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EUROSYSTÉM

MEDIUM-TERM FORECAST

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1 Summary

This Medium-Term Forecast (MTF-2015Q1) incorporates the national accounts for the fourth quarter of 2014, monthly figures from the first months of 2015, and developments in forward-looking indicators. The projection horizon is extended to the end of 2017. As for the technical assumptions, which are based on the 2015 March ECB Staff Macroeconomic Projections for the Euro Area, the assumptions for the exchange rate and oil prices have been updated.

The Slovak economy grew in the last quarter 2014 by 0.6% quarter-on-quarter, which was broadly in line with expectations. The growth was attributable to both domestic and external demand. This balanced composition is expected to continue in 2015, and **GDP growth for the year is projected to accelerate to 3.2% (revised up by 0.3 percentage point from the previous forecast)**. In 2016 Slovakia's external demand is expected to gather significant momentum, and its economy is therefore assumed to grow at a faster pace of **3.8% (up by 0.2 percentage point). Growth in 2017 is expected to edge down to 3.5%**. One of the factors supporting the acceleration of the Slovak economy over the projection horizon is the assumed positive impact of the ECB's expanded asset purchase programme.

Employment growth in the last quarter of 2014 was higher than expected, at 0.6%, thanks to activity growth and in particular relatively strong domestic demand. This trend is expected to continue in 2015. **The number of people finding work this year should be around 22,000, with employment growth for the year expected to be unchanged from the rate for 2014, at 1.4%.** Looking further ahead, employment growth is expected to slow slightly, reflecting negative demographic developments. **The unemployment rate is projected to decrease, down to 10% by the end of the projection horizon.** The assumption for nominal wage growth is that it will moderate, amid low inflation and subdued labour productivity growth.

The HICP inflation rate in February 2015 was -0.6%, which reflected mainly falling prices of energy and food. Looking forward, prices are expected to move moderately up. Nevertheless, the average annual inflation rate for 2015 is projected to be negative, at -0.3%. **Over the rest of the forecast period, inflation is assumed to accelerate to 1.7% in 2016 and 2.4% in 2017.** This trend is expected to be predicated on the fading of downward cost pressures (low oil prices), a weaker exchange rate, and rising consumer demand.

The risks to the outlook for the real economy, as well as inflation, over the projection horizon are balanced.

2 Current developments in the external environment and in Slovakia

In both the euro area as a whole and Germany, economic growth accelerated in the fourth quarter of 2015

The euro area's GDP growth increased slightly in the fourth quarter of 2015 (to 0.3%)[1]. The strongest growth among the zone's larger national economies was reported by Germany (0.7%), Spain (0.7%) and the Netherlands (0.5%). Sentiment among managers and consumers, as reflected in forward-looking indicators, ceased deteriorating and began gradually to improve. Euro area growth was driven by domestic demand, and in particular by private consumption. Net exports also contributed positively to overall growth. Consumer prices continued to fall, reflecting decreases in food and energy prices. In January the price level fell by 0.6%, and then in February it decreased more moderately, by 0.3%.

In comparison with its December projections, the ECB has revised up the forecast for euro area economic growth, by 0.5 percentage point in 2015 and 0.4 percentage point in 2016[2]. Activity is expected to be supported by the non-standard monetary policy measures adopted by the ECB's Governing Council, which should stimulate domestic demand as a result of their impact on interest rates. Other factors are also expected to boost domestic demand, including the sharp fall in oil prices, which will lead to a substantial increase in real disposable income, and the continuing easing of credit standards. In addition, activity growth is expected to benefit from a gradual increase in residential investment, a strengthening recovery of business investment, and a moderate pick-up in external demand (stemming from the recovery of global activity and the effects of a weaker euro). The adverse impact of a number of other factors is likely to decline only gradually. These include the indebtedness ratios of the households and the general government sector, high unemployment rates in some stressed countries, and the dampening effect of ample spare capacity on investment spending.

Slovakia's economic growth[3] remains robust in line with expectations

The Slovak economy maintained a stable growth rate in the last quarter of 2014 (0.6% quarter-on-quarter), supported by both external and domestic demand. On the domestic side, investment demand growth accelerated significantly, aided by low interest rates, looser credit conditions, and corporate profits. Profits were influenced by production growth as well as by the decline in cost factors that resulted from falling energy prices. The positive supply shock of low oil prices was passed on to private consumption, which by the end of 2014 had risen back to its pre-crisis level.

The relatively strong growth in domestic demand spurred job creation to a greater extent than projected. Jobs were created mostly in the services sector and to a lesser extent in industry. Wage growth was relatively robust and driven mainly by productivity gains in particular sectors of the economy. With prices falling, the purchasing power of households increased in real terms.

Higher domestic demand has not yet been reflected in consumer prices. Given the weights of energy and food in the consumer basket, the supply-side decline in energy prices and falling food prices have put a downward pressure on the overall price level. Somewhat surprisingly, services price inflation appears to have been lower than expected in the first months of this year.

1 *For further details, see "Report on the International Economy – March 2015"/(in Slovak only).*
2 *According to the "ECB Staff Macroeconomic Projections for the Euro Area".*
3 *For further details, see "Report on the Slovak Economy"/(in Slovak only).*

3 TECHNICAL ASSUMPTIONS OF THE FORECAST [4]

3.1 COMMODITIES, EXCHANGE RATE

The exchange rate of the euro against the US dollar depreciated substantially between the publication of the previous forecast and the cut-off date for this forecast. One factor was January's decision of the ECB's Governing Council to expand its asset purchase programme to include public sector bonds. The euro weakened further against the dollar in the period before the actual launch of the expanded asset purchase programme (EAPP)[5], at the beginning of March 2015. Consequently, this forecast assumes that the average exchange rate over the projection horizon will be USD 1.07 per euro, which is around 10% weaker than the rate projected in January's update of the December Medium-Term Forecast (MTF-2014Q4U).

For this forecast, the average oil price per barrel is assumed to be USD 58.4 in 2015 (10% higher than projected in the January forecast), USD 65.0 in 2016 (5% higher), and USD 68.6 in 2017. Owing to these two factors, the assumed increase in the oil price in euro over the projection period is higher than stated in the previous forecast.

3.2 EXTERNAL DEMAND

The EAPP, which the ECB launched in March 2015 and which is intended to run at least until September 2016, is expected to support economic activity in euro area countries that are trading partners of Slovakia and therefore to boost the external demand of these economies. Evidence of strengthening sentiment in the euro area in the first months of 2015 is also provided by forward-looking indicators, with improvements observed in both the Purchasing Managers' Index (PMI) and economic sentiment indicator (ESI) for the euro area. In Germany, the ZEW and Ifo indices increased, based on more positive assessments of the current economic situation as well as on brighter expectations for the next six months.

On the other hand, Slovakia's external demand growth is expected to be dampened by slower growth in emerging economies, in particular China, as well as by the expected contraction of the Russian economy in 2015 amid persisting geopolitical tensions in that region. Overall, **Slovakia's external demand** is expected to grow by 3.7% in 2015, accelerating to 5.3% in 2016 and 5.5% in 2017.

4 *The technical assumptions of the Medium-Term Forecast are based on the "March 2015 ECB Staff Macroeconomic Projections for the Euro Area", with a cut-off date of 11 February. The exceptions are the EUR/USD exchange rate, which is assumed to remain unchanged over the projection horizon at the level set on 10 March 2015, and the Brent crude oil price, which was updated on the basis of futures contracts.*

5 *EAPP – Expanded Asset Purchase Programme, also known as quantitative easing (QE).*

4 Macroeconomic forecast for Slovakia

4.1 ECONOMIC GROWTH

Slovak exports to continue picking up

Slovak exports continued increasing in the last quarter of 2014, supported in part by economic growth in the euro area. This upward trend was maintained in January, according to foreign trade figures. Surveys of industry managers in the first quarter of 2015 showed sharply rising export expectations and slightly improved assessments of competitiveness in global markets. The brighter outlook for the euro area economy is expected to be reflected in accelerating external demand growth, while export performance should be further boosted by falling prices of exports to non-euro area countries. In the additional context of a depreciating exchange rate, it is assumed that Slovak export growth will exceed external demand growth and therefore that the Slovak economy will gain market shares.

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

Source: SO SR, ECB, and NBS calculations.

Robust growth in investment demand to slow over medium-term horizon

Investment growth was strong in 2014 and is expected to remain so in 2015, but whereas last year its main driver was the government sector, this year it will be the private sector. Previously there was relatively subdued capital investment, but now that the utilisation of production capacity has increased from low to high levels, the assumption is that the renewal of fixed assets will gather momentum and production capacity will be expanded. Such investment decisions are expected to be supported by the looser monetary policy stance, in particular low interest rates on loans to non-financial corporations and easier credit standards. A moderate rise in the number of consumers who are planning to purchase a home within the next 12 months is expected to lead to an increase in residential investment. The supply side began adapting to this situation in 2014, as residential construction starts increased in comparison with the previous year. Over the medium term, investment demand is projected to ebb, although that will be largely due to decreases in public sector funding from the European Union in the new EU budget programming period. Private investment growth is likely to remain at relatively high levels.

Consumer demand to accelerate moderately

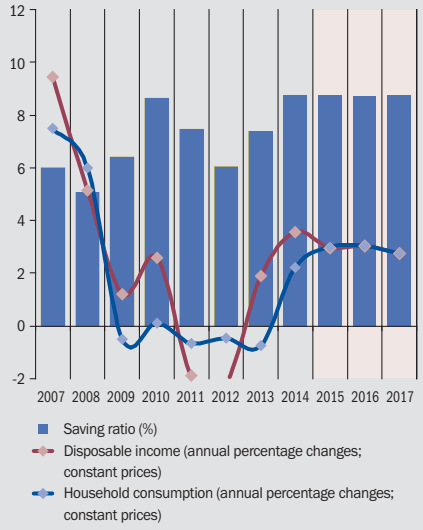
The moderate upward trend in private consumption observed in 2014 is expected to continue in 2015, supported by the positive income effect

Table 1 Forecast for gross fixed capital formation (annual percentage changes; constant prices)

	2014	2015	2016	2017
Gross fixed capital formation in total	5.7	6.1	3.6	3.7
– private sector	3.7	6.7	5.6	4.8
– public sector	17.9	3.1	-7.7	-3.4

Source: SO SR and NBS.

Chart 2 Household income, consumption and saving ratio



Source: SO SR and NBS.

of decreases in prices of basic necessities (such as energy and food). Household are therefore likely to spend more on the purchase of other goods and services. Further evidence for the continuation of relatively strong growth in private consumption is provided by the improving labour market and related pick-up in sentiment. A growing number of households intend to, or are considering whether to, buy durable goods (especially cars) within the next few months. Over the medium-term horizon, this trend is expected to strengthen, and consumption growth should reflect increases in disposable income.

Public spending growth to abate from record levels of 2014

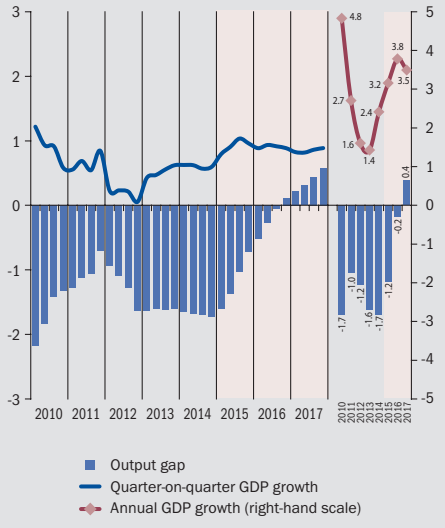
Nominal government final consumption increased in the fourth quarter more quickly than projected in the MTF-2015Q1 forecast, as the contribution of sales to its growth rate exceeded assumptions. Public consumption growth is projected to slow over the period 2015 to 2017, since the NBS forecast does not envisage continuing strong increases in employee compensation and in spending on goods and services.

Real public investment growth was higher in 2014 than in any year since 2006. The sharp rise in government spending observed in the last quarter was probably the result of increased investment activity among entities newly categorised into the public sector (notably the National Motorways Company/Národná diaľničná spoločnosť). Public investment is expected to increase more slowly in 2015, and then to decline in 2016 and 2017 owing to developments in EU funding. The slow onset of the EU's new budget programming period should see EU funds exceed domestic resources as a source of funding for government investment expenditure.

Slovak economic growth to gather momentum

Domestic demand is continuing to grow and export performance is rebounding thanks to increasing external demand (in an environment of accommodative monetary policy), low commodity prices, a weaker exchange rate, and a short-term moderate decline in prices. **It is assumed that economic growth will be balanced over the projection horizon and that its rate will be 3.2% 2015, 3.8% in 2016 and 3.5% in 2017.** As relatively strong GDP growth exceeds potential output growth, the output gap is expected to close. The economy could be producing at potential GDP by the end of 2016.

Chart 3 GDP growth and the output gap (%)



Source: SO SR and NBS.

Box 1

ESTIMATED IMPACT OF THE ECB'S ACCOMMODATIVE MONETARY POLICY STANCE ON THE SLOVAK ECONOMY

The ECB's Governing Council decided in January 2015 to extend the use of non-standard monetary policy measures with the aim of fulfilling its price stability mandate. The expanded asset purchase programme (widely known as quantitative easing), which will include purchases of government bonds, represents a further easing of monetary policy conditions. It is expected to support economic activity in the euro area, via several transmission channels, by stimulating investment activity and reviving household final consumption.

The accommodative monetary policy stance will affect the Slovak economy **directly** (through the impact of financial and monetary variables on the Slovak economy) and **indirectly** (via Slovakia's most significant trading partners in the euro area). The effects of looser monetary policy on the Slovak economy were estimated using model simulations of cumulative changes in the relevant variables, over a review period from the cut-off date for September's MTF-2014Q3 forecast to the cut-off date for current MTF-2015Q1 forecast (i.e. 5 September to 10 March 2015).

Direct channels:

1 *Direct impact of a change in the EUR/USD exchange rate.*

During the review period, the euro depreciated against the US dollar by 17%, with the main cause assumed to be the non-standard monetary policy measures. At the same time, given the historical correlation between the EUR/USD exchange rate and the oil price in USD per barrel, it is assumed that half of the dollar's appreciation was reflected in a decrease in the (dollar) price of oil. Weakening of the euro vis-à-vis the dollar therefore slightly *reduces* growth in the Slovak economy.

2) *Direct impact of* ***the nominal effective exchange rate of Slovakia depreciating by*** **1.75%**.

From September to February, the nominal effective exchange rate (NEER) of Slovakia was relatively stable (unlike the euro area's NEER, which depreciated significantly owing mainly to weakening of the euro against the dollar). From February to 10 March 2015, however, the euro also weakened substantially against a majority of the currencies of Slovakia's non-euro area trading partners. In consequence, Slovakia's effective exchange rate depreciated by 1.75%. This channel has the second largest impact on Slovakia's economic growth.

3) *Impact of financial variables.*

Direct effects include also financial channels, such as interest rate adjustments, the easing of credit standards, and the formation of expectations. Although all these factors are expected to have a growth-supporting impact, their impact in Slovakia is less significant than that of the exchange rate channel.

Indirect channel:

1) *Indirect impact though increased external demand for Slovak exports.*

The accommodative monetary policy that will support growth in euro area countries is assumed to increase demand for Slovak exports by **0.5 percentage point in 2015 and 0.3 percentage point in 2016**. This is the most important transmission channel for Slovakia.

The most significant of the **direct channels** is expected to be the depreciation of the euro exchange rate, not only against the US dollar but in particular against other countries. This

was reflected in the depreciation of Slovakia's NEER, especially after January's decision of the ECB to expand the asset purchase programme. In the real economy, a weaker NEER could boost Slovakia's export performance by improving price competitiveness. On the other hand, if only the EUR/USD exchange rate is weaker, it could have a negative income effect on households resulting from higher energy prices and therefore inhibit to some extent the positive impulse of improved exports. Taking into account **indirect channels** (secondary effects) through the additional increase in Slovakia's external demand, and based on model calculations, **the estimated impact of non-standard monetary policy measures on GDP growth in Slovakia is 0.4 percentage point in 2015 and 0.2 percentage point in 2016. The impact on inflation is estimated to be 0.4 percentage point in 2015 and 0.6 percentage point in 2016**. This could generate around 2,800 new jobs, mainly in industry. These results should be seen as indicative only, since they based entirely on models.

4.2 THE LABOUR MARKET

Strong employment growth to continue

With domestic demand expected to be the main contributor to economic growth in the short-term horizon, job creation is likely to be greater than it was when growth was being driven by export sectors. The relatively high rate of employment growth observed last year is therefore expected to continue this year. This is also implied by forward-looking indicators pointing to job creation in the services and retail trade sectors. Overall, the number of jobs created is projected to be around 22,000 in 2015 and a similar number in 2016, before declining to 17,000 in 2017 due to falling labour demand (a consequence of adverse demographic developments). The closing of the output gap will accelerate labour demand, resulting in higher values for the indicators of hours worked and length of working week.

As employment increases, the unemployment rate is expected to decline almost to 10% by the end of the projection horizon, which should be virtually identical to the level of the non-accelerating inflation rate of unemployment (NAIRU).

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

Source: SO SR and NBS.

4.3 LABOUR COSTS AND PRICE DEVELOPMENTS

Labour costs to stabilise

Strong wage growth in 2014 is likely to have made up the ground previously lost when labour productivity accelerated faster than wages, while owing to rigid wage bargaining, wage growth

Table 2 Unit labour costs (annual percentage changes)

	2014	2015	2016	2017
Nominal compensation per employee (ESA)	3.4	2.7	3.8	4.3
Real productivity	1.0	1.7	2.7	2.7
Unit labour costs	2.3	0.9	1.1	1.6
GDP deflator	-0.2	-0.1	1.8	2.4

Source: SO SR and NBS calculations.

Table 3 Wages (annual percentage changes)

	2014	2015	2016	2017
Nominal labour productivity	0.9	1.6	4.5	5.2
Whole economy – nominal	4.1	2.6	3.8	4.3
Whole economy – real	4.2	2.7	2.1	1.8
Public administration, education and health care – nominal	4.6	3.9	3.5	3.3
Public administration, education and health care – real	4.7	4.0	1.7	0.8
Private sector – nominal	4.0	2.3	3.9	4.6
Private sector – real	4.1	2.4	2.2	2.1

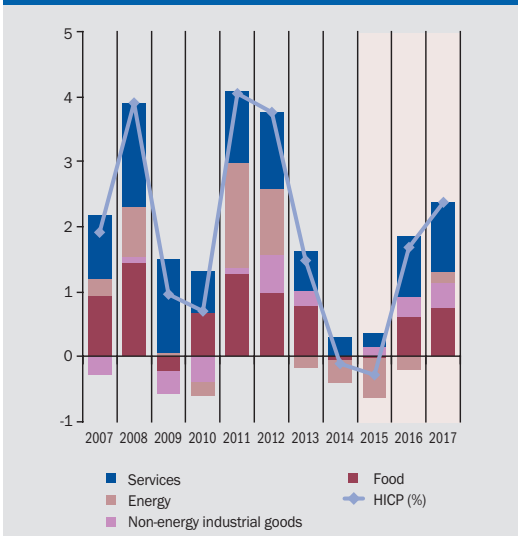
Source: SO SR and NBS calculations.
Note: Deflated by the CPI. The sector „Public administration, education and health care" corresponds to sections O, P and Q of the SK NACE Rev. 2 statistical classification of economic activities. Nominal average wage growth in the general government sector (ESA S.13) is assumed to be 3.7% in 2015, 3.6% in 2016 and 3.2% in 2017.

did not reflect the absence of inflation in 2014. Consequently, unit labour costs increased to the detriment of firms' profits, since wage growth could not be compensated by price increases. In the years ahead this trend should be partly mitigated by labour productivity gains and a gradual increase in prices. This in turn is expected to support an increase in corporate profits and the moderation of unit labour cost growth.

Prices to decline marginally this year, before accelerating up to 2017

After an atypical decline in prices at the beginning of the year[6] and with energy prices assumed to decline throughout the year, the average inflation rate for 2015 is projected to be negative. Despite increasing consumer demand, domestic price pressures are expected to remain subdued this year. The weakening exchange rate should gradually have an upward effect on non-energy industrial goods prices, which are expected to contribute positively to the headline inflation rate, albeit not sufficiently to offset decreases in food and energy prices in 2015. In the subsequent period the inflation rate should return to positive territory and slowly begin to accelerate. This trend is expected to reflect continuing

Chart 5 Expected composition of annual inflation (p.p.)



Source: SO SR and NBS.

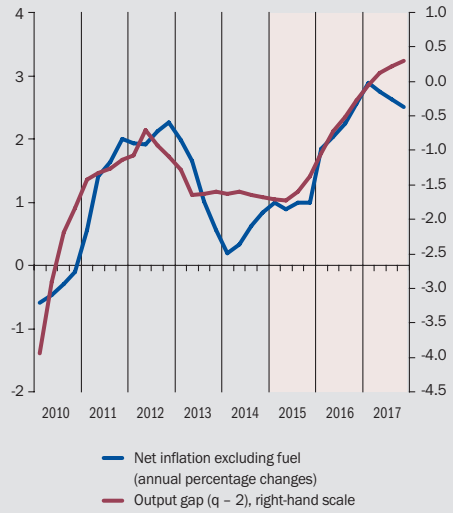
6 *In January 2015 prices fell by 0.1% month-on-month, whereas the average month-on-month inflation rate for January, over the period 2010 to 2014, was 0.9%, and over the period 1997 to 2014, 1.8%.*

Table 4 Inflation components (annual percentage changes)

	2014	2015	2016	2017
HICP	-0.1	-0.3	1.7	2.4
Food	-0.2	-0.1	2.5	3.1
Non-energy industrial goods	0.0	0.5	1.2	1.3
Energy	-2.2	-3.8	-1.2	1.2
Services	1.0	0.7	3.0	3.4
Net inflation excluding fuel	0.5	1.0	2.2	2.7

Source: SO SR and NBS calculations.

Chart 6 Net inflation excluding fuel and the output gap (%)



Source: SO SR and NBS calculations.

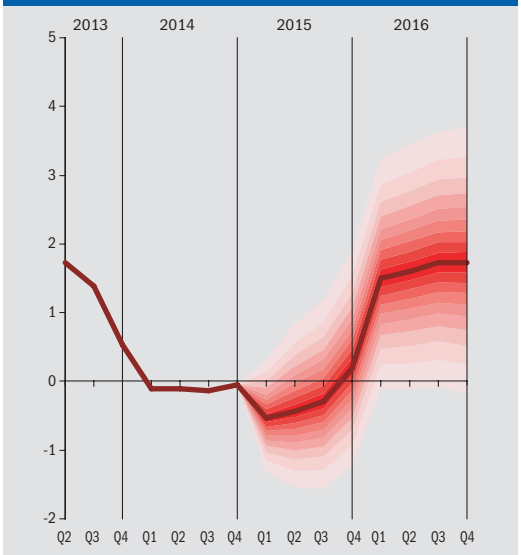
growth in domestic demand, rising import prices (the lagged impact of the weaker currency), and the return of food prices to a moderately upward path amid increasing commodity prices. It is assumed that by the end of the projection horizon, the temporary supply-side shock of falling oil prices will be fading, and that energy prices will therefore have a slightly positive impact on the inflation rate.

5 Risks to the forecast

The risks to the outlook for the real economy are balanced over the projection horizon. The upside risks are that the accommodative monetary policy stance will have a greater than expected impact and that new fiscal impulses will appear. On the downside there are geopolitical risks and the possibility of global economic growth being weaker than projected.

The risks to the inflation forecast are also balanced over the projection horizon. On the upside, import price growth may exceed assumptions owing to exchange rate depreciation, while another risk is oil price developments. Downward risks include agricultural price movements and weaker than projected demand-push pressures from both the external and domestic environment.

Chart 7 HICP inflation forecast (%)



Source: SO SR and NBS.

Table 5 Risks to the forecast

	2015	2016	2017
GDP	Balanced	Balanced	Balanced
Inflation	Balanced	Balanced	Balanced

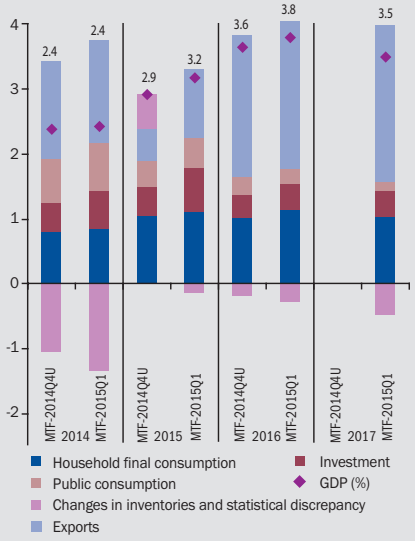
Source: NBS.

6 Comparison with the previous forecast

Stronger economic growth thanks to the ECB's non-standard measures

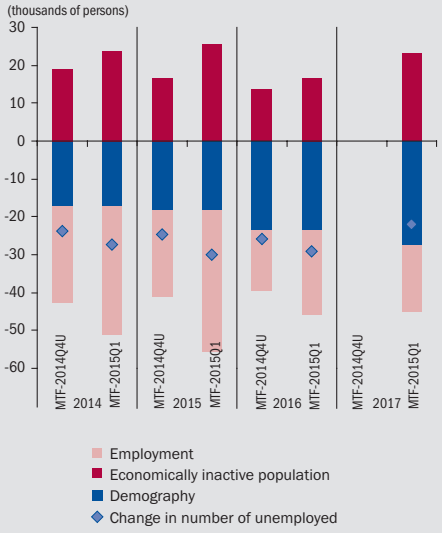
The economic growth projections over the projection horizon are higher in this forecast than in January's forecast (MTF-2014Q4U). This reflects not only better than expected current activity (stemming mainly from domestic demand), but also depreciation of the effective exchange rate following the launch of the ECB's expanded asset purchase programme. The revisions to domestic demand concern mainly investment demand, which is currently stronger than projected in the previous forecast. Investment spending is expected to be further boosted by the accommodative monetary policy stance. The projections for private consumption have also been revised up slightly since January, in order to reflect faster income growth. Income should be boosted by a marked improvement in the employment situation and, in 2015, a further decline in prices. Export growth forecasts, particular the figure for 2015, have been adjusted upwards on the basis of better than expected current performance as well as exchange rate depreciation.

Chart 8 Composition of GDP growth[1] (annual percentage changes; contributions in p.p.)



Source: SO SR and NBS.
Note: The item "Changes in inventories and statistical discrepancy" includes uncategorised imports that remained after the calculation of import intensity.
1) 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%, public consumption – 7%, investment – 50%, and exports – 62.5%). Remaining imports were included under changes in inventories and the statistical discrepancy.

Chart 9 Comparison of labour market indicators (contributions to unemployment)



Source: SO SR and NBS.

More favourable labour market figures

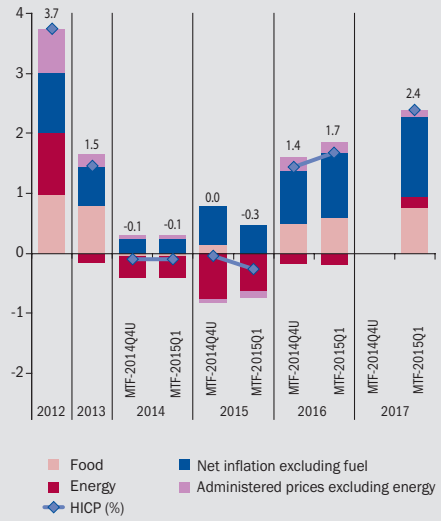
The upward revisions to employment growth projections for 2015 and 2016 are based on current, more favourable developments, as well as on the improved forecast, not least for the domestic side of the economy, which should see greater job creation. As a corollary of the adjustments to the employment outlook, unemployment is expected to decrease at a faster pace than previously projected.

Inflation forecast for this year revised down

In the first two months of 2015 the exchange rate was weaker and oil prices were higher[7] than projected in the previous forecast, but these factors did not manage to offset the decline in the overall price level in that period. There was also an absence of the price adjustments usual for this time of year (especially in services). As a re-

7 *Energy prices are volatile, reflecting pronounced fluctuations in prices of oil and other energy commodities. Movements in global prices of oil and in prices of related energy commodities are passed through almost immediately to changes in fuel prices and, with a lag, to prices of gas, heat and electricity. As a result of the collapse in oil prices in the second half of 2014, energy prices are one of the causes of the current negative inflation rates. This downward impact is due in part to the secondary effects of energy prices on prices of food and services.*

Chart 10 Comparison of inflation components (annual percentage changes; contributions in p.p.)



Source: SO SR and NBS.

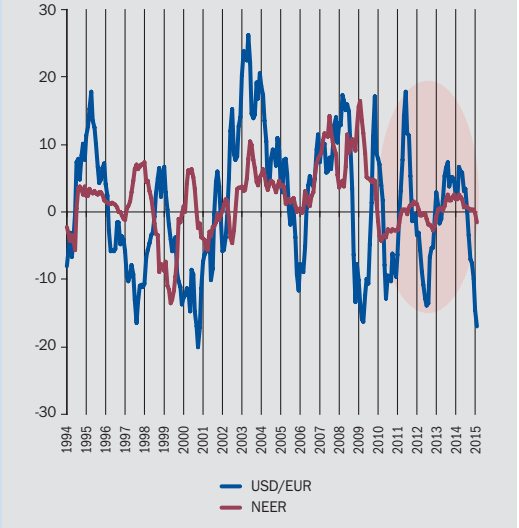
sult, the average inflation forecast for 2015 has been revised down by 0.3 percentage point. The forecast for 2016, by contrast, is now moderately higher than before, reflecting the upward effect of a weaker exchange rate on prices of non-energy industrial goods, as well as stronger domestic demand.

Box 2

IMPACT OF THE EXCHANGE RATE ON THE SLOVAK ECONOMY

Slovakia is a small open economy. The ratio of total exports and imports of goods and services to GDP (i.e. the openness of the economy) is more than 180% and still increasing. This upward trend was disrupted only in 2009, when the global financial crisis caused a collapse in world trade and consequently a decline in Slovakia's exports and imports. For such an open economy, it is clear that the exchange rate channel plays a key role in the price competitiveness of exports. Since imports make up around 30% of household consumption (according to the composition of household final consumption), the exchange rate is also a crucial factor in domestic price level developments. Euro area countries are among Slovakia's principal trading partners (the share of exports to euro area countries in total Slovak exports is around 45%), and therefore the country's entry into the euro area and adoption of the euro (from 1 January 2009) significantly reduced volatility in Slovakia's nominal effective exchange rate (NEER)[8]. The NEER's stability was also sup-

Chart A EUR/USD exchange and Slovakia's nominal effective exchange rate (annual percentage changes)



Source: ECB and NBS.

8 *In the NBS methodology, the NEER is calculated on the basis of bilateral exchanges rates of the 15 most significant trading partners in manufacturing industry.*

ported by the fact that the currencies of some non-euro area trading partners are pegged to the euro, meaning that only part of the of the EUR/USD exchange rate developments pass through directly to these currencies' bilateral exchange rates with the euro.

This is confirmed also by developments in recent months, with the EUR/USD exchange rate depreciating and the NEER showing more stability. Applying a simple correlation analysis, the EUR/USD exchange rate was not shown to have a direct impact on / to pass through to Slovakia's effective exchange rate. An exception has been observed recently, when the euro depreciated against all currencies following the expansion of the ECB's asset purchase programme. This was reflected in Slovakia's NEER, which in the first third of March depreciated by almost 2% in comparison with its level at the beginning of February.

In estimating the pass-through of the exchange rate to the economy, it is necessary to distinguish between two separate cases: the impact of the EUR/USD exchange rate and the impact of the nominal effective exchange rate.

1) Pass-through of the EUR/USD exchange rate – 10% depreciation of the euro against the dollar

- The main pass-through channel is energy commodity prices. Although energy commodities are imported from Russia, it is assumed that the payments are settled in US dollars. Hence as the euro depreciates, oil prices in euro increase, with a direct upward impact on energy prices and, secondarily, other prices. Assuming wage rigidity, rising inflation will reduce the real income of households and consequently dampen household final consumption.
- Such a shock is, however, accompanied by a countermovement in the oil price (by around half), which mitigates its negative impact.
- This shock therefore causes an increase in inflation and a slowdown in the growth of the real economy.

2) Pass-through of the nominal effective exchange rate – 10% depreciation of the nominal effective exchange rate

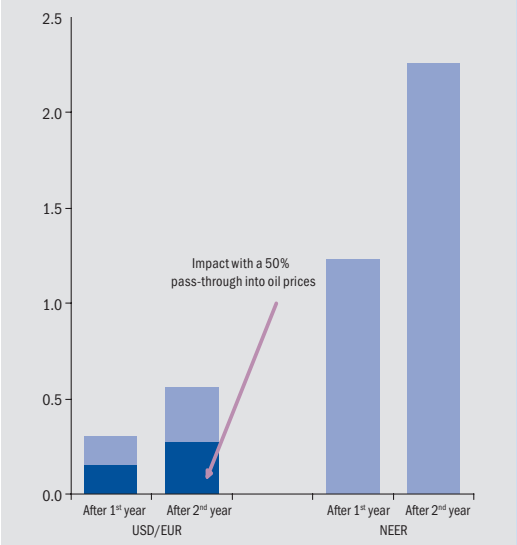
- In the initial stage the main pass-through channel is an improvement in price competitiveness and the resulting pick-up in export performance. Higher demand for exports has a positive impact on employment and real income, which boosts the domestic side of the economy.
- On the other hand, depreciation of the nominal effective exchange rate gradually passes through to the domestic price level via higher import prices. Consequently, the relative prices balance out and the initial positive impulse gradually fades. Over the longer-term horizon (two to three years) GDP growth decelerates, although the cumulative impact on GDP, even after three years, remains moderately positive.

Differences between the transmission of shocks in the EUR/USD exchange rate and nominal effective exchange rate (NEER) are shown in the charts. Both shocks produce an inflationary impulse, but the impact is greater through the NEER. In the case of a 10% depreciation of the NEER, the cumulative impact on the headline inflation rate is 2.26%, which constitutes a pass-through of around 23%.

These are simulation calculations that help explain the pass-through of the exchange rate to the Slovak economy using a simplified model approach. The size of the pass-through may in fact vary due, for example, to the NEER being based on a territorial structure, although more precisely it should have been based on the currency structure of transactions. However, these data are not available.

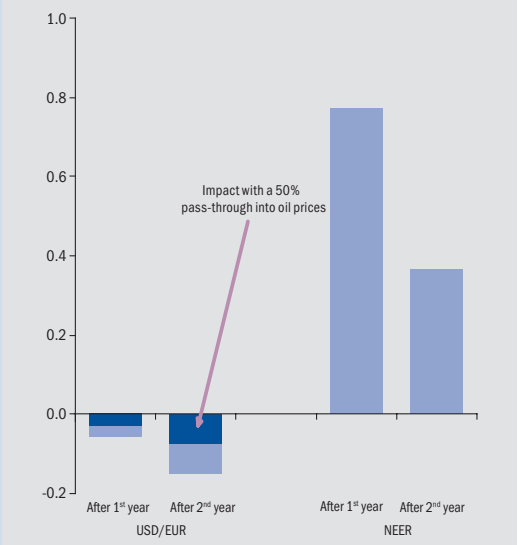
Simulation: 10% depreciation of the euro against the dollar and 10% depreciation of Slovakia's nominal effective exchange rate

Chart B Cumulative impact on the price level according to the HICP (%)



Source: NBS.

Chart C Cumulative impact on GDP (%)



Source: NBS.

7 Impact of the MTF-2015Q1 macroeconomic forecast on public finances

Applying the macroeconomic assumptions of this forecast (MTF-2015Q1) to the legislative assumptions from the February meeting of the Tax Revenue Forecasting Committee, the projected collection of taxes and social contributions would increase by 0.2% of GDP in 2015, 0.3% of GDP in 2016 and 0.4% of GDP in 2017. This improvement in the collection of taxes and social contributions is based mainly on the fact that the assumptions of the MTF-2015Q1 forecast for the labour market situation and consumption (both nominal and real) are more positive than the corresponding assumptions from the February meeting of the Macroeconomic Forecasting Committee.

Table 6 Differences in projections for tax and social contribution revenues in Slovakia's public finances (EUR millions, unless otherwise stated)

How the tax collection outlook under MTF-2015Q1 macroeconomic projections differs from the outlook according to FPI assumptions (February 2015)	2015	2016	2017
Personal income tax	24	35	37
Corporate income tax	4	18	32
Withholding tax	-2	0	17
VAT	52	82	90
Excise taxes	3	6	6
Social and health insurance	91	128	133
Total (impact of taxes and contributions)	172	269	315
Total (impact of taxes and contributions, % of GDP)	0.2	0.3	0.4
Impact of nominal GDP changes on the deficit target[1)]	-9	-3	1
Total (EUR millions)	**163**	**266**	**316**
Total (% of GDP)	**0.2**	**0.3**	**0.4**

Source: NBS – based on the estimated impact of macroeconomic developments on the general government balance, as calculated by the Finance Ministry's Financial Policy Institute (FPI).
1) Change in nominal deficit resulting from change in GDP, assuming attainment of fiscal target as a percentage of GDP (where "-" denotes an improvement in the nominal deficit and "+" denotes a deterioration).

Table 7 Medium-Term Forecast (MTF-2015Q1) for key macroeconomic indicators

Indicator	Unit	Actual	Forecast P1Q-2015			Difference versus MTF-2014Q4 update		
		2014	2015	2016	2017	2015	2016	2017
Prices								
HICP inflation	annual percentage changes	-0.1	-0.3	1.7	2.4	-0.3	0.3	-
CPI inflation	annual percentage changes	-0.1	-0.2	1.7	2.5	-0.3	0.2	-
GDP deflator	annual percentage changes	-0.2	-0.1	1.8	2.4	-0.1	0.2	-
Economic activity								
Gross domestic product	year-on-year changes in %, constant prices	2.4	3.2	3.8	3.5	0.3	0.2	-
Final consumption of households	year-on-year changes in %, constant prices	2.2	3.0	3.0	2.8	0.2	0.3	-
Final consumption of general government	year-on-year changes in %, constant prices	4.4	2.7	1.5	0.8	0.5	-0.2	-
Gross fixed capital formation	year-on-year changes in %, constant prices	5.7	6.1	3.6	3.7	1.9	0.2	-
Exports of goods and services	year-on-year changes in %, constant prices	4.6	2.9	6.3	6.6	1.5	0.1	-
Imports of goods and services	year-on-year changes in %, constant prices	5.0	2.6	5.6	6.0	1.2	0.3	-
Net exports	EUR millions in constant prices	5,085	5,479	6,296	7,126	392	328	-
Domestic demand	year-on-year changes in %, constant prices	3.4	3.7	2.9	2.6	0.7	0.2	-
Output gap	% of potential output	-1.7	-1.2	-0.2	0.4	0.1	0.2	-
Gross domestic product	EUR millions at current prices	75,215	77,542	81,944	86,869	289	587	-
Labour market								
Employment	thousands of persons, ESA 2010	2,223	2,255	2,279	2,297	18.2	26.1	-
Employment	year-on-year changes in %, ESA 2010	1.4	1.4	1.1	0.8	0.5	0.4	-
Number of unemployed	thousands of persons [1]	359	329	299	277	-9.2	-12.5	-
Unemployment rate	%	13.2	12.0	11.0	10.2	-0.4	-0.5	-
Unemployment gap [2]	p. p.	1.5	1.1	0.5	0.2	0.1	-0.1	-
Labour productivity [3]	year-on-year changes in %	1.0	1.7	2.7	2.7	-0.3	-0.2	-
Nominal productivity [4]	year-on-year changes in %	0.9	1.6	4.5	5.2	-0.5	0.0	-
Nominal compensation per employee	year-on-year changes in %, ESA 2010	3.4	2.7	3.8	4.3	0.2	0.2	-
Nominal wages [5]	year-on-year changes in %	4.1	2.6	3.8	4.3	-0.1	0.1	-
Real wages [6]	year-on-year changes in %	4.2	2.7	2.1	1.8	0.1	0.0	-
Households								
Disposable income	constant prices	3.6	3.0	3.0	2.8	-0.1	0.3	-
Savings rate	% of disposable income	8.7	8.7	8.7	8.7	-0.7	-0.7	-
Balance of payments								
Goods balance	% of GDP	4.5	4.0	4.2	4.5	-1.7	-1.5	-
Current acount	% of GDP	0.1	0.6	0.7	1.2	-1.1	-0.9	-
External environment and technical assumptions								
External demand growth for Slovakia	year-on-year changes in %	3.9	3.7	5.3	5.5	-0.2	0.1	-
Exchange rate (EUR/USD) [7] [8]	level	1.33	1.09	1.07	1.07	-9.1	-10.2	-
Oil price in USD [7] [8]	level	99.3	58.4	65.0	68.6	10.0	5.0	-
Oil price in USD	year-on-year changes in %	-8.8	-41.2	11.3	5.7	5.3	-5.2	-
Oil price in EUR	year-on-year changes in %	-8.9	-28.1	12.6	5.7	12.5	-3.9	-
Non-energy commodity price in USD	year-on-year changes in %	-6.4	-11.0	2.6	4.8	-6.2	-1.2	-
EURIBOR 3M [9]	% p. a.	0.2	0.1	0.1	0.2	0.0	-0.1	-
10-Y Slovak government bond yields	%	2.1	1.3	1.4	1.5	-0.3	-0.4	-

Source: NBS, ECB, SO SR.

1) *Labour Force Survey.*
2) *Difference between unemployment rate and NAIRU (non-accelerating inflation rate of unemployment). Positive value indicates a higher unemployment rate than NAIRU.*
3) *GDP at constant prices / employment – ESA 2010.*
4) *Nominal GDP divided by employment (quarterly reporting by SO SR).*
5) *Average monthly wages according to SO SR statistical reporting.*
6) *Wages according to SO SR statistical reporting, deflated by CPI inflation.*
7) *Changes from the previous forecast in per cent.*
8) *Technical assumptions for the exchange rates and oil prices are based on information available at 10 March 2015.*
9) *Technical assumptions for interest rates and non-energy commodity prices are based on market expectations, with a cut-off date of 11 February 2015.*

Time series of selected macroeconomic indicators can be found on the NBS website at
http://www.nbs.sk/_img/Documents/_Publikacie/PREDIK/2015/protected/P1Q-2015.xls