



# NBS Monthly Bulletin

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## **A**BBREVIATIONS

6D1	
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
lfo 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** SUMMARY<sup>1</sup>

Euro area economic activity continued to grow in August, according to incoming monthly data. Hard indicators suggest that GDP growth in the third quarter was relatively respectable. Industrial production increased quite markedly, boosted mainly by German industry. The favourable trend is expected to be dampened by a softening of domestic demand, indicated by the marginal decline in retail sales in the past two months. Leading indicators point to the continuation of strong activity growth.

In Slovakia, the industrial production index increased in August in line with expectations, and output in the automotive industry is expected to gain momentum in the period ahead. Other components of the index increased quite strongly, and overall industrial production growth should accelerate following the production launch of new car models. The upturn in industrial production also had a positive impact on both exports and sales in August. Nowcasts indicate that GDP growth will match September's projections. In the labour market, employment growth slowed moderately in August, as had been expected. This reflected the increasing tightness of the labour market, with employers finding it difficult to fill vacancies, even with foreign workers. The decline in labour market slack is also reflected in annual wage growth, which in August accelerated to 4.7%. Wage growth is strongest in industry, where labour shortages are most pronounced, and in the construction sector, which is experiencing a broad-based boom, most notably in the residential sector. The unemployment rate declined in September to 6.3%.<sup>2</sup>

The annual inflation rate edged up to 1.8% in September, slightly higher than projected in NBS's September forecast. Its acceleration was driven mainly by increases in processed food prices and, to a lesser extent, automotive fuel prices. Demand-pull inflation stabilised, but the next period is expected to see it accelerate amid cost-push and demand-side pressures. The average headline inflation rate for this year is expected to be 1.3%.

- 1 All month-on-month and quarter-on-quarter changes mentioned in the text have been seasonally adjusted using NBS internal models.
- 2 The registered unemployment rate for job seekers available for work, seasonally adjusted.



## **2** The real economy

## 2.1 'HARD' INDICATORS OF ECONOMIC ACTIVITY

August saw an anticipated correction in monthly real economy indicators, with sales and exports increasing quite strongly after weakening in July. As a result, the three-month-on-three-month rate of change in both sales and exports was less negative in August than in July. As for industrial production, its negative rate of change in threemonth-on-three-month terms became more pronounced in August. In the case of the automotive industry, a full rebound from previous declines is not envisaged until the next period. The summer saw car factories shut down in order to be retooled for the production of next-generation car models. If past experience is a guide, the arrival of these revamped models on the market will stimulate demand for cars.

The month-on-month growth in exports in August reflected several favourable developments, in particular the restarting of production lines after holiday shutdowns in July. Petrochemical exports rallied, making up for the declines in the second guarter caused by investment-related

Chart 1 Sales, industrial production and

exports (three-month-on-three-month

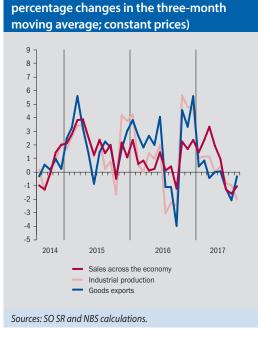


Chart 2 Automotive industry trends (three-month-on-three-month percentage changes in the three-month moving average; constant prices)



Sources: SO SR and NBS calculations.

plant shutdowns. Exports in the metal manufacturing sector maintained their favourable trend.

Sales showed a similar pattern as they picked up in all the core sectors, most notably in automotive industry and, to a lesser extent, in electronics manufacturing and rubber and plastic products manufacturing. Within the sphere of domestic trade, wholesale trade recorded the largest sales growth, while retail sales, after falling in July also made a significant contribution to overall sales growth. Sentiment in the retail trade sector remains optimistic, implying that the favourable trend will continue.

#### 2.2 'SOFT' LEADING INDICATORS

The European Commission's **Economic Senti**ment Indicator (ESI) for the euro area continued to increase in September, as did the ESI for Germany. The composite Purchasing Managers' Index (PMI) for the euro area increased in September, to stand at a level last reached in the first half of the year. The PMI for Germany rose to its highest level for six and a half years. The Ifo Busi-

NBS



ness Climate Index for Germany fell slightly in September, while the ZEW economic sentiment index increased significantly in the same month and increased further in October. Leading indicators, as well as short-term forecasts, suggest that economic growth in both Germany and the euro area as a whole will remain relatively strong in the third quarter.

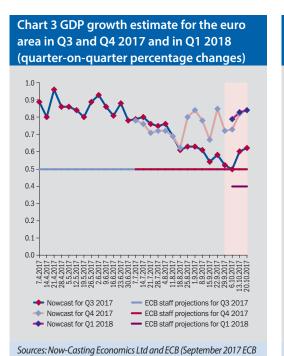


Chart 5 Economic sentiment indicators for

Germany



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

## Monthly Bulletin. Chart 4 GDP growth estimate for Germany

Note: The highlighted area denotes developments since the previous

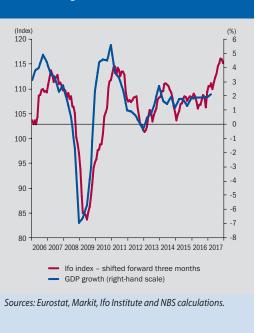
staff macroeconomic projections for the euro area).

in Q3 and Q4 2017 and in Q1 2018



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





## **3** The labour market

Looking at the labour market in August, employment grew by 0.1% month on month and by 2.7% year on year. The annual increase in employment was moderately lower compared with July (3.1%) and with its average rate for the seven months from January to July (also 3.1%<sup>3</sup>). Job growth remains relatively strong, supported mainly by recruitment in industry, particularly in the automotive, machine engineering, food, and wood processing industries. None of the main sectors avoided a slowdown in employment growth in three-month-on-three-month moving average terms, but the decline was more marked in the services and trade sectors. Given that employers are now reporting difficulty in filling job vacancies, employment growth going forward is not expected to reach the previous strong levels, especially those of 2015 and 2016.

The August figures taken together with the strong increase in July indicate that the employment growth projection in NBS's September 2017 Medium-Term Forecast (MTF-2017Q3) is realistic.

Chart 7 Employment – sectoral contributions

to three-month-on-three-month changes

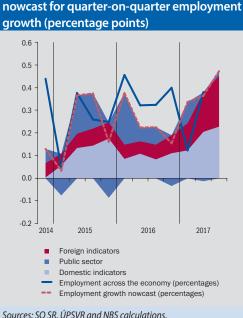
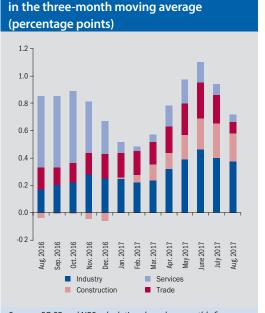


Chart 8 Indicator contributions to the

Sources: SO SR, OFSVR and NBS Calculations. Notes: The public sector comprising public administration, education and human health as defined in the sections O, P and Q of the NACE statistical classification of economic activities. The data are adjusted for the trend (regression intercept). The estimated trend has a value of approximately 0.24 percentage point for the first quarter.



Sources: SO SR and NBS calculations based on monthly figures for employment in the reviewed sectors.

The continuation of relatively strong employment growth in the third quarter was further supported by favourable unemployment data for September. The number of unemployed was lower in September than in August by around 6,900 (seasonally adjusted), reaching an all-time low of around 207,000. The unemployment rate based on the total number of job seekers was 7.6% (seasonally adjusted).<sup>4</sup> The fall in unemployment continues to have a significant downward impact on long-term unemployment. Even adjusting for the number of people removed from the unemployment register for reasons other than finding work, headcount unemployment still fell in September (by around five thousand).

Annual average wage growth across the reviewed sectors rose to 4.7% in August (from 4.2% in July), owing mainly to higher wage growth in industry (5.9%) – especially in rubber and plastic products manufacturing and transport equipment manufacturing – and construction (4.3%). The trade

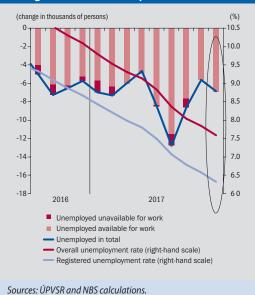
- 3 After adjustment to take account of a methodological change made in January 2016.
- 4 In non-seasonally adjusted terms, the registered unemployed rate decreased month on month by 0.12 percentage point, to 6.42%, and the registered unemployment rate based on the total number of job seekers fell by 0.11 percentage point, to 7.59%.

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



sector also saw robust wage growth (5.7%), reflecting mainly the positive contribution of retail trade wages. In terms of wage growth, the services sector may be subdivided into segments where the rate is five per cent or more (hotels, restaurants, transportation, storage) and segments were it is only moderate or non-existent (information technology, administrative and support services). In the IT segment in particular, lower wage growth may be partly attributed to the period of weaker output that has accompanied the fading of the impact of the absorption of the remaining EU funds available under 2007-2013 programming period. While sales in the IT segment have already begun to pick up in 2017, wages have not.

The rebound of overall wage growth in August may have stemmed largely from improved industrial production trends, via wages paid for hours worked and overtime. Wage growth in August was approximately in line with the MTF-2017Q3 projection.

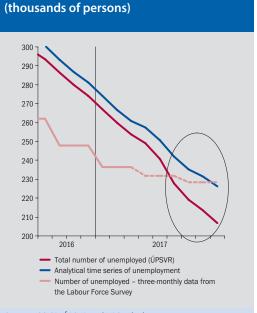
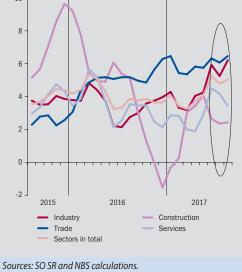


Chart 10 Number of unemployed

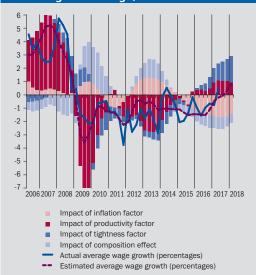
Sources: SO SR, ÚPSVR and NBS calculations. Note: The Labour Force Survey unemployment figures for Q3 2017 are the MTF-2017Q3 projections. The analytical time series of unemployment is based on ÚPSVR figures and is defined in the MTF-2013Q3 forecast.







## Chart 12 Factor model based wage determinants (annual percentage changes; percentage point contributions; deviations from long-run average)



#### Source: NBS calculations.

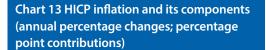
Notes: Long-run average annual wage growth is 4.3% (calculated since 2006). Wages and productivity are given in nominal terms. Further information about the methodology is provided in this Analytical Commentary.

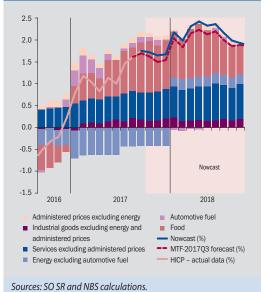


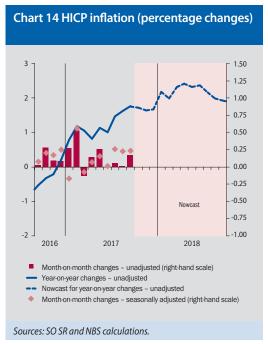


## **4 P**RICES

Annual HICP inflation continued to accelerate in September. Its rate increased to 1.8% (from 1.6% in August), which was slightly higher than projected in the MTF-2017Q3 forecast (1.7%). Almost all of the increase was accounted for by food prices. In month-on-month terms, the price level increased moderately.







Headline inflation in September slightly exceeded NBS projections. As in the previous month, food prices accounted for most of the increase in inflation, and petrol/diesel prices also made a positive contribution. Non-energy industrial goods inflation and services inflation were slightly lower than envisaged in the MTF-2017Q3 forecast. In the category of processed foods, prices

percentage point contributions)													
			Non-energy industrial goods	Energy	Food	Services	HICP	Demand- -pull inflation excluding fuel					
		August 2017 – actual figure	1.0	-2.3	3.9	2.1	1.6	1.7					
Year-on-year changes	A	September 2017 – MTF-2017Q2 forecast	1.0	-2.6	4.2	2.2	1.7	1.8					
	В	September 2017 – actual figure	0.9	-2.2	4.5	2.1	1.8	1.6					
	B-A	September – actual figure minus forecast	-0.2	0.4	0.3	-0.1	0.07	-0.2					
Yea	(B-A) * weight	Contribution to overall forecast error <sup>1)</sup>	-0.05	0.06	0.08	-0.03	0.06	-0.09					

# Table 1 HICP components - comparison of projected and actual rates of change (percentages;

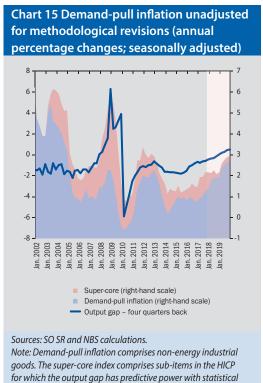
Sources: SO SR and NBS calculations.

1) Projections taken from NBS's September 2017 Medium-Term Forecast (MTF-2017Q3).



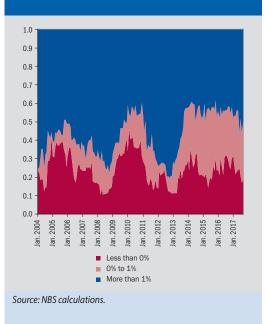
of oils and fats increased in September by 17%, year on year, and prices of milk and dairy products increased by almost 10%. The euro's appreciating exchange rate continued to dampen import price inflation, and thus, as expected, had a dampening impact on non-energy industrial goods inflation. Services prices in August were only slightly higher in month-on-month terms, while their year-on-year rate of change was the same as in August (2.1%). Demand-pull and cost-push pressures from the tightening labour market remain a factor, and they are expected to continue putting upward pressure on services prices in particular.

In view of current trends and the upside risk that food prices pose to the inflation outlook, the average inflation rate in 2017 is expected to be 1.3%.



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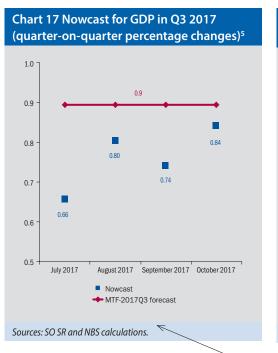
Chart 16 HICP core inflation broken down by price-change intervals

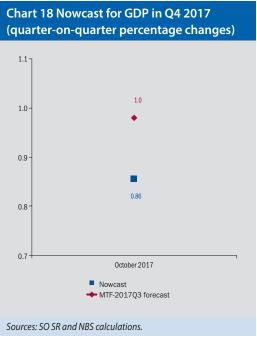




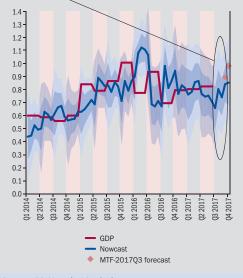
## **5** INDICATIVE IMPACT ON THE FORECAST

The nowcast for GDP growth in the third quarter of 2017 has drawn closer to the NBS projection made in the September 2017 Medium-Term Forecast (MTF-2017Q3). The nowcast for private consumption growth is close to the forecast projections, while the nowcast for exports suggests their growth will be slightly lower than projected and the nowcast for employment points to moderately stronger growth.





## Chart 19 GDP nowcast (quarter-on-quarter percentage changes)<sup>5</sup>



Sources: SO SR and NBS calculations. Note: The GDP nowcast excludes qualitative impacts and one-off effects (e.g. EU funds). 5 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.

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Chart 22 Employment nowcast (quarter-on-quarter percentage changes)<sup>5</sup>

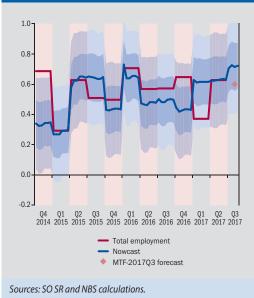
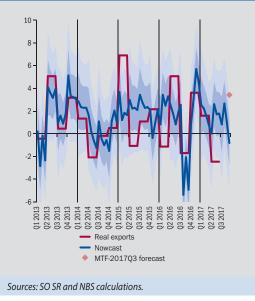


Chart 21 Nowcast for goods and services exports (quarter-on-quarter percentage changes)<sup>5</sup>



## **OVERVIEW OF MAIN MACROECONOMIC INDICATORS FOR SLOVAKIA**

## Table 2 Selected economic and monetary indicators for Slovakia

(annual percentage changes, unless otherwise indicated)

	Gross do- mestic prod-	HICP	Industrial producer prices	Employ- ment ESA 2010	Unem- ployment rate (%)	Industrial produc- tion index	Total sales of sectors <sup>1)</sup>	Economic Sentiment Indicator (long-term	M3 (for analyti- cal use) <sup>2)</sup>	Loans to private sector <sup>3)</sup>	Loans to non-fi- nancial corpora-	Loans to house- holds <sup>3)</sup>	State budget balance (EUR mil.)	General govern- ment balance	General govern- ment gross	Current account (% of GDP)	Balance of trade (% of GDP)	USD/EUR exchange rate (average
	uct							average=100)			tions <sup>3)</sup>			(% of GDP)	debt (% of GDP)			for the period)
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
2009	-5.4	0.9	-2.6	-2.0	12.1	-15.6	-16.4	76.9	-2.8	1.1	-3.3	11.0	-2,791.3	-7.8	36.3	-3.4	0.4	1.3948
2010	5.0	0.7	-2.7	-1.5	14.4	8.2	8.0	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	5.2	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	2.6	-0.1	-3.5	1.4	13.2	3.5	2.6	100.4	2.5	7.7	1.9	13.2	-2,923.4	-2.7	53.6	1.1	3.6	1.3285
2015	3.8	-0.3	-4.2	2.0	11.5	7.4	7.4	99.7	11.5	10.7	7.3	13.1	-1,932.6	-2.7	52.5	-1.7	1.3	1.1095
2016	3.3	-0.5	-4.3	2.4	9.7	4.7	4.1	101.6	6.1	10.2	4.2	13.4	-980.3	-1.7	51.9	-1.5	2.0	1.1069
2016 Q4	3.0	-0.1	-2.4	2.6	9.1	4.1	3.5	102.7	6.1	10.2	4.2	13.4	-	-3.1	51.9	-3.3	0.3	1.0789
2017 Q1	3.1	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	3.3	1.0	1.9	2.1	8.1	1.7	3.2	101.7	5.9	12.6	10.5	13.3	-	•	•	-1.7	2.0	1.1021
2017 Q3		1.6	•			•		104.6	•				-					1.1746
2016 Oct.	-	-0.3	-2.8	-	9.1	3.5	3.2	102.8	8.7	10.1	5.4	13.0	223.7	-	-	-	-	1.1026
2016 Nov.	-	0.2	-2.6	-	8.8	3.3	3.1	101.3	8.1	9.4	3.5	13.1	-201.6	-	-		-	1.0799
2016 Dec.	-	0.2	-1.8	-	8.8	5.8	4.3	103.9	6.1	10.2	4.2	13.4	-358.1	-	-	-	-	1.0543
2017 Jan.	-	0.8	0.4	-	8.6	7.6	4.6	104.6	6.2	11.4	7.3	13.5	92.3	-	-	-	-	1.0614
2017 Feb.	-	1.2	2.6	-	8.4	2.5	5.3	106.6	6.6	11.9	9.4	13.5	-500.0	-	-		-	1.0643
2017 Mar.	-	1.0 0.8	3.0 2.5	-	8.0	13.0	8.3 4.2	101.6	5.7	12.0 12.3	8.5	13.8	70.7 -298.2	-	-	-	-	1.0685 1.0723
2017 Apr. 2017 May	-	1.1	2.5 1.9		7.7 7.4	-3.2 5.1	4.2 4.3	101.6 102.6	6.1 5.7	12.5	9.6	13.6 13.6	-298.2	-	-	-	-	1.10725
2017 May 2017 June	-	1.1	1.9	-	7.4 6.9	3.1	4.5 1.2	102.8	5.7 5.9	13.0	11.7 10.5	13.0	-250.4	-	-		-	1.1058
2017 Julie 2017 July		1.5	0.6		6.7	9.2	7.1	100.8	5.6	12.0	9.6	13.3	53.2					1.1229
2017 July 2017 Aug.		1.5	2.1		6.5	-0.4	4.1	102.1	6.7	12.1	10.4	13.3	-227.2					1.1807
2017 Aug. 2017 Sep.	-	1.8	2.1	-	6.4	-0.4	т.I	104.0					-94.8				-	1.1915

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/2017/StatisticsMB1017.xls