NÁRODNÁ BANKA SLOVENSKA
EUROSYSTÉM

Medium-term forecast

Update Q4 2015

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1 Update of the December 2015 Medium-Term Forecast (MTF-2015Q4U)[1]

This update of the December 2015 Medium-Term Forecast is based on detailed data about the composition of GDP growth for the third quarter of 2015 and the latest figures on the heightened absorption of EU funds in 2015. The latest monthly indicators of the real economy's performance in the fourth quarter of 2015 are also taken into account, as are leading indicators[2] for economic conditions in the near term.

In their technical assumptions, this update and the December forecast differ mainly in the assumption for **oil prices**. Owing to this positive supply shock, demand for Slovak exports is expected to increase, but that impact is offset by a deterioration in the outlook for the Chinese economy. **Therefore the external demand projection is unchanged from the December forecast.**

Recent developments indicated that investment demand growth was exceptionally high in 2015 owing to rapid absorption of remaining EU funds available from the previous programming period. This positive, one-off factor prompted a slight upward revision of the GDP growth estimate for last year**.** Falling back to normal levels, the absorption of EU funds is expected to contribute negatively to GDP growth in 2016. That impact, however, is expected to be offset by the start of construction of a new car factory and by higher private consumption in a low-inflation environment. **GDP growth is projected to be 3.2% in 2016 and 3.3% in 2017**, with both figures representing marginal upward revisions from the December forecast.

The robust performance of the labour market in the last quarter reflected not only economic fundamentals, but also a temporary factor in the form of the absorption of outstanding EU funds. Employment therefore increased quite strongly, and its growth is expected to ease down to 1.4% in 2016 and 1.0% in 2017. The employment forecast has been revised up slightly to reflect improving domestic demand, job growth in the public sector and the impact of the establishment of a new car plant. Although wage dynamics remain unchanged, household income is expected to increase in real terms.

The inflation forecast for 2016 has been revised down significantly. Lower oil prices are expected to pass through to automotive fuel prices. Likewise the subdued path of food prices has been reflected in a downward revision of the inflation forecast this year. The average inflation rate is projected to be 0.4% in 2016, rising to 1.8% in 2017 on the assumption of rising commodity prices and a pick-up in domestic demand.

The projections for the fiscal deficit have not changed notably, with the impact of higher income tax revenues being counterbalanced by higher capital expenditures.

1 This update of the December 2015 MTF-2014Q4 Medium-Term Forecast is abbreviated as MTF-2014Q4U. The December forecast needs to be updated owing to NBS's membership of the Macroeconomic Forecasting Committee (MFC), which under the Fiscal Responsibility Act is required to produce a macroeconomic and tax forecast by 15 February of each year. The updating of the December forecasts began in 2013.

2 The cut-off date for the data included in this update is 8 January 2016.

2 Technical assumptions[3]

The updated forecast, MTF-2013Q4U, incorporates technical assumptions that are based on both published external data (oil prices and the exchange rate), and NBS staff projections (for external demand and administered prices).

Between the cut-off dates for the December forecast and this update, **the euro's exchange rate**[4] against the US dollar first depreciated and then corrected. Hence the assumption for the average rate over the projection horizon is virtually unchanged, at **USD 1.09 per euro,** only 0.1% stronger than the corresponding assumption in the December forecast.

As regards assumptions for **oil prices**, those of the December forecast have been revised down markedly owing mainly to the continuing oil supply glut as well as to the slowdown of Chinese economic growth. Based on the path of Brent oil price futures (and a spot price of **USD 33.5 per barrel** at the cut-off date for this update), the price of oil is assumed to average USD 37.2 in 2016 (revised down by 29% from the December figure) and USD 44.2 in 2017 (down by 23%). The revisions to the assumptions for the oil price in euro are almost identical to those for the price in US dollars, given the assumptions for the exchange rate.

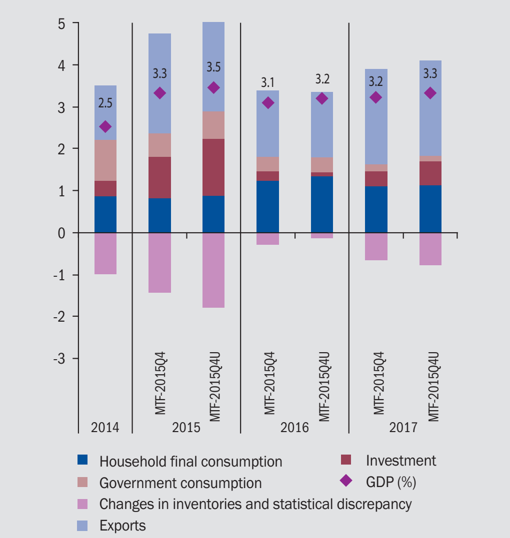
Forecast for the external environment

Leading indicators improved moderately in November and December and suggest that the euro area's economic growth will continue in coming quarters in line with the projections of the December forecast. Given the large downward revision in oil price projections since the previous forecast, **Slovakia's external demand** may, through the revenue channel, grow more strongly over the projection horizon. On the other hand, the outlook for demand for Slovak exports faces a mounting downside risk of decelerating growth in China and the possible repercussions of that slowdown for other emerging market economies. Similarly, the current oil price could have a dampening effect on investment in energy production in the United States and therefore, indirectly via trading partners, on growth in Slovakia's external demand. With the impacts of these factors cancelling each other out, the assumptions for external demand growth remain unchanged, at 4.0% in 2016 and 4.8% in 2017.

Macroeconomic forecast for Slovakia

This update of the December forecast is based on detailed data about the composition of GDP growth for the third quarter of 2015 and the latest figures on the absorption of EU funds in 2015. The revisions to the technical assumptions that had the greatest impact on the updated forecast was the fall in oil prices. The confirmation that a new car plant is to be built in Slovakia was also taken into account in this update, causing the GDP growth outlook to be revised up by 0.3 percentage point over the projection horizon[5]. **The economy is now assumed to grow by 3.5% in 2015, 3.2% in 2016 and 3.3% in 2017,** which in comparison with the December forecast is an increase of 0.2 percentage point in 2015, 0.1 percentage point in 2016, and 0.1 percentage point in 2017.

Chart 1 Composition of GDP growth (annual percentage changes; contributions in p.p.)



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.

3 The technical assumptions of MTF-2015Q4U, as well as the assumptions for external demand developments, are based on data with a cut-off date of 8 January 2016.

4 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.

5 For further details, see Box 1.

The projected contribution of domestic demand to economic growth in 2016 has been revised up slightly. The acceleration of private consumption is expected to be supported mainly by **low inflation**, via an **increase in real income**. The positive supply shock from the slump in commodity prices, and the lower inflation related to it, is expected to fade in 2017. Therefore the outlook for private consumption remains largely unchanged from the previous forecast.

The projection for investment growth in 2015 is increased to reflect the higher absorption of EU funds. Since this significant impact was a one-off factor, not to be repeated in 2016, the projected fall in public investment in 2016 is greater in this update than in the December forecast. That difference is partly counterbalanced by private investment and by factoring in the upcoming establishment of a new car plant in Slovakia. The direct impact of that investment will stem mainly from construction work on the plant in 2016 and 2017 and also from technology imports for the plant in 2017. Indirect impulses should include investment in supplier industries and increased domestic demand. Their impact is expected to peak in 2017, and therefore the projection for investment demand in that year has been revised up markedly.

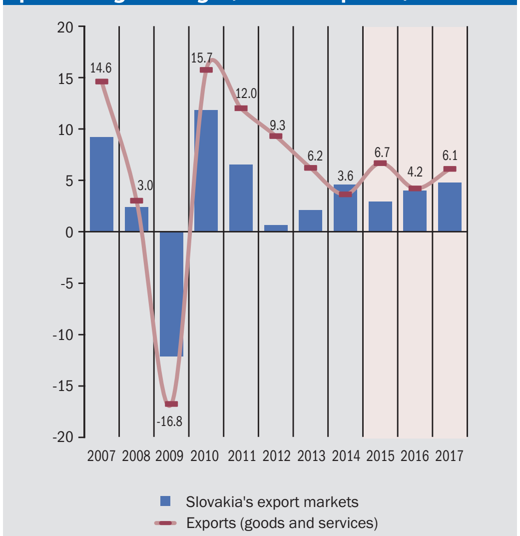
The outlook for growth in government consumption expenditure has been revised up from the December forecast, in response to the increase in expenditures financed with EU funds. In 2016 lower prices are expected to have a favourable impact.

Based on the revised macroeconomic scenario, the projection for public revenues (as a share of GDP) in 2015 is increased from the December forecast, by 0.5 percentage point, owing mainly to the impact of the elevated absorption of EU funds. The public revenue projections are also raised for 2016 and 2017, by 0.1 and 0.2 percentage point, respectively. The forecast for increased in expenditure in 2015 and 2016 has not been revised, nor has the projection of no change in total expenditure in 2017. Hence the overall fiscal outlook remains largely the same as in the December forecast: the projected general government deficit is unchanged in 2015 and 2016 and is revised down slightly, by 0.1 percentage point, in 2017. The general government debt (as a share of GDP) forecasts for 2015 and 2017 have been revised down by 0.2 and 0.1 percentage point, respectively.

Despite external demand remaining flat, projections for export performance in the first quarter of 2016 have been lowered slightly owing to the current situation in the metal industry. Over the whole projection horizon, however, there are no changes in the outlook for exports or market share acquisition. As for imports, in 2016 they should reflect the base effect of a decrease in capital goods imports financed from EU funds, and hence the import growth forecast has been revised down from the December forecast.

The outlook for the labour market is largely unchanged. The better than expected developments observed towards the end of 2015 are assumed to be one-off and related mainly to the substantial absorption of EU funds. A moderate correction is expected in early 2016, but economic growth will nevertheless continue to generate new jobs and employment is projected to continue growing, albeit more slowly than in 2015. In comparison with the December forecast, job growth projections for 2016 and 2017 are now slightly higher, to reflect improvements in domestic demand, employment growth in the public sector, and the impact of a new car plant. As

Chart 2 Forecast for external demand and for Slovak exports of goods and services (annual percentage changes; constant prices)



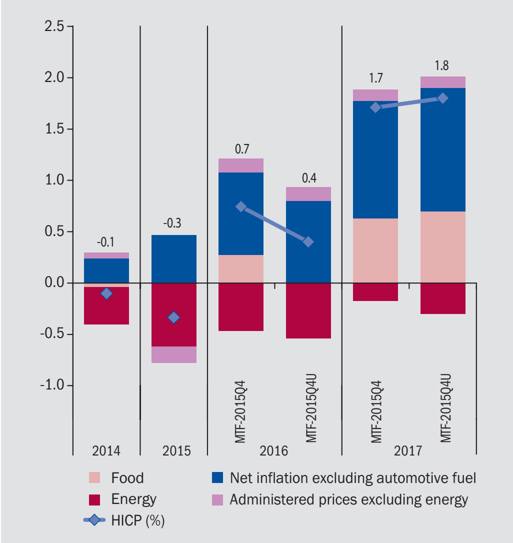
Sources: SO SR, ECB and NBS calculations.

a result, the projected drop in unemployment is slightly greater in this update than in the December forecast. Wage dynamics remain unchanged, but the projection for real wage growth in 2016 is marginally increased owing to the assumption of lower inflation.

Besides taking into account the building of a new car plant, **this update differs most of all from the December forecast in its projections for inflation.** The inflation rate forecast for 2016 is reduced by 0.4 percentage point, owing to the pass-through of the continuing oil-price slump to automotive fuel prices and partly also to the fact that inflationary pressures in December 2015 were more subdued than expected (particularly with regard to food prices)**.** At the same time the update assumes a greater pass-through of the VAT reduction on selected food items[6]. The impact of low prices of energy commodities on consumer prices is expected to continue in 2017, and the projected reduction in administered energy prices in that year is increased from the December forecast. The overall outlook for headline inflation is not, however, significantly revised, since the impact of falling energy prices is expected to be cancelled out by increases in other inflation components, stemming from imported inflation and rising consumer demand.

The risks to the GDP outlook from external factors are balanced (the upside risk of lower oil prices should be offset by the downside of risk of deteriorating economic conditions in emerging market economies). As for domestic risks to the 2015 GDP forecast, there is the upward risk of increased investment financed by EU funds. On the other hand, a marked drop in public investment would, due to a base effect, constitute the downside risk to the GDP outlook for 2016. The risks to HICP inflation outlook have been on the downside owing to the continuing slump in oil prices.

Chart 3 Comparison of inflation components (annual percentage changes; contributions in p.p.)



Sources: SO SR and NBS.

Box 1

JAGUAR LAND ROVER INVESTMENT IN SLOVAKIA

The carmaker Jaguar Land Rover (JLR) has confirmed that it will build a new 1.4 billion pound car plant in Slovakia, with construction to begin this year and to be completed in 2020. According to the updated assumptions for the planned investment, the plant's production capacity should reach 150,000 cars per year by 2020 (against an original projection of 300,000), and capacity may be expanded in subsequent years. Based on these figures, NBS's macroeconomic modelling indicates that the investment could boost GDP growth by a cumulative 1.8 percentage points and create up to around nine thousand new jobs by the end of the projection horizon.

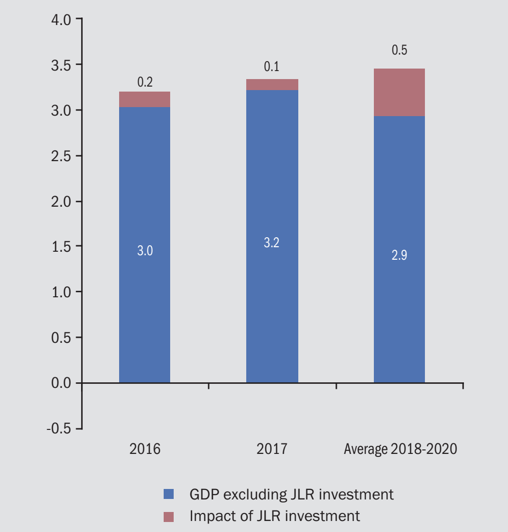
The model estimate includes, on the one hand, the direct stimulus provided by the plant's construction and production, and, on the other hand, additional indirectly generated production as well as induced production**.** Car production entails a chain of parts and accessories suppliers and, by a multiplying effect, increases demand within the car industry in general. This generates significant demand among all industries for suppliers of other industries and

6 *The December forecast assumed a pass-through of the VAT reduction to HICP of -0.12 percentage point, while the update assumes -0.17 percentage point.*

therefore indirectly supports production, especially in the sectors manufacturing metals, electronics, rubber and plastics products, and textiles, in energy generation, and in transport services and business services. Rising production across the whole economy has an upward impact on wages and, consequently, boosts demand for consumer goods and services, two-thirds of which are produced domestically. Additional wages are a source of induced production.

The estimated direct impact on GDP and employment is based on the phasing in of the investment. In 2016 the focus of the investment will be on building work, which is expected to provide a stimulus to the local construction sector. The investment phase is expected to reach its peak in 2017 and 2018 with an influx of construction investment, key machinery inputs and know-how. This will heighten demand for imports, and while not yet affecting output, it will boost productivity in the medium-term horizon. Based on the information available, production of the plant's first model of car is expected to begin in September 2018, and production of a second model should start in June 2019. The plant is expected to be directly employing 2,800 people by the end of the projection horizon. The establishment of the car plant has been factored into projections for potential GDP growth, and the new jobs created both directly and indirectly should be reflected in employment potential.

Chart A GDP growth estimate taking into account the JLR investment (%)



Source: NBS calculations.

Table A Impact of the JLR investment on the economy – model simulation of the impact on rates of change (p.p.)

	2016	2017	2018	2019	2020	Cumulative total
HICP	0.00	0.02	0.04	0.04	0.05	0.15
Household consumption	0.01	0.07	0.11	0.17	0.16	0.50
Investment	1.27	1.71	0.46	-1.40	-0.49	1.54
Exports	0.01	-0.01	0.97	2.79	0.79	4.54
Imports	0.14	0.32	0.98	1.88	0.35	3.68
GDP	0.17	0.11	0.19	0.84	0.53	1.84
Employment	0.01	0.04	0.08	0.15	0.10	0.39
Employment (thousands of persons)	0.19	1.01	1.98	3.62	2.29	9.09

Source: NBS calculations.
Note: Owing to rounding, the cumulative total of the annual impacts may not add up.

Table 1 Update of the Medium-Term Forecast (MTF-2015Q4U) for key macroeconomic indicators

Indicator	Unit	Actual	MTF-2015Q4U			Difference versus MTF-2015Q4		
		2014	2015	2016	2017	2015	2016	2017
Prices								
HICP inflation	annual percentage changes	-0.1	-0.3	0.4	1.8	0.0	-0.3	0.1
CPI inflation	annual percentage changes	-0.1	-0.3	0.4	1.9	0.0	-0.3	0.1
GDP deflator	annual percentage changes	-0.2	-0.3	0.9	2.2	-0.1	-0.4	-0.1
Economic activity								
Gross domestic product	annual percentage changes, constant prices	2.5	3.5	3.2	3.3	0.2	0.1	0.1
Final consumption of households	annual percentage changes, constant prices	2.3	2.3	3.6	3.0	0.1	0.3	0.1
Final consumption of general government	annual percentage changes, constant prices	5.9	3.7	2.0	0.9	0.4	0.2	0.0
Gross fixed capital formation	annual percentage changes, constant prices	3.5	12.9	0.8	4.9	3.6	-1.4	1.7
Exports of goods and services	annual percentage changes, constant prices	3.6	6.7	4.2	6.1	0.0	-0.1	0.0
Imports of goods and services	annual percentage changes, constant prices	4.3	8.2	3.7	6.0	0.1	-0.4	0.3
Net exports	EUR millions at constant prices	4,733	4,070	4,583	4,974	-41	174	-30
Output gap	% of potential output	-1.7	-0.9	-0.8	-0.5	0.1	0.0	0.0
Gross domestic product	EUR millions at current prices	75,560	77,964	81,154	85,720	84	-171	-119
Labour market								
Employment	thousands of persons, ESA 2010	2,223	2,267	2,299	2,322	0.4	2.9	6.6
Employment	annual percentage changes, ESA 2010	1.4	2.0	1.4	1.0	0.0	0.1	0.1
Number of unemployed	thousands of persons [1]	359	315	280	253	-0.4	-2.9	-6.7
Unemployment rate	%	13.2	11.5	10.2	9.3	0.0	-0.2	-0.2
Unemployment gap [2]	p. p.	2.1	1.3	0.7	0.2	0.1	0.1	0.0
Labour productivity [3]	annual percentage changes	1.1	1.5	1.8	2.3	0.2	0.0	0.0
Nominal productivity [4]	annual percentage changes	1.0	1.0	2.6	4.5	0.3	-0.4	-0.1
Nominal compensation per employee	annual percentage changes, ESA 2010	1.8	2.0	3.6	3.9	-0.1	-0.1	0.1
Nominal wages [5]	annual percentage changes	4.1	2.7	3.6	3.9	0.0	0.0	0.1
Real wages [6]	annual percentage changes	4.2	3.0	3.3	2.1	0.0	0.4	0.1
Households								
Disposable income	constant prices	3.2	2.6	3.7	3.0	0.1	-0.1	0.1
Saving ratio	% of disposable income	8.0	8.4	8.5	8.5	-0.5	-0.9	-0.8
General government sector (S.13)								
General government balance [7]	% of GDP	-2.8	-2.8	-2.5	-1.7	0.0	0.0	0.1
Gross debt	% of GDP	53.5	52.5	52.5	52.3	-0.2	0.0	-0.1
Total revenue	% of GDP	38.9	41.4	39.4	38.7	0.5	0.1	0.2
Total expenditure	% of GDP	41.6	44.1	41.9	40.4	0.5	0.1	0.0
Balance of payments								
Goods balance	% of GDP	3.8	2.3	2.6	2.4	0.0	0.7	0.5
Current account	% of GDP	0.1	-0.5	-1.4	-1.4	0.2	0.5	0.2

Table 1 Update of the Medium-Term Forecast (MTF-2015Q4U) for key macroeconomic indicators

Indicator	Unit	Actual	MTF-2015Q4U			Difference versus MTF-2015Q4		
		2014	2015	2016	2017	2015	2016	2017
External environment and technical assumptions								
External demand growth for Slovakia	annual percentage changes	4.6	2.9	4.0	4.8	0.0	0.0	0.0
Exchange rate (EUR/USD) 8)	level	1.33	1.11	1.09	1.09	-0.1	0.1	0.1
Oil price in USD 8)	level	98.9	52.9	37.2	44.2	-1.6	-28.8	-23.2
Oil price in USD	annual percentage changes	-9.1	-46.6	-29.7	18.7	-0.9	-26.8	8.6
Oil price in EUR	annual percentage changes	-9.2	-36.0	-28.3	18.7	-1.0	-27.5	8.6
Non-energy commodity prices in USD	annual percentage changes	-8.6	-18.7	-5.2	4.1	0.0	0.0	0.0
EURIBOR 3M	% p. a.	0.2	0.0	-0.2	-0.1	0.0	0.0	0.0
10-Y Slovak government bond yields	%	2.1	0.9	0.9	1.2	0.0	0.0	0.0

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) B9n – Net lending (+) / borrowing (-)
8) Changes vis-à-vis the previous forecast (in per cent).

Time series of selected macroeconomic indicators can be found on the NBS website at
http://www.nbs.sk/_img/Documents/_Publikacie/PREDIK/2015/MTF-2015Q4_a.xls