.0
Gross domestic product	EUR millions at current prices	78,071	80,615	84,648	89,892	-200	-376	-438
Labour market								
Employment	thousands of persons, ESA 2010	2,267	2,306	2,331	2,355	6.9	6.4	6.1
Employment	annual percentage changes, ESA 2010	2.0	1.7	1.1	1.1	0.3	0.0	0.0
Number of unemployed	thousands of persons [1]	314	274	255	234	-9.7	-6.0	-5.7
Unemployment rate	percentages	11.5	10.0	9.2	8.5	-0.3	-0.3	-0.2
Unemployment gap [2]	percentage points	1.6	0.3	0.0	-0.5	-0.2	-0.2	-0.2
Labour productivity [3]	annual percentage changes	1.6	1.6	2.4	3.1	-0.2	0.2	0.0
Nominal productivity [4]	annual percentage changes	1.2	1.5	3.9	5.1	-0.5	-0.2	0.0
Nominal compensation per employee	annual percentage changes, ESA 2010	2.4	3.3	4.1	4.0	0.0	0.4	0.2
Nominal wages [5]	annual percentage changes	2.9	3.4	4.1	4.0	0.1	0.4	0.2
Real wages [6]	annual percentage changes	3.2	3.7	2.9	2.1	0.3	0.6	0.3
Households								
Disposable income	constant prices	3.0	3.8	3.7	3.4	0.0	0.6	0.3
Saving ratio	percentages of disposable income	8.8	9.4	9.4	9.2	0.3	0.4	0.3
General government sector [7]								
Total revenue	percentages of GDP	42.7	40.9	40.2	40.0	1.1	1.1	1.2
Total expenditure	percentages of GDP	45.6	43.4	42.2	41.2	1.1	1.3	1.3
General government balance [8]	percentages of GDP	-3.0	-2.6	-2.0	-1.2	0.0	-0.2	-0.1
Cyclical component	percentages of trend GDP	-0.4	-0.1	0.1	0.2	0.0	0.0	0.0
Structural balance	percentages of trend GDP	-2.2	-2.2	-2.1	-1.4	0.2	-0.1	-0.1
Cyclically adjusted primary balance	percentages of trend GDP	-0.8	-0.8	-0.5	0.0	0.1	-0.1	-0.1
Fiscal stance [9]	year-on-year change in p. p.	-0.6	0.0	0.3	0.5	0.3	-0.2	0.0
General government gross debt	percentages of GDP	52.9	53.5	53.3	52.1	0.6	0.7	0.8

Table 7 Medium-Term Forecast (MTF-2016Q2) for key macroeconomic indicators (continue)

Indicator	Unit	Actual	MTF-2016Q2			Difference versus MTF-2016Q1		
		2015	2016	2017	2018	2016	2017	2018
Balance of Payments								
Trade balance (goods)	percentages of GDP	2.4	2.7	2.0	2.3	-0.4	-0.8	-0.9
Current acount	percentages of GDP	-1.3	-1.2	-1.6	-1.0	-0.4	-0.7	-0.9
External environment and technical assumptions								
External demand growth for Slovakia	annual percentage changes	3.6	3.6	4.3	4.6	0.1	-0.2	-0.2
Exchange rate (USD/EUR) [10]	level	1.11	1.13	1.14	1.14	3.3	4.3	4.3
Oil price in USD [10]	level	52.4	43.4	49.1	51.3	11.6	9.8	9.0
Oil price in USD	annual percentage changes	-47.0	-17.1	12.9	4.6	8.8	-1.9	-0.8
Oil price in EUR	annual percentage changes	-36.6	-18.7	11.9	4.6	6.2	-3.0	-0.8
Non-energy commodity price in USD	annual percentage changes	-19.9	-3.3	4.3	4.6	11.4	1.3	-0.1
3-month EURIBOR	percentages p. a.	0.0	-0.3	-0.3	-0.3	0.0	0.0	-0.1
10-Y Slovak government bond yields	percentages	0.9	0.5	0.7	1.0	-0.2	-0.1	-0.1

Sources: NBS, ECB and SO SR.
1) Labour Force Survey.
2) Difference between the unemployment rate and NAIRU (non-accelerating inflation rate of unemployment). A positive value indicates that the unemployment rate is higher than the NAIRU.
3) GDP at constant prices / employment – ESA 2010.
4) Nominal GDP divided by persons in employment (according to SO SR quarterly statistical reporting).
5) Average monthly wages (according to SO SR statistical reporting).
6) Wages according to SO SR statistical reporting, deflated by CPI inflation.
7) S. 13; fiscal outlook.
8) B9n – Net lending (+) / borrowing (-).
9) Year-on-year changes in cyclically adjusted primary balance; a positive value denotes tightening.
10) Difference in per cent versus previous prediction.

Time series of selected macroeconomic indicators can be found on the NBS website at
http://www.nbs.sk/_img/Documents/_Publikacie/PREDIK/2016/protected/P2Q-2016.xls