



NÁRODNÁ BANKA SLOVENSKA
EUROSYSTEM



NBS MONTHLY BULLETIN

JANUARY 2018

Published by:
© Národná banka Slovenska

Address:
Národná banka Slovenska
Imricha Karvaša 1, 813 25 Bratislava
Slovakia

Contact:
info@nbs.sk

<http://www.nbs.sk>

Discussed by the NBS Bank Board on 30 January 2018.

All rights reserved.
Reproduction for educational and non-commercial
purposes is permitted provided that the source is
acknowledged.

ISSN 1337-9526 (online)



CONTENTS

1	SUMMARY	5	Chart 6	Germany – Ifo index and annual GDP growth	7
2	THE REAL ECONOMY	6	Chart 7	Employment – sectoral contributions to three-month-on-three-month changes in the three-month moving average	8
2.1	‘Hard’ indicators of economic activity	6	Chart 8	Indicator contributions to the nowcast for quarter-on-quarter employment growth	8
2.2	‘Soft’ leading indicators	6	Chart 9	Unemployment	9
3	THE LABOUR MARKET	8	Chart 10	Number of unemployed	9
4	PRICES	11	Chart 11	Wage growth by sector based on monthly figures	9
5	INDICATIVE IMPACT ON THE FORECAST	13	Chart 12	Wage growth trends	9
OVERVIEW OF MAIN MACROECONOMIC INDICATORS FOR SLOVAKIA		15	Chart 13	Factor model based wage determinants	10
LIST OF TABLES			Chart 14	HICP inflation and its components	11
Table 1	HICP components – comparison of projected and actual rates of change	11	Chart 15	HICP inflation	11
Table 2	Selected economic and monetary indicators for Slovakia	15	Chart 16	Demand-pull inflation	12
LIST OF CHARTS			Chart 17	The HICP services component and wages	12
Chart 1	Sales, industrial production and exports	6	Chart 18	The Brent crude oil price and automotive fuel prices in Slovakia	12
Chart 2	Automotive industry trends	6	Chart 19	Nowcast for GDP in Q4 2017	13
Chart 3	GDP growth estimate for the euro area in Q4 2017, Q1 2018 and Q2 2018	7	Chart 20	Nowcast for GDP in Q1 2018	13
Chart 4	GDP growth estimate for Germany in Q4 2017, Q1 2018 and Q2 2018	7	Chart 21	Nowcast for GDP	13
Chart 5	Economic sentiment indicators for Germany	7	Chart 22	Nowcast for private consumption	14
			Chart 23	Nowcast for goods and services exports	14
			Chart 24	Nowcast for employment	14



ABBREVIATIONS

CPI	Consumer Price Index
EA	euro area
ECB	European Central Bank
EC	European Commission
EMEs	emerging market economies
EONIA	euro overnight index average
ESA 2010	European System of Accounts 2010
ESI	Economic Sentiment Indicator (European Commission)
EU	European Union
EUR	euro
EURIBOR	euro interbank offered rate
Eurostat	statistical office of the European Union
FDI	foreign direct investment
GDP	gross domestic product
GNDI	gross national disposable income
GNI	gross national income
HICP	Harmonised Index of Consumer Prices
Ifo Institute	Leibniz Institute for Economic Research at the University of Munich
IMF	International Monetary Fund
MFI	monetary financial institutions
MF SR	Ministry of Finance of the Slovak Republic
MMF	money market fund
MTF	NBS's Medium-Term Forecast (published on a quarterly basis)
NACE	Statistical Classification of Economic Activities in the European Community (Rev. 2)
NARKS	National Association of Real Estate Offices of Slovakia
NBS	Národná banka Slovenska
NEER	nominal effective exchange rate
NFC	non-financial corporation
NPISHs	Non-profit institutions serving households
OECD	Organisation for Economic Co-operation and Development
p.a.	per annum
p.p.	percentage point
PMI	Purchasing Managers' Index
REER	real effective exchange rate
SASS	Slovenská asociácia správcovských spoločností – Slovak Association of Asset Management Companies
SME	small and medium-sized enterprise
SO SR	Statistical Office of the Slovak Republic
ULC	unit labour costs
ÚPSVR	Ústredie práce, sociálnych vecí a rodiny – Central Office of Labour, Social Affairs and Family
ÚRSO	Úrad pre reguláciu sieťových odvetví – Regulatory Office for Network Industries
USD	US dollar
VAT	value-added tax
ZEW	Das Zentrum für Europäische Wirtschaftsforschung – The Centre for European Economic Research

Symbols used in the tables

- . – Data are not yet available.
- – Data do not exist / data are not applicable.
- (p) – Preliminary data



1 SUMMARY¹

The strength of sentiment in the euro area in recent months has been favourably reflected in hard indicators. Euro area industrial production increased significantly in November, with the growth driven mainly by Germany industry. The labour market situation is gradually improving and is having an increasingly greater impact on private consumption, as evidenced by retail sales. Leading indicators remained elevated in January, implying that economic activity will remain robust. This should support increasing foreign demand for Slovak goods and services.

In Slovakia, monthly indicators of economic activity continued to rise in November. Industrial production growth increased notably, thanks largely to the car industry's improving output. Nevertheless, the favourable developments in industrial production were still not fully reflected in overall sales and exports, both of which recorded the same growth rates as in the previous month. The upward trends are, however, expected to boost the growth of these indicators after a short lag.

The labour market situation remains bright. Employment growth maintained its relatively high rate in November. Most new jobs are being added in the industry, services and trade sectors. Employers' expectations, as well as the number of job vacancies, suggest that employment will continue increasing in the period ahead. This outlook is further supported by the unemployment rate, which in December fell appreciably (to 7.1%).² Strong demand for labour is having a substantial downward impact on long-term unemployment. The labour market's continuing tightening is supporting wage growth, which in November rose to 4.9%. The highest wage growth was in the expanding sectors (industry and services).

The annual inflation rate for December was 2.0%, and for the year as a whole it stood at 1.4%. In December, food inflation was close to a five-year high and accounted for more than two-thirds of the headline rate. It is expected, however, that this supply-side shock will fade during the first half of the year and that upward pressure on the price level will come mainly from prices of energy and services.

¹ All month-on-month and quarter-on-quarter changes mentioned in the text have been seasonally adjusted using NBS internal models.

² The unemployment rate based on the total number of job seekers, seasonally adjusted.

2 THE REAL ECONOMY

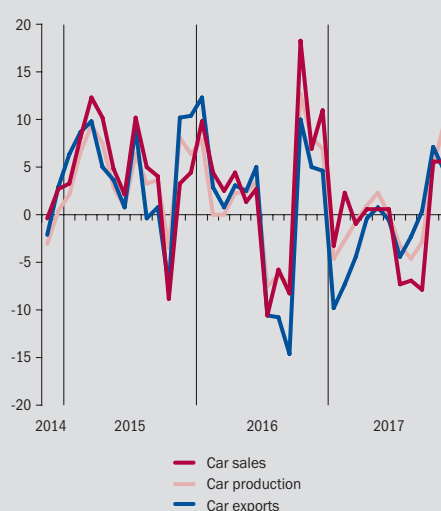
2.1 'HARD' INDICATORS OF ECONOMIC ACTIVITY

Monthly indicators of economic activity maintained their upward trend in November 2017, in three-month-on-three-month terms. While the growth rates of sales and exports moderated, industrial production growth accelerated, due mainly to the increase in manufacture of transport equipment.

November's industrial production growth rate of 3.8% was also supported by the manufacture of refined petroleum products. The rising trend in industry is expected to continue, as implied by business surveys conducted in late 2017 in which managers' expectations for production improved the most. After two quarters of moderate decline, industrial production is expected to have returned to positive growth in the fourth quarter of 2017.

As for overall sales, their three-month-on-three-month growth rate stood at 2.0%. The sectoral breakdown of the growth was similar to that in industrial production. At the same time, how-

Chart 2 Automotive industry trends
(three-month-on-three-month percentage changes in the three-month moving average; constant prices)

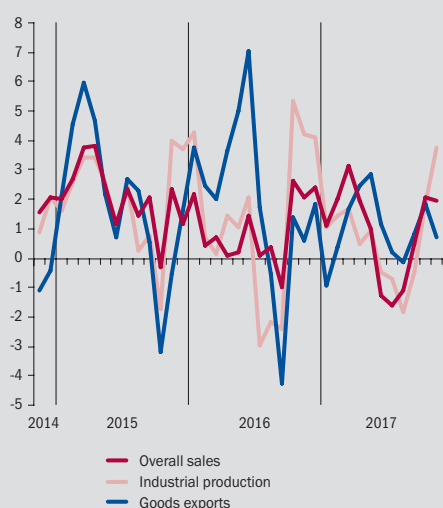


Sources: SO SR and NBS calculations.

ever, growth in wholesale trade sales fell, mostly due to declines in November itself in sales of information technologies, fuels, and machinery.

Slovakia's exports increased in November by 0.7% on a three-month-on-three-month basis. Despite the relatively robust output in core sectors, October's growth rate was not surpassed.

Chart 1 Sales, industrial production and exports
(three-month-on-three-month percentage changes in the three-month moving average; constant prices)



Sources: SO SR and NBS calculations.

2.2 'SOFT' LEADING INDICATORS

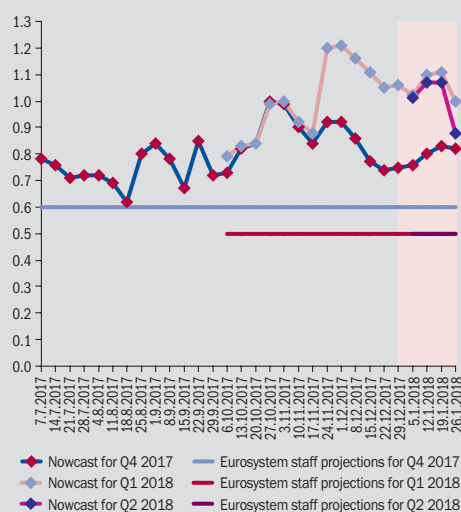
The European Commission's **Economic Sentiment Indicator** (ESI) for the euro area rose in December to its highest level for more than 17 years (116.0). Among euro area countries, the ESI for Germany recorded one of the highest increases (up to 116.0). In both cases, the ESI's increase was broad-based across all sectors. The composite Purchasing Managers' Index (**PMI**) for the euro area increased in January. The PMI for Germany fell marginally, but remained close to the six-and-a-half-year high recorded in the previous month. The **ZEW economic sentiment index** for Germany increased in January, and the current conditions index reflected burgeoning optimism.



The **Ifo Business Climate Index** for Germany increased in January, and while the sub-index for expectations was less favourable, the sub-index for current conditions reached an all-time high.

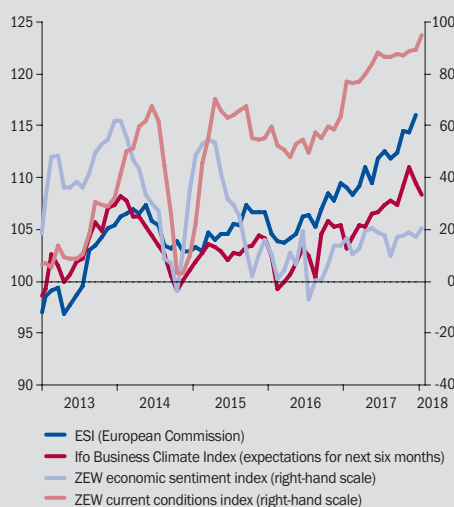
Leading indicators, as well as short-term forecasts, suggest that economic growth in both Germany and the euro area as a whole will remain strong in early 2018.

Chart 3 GDP growth estimate for the euro area in Q4 2017, Q1 2018 and Q2 2018 (quarter-on-quarter percentage changes)



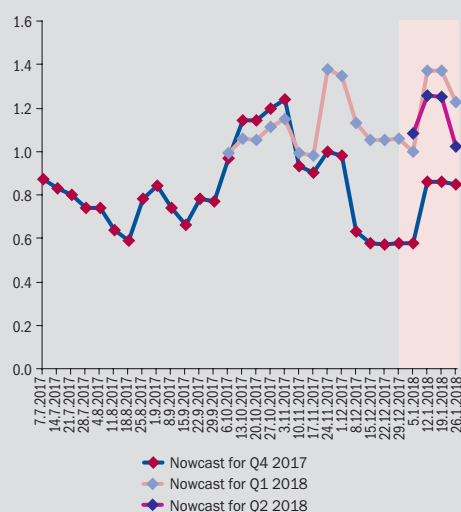
Sources: Now-Casting Economics Ltd and ECB (December 2017 Eurosystem staff macroeconomic projections for the euro area).
Note: The highlighted area denotes developments since the previous Monthly Bulletin.

Chart 5 Economic sentiment indicators for Germany



Sources: European Commission, Ifo Institute and ZEW Centre.
Note: ESI (long-run average = 100); Ifo index (2005 = 100); ZEW (balance of responses).

Chart 4 GDP growth estimate for Germany in Q4 2017, Q1 2018 and Q2 2018 (quarter-on-quarter percentage changes)



Source: Now-Casting Economics Ltd.
Note: The highlighted area denotes developments since the previous Monthly Bulletin.

Chart 6 Germany – Ifo index (2005 = 100) and annual GDP growth



Sources: Eurostat and Ifo Institute.

3 THE LABOUR MARKET

Employment growth across the reviewed sectors remained robust in November, standing at 2.8% year on year (down from 2.9% in the third quarter) and 0.1% in month-on-month terms. Taking into account that job growth is lower in the public sector (0.9% in the third quarter) than in the private sector, annual employment growth in the economy as a whole in the fourth quarter is expected to be around 2.2%. The main driver of November's job growth was industry, which saw increases in all branches apart from the energy and chemical industries. Services and trade also contributed positively, if somewhat more modestly (supported by most subsectors with the exception of certain market services in which job growth slowed: such as legal and accounting activities, administrative services, and architectural activities). The rising employment trend in the construction sector came to an end in November, but with confidence in the sector still elevated and construction production continuing to grow, it may reappear. Since confidence indicators have maintained the favourable levels observed at the end of 2017, job growth in ear-

Chart 8 Indicator contributions to the nowcast for quarter-on-quarter employment growth (percentage points)

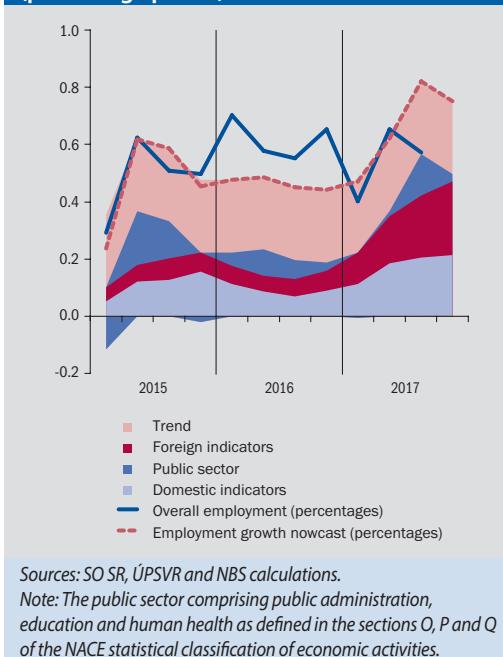
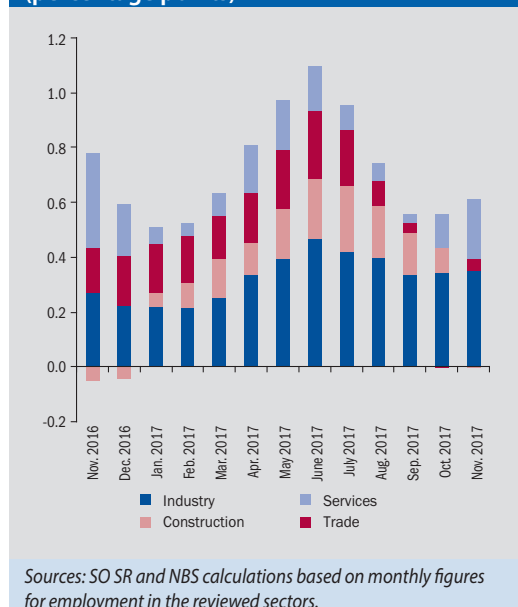


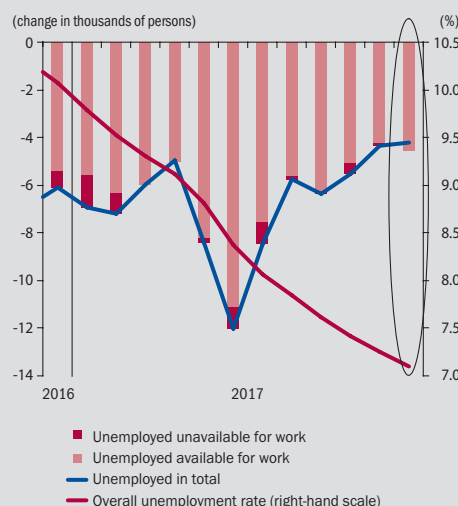
Chart 7 Employment – sectoral contributions to three-month-on-three-month changes in the three-month moving average (percentage points)



ly 2018 is expected to remain relatively strong. With the labour market becoming increasingly tighter, however, a rising number of employers are experiencing labour shortages.

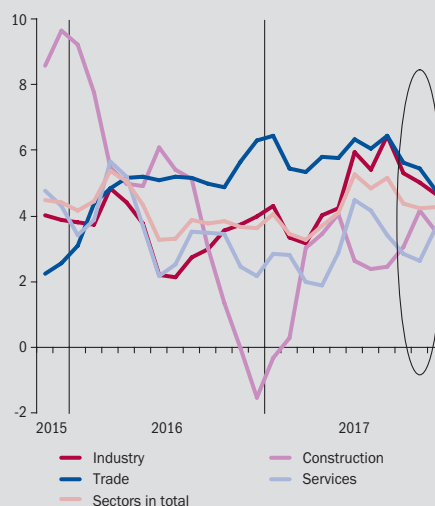
The number of unemployed continued its downward trend in December, falling by 4,200, month on month, after seasonal adjustment. As a result, the adjusted unemployment rate based on the total number of job seekers fell to 7.1%. Part of that decrease was accounted for by job seekers being removed from the unemployment register for reasons other than finding work, but even after adjusting for this fact, December's fall in headcount unemployment was relatively large (almost 3,000 month on month). Unemployment is falling to below previous historical lows, a development aided by active labour-market policies (assistance to long-term unemployed and training for job seekers). The number of job vacancies remains very high, implying that employment growth could remain relatively strong.

Chart 9 Unemployment (percentages; change in thousands of persons)



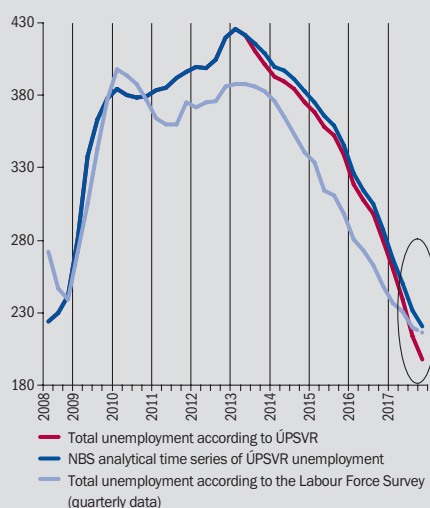
Sources: ÚPSVR and NBS calculations.

Chart 11 Wage growth by sector based on monthly figures (annual percentage changes in the three-month moving average)



Sources: SO SR and NBS calculations.

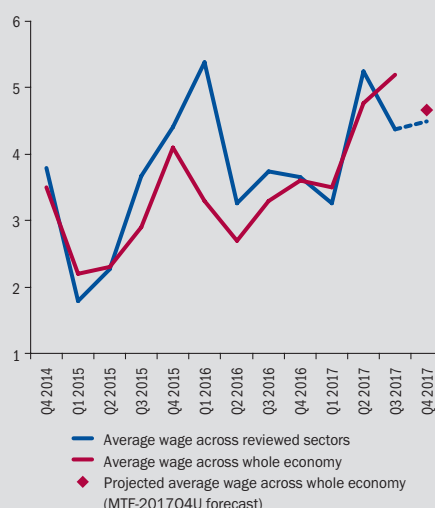
Chart 10 Number of unemployed (thousands of persons)



Sources: SO SR, ÚPSVR and NBS calculations.

Note: The analytical time series adjusts the level of unemployment to take account of the removal of job seekers from the unemployment register for reasons other than finding work. The Labour Force Survey unemployment figure for Q4 2017 is the MTF-2017Q4U projection.

Chart 12 Wage growth trends (annual percentage changes)



Sources: SO SR and NBS calculations.

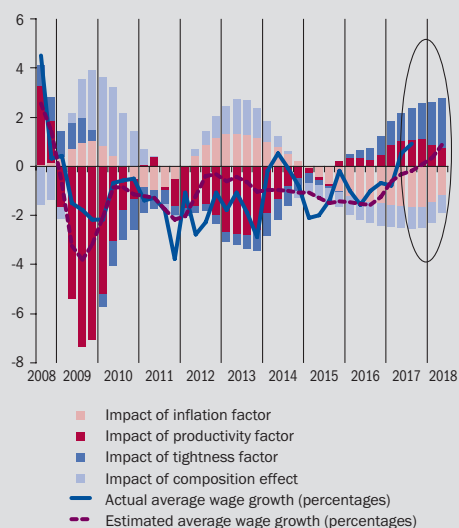
Note: The figure for the reviewed sectors in Q4 2017 is based on data for October and November 2017.

Average annual wage growth in the reviewed sectors increased to 4.9% in November, from 4% in October (the average rate for the third quarter was 4.4%). The rebound in wage growth was driven by wages in core branches of industry (wages

in the sector as a whole increased by 5% year on year), and in the services sector, where the overall growth rate of 5.6% was largely accounted for by such subsectors as transportation, restaurants, and other market services (administrative,



Chart 13 Factor model based wage determinants (annual percentage changes; percentage point contributions; deviations from long-run average)



Source: NBS calculations.

Notes: Long-run average annual wage growth is 4.3% (calculated since 2006). Wages and productivity are given in nominal terms. Further information about the methodology is provided in this [Analytical Commentary](#).

real-estate, consultancy, and recreation activities). Wage growth moderated in construction (to 2.4%) and trade (3.8%). In view of the latest monthly data and the relatively high irregular bonuses paid towards the end of 2016, annual wage growth is expected to fall in the fourth quarter in line with projections. It may, however, accelerate in the next period, given that wage determinants such as price developments, the pick-up in nominal productivity, and labour market tightening are quite clearly implying upward pressure on wage growth.

4 PRICES

The annual HICP inflation rate in Slovakia edged down to 2.0% in December (from 2.1% in November), in accordance with the projection. In month-on-month terms, the price level remained unchanged.

Chart 14 HICP inflation and its components (annual percentage changes; percentage point contributions)

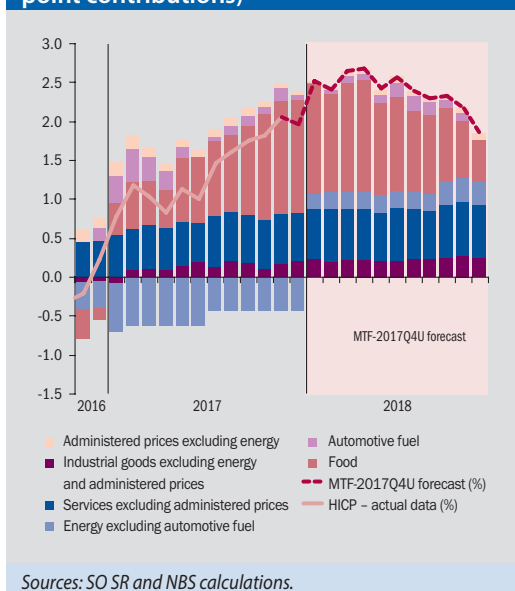
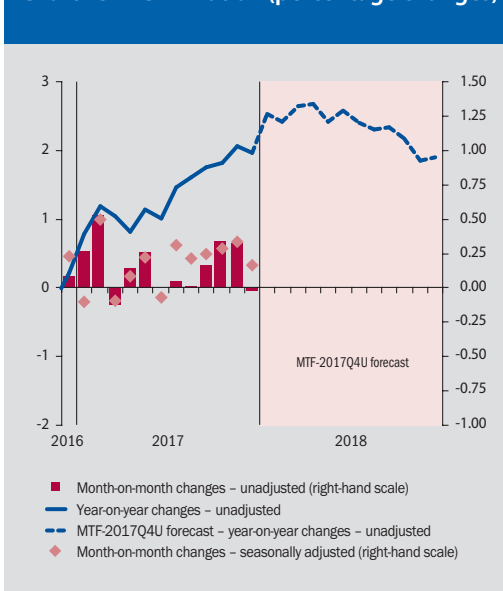


Chart 15 HICP inflation (percentage changes)



The increase in food prices continued to be supported by the continuing upward trend in egg prices. Annual food inflation stood at 5.5% in December, close to a five-year high for a second successive month. With its impact on the headline HICP inflation rate amounting to 1.44 per-

Table 1 HICP components – comparison of projected and actual rates of change (percentages; percentage point contributions)

			Non-energy industrial goods	Energy	Food	Services	HICP	Demand-pull inflation excluding fuel	Administered prices excluding energy
Year-on-year changes	A	December 2017 – MTF-2017Q4 forecast	0.7	-2.3	5.4	2.2	1.96	1.6	0.6
	B	December 2017 – actual figure	0.8	-2.5	5.5	2.1	1.96	1.7	0.5
	B-A	December – actual figure minus forecast	0.1	-0.2	0.1	-0.1	0.0	0.0	-0.1
	(B-A) * weight	Contribution to overall forecast error¹⁾	0.04	-0.03	0.03	-0.04	0.01	0.01	-0.01

Sources: SO SR and NBS calculations.

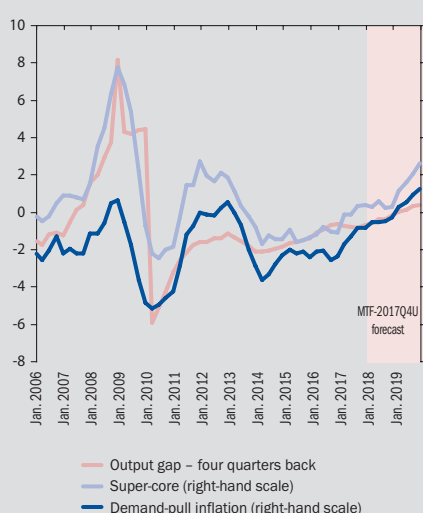
1) Projections taken from NBS's December 2017 Medium-Term Forecast (MTF-2017Q4).

centage points, the food component remained the principal contributor to inflation. Food inflation is expected to begin easing after the first four months of the year, owing to the fading of the impact of the supply-side shock and to projected developments in agricultural commodity prices in the European market.

Given the upward trend in global oil prices, the annual rate of increase in automotive fuel prices is expected to accelerate until around June/July 2018. Demand-pull inflation has been in line with projections and is expected to accelerate moderately in the short term, reflecting the pass-through of increases in real disposable income and in import prices.

Annual services inflation was 2.1% in December and is expected to accelerate in January 2018, reflecting cost-push and demand-pull pressures generated by consumer demand developments. As a result, the average headline inflation rate in 2018 is expected to be slightly above 2%.

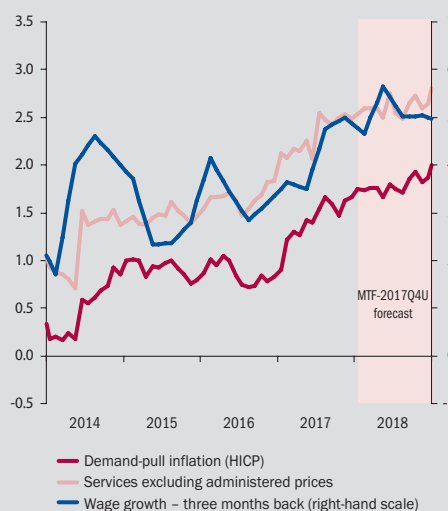
Chart 16 Demand-pull inflation (annual percentage changes; seasonally adjusted)



Sources: SO SR and NBS calculations.

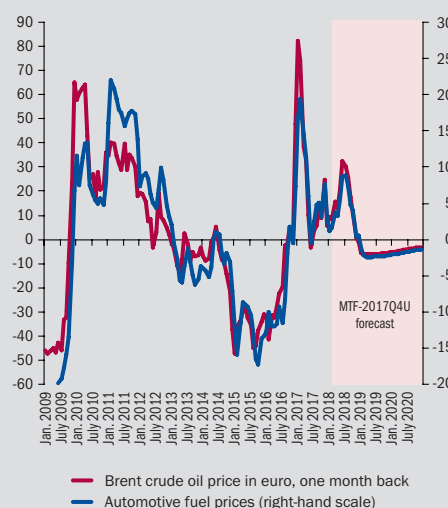
Note: Demand-pull inflation comprises the following: industrial goods excluding energy and administered prices; and services excluding administered prices. The super-core index comprises sub-items in the HICP for which the output gap has predictive power with statistical significance.

Chart 17 The HICP services component and wages (annual percentage changes)



Sources: SO SR and NBS calculations.

Chart 18 The Brent crude oil price (EUR) and automotive fuel prices in Slovakia (annual percentage changes)



Sources: SO SR and NBS calculations.

5 INDICATIVE IMPACT ON THE FORECAST

Nowcast movements and all the most recent monthly data have been incorporated into the update of NBS's December 2017 Medium-Term Forecast (MTF-2017Q4U).

Chart 19 Nowcast for GDP in Q4 2017
(quarter-on-quarter percentage changes)

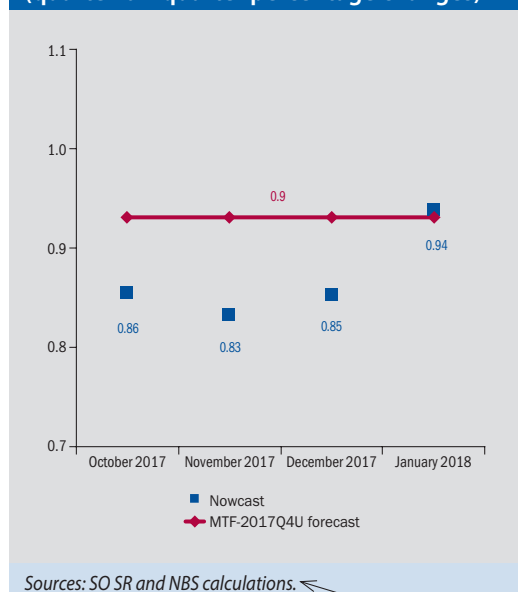


Chart 20 Nowcast for GDP in Q1 2018
(quarter-on-quarter percentage changes)

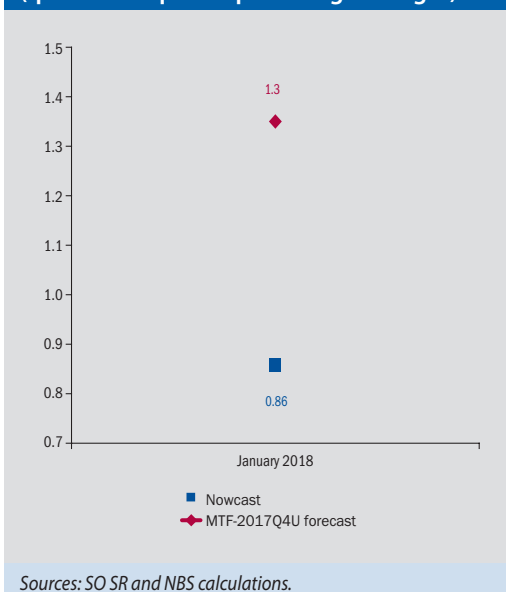
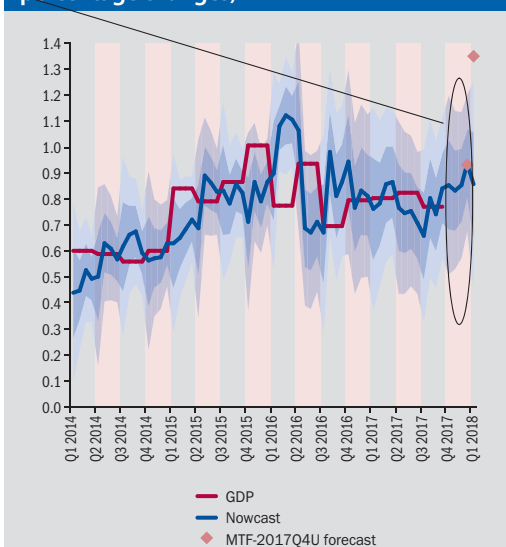


Chart 21 Nowcast for GDP (quarter-on-quarter percentage changes)³

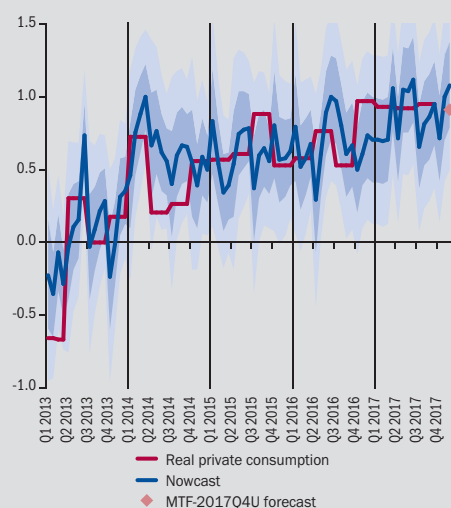


Note: The GDP forecast for the first quarter of 2018 differs from the GDP nowcast by taking into account the expected increase in production capacities in the automotive industry, which constitutes a one-off factor in the economy.

³ The band around the point estimate denotes ± 1 and 2 times the root mean square error. Nowcasts are calculated using OLS time series models based on selected sets of monthly indicators (for employment, a factor model is used). Nowcasts provide a current estimate of future developments using available monthly figures from the current quarter, their future values forecast with ARIMA models, and their lagged values. The individual model projections are independent of each other and therefore a forecasting error in a past quarter cannot affect current projections. Further details are available in the commentaries on the [GDP nowcasts](#), [private consumption nowcasts](#), [export nowcasts](#) and [employment nowcasts](#).



Chart 22 Nowcast for private consumption (quarter-on-quarter percentage changes)³



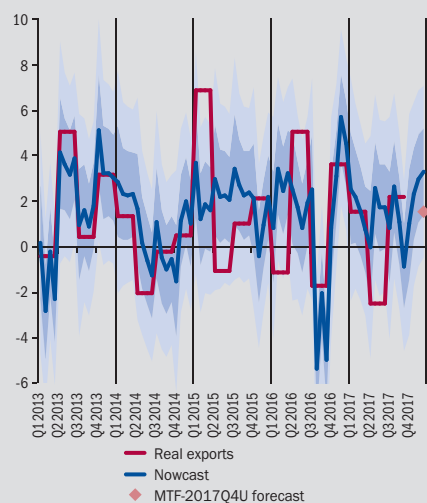
Sources: SO SR and NBS calculations.

Chart 24 Nowcast for employment (quarter-on-quarter percentage changes)³



Sources: SO SR and NBS calculations.

Chart 23 Nowcast for goods and services exports (quarter-on-quarter percentage changes)³



Sources: SO SR and NBS calculations.



OVERVIEW OF MAIN MACROECONOMIC INDICATORS FOR SLOVAKIA

Table 2 Selected economic and monetary indicators for Slovakia
(annual percentage changes, unless otherwise indicated)

	Gross domestic product	HICP	Industrial producer prices	Employment ESA 2010	Unemployment rate (%)	Industrial production index	Total sales of sectors ¹⁾	Economic Sentiment Indicator (long-term average=100)	M3 (for analytical use) ²⁾	Loans to private sector ³⁾	Loans to non-financial corporations ³⁾	Loans to households ³⁾	State budget balance (EUR mil.)	General government balance (% of GDP)	General government gross debt (% of GDP)	Current account (% of GDP)	Balance of trade (% of GDP)	USD/EUR exchange rate (average for the period)
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
2010	5.0	0.7	-2.7	-1.5	14.4	8.1	8.1	98.7	7.8	5.3	1.6	12.5	-4,436.1	-7.5	41.2	-4.7	-0.1	1.3257
2011	2.8	4.1	2.7	1.8	13.6	5.3	6.2	98.8	2.9	9.3	7.6	11.1	-3,275.7	-4.3	43.7	-5.0	-0.1	1.3920
2012	1.7	3.7	3.9	0.1	14.0	8.0	4.4	93.9	8.8	3.8	-2.3	10.3	-3,810.7	-4.3	52.2	0.9	3.4	1.2848
2013	1.5	1.5	-0.1	-0.8	14.2	3.8	1.9	90.2	6.4	6.4	1.7	10.3	-2,023.3	-2.7	54.7	1.9	3.9	1.3281
2014	2.8	-0.1	-3.5	1.4	13.2	3.6	2.6	100.4	2.5	7.7	1.9	13.2	-2,923.4	-2.7	53.5	1.1	3.6	1.3285
2015	3.9	-0.3	-4.2	2.0	11.5	7.3	7.3	99.7	11.5	10.7	7.3	13.1	-1,932.6	-2.7	52.3	-1.7	1.3	1.1095
2016	3.3	-0.5	-4.3	2.4	9.7	4.8	4.1	101.6	6.1	10.2	4.2	13.4	-980.3	-2.2	51.8	-1.5	2.0	1.1069
2017	.	1.4	.	.	.	.	.	103.5	.	.	.	.	-1,220.1	.	.	.	.	1.1297
2017 Q1	3.0	1.0	2.0	2.1	8.7	7.7	6.1	104.3	5.7	11.1	8.0	12.6	-	-0.8	53.5	0.2	2.3	1.0648
2017 Q2	3.7	1.0	1.9	2.1	8.1	1.8	3.2	101.7	5.9	12.6	10.5	13.3	-	-0.9	51.8	-1.7	2.0	1.1021
2017 Q3	3.4	1.6	1.6	2.3	8.0	3.3	4.7	104.6	6.4	11.2	9.8	12.0	-	.	.	-3.1	-0.7	1.1746
2017 Q4	.	2.0	1.2	.	.	.	.	103.4	.	.	.	.	-	.	.	.	.	1.1774
2017 Jan.	-	0.8	0.4	-	8.6	7.4	4.5	104.6	6.2	11.4	7.3	13.5	92.3	-	-	-	-	1.0614
2017 Feb.	-	1.2	2.6	-	8.4	2.6	5.4	106.6	6.6	11.9	9.4	13.5	-500.0	-	-	-	-	1.0643
2017 Mar.	-	1.0	3.0	-	8.0	12.9	8.3	101.6	5.7	12.0	8.5	13.8	70.7	-	-	-	-	1.0685
2017 Apr.	-	0.8	2.5	-	7.7	-3.0	4.1	101.6	6.1	12.3	9.6	13.6	-298.2	-	-	-	-	1.0723
2017 May	-	1.1	1.9	-	7.4	5.1	4.3	102.6	5.7	13.0	11.7	13.6	-256.4	-	-	-	-	1.1058
2017 June	-	1.0	1.4	-	6.9	3.3	1.2	100.8	5.9	12.6	10.5	13.3	72.6	-	-	-	-	1.1229
2017 July	-	1.5	0.6	-	6.7	9.2	6.9	102.1	5.6	11.9	9.6	13.3	53.2	-	-	-	-	1.1511
2017 Aug.	-	1.6	2.1	-	6.5	-0.4	3.9	104.0	6.7	12.1	10.4	13.3	-227.2	-	-	-	-	1.1807
2017 Sep.	-	1.8	2.1	-	6.4	2.3	3.4	107.7	6.4	12.0	10.3	13.0	-94.8	-	-	-	-	1.1915
2017 Oct.	-	1.8	2.0	-	6.1	5.4	3.1	106.3	6.8	11.3	8.3	13.1	336.2	-	-	-	-	1.1756
2017 Nov.	-	2.1	1.7	-	6.0	6.2	5.0	102.0	7.9	10.9	7.7	12.8	-229.7	-	-	-	-	1.1738
2017 Dec.	-	2.0	.	-	5.9	.	.	102.0	.	.	.	.	-238.7	-	-	-	-	1.1836

Sources: Statistical Office of the Slovak Republic, MF SR, the European Commission and NBS.

1) Constant prices (seasonally adjusted).

2) Currency in circulation in M3 refers to money held by the public (according to methodology in place prior to 2008).

3) Adjusted for sales and securitisation.

More detailed time series for selected macroeconomic indicators

http://www.nbs.sk/_img/Documents/_MonthlyBulletin/2018/StatisticsMB0118.xls