



NÁRODNÁ BANKA SLOVENSKA  
EUROSYSTEM



# REPORT ON THE SLOVAK ECONOMY

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## ABBREVIATIONS

CPI	Consumer Price Index
EA	euro area
ECB	European Central Bank
EC	European Commission
EIA	Energy Information Administration
EMU	Economic and Monetary Union
EONIA	euro overnight index average
ESA 95	European System of National Accounts 1995
EU	European Union
Eurostat	Statistical Office of the European Communities
FDI	foreign direct investment
Fed	Federal Reserve System
EMU	Economic and Monetary Union
EURIBOR	euro interbank offered rate
FNM	Fond národného majetku – National Property Fund
GDP	gross domestic product
GNDI	gross national disposable income
GNI	gross national income
HICP	Harmonised Index of Consumer Prices
IMF	International Monetary Fund
IPI	industrial production index
IRF	initial rate fixation
MFI	monetary financial institutions
MF SR	Ministry of Finance of the Slovak Republic
MMF	money market fund
NARKS	National Association of Real Estate Offices of Slovakia
NBS	Národná banka Slovenska
NEER	nominal effective exchange rate
NPISHs	Non-profit Institutions serving households
OIF	open-end investment fund
p.a.	per annum
p.p.	percentage points
qoq	quarter-on-quarter
PPI	Producer Price Index
REER	real effective exchange rate
SASS	Slovenská asociácia správcovských spoločností – Slovak Association of Asset Management Companies
SO SR	Statistical Office of the Slovak Republic
SR	Slovenská republika – Slovak Republic
ULC	unit labour costs
VAT	value-added tax
yoy	year-on-year

Symbols used in the tables

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



# 1 SUMMARY

The Slovak economy continued to grow in the fourth quarter of 2016, by 0.8% quarter-on-quarter (compared with 0.7% in the previous quarter). The annual rate of growth remained at 3%. The main driver of economic growth was private consumption, supported by the improving labour market situation and the persisting low interest rate environment.

Employment continued to rise at the same pace as in the previous quarter, i.e. by 0.6% quarter-on-quarter. In year-on-year terms, it rose by 2.6%

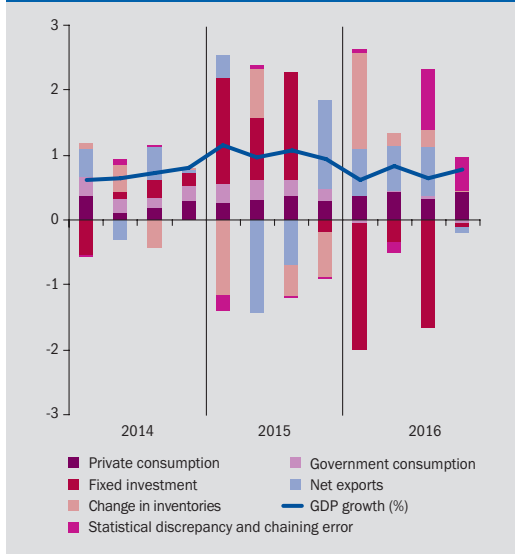
in the fourth quarter, compared with 2.4% in the third quarter. This rise took place mostly in manufacturing and services. The average wage in the economy increased by 3.6% year-on-year, compared with 3.3% in the previous quarter. The accelerated wage growth was driven mainly by developments in the private sector.

Price levels fell in the fourth quarter by only 0.1% year-on-year (compared with 0.7% in the third quarter), owing to a slowdown in the annual rate of decline in energy and processed food prices.

## 2 GROSS DOMESTIC PRODUCT

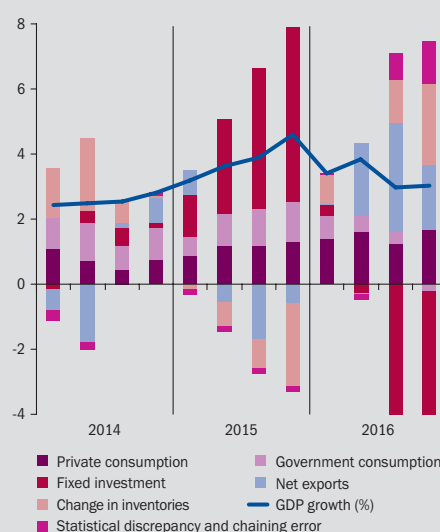
The quarterly rate of growth in the Slovak economy accelerated somewhat in the fourth quarter, to 0.8% (from 0.7% in the third quarter). The annual rate of growth (non-seasonally adjusted) remained at 3%, the figure for the previous quarter. The quarter-on-quarter economic growth was driven mainly by private consumption, supported by the improving labour market situation. Another stimulant to growth was statistical discrepancy, arising from the difference between the two methods used for GDP measurement. This discrepancy was in positive territory in the third and fourth quarters, because economic output on the production side exceeded that on the

**Chart 1 Quarterly GDP growth by component (percentage points; constant prices)**



Sources: SO SR and NBS calculations.

**Chart 2 Annual GDP growth by component (percentage points; constant prices)**



Sources: SO SR and NBS calculations.

consumption side, while a part of the discrepancy may be due to unregistered investments.

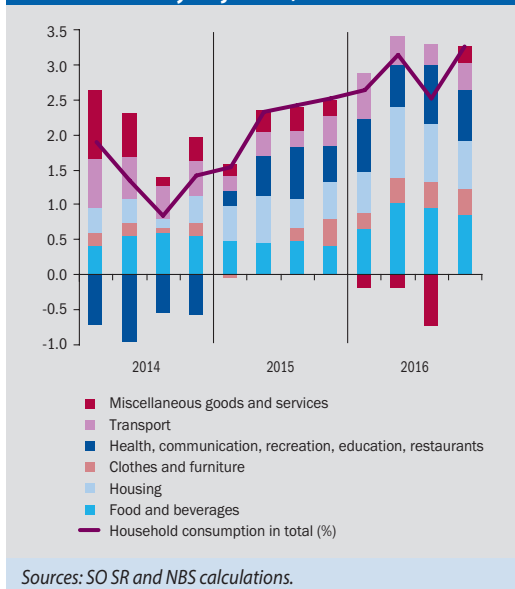
The quarterly rate of private consumption growth accelerated to 0.8% in the fourth quarter, from 0.6% in the third quarter. In year-on-year terms, private consumption rose by 3.3%, representing the fastest growth rate (non-seasonally adjusted) since the financial crisis. This was due to dynamic growth in gross wages and salaries at the end of the year and to the non-inflationary environment, strengthening the purchasing power of households.

**Table 1 GDP by expenditure (annual percentage changes; constant prices)**

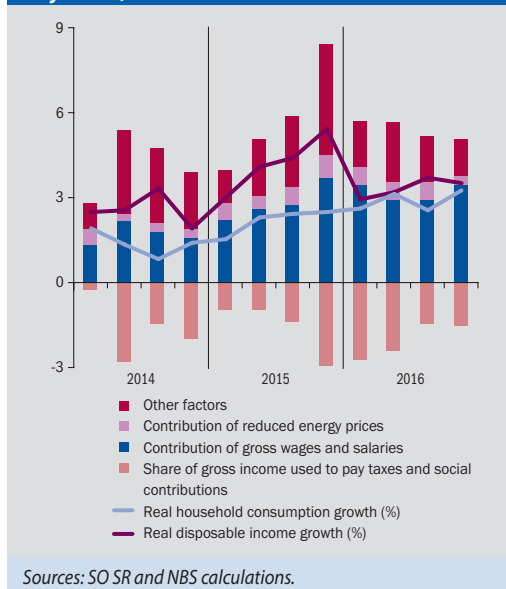
	2015	2016				Year
	Year	Q1	Q2	Q3	Q4	
<b>Gross domestic product</b>	<b>3.8</b>	0.6	0.8	0.7	0.8	<b>3.3</b>
Final consumption						
Households and non-profit institutions	<b>2.2</b>	0.7	0.8	0.6	0.8	<b>2.9</b>
General government	<b>5.4</b>	-0.3	0.3	0.2	-0.3	<b>1.6</b>
Gross fixed capital formation	<b>16.9</b>	-8.1	-1.6	-7.8	-0.3	<b>-9.3</b>
Exports of goods and services	<b>7.0</b>	-0.6	4.9	-1.6	3.6	<b>4.8</b>
Imports of goods and services	<b>8.1</b>	-1.4	4.5	-2.5	4.0	<b>2.9</b>

Source: SO SR.

**Chart 3 Annual changes in private consumption by contributions of segments (percentage points; constant prices; non-seasonally adjusted)**



**Chart 4 Factors determining the annual rate of growth in real disposable household income (percentage points; non-seasonally adjusted)**



The household sector has long been benefiting from the improving labour market conditions, in particular rising employment and average wage. The nominal volume of gross wages grew in the fourth quarter by 6.5% year-on-year, representing the strongest growth in 2016. Part of this wage growth was absorbed by the increased tax burden (although there was no legislative tax rate increase, the effective tax rate rose somewhat). Hence, the wage rise was not fully reflected in the rate of disposable income growth, which reached roughly 50% of the rate of wage growth (i.e. 3.4% year-on-year). This growth, however, was sufficient to boost consumption thanks to the low-inflation environment.

Owing to the beneficial impact of low prices (especially energy prices, which contributed to real household income growth for a fourth successive year), households could afford to spend more on consumption, mainly on food and housing (Chart 3). The coverage of basic needs points to the probability that low-income households also increased their consumption to a considerable extent. In addition, households spent more on services (health, communication, recreation, education and restaurants) throughout the year under review. With the positive influence of energy prices waning gradually (Chart 4), households cut back their spending on these items towards the end of the year.

**Box 1**

**DEVELOPMENTS IN HOUSEHOLD SAVING BEHAVIOUR IN 2016**

For a second successive year, the savings ratio of Slovak households exceeded its level seen during the crisis years, when it was affected by increased uncertainty about future job and earning prospects. The strong motivation to save, causing the savings ratio to rise above 8% in those years, weakened after the crisis and, consequently, the ratio fell to fluctuate

around 6.8% in the period from 2011 to 2014. Then, the savings ratio rose to 9.1% in 2015 and to 9.6% in 2016, representing a 16-year maximum.

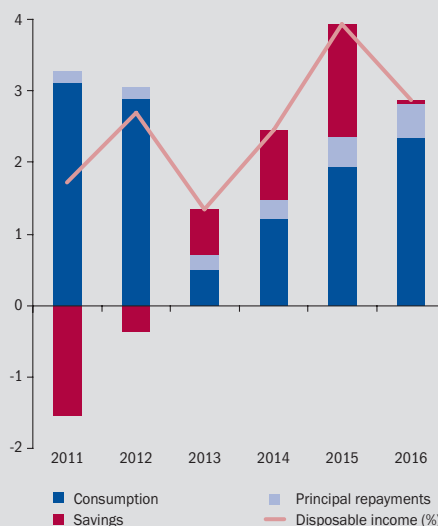
The savings ratio rose without detriment to consumption, which continued growing at a steady pace. Adequate conditions were cre-

ated by the labour market, supported by the favourable price developments; households benefited from the rising employment and wages, as well as from the stagnating consumer prices. At first sight, the concentration of more and more funds in savings is in contradiction to the improving expectations regarding the overall economic situation and the financial situation of households, which should lead to a fall in the savings ratio.

A rise in the savings ratio was also caused by the growing credit burden of households. The low interest rate environment generated an increase in household indebtedness, coupled with a rise in the ratio of loan repayments to gross disposable income.

From a methodological point of view, interest costs are classified as household expenditure (like taxes and social contributions); hence, they are not included in the disposable income of households. Households use their disposable income largely for consumption. The remaining part of disposable income (not used for consumption) is re-

**Chart B Breakdown of disposable income into consumption, principal repayments and savings (percentage points)**



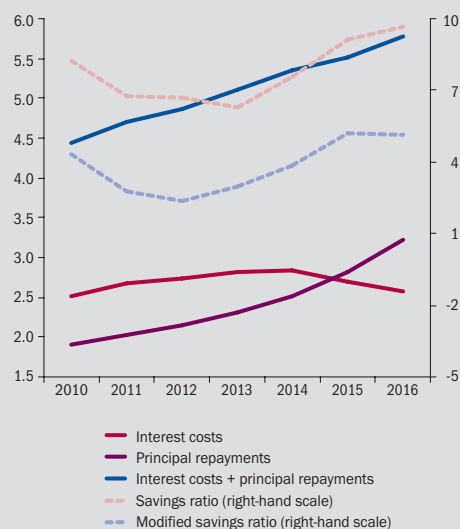
Sources: SO SR and NBS calculations.

ferred to as savings, which include principal repayments.

A breakdown of loan repayments into interest costs and principal repayments indicates that households set aside more and more of their disposable income for principal repayments. This is one of the reasons why the remaining part of disposable income (savings) is increasing gradually.

The growing amount of principal repayments provides an explanation for almost the entire annual increase in savings in 2016. If principal repayments in 2016 had remained at the level of the previous year, the savings ratio would have also remained at the level of 2015 (see the modified savings ratio in the Chart). This means that every euro saved in 2016 was used for principal repayment. The growing amount of principal repayments, however, does not explain adequately the high savings ratio recorded in 2015, even if we can assume in connection with the rising indebtedness of households that they behaved rationally and saved to be able to make higher loan repayments.

**Chart A Proportion of loan repayments and their components to GDP compared with the savings ratio (percentages)**



Sources: SO SR and NBS calculations.

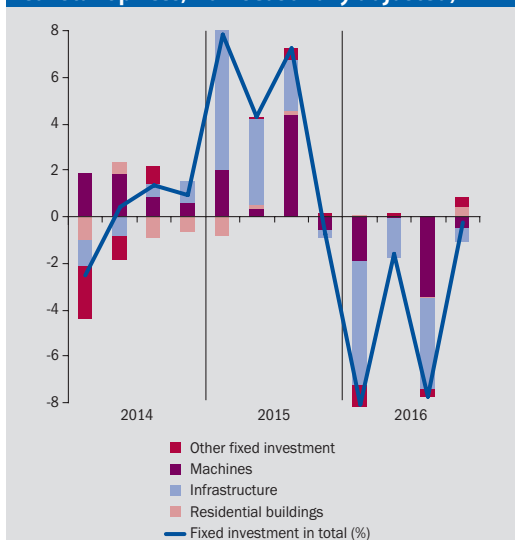


After the absorption of EU funds had been reduced, public consumption fell by 0.3% quarter-on-quarter. The diminishing effect of the drop in EU funded investment was reflected mostly in fixed investment. The investment component of domestic demand continued to decrease. After falling by 7.8% in the third quarter, it ended the year with a smaller decrease. Fixed investment fell by 0.3% quarter-on-quarter. At the end of the

year, the public sector continued to restrict the construction of infrastructural projects, while the private sector restricted investment in machines. A sharper drop in investment was prevented by growing investment in residential buildings and car purchases.

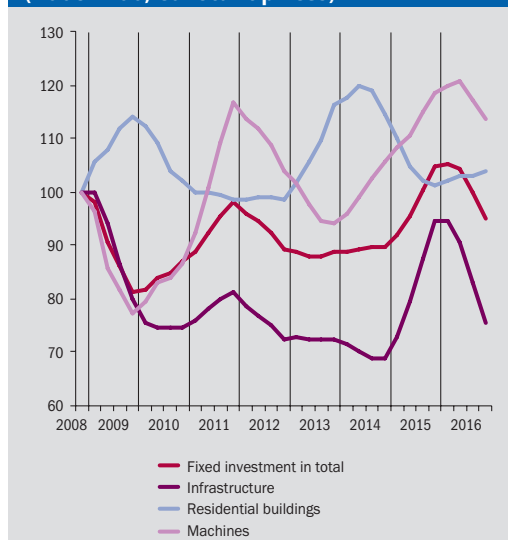
With the ending absorption of EU funds, the year-end volume of fixed investment fell below

**Chart 5 Quarterly changes in real investment by contributions of assets (percentage points; constant prices; non-seasonally adjusted)**



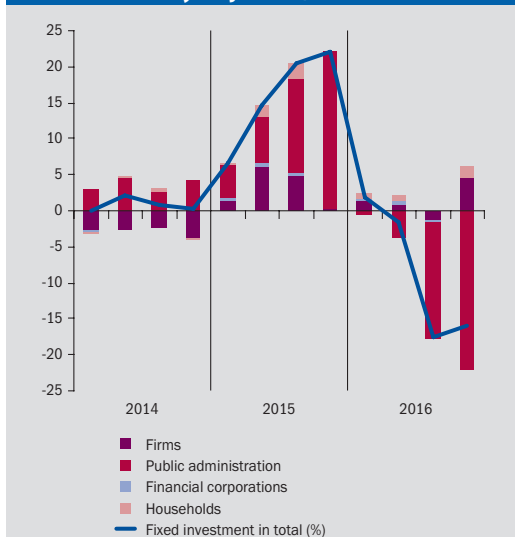
Sources: SO SR and NBS calculations.

**Chart 7 Annual cumulative changes in assets compared with the pre-crisis period (2008=100; constant prices)**



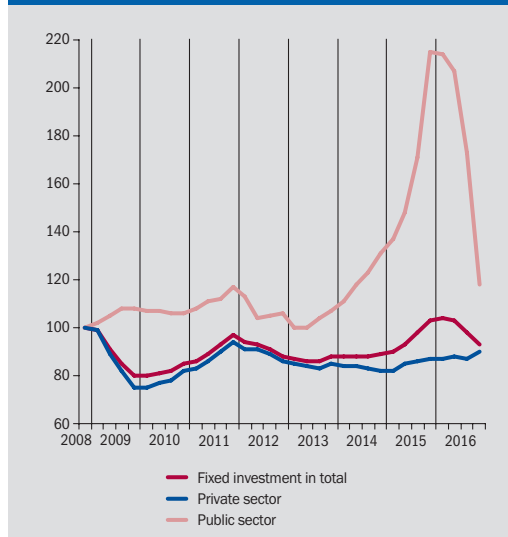
Sources: SO SR and NBS calculations.

**Chart 6 Annual changes in nominal investment by contributions of sectors (percentage points; current prices; non-seasonally adjusted)**



Sources: SO SR and NBS calculations.

**Chart 8 Annual cumulative changes in investment by sector compared with the pre-crisis period (2008=100; current prices)**



Sources: SO SR and NBS calculations.

its pre-crisis level (the quarterly average in 2008), by almost 9%, and thus returned to the level of end-2014. Thus, 2015 was the only post-crisis

year, when investment exceeded its pre-crisis level (owing to EU funding).

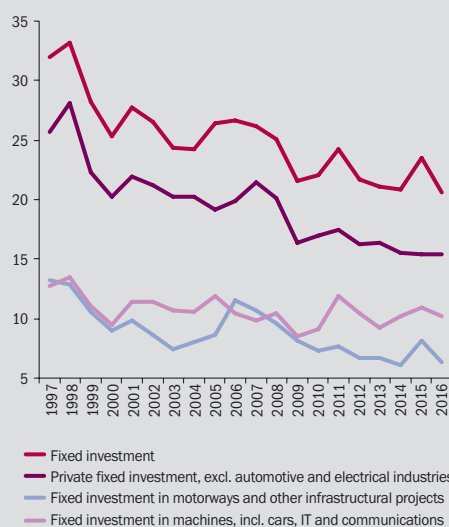
**Box 2**

**LONG-TERM INVESTMENT RATIOS**

Fixed capital, which is one of the basic factors determining the rate of economic growth, grew at a slower pace in the period following the crisis. The ratio of investment to GDP (investment ratio) remained below its pre-crisis level.

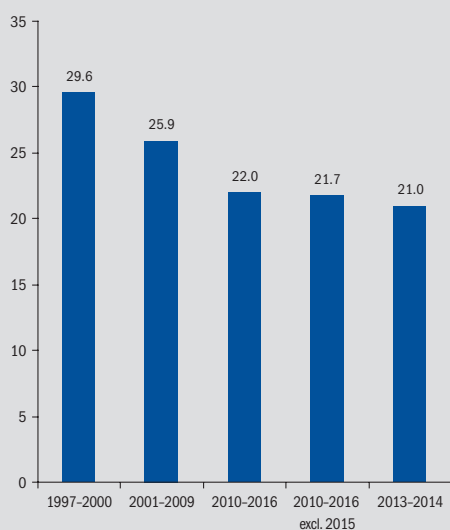
The average investment ratio, which had been close to 30% of GDP before 2000, dropped considerably after the investment base of the economy had been rebuilt. Over the first decade of the new millennium, the said ratio fluctuated around 25%. Then, after falling still further during the crisis, it stabilised at a lower level. From 2010 to 2016, it fluctuated around 22%. With public investment and investment in the automotive and electrical industries left out of account, the investment ratio has shown a falling tendency since 2010. In 2016, it dropped to an all-time low (20.6%, i.e. 1 percentage point below the figure recorded in the crisis year of 2009).

**Chart B Investment ratios by type of investment (percentages)**



Sources: SO SR and NBS calculations.

**Chart A Average investment ratio (percentages)**



Sources: SO SR and NBS calculations.

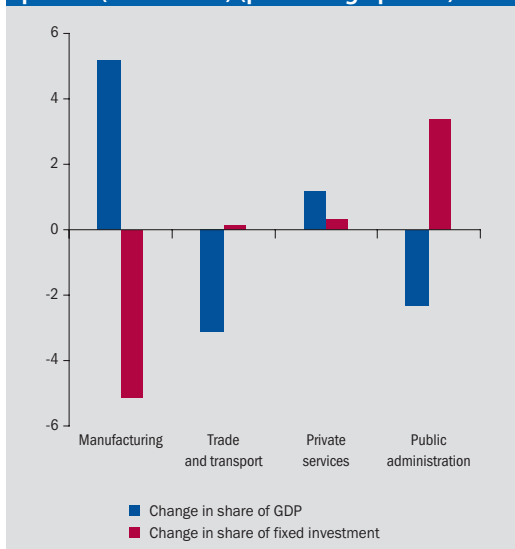
The investment ratio in the post-crisis years (compared with the pre-crisis years) was reduced by a downturn in investment in motorways and other infrastructural projects, including industrial halls and other non-residential buildings. The situation in this area was improved temporarily by the accelerated absorption of EU funds in 2015. The moderately growing investment in machinery and equipment, including cars and information-communication technologies, was insufficient for the investment ratio to return to its pre-crisis level, though investment in such assets, forming the skeleton of production capacities and strengthening the economy's production potential, is more significant (in volume terms) than in the neighbouring countries and in the rest of the euro area.<sup>1</sup>

<sup>1</sup> For more information, see the Report on the Slovak economy, June 2015.

The fall in the investment ratio after the crisis was probably a result of structural changes occurring in GDP creation. The structure of GDP started to show a growing share of investment in manufacturing, which had been most restricted during the crisis (Chart C). Manufacturing, the biggest investor before the crisis, created conditions for value added

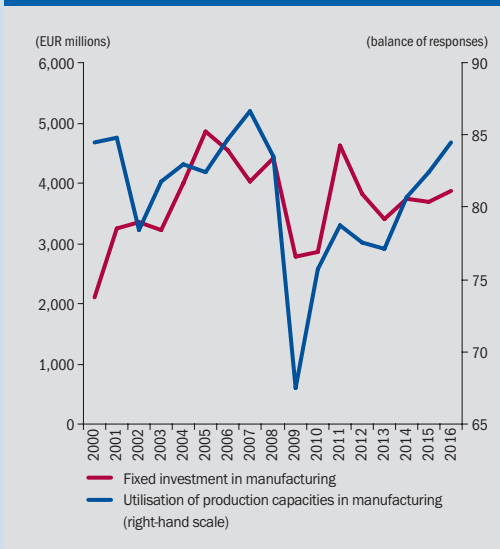
growth, by flexibly utilising the existing production capacities. Within the structure of GDP, the share of private services increased too, but their share in investment did not increase proportionately. Private services managed to produce a higher value added, even without demand for increased investment.

**Chart C Structural changes in GDP and in investment in the post-crisis period (2010-2016), compared with the pre-crisis period (2001-2008) (percentage points)**



Sources: SO SR and NBS calculations.

**Chart D Comparison of fixed investment and the utilisation of production capacities in manufacturing**



Sources: SO SR and NBS calculations.

**Table A Share of sectors in GDP (percentages)**

	2001 – 2008	2010 – 2016	Difference (p.p.)
Manufacturing	17.6	22.7	5.2
Trade and transport	23.5	20.4	-3.1
Private services	33.8	35	1.2
Public administration	15.5	13.2	-2.3

Sources: SO SR and NBS calculations.

**Table B Share of sectors in fixed investment (percentages)**

	2001 – 2008	2010 – 2016	Difference (p.p.)
Manufacturing	28.4	23.3	-5.1
Trade and transport	14.6	14.7	0.1
Private services	23.5	23.8	0.3
Public administration	10.7	14.1	3.4

Sources: SO SR and NBS calculations.

The larger share of manufacturing in the country's GDP is due partly to the greater involvement of manufacturing in the global value chains, which is indicated by the increasing product concentration in exports, as well as in production.<sup>2</sup> The global value chains may fragment not only the production process but the fixed investment process as well. The need of firms to invest may be partly offset by the growing importance of opera-

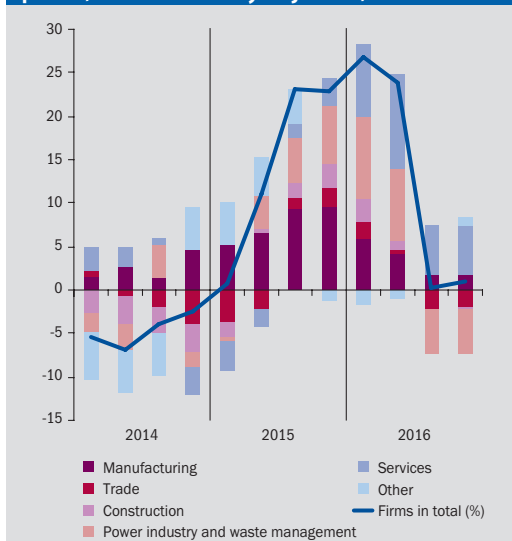
tional leasing of investment means, which is not a form of investment but an expense item for firms.

These reasons, especially the structural change in GDP, indicate that the lower investment ratio in the post-crisis period is not a temporary phenomenon. It may, however, be increased by large one-off investments (mainly foreign direct investment).

Slovakia's exports of goods and services increased in the fourth quarter by 3.6% quarter-on-quarter, and thus more than offset the 1.6% decline recorded in the previous quarter (the holiday season). As in the extremely strong second quarter, the accelerating export growth was driven by exports to countries outside the euro area. Imports remained volatile and followed the trend in exports: they closed the year with an increase of 4% (after a fall of 2.5% in the third quarter).

The improved export possibilities of manufacturers did not lead to accelerated profit growth,

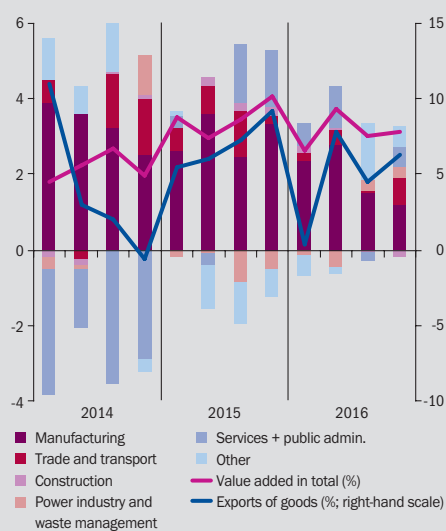
**Chart 9 Annual cumulative changes in profits by sector (percentage points; current prices; non-seasonally adjusted)**



Sources: SO SR and NBS calculations.

Note: Services include transport, storage, post & telecommunications, accommodation and catering, information and communication, real estate and professional services.

**Chart 10 Annual changes in value added by sector (percentage points; constant prices)**



Sources: SO SR and NBS calculations.

Note: 'Other' includes non-additivity of seasonal adjustment.

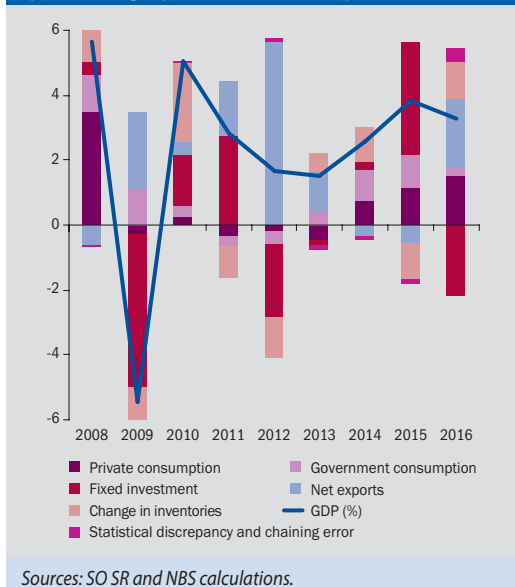
nor to increased value added creation in manufacturing. The year-end profits were probably used to cover the increased import costs, as well as the costs of employment growth and wage growth in manufacturing. On the other hand, the increased consumer demand stimulated profit growth and value added creation in services. As a consequence of falling investment demand, the construction sector showed poor financial performance, which also led to a downturn in value added creation.

During 2016, the Slovak economy expanded by 3.3%. It was a good result in comparison with 2015, when an annual growth rate of 3.8% was reached with the help of EU funding. A signifi-

<sup>2</sup> For more information, see the flash commentary on *Developments in Foreign Trade, January 2017*.



**Chart 11 Contributions to GDP growth  
(percentage points; constant prices)**



cant contribution to economic growth in 2016 was made by private consumption, which grew at a pace not seen since the crisis. The positive contribution of net exports reached its 4-year maximum, which was a natural consequence of weakened investment activity in Slovakia, because investments come mostly from imports. The decline in investment was partly offset by an increase in inventories and by statistical discrepancy. The trends seen in inventories and discrepancy were the opposite of those observed in 2015, which may be a consequence of the fact that the absorption of EU funds on the production and consumption sides of GDP was recorded at different times.

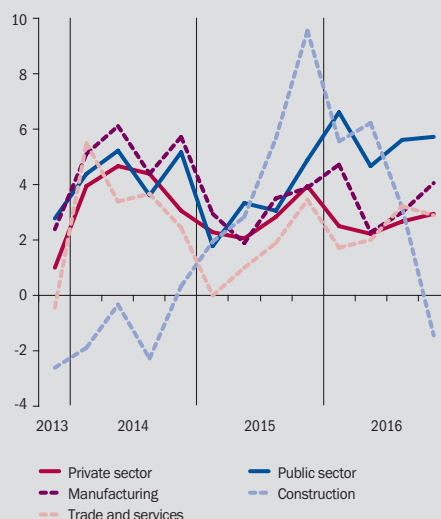
## 3 THE LABOUR MARKET

The average nominal wage increased by 3.3% during 2016. This represented a modest acceleration in comparison with 2015 (2.9%). Accelerated wage growth was recorded in the public sector, while the private sector saw a certain slowdown in wage dynamics, which may be explained by the strong economic growth in 2015 (influenced by EU funding). Real wage growth accelerated more significantly (as a result of low inflation). In the private sector and the economy as a whole, real wage growth reached almost the level of the pre-crisis period (i.e. from Q1 2007 to Q3 2008).

In the fourth quarter of 2016, the annual rate of average wage growth accelerated for the second time, to 3.6% (in the third quarter it accelerated to 3.3%). This acceleration was caused by wage growth in the private sector in particular. To a lesser extent, wage growth also accelerated in public administration, education and health care. The annual rate of wage growth in the public sector was much faster than in the private sector, owing to the wage increases negotiated for state employees and teachers. Within the private sector, wage growth was recorded in transport and storage, accommodation and catering, manufacturing industries, and in the financial sector. Weaker annual wage growth, influenced, inter alia, by a drop in EU funded investment, was recorded in construction and in the IT and communication sector. Wage growth continued to be driven by developments in large firms in particular. Small firms with up to 20 employees were still lagging behind in this respect (with an annual growth rate of 0.9%).

Wage developments in the economy were greatly affected at the year-end by one-off remuneration payments, as well as by an increase in basic wages. Employers in need of new employees tend to increase the remuneration of their employees. The only sector in which wages rose considerably (by 0.8% in the third quarter and 4.9% in the fourth quarter) was the financial sector.

**Chart 12 Wage developments by sector (annual percentage changes)**



Sources: SO SR and NBS calculations.

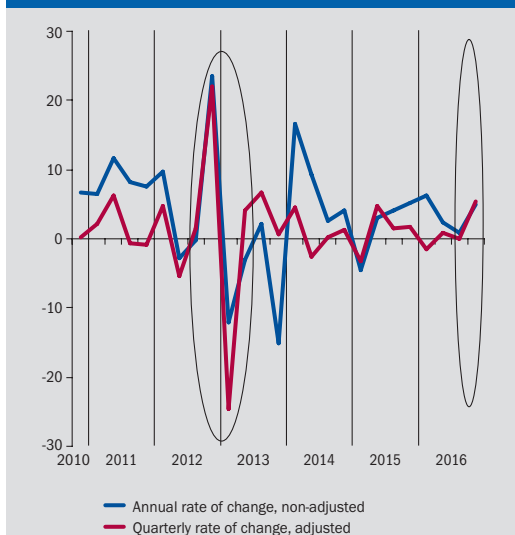
Note: Data for the public sector were calculated on the basis of developments in the categories O, P and Q of the NACE classification.

**Chart 13 Wage indicators (annual percentage changes)**

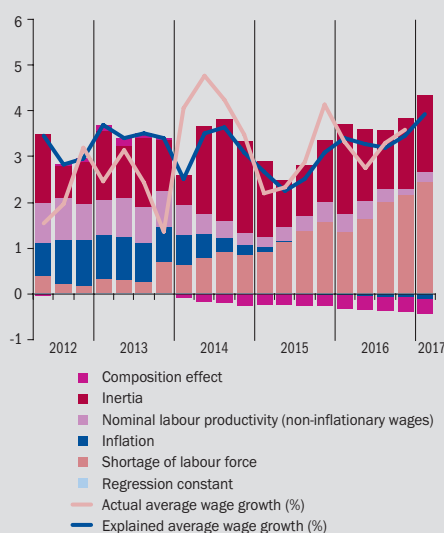


Sources: SO SR, Social Insurance and NBS calculations.

The data used are based on statistics on firms with 20 or more employees and on the public and financial sectors, irrespective of the number of employees.

**Chart 14 Changes in wage dynamics in the financial sector, compared with 2012 (%)**


Sources: SO SR and NBS calculations.

**Chart 15 Factors determining the rate of wage growth (annual percentage changes; contributions in percentage points)**


Source: NBS calculations based on a regression analysis.

Note: The following variables have been transformed: 4-quarter moving average of labour productivity, 4-quarter moving average of CPI inflation recorded three quarters earlier. The shortage of labour force has been revealed by an economic trend research carried out by the European Commission; the sectors are weighted by developments in employment. The composition effect is given by the impact of annual growth in employment. The data for Q1 2017 are based on the MTF-2017Q1 forecast of NBS.

The current developments in the individual wage determinants suggest that the persistently perceived shortage of employees has a pro-growth influence amidst rising employment and economic growth. By contrast, the influence of inflation is subdued, though it is expected to strengthen gradually. The effect of nominal labour productivity is relatively weak, too. By contrast, the composition effect (associated with the fact that the average wage may fall somewhat after new lower-paid employees are hired) has a slightly negative influence on wage dynamics.

Stronger wage growth compared with the rate of nominal labour productivity growth continued in the fourth quarter. This phenomenon can be observed in trade and services, as well as in manufacturing. One of the factors supporting the rise in consumer and cost prices is the ac-

**Table 2 Wages and labour productivity (annual percentage changes)**

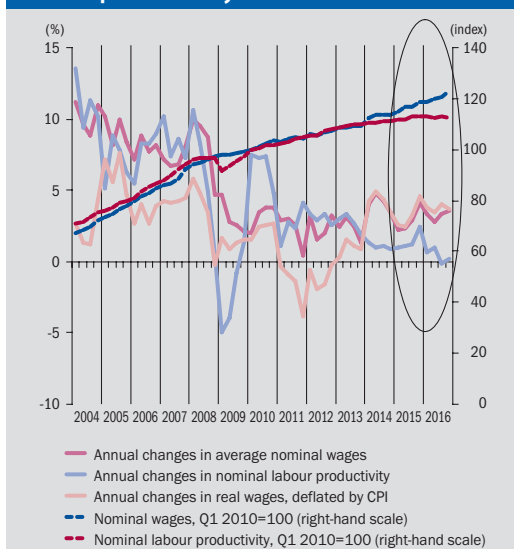
	2015	2016				Year
	Year	Q1	Q2	Q3	Q4	
Average wage (headline)	<b>2.9</b>	3.3	2.7	3.3	3.6	<b>3.3</b>
Consumer-price inflation	<b>-0.3</b>	-0.5	-0.7	-0.7	-0.1	<b>-0.5</b>
Average real wage (headline)	<b>3.2</b>	3.8	3.4	4.0	3.7	<b>3.8</b>
Average wage (ESA 2010)	<b>2.6</b>	2.7	1.8	2.0	3.3	<b>2.5</b>
Compensation per employee (ESA 2010)	<b>3.1</b>	2.2	1.4	0.8	2.5	<b>1.8</b>
Nominal labour productivity (ESA 2010)	<b>1.6</b>	0.7	1.1	-0.1	0.3	<b>0.5</b>
Real labour productivity (ESA 2010)	<b>1.8</b>	1.1	1.5	0.5	0.4	<b>0.9</b>

Sources: SO SR and NBS calculations.

Note: Average wages (headline) are based on data from the statistical reports of SO SR. Average real wages were calculated on the basis of CPI inflation. Labour productivity (ESA 2010) was calculated as the ratio of nominal GDP to employment as defined in the ESA 2010 methodology.

celerated growth in labour costs. Accelerated annual growth, exceeding the rate of labour productivity growth, was also recorded in compensation per employee (2.5% year-on-year, compared with 0.8% in the third quarter), i.e. total wage costs, including social contributions paid by the employer.

**Chart 16 Annual changes in wages and labour productivity**



Sources: SO SR and NBS calculations.

Note: Wages are based on data from the statistical reports of SO SR. Nominal labour productivity was calculated from employment according to the statistical reports of SO SR. Base indices are based on seasonally adjusted data.

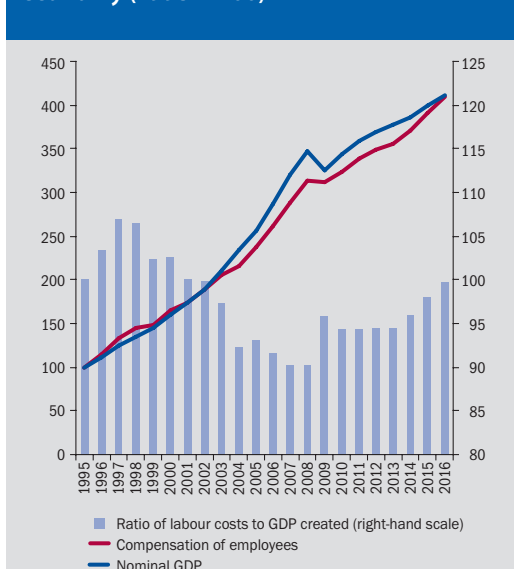
### 3.1 EMPLOYMENT AND UNEMPLOYMENT

Employment continued to grow in the fourth quarter, by 2.6% year-on-year (compared with 2.4% in the third quarter). The quarterly rate of growth remained unchanged, at 0.6%. In quarter-on-quarter terms, employment grew most rapidly in manufacturing (manufacture of metal products, electrical appliances, machines, transport equipment, rubber and plastic goods) and services (practically the full spectrum of services, including business activities). The rate of growth was influenced by the number of employees and, to a lesser extent, by the number of self-employed persons.

Owing to the limited availability of an appropriately skilled workforce, employers are unlikely to be able to maintain the current rate of employment growth in the long term. This is evident from the current quarterly data, which indicate that the rate of employment growth in large firms (with 20 or more employees) has slowed somewhat. Employment growth is currently driven by developments in small firms with up to 19 employees, which started to react to the improved economic situation with a certain delay.

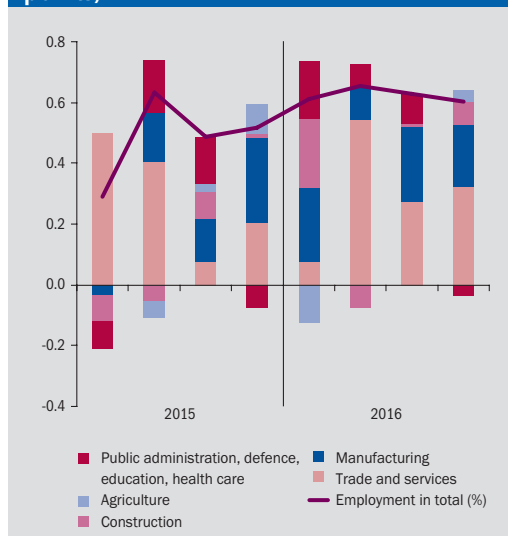
The rate of employment growth accelerated throughout the year (by 2.4%, compared with 2% in 2015) in the private sector, as well as in

**Chart 17 Changes in labour costs in the economy (1995 = 100)**



Sources: SO SR and NBS calculations.

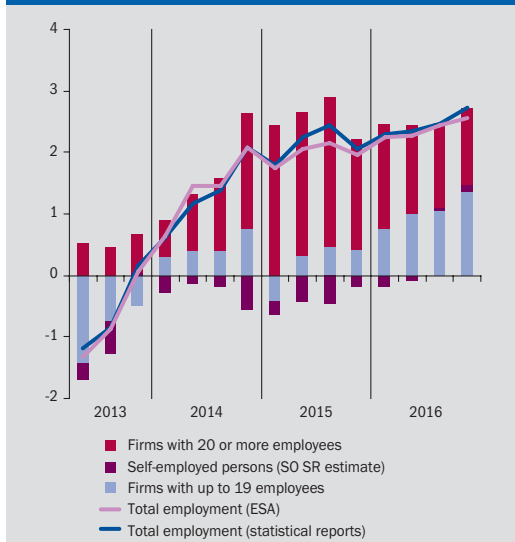
**Chart 18 Quarterly changes in employment by contributions of sectors (percentage points)**



Source: SO SR.

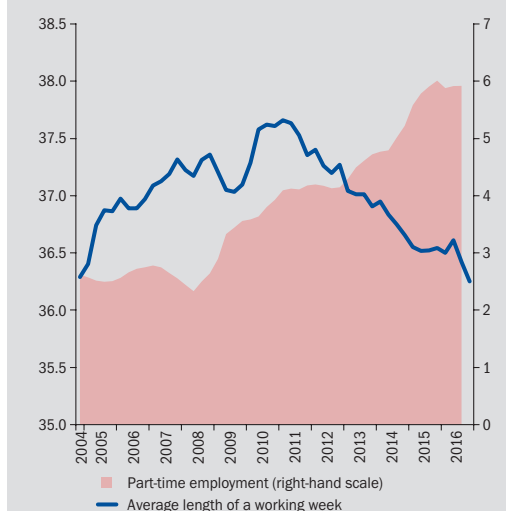


**Chart 19 Quarterly changes in employment by contributions of firms broken down by size (percentage points)**



Sources: SO SR and NBS calculations.

**Chart 21 Part-time employment and the average length of a working week (% of employment; hours per person per week; 4-quarter moving average)**

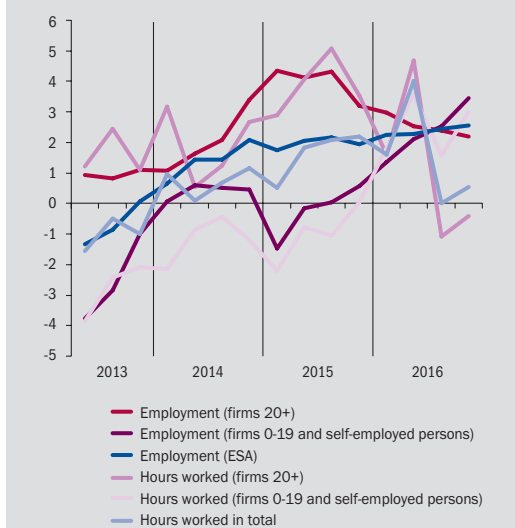


Sources: SO SR and Eurostat.

public administration and health care. This represented an increase of 54,000 persons.

Employment growth in the last two quarters was only partly reflected in the number of hours worked. In the third quarter, this was due

**Chart 20 Employment and the hours worked by size of firms (annual percentage changes)**



Sources: SO SR and NBS calculations.

to the effect of the summer holiday season, while the fourth quarter saw only a modest increase in the number of hours worked. Developments in the main economic sectors showed similar tendencies. A possible explanation for the weaker growth in the number of hours worked than in employment is the stronger than expected impact of EU funding in 2015 on the number of hours worked and the subsequent downward correction. Another factor at play here, though less significant, is part-time employment. Short-term deviations of growth in the number of hours worked from employment growth are not exceptional in the history of Slovakia.

The number of unemployed (Labour Force Survey) in the fourth quarter reflected the rise in employment: it decreased by approximately 14,800 persons (according to seasonally adjusted data). As a result, the seasonally adjusted unemployment rate fell by 0.5 percentage point, to 9% (the non-seasonally adjusted rate reached 9.1%) and remained only slightly above its historical minimum from the pre-crisis period (the fourth quarter of 2008). Over the course of 2016, the unemployment rate fell by 1.8 percentage points (representing 48,000 persons), representing the sharpest drop in the



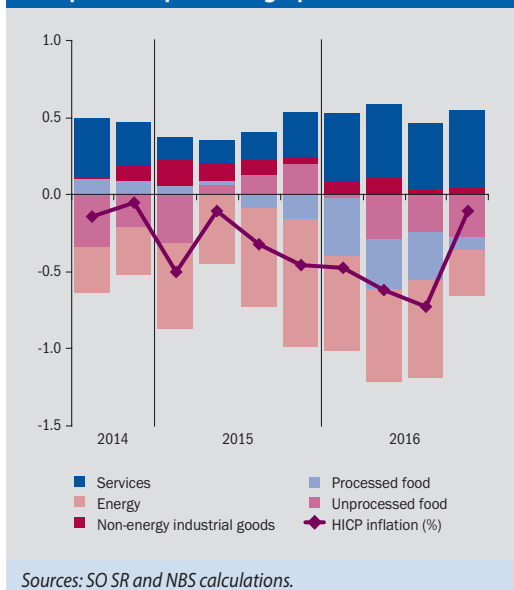
post-crisis period. The number of Slovak citizens working abroad decreased for a second successive quarter, owing probably to the improving situation in the domestic labour market. As a result of this situation (higher wages and stronger demand for labour), the labour force participation rate rose in the quarter under review, indicating that a large number of economically inactive persons entered the labour market.

The unemployment rate calculated from the total number of job applicants registered with the Central Office of Labour, Social Affairs and Family (ÚPSVR) decreased in the fourth quarter by 0.6 percentage point, to 10.3%. The non-seasonally adjusted average rate of registered unemployment reached 8.9% (as well as the adjusted rate), representing a year-on-year fall of 1.9 percentage points. Thus, unemployment shows very similar falling tendencies according to both methodologies.

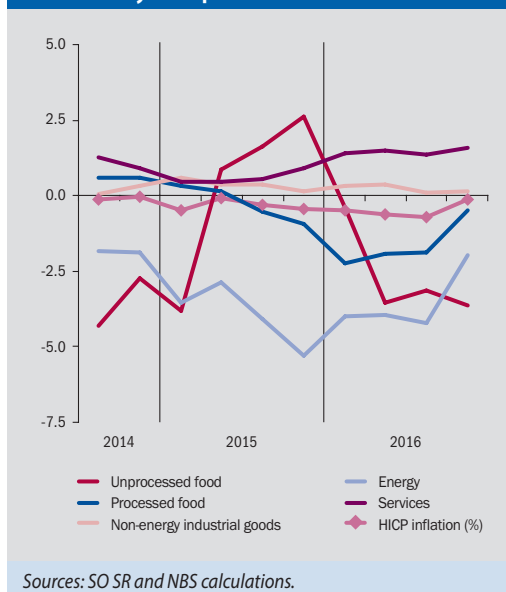
## 4 PRICE DEVELOPMENTS

Price levels fell in the fourth quarter by 0.1% year-on-year, compared with 0.7% in the previous quarter. In December, inflation showed positive year-on-year dynamics again (0.2%), after being in negative territory for almost three years. Thus, the assumption that the price decline has come to an end and inflation will accelerate gradually has been confirmed. The negative rate of change in the general price level persisted for twelve successive quarters. Within the structure of HICP inflation, the slowdown in the annual inflation rate was moderated by a slowdown

**Chart 22 Annual headline inflation rate by component (percentage points)**



**Chart 23 Annual percentage changes in inflation by component**



in the rate of decline in energy and processed food prices. Energy prices reflected the revival in Brent oil prices in the world markets, when they started to rise gradually from their all-time lows in the first quarter of 2016. Processed food prices reflected the rise in the prices of basic food commodities in the second half of the year. The price deflation was still attributable to external factors. The prices of services and non-energy industrial goods showed positive dynamics and a slight acceleration in comparison with the third quarter.

**Table 3 Annual percentage changes in inflation by component**

	2015	2016				Year
	Year	Q1	Q2	Q3	Q4	
<b>HICP inflation</b>	<b>-0.3</b>	-0.5	-0.6	-0.7	-0.1	<b>-0.5</b>
Unprocessed food	<b>0.3</b>	-0.4	-3.5	-3.1	-3.6	<b>-2.7</b>
Processed food	<b>-0.2</b>	-2.2	-1.9	-1.9	-0.5	<b>-1.6</b>
Non-energy industrial goods	<b>0.4</b>	0.3	0.4	0.1	0.2	<b>0.2</b>
Energy	<b>-3.9</b>	-4.0	-3.9	-4.2	-2.0	<b>-3.5</b>
Services	<b>0.6</b>	1.4	1.5	1.4	1.6	<b>1.5</b>

Sources: SO SR and NBS calculations.