inštitút finančnej politiky

Policy brief 2018/1 Ministerstvo financií SR / www.finance.gov.sk/ifp

February 5th, 2018

The Labour Market Fever

Macroeconomic forecast 2017 – 2021

Branislav Žúdel, Monika Pécsyová

The Slovak economy is projected to accelerate to 4.2 per cent this year, against the backdrop of firming household consumption, strong export growth and solid private investment. Wages will gain steam accordingly, propping up inflation. The economy will add 40 thousand new jobs, while unemployment will tumble to new historical lows. In 2019, growth is set to firm further, owing to new automotive production capacities.

FED on an upward trend while ECB waiting

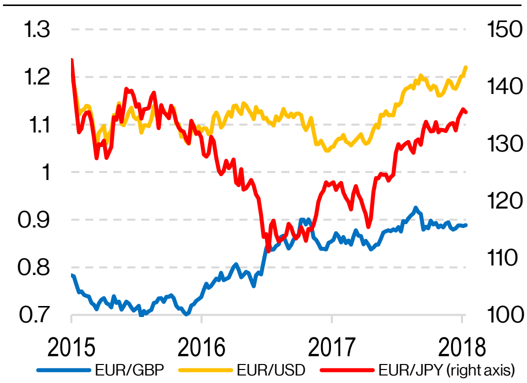
The US Federal Reserve continues on track of gradual monetary policy tightening. In the meantime, the **ECB is awaiting more progress** towards a sustained adjustment in the path of inflation. Most members of the Fed Board of Governors expect three policy rate hikes this year. Robust growth of the US economy coupled with historically low rate of unemployment contrast with subdued price and wage developments. In 2018, the Fed will continue unwinding its balance sheet at a brisker pace, while the **ECB is only to announce the specificities of its Asset Purchase Programme tapering beyond September 2018.** Nevertheless, given the recent price developments in the euro area, policy rate hikes are not expected earlier than in the first half of 2019.

The euro has appreciated markedly against all major currencies during the period under review, **and is likely to continue on an upward path throughout 2018** owing to euro area's robust economic performance and upbeat economic sentiment. The effective exchange rate against the British pound will to a large degree depend on the progress of EU-UK Brexit negotiations – an eventual significant advancement could potentially strengthen the pound.

Oil prices hit the ceiling

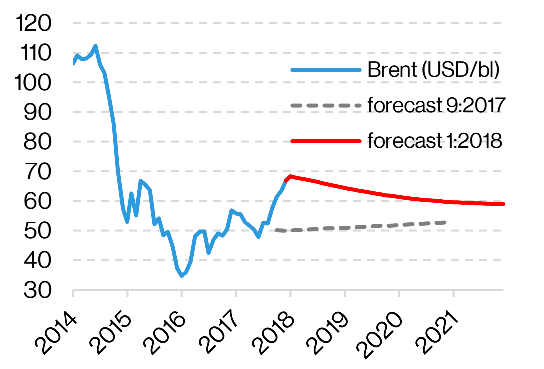
After having hit the 70 USD/b mark, prices of Brent Crude oil will follow a steady downward trajectory over the projection horizon on the back of excess supply generated mainly by the US, whose production should peak in 2018. The extension of the OPEC production cut, however, will keep the price above 60 USD/b (Chart 2).

Chart 1: EUR/USD hits record high



Source: Bloomberg

Chart 2: Brent crude price in USD/barrel



Source: Bloomberg

Recovery is notable across the Eurozone members

The economic expansion in the euro area remains intact, with growth stronger than previously anticipated (Chart 3). In Q3, the euro area economy advanced by 0.6 per cent, powered by strong domestic demand (notably, fixed investment), and a mild positive contribution from the external sector. The strong cyclical momentum is underpinned by a reduction in economic slack, intensified global activity, and upbeat consumer and business sentiment. Contrary to that, the Brexit vote adversely weighs on UK activity, where business investment remains subdued and the external sector muted, despite the weak pound.

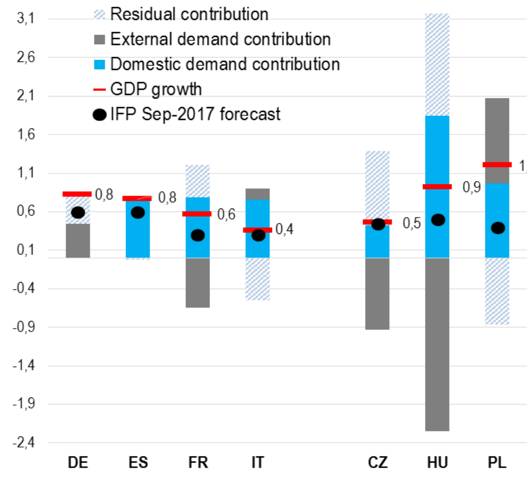
Visegrad economies growing above expectations

Our regional trading partners have recorded another robust quarter, beating market expectations. Poland led the way on the back of vigorous household consumption and healthy external demand. Hungary benefitted from a strong rebound in investment, while the Czech Rep. to some degree corrected the outstanding growth performance earlier in the year. Domestic demand will continue fuelling growth of our regional partners going forward, owing to strong labour markets, economic optimism and the projected recovery in EU fund absorption.

Surveys suggest positive development

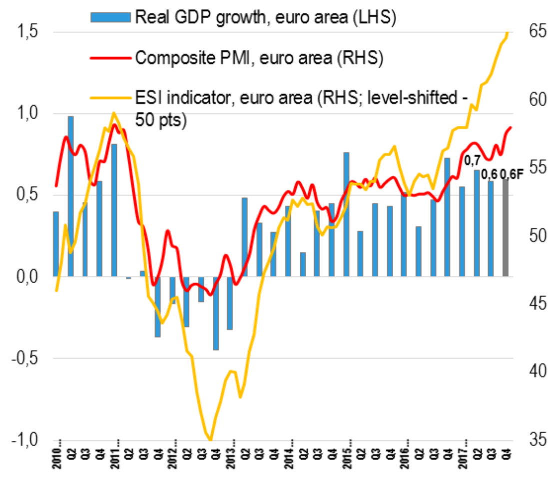
Favourable survey readings for both, the euro area and Germany, suggest a sustained momentum of growth on the short term projection horizon (Chart 4). Notably, the manufacturing component of the euro area PMI reached an all-time high in December 2017, at odds with the stronger levels of the euro.

Chart 3: Broad-based growth structure powered the performance of our trading partners in Q3-2017



Source: Eurostat, IFP

Chart 4: Upbeat business sentiment hints at sustained growth momentum in the near term (LHS %, RHS pts)



Source: Eurostat, IFP

Foreign demand growth will be stronger

Against the backdrop of strong import performance of our regional trading partners, we have revised up the weighted foreign demand indicator for the subsequent two years. The upward revision stems from a stronger-than-expected import growth mainly in Germany, but imports are expected to pick up also in the V3 region, fuelled by buoyant household consumption, high import-intensity of public investments, and the upturn in global trade. The cut-off date for selected external environment assumptions, including interest rates and commodity prices is January 15, 2018.

Table 1: External environment forecast 2017 – 2020

	GDP (% growth)					Difference vs. last					Import (% growth)					Difference vs. last				
	2017	2018	2019	2020	2021	2017	2018	2019	2020	2021	2017	2018	2019	2020	2021	2017	2018	2019	2020	2021
Most important trade partners	3,3	2,6	2,3	1,9	1,8	0,4	0,3	0,3	0,1		6,2	5,4	4,9	4,7	4,5	0,4	0,4	0,4	0,2	
Euro area*	2,6	2,2	2,1			0,5	0,3				5,1	4,6	4,4			0,4	0,3			
Germany	2,5	2,3	1,9			0,5	0,4				5,2	4,6	4,1			0,6	0,2			
Czech rep.	4,4	3,0	2,7			0,2	0,3				6,1	6,0	5,1			0,1	0,4			
Poland	4,4	3,5	3,2			0,5	0,4				7,0	6,6	6,0			-1,7	0,3			
Hungary	3,9	3,4	2,7			0,3	0,3				10,1	6,9	6,3			2,7	0,9			

*Export-weighted euro area indicator

Source: European Commission, IFP

Ample private consumption behind the 2017 performance

The Slovak economy will have expanded by 3.4 per cent annually in 2017, fuelled predominantly by household consumption, which has benefitted from the strength of the Slovak labour market. Export performance has underperformed its solid fundamentals, owing to temporary headwinds, including ending lifecycle of certain domestically manufactured car models in the automotive industry. Nevertheless, export growth has picked up in H22017 and is projected to accelerate further in the upcoming years. The economy has also benefitted from revitalised investment activity in the second half of 2017, partially offset by government consumption.

Export adds to the private consumption

The economy will gather speed to 4.2 per cent this year, buttressed by two main pillars. The traditional primary driver – household consumption – will be joined by net exports, the latter benefitting from the strength of euro area expansion on the one hand, and new Volkswagen production capacities on the other. Aggregate investment activity is to intensify thanks to investments related to Jaguar Land Rover (JLR) and the D4/R7 ring road construction. Public spending is to increase only gradually, which will limit the economy's tendency to overheat.

Post-crisis peak in the next year

The economy will accelerate further next year to 4.5 per cent, propped up by strong export dynamics continued as a result of solid performance of our trading partners, as well as the onset of the JLR production. Going forward, private consumption will support growth at a stable pace at around 3 per cent, while the completion of major investments will slow down aggregate investment activity. The positive output gap is projected to peak in 2019, marginally above 1 per cent of GDP.

Return of the economy to its long-term potential

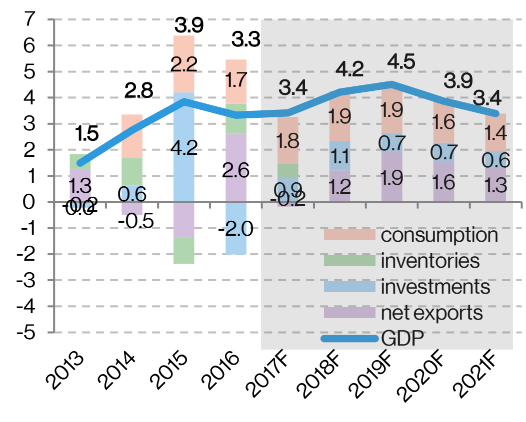
In 2020 and 2021, economic growth is projected to slow down to 3.9 per cent and 3.4 per cent, respectively, as major tailwinds, including new automotive production capacities, and robust external activity wear off. In particular, the external environment will lose traction as its business cycles mature, and monetary policy tightens. Household consumption and investment activity will slow down in line with the long-term potential of the economy. The output gap is projected to gradually start closing at the end of the forecast horizon.

MF SR FORECAST - MAIN ECONOMIC INDICATORS (January 2018)

indicator (growth in % unless otherwise noted)	actual 2016	forecast 2017	2018	2019	2020	2021	diff. from September 2017: 2017	2018	2019	2020	2021
Gross domestic product											
GDP, real	3.3	3.4	4.2	4.5	3.9	3.4	0.1	0.0	0.1	0.0	
GDP, nominal (bn €)	81.2	85.0	90.2	96.1	102.1	108.0	0.4	0.7	0.8	1.1	
Private consumption, real	2.6	3.7	3.5	3.2	2.8	2.5	0.3	0.6	0.3	-0.1	
Private consumption, nominal	2.3	5.2	5.7	5.3	5.1	4.9	0.4	1.1	0.5	0.1	
Public consumption	1.6	-0.6	0.6	1.3	1.2	1.2	-1.0	-0.7	-0.3	-0.4	
Fixed investments	-8.3	4.3	5.2	3.3	3.3	3.0	1.3	1.0	0.1	0.1	
Export of goods and services	6.2	3.6	7.9	8.5	7.1	5.9	-1.4	0.1	0.8	0.8	
Import of goods and services	3.7	4.1	7.1	7.2	6.2	5.2	-0.7	0.3	0.9	0.8	
Labor market											
Employment (registered)	2.5	1.8	1.7	1.1	1.0	0.7	-0.1	0.3	0.1	0.0	
Wages, nominal	3.3	4.6	5.2	5.4	5.2	5.2	0.7	0.6	0.6	0.0	
Wages, real	3.8	3.3	3.2	3.3	2.9	2.8	0.7	0.3	0.4	-0.2	
Unemployment rate	9.6	8.2	7.3	6.7	6.1	5.9	0.0	0.0	0.0	0.0	
Inflation											
CPI	-0.5	1.3	2.0	2.0	2.2	2.3	0.0	0.3	0.1	0.1	

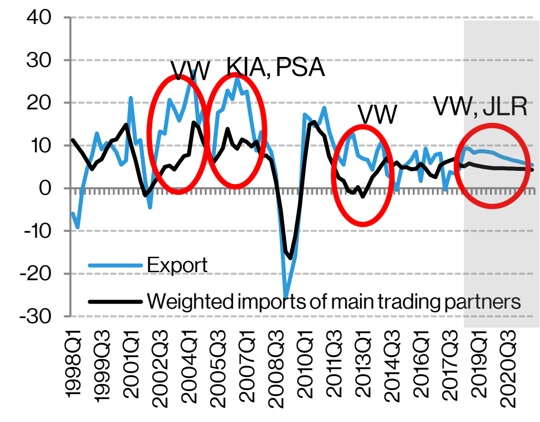
Source: SO SR, IFP

Figure 5: Contributions to GDP growth (in p. p..)



Zdroj: IFP

Figure 6: Impact of one-off supply shocks in automotive industry on exports (y-o-y; in p. p.)



Zdroj: IFP

The labour market fever

The overheating of the labour market is to intensify further, as employment – already at all-time highs – continues to increase at a steady pace. The rate of unemployment has fallen to unprecedented levels, while vacancies have hit a new record level. The resulting shortage of available labour force will exert an upward pressure on nominal wages and prices in the services sector, which will put an end to the subdued wage and inflation dynamics experienced since the crisis.

Employment growth by 1.7 % in the actual year...

Employment will grow by 1.7 per cent, and the economy will add about 40 thousand new jobs, of which more than half will be in the market services sector. Meanwhile, we expect the number of Slovaks working abroad to fall, and foreign workers to join the Slovak labour force, causing potential employment to rise towards projection horizon's end. Employment dynamics is expected to ease looking ahead.

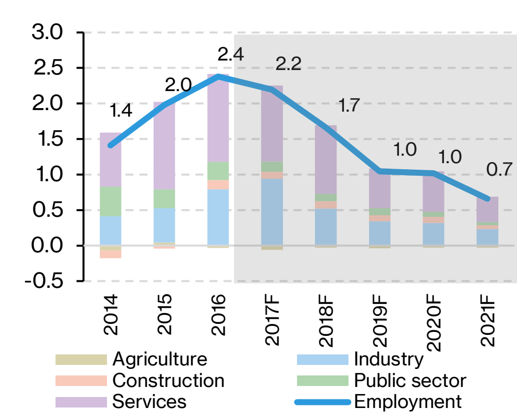
...pushes down the unemployment rate to 7.3 %

The unemployment rate is anticipated to drop to 7.3 per cent this year, while participation rates are set to rise due to a shift in the retirement age as well as the aforementioned increased employment of foreigners. The retirement age shift will increase the number of economically active people, taming the reduction in the unemployment rate over the forecast horizon, while greater deployment of foreign workers will temper the overheating of the labour market (the latter rests also on the new estimate of NAIRU, see BOX). Consequently, unemployment rate will end up under but close to 6 per cent.

The highest wage growth in ten years

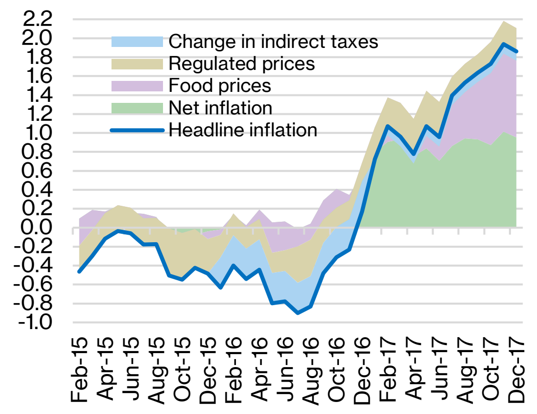
Turning to nominal developments, the average nominal wage is projected to accelerate at the fastest pace since the crisis and exceed the EUR 1000 threshold this year. It will pick up the pace to 5.4 per cent next year, reflecting persistent labour market tightening on the one hand, and institutionalised pay rises for night shifts, holidays and week end on the other. **The cumulative contribution of these pay-outs to wage growth over 2018 to 2020 is about 0.4 percentage points**, while it is expected to have a softening effect on employment. Wage growth would advance most rapidly in industry and services, exceeding 3 per cent this and next year in real terms. Wage developments will follow those of underlying productivity over the medium-term.

Chart 7: Contribution to employment growth (p.p.)



Source: SO SR, IFP

Chart 8: Headline inflation and contributions of individual components (p.p.)



Source: SO SR, IFP

The return of inflation

Consumer price growth is set to reach 2 per cent this year, driven by the intensification of the fundamental demand-pull pressures. Price development will be supported by brisker wage growth, as well as the persistence of higher food prices from last year, which should retreat over the course of 2018. The contribution of regulated prices will be modest in line with energy commodity price developments, as well as decisions of the Regulatory Office. Higher oil prices will prop up prices of fuel, while stronger levels of the euro will limit inflation of tradable goods.

Inflation acceleration beyond 2 per cent driven by economic activity

Inflation is estimated to speed up slightly in the years to come. Higher wages will lift up prices of services. Recent developments in energy commodity prices in the world markets, as well as futures indicate a slight increase in prices of energy commodities next year. Resulting from the convergence process of the Slovak economy to its euro area counterparts, inflation is projected to exceed 2.3 per cent over the medium term.

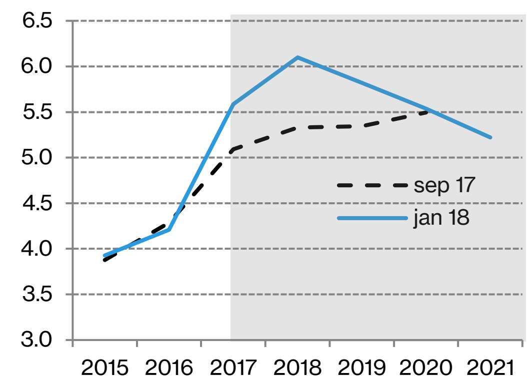
Balanced risks

The risks to the current forecast are broadly balanced. Risks stemming from the external environment remain unchanged. External factors which could adversely weigh on our baseline scenario include political risk[1], global trade protectionism, and euro volatility[2], offset by smooth Brexit proceedings and secondary spillovers from US fiscal stimulus on the upside. There are two downside risks emanating from the domestic economy. One, labour supply shortage could limit the economy's potential. The second domestic downside risk relates to the economy's ability to become satiated in terms of credit, which could slow down private consumption. On the upside, wages could grow faster, and so could private consumption thanks to the institutionalised pay-outs. The economy may also accelerate due to higher public spending reflecting the electoral cycle, as well as due to a more robust EU fund absorption, which for the time being remains low. Influx of foreign workers could further benefit the labour market.

Labour market lifts up the tax base

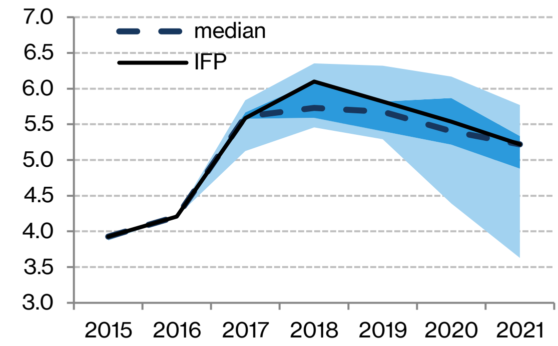
The overall impact of the macroeconomic forecast update on tax bases is favourable, owing to stronger labour market in 2018 and 2019. The favourable impact of higher household spending is furthermore aided by public investment growth next year. Tax bases for withholding tax, bank levy, as well as CIT have been affected only marginally. The overall impact of the present macroeconomic forecast on tax and social contributions will be subjected to further scrutiny at the Tax Forecast Committee meeting held on February 8, 2018.

Chart 9: Macroeconomic tax bases growth compared to previous forecast



Source: IFP

Chart 10: Comparison of forecasts of macroeconomic bases[3] with the members of the Macroeconomic Forecasts Committee



Source: IFP

The medium-term forecast prepared by Institute for Financial Policy (IFP) of the MF SR was discussed at the Macroeconomic Forecast Committee on January 31, 2018. **The medium-term forecast was evaluated as realistic by most members of the Committee**

[1] We refer specifically to recent political impassé in Germany, the Catalonia crisis, as well as the upcoming general election in Italy

[2] Especially euro exchange rate levels divorced from its fundamental value for prolonged period of time, which could dampen export performance

[3] Macroeconomic basis for the budget revenues (weight of indicators depends on the proportional share of the particular tax on the total tax revenues); Wage base (employment x nominal wage) – 51,1 per cent; Nominal private consumption – 25,7 per cent; Real private consumption – 6.6 per cent; Nominal GDP growth – 9.9 per cent; Real GDP growth – 6.7 per cent.

(NBS, ČSOB, Infostat, SAV, SLSP, Unicredit), while two members assessed the forecast as optimistic (Tatrabanka, VÚB), especially at the far end of the forecast horizon. The detailed macroeconomic forecast, as well as the minutes from the meeting and all supporting documentation are available at the IFP website.

BOX: Update of the NAIRU estimate

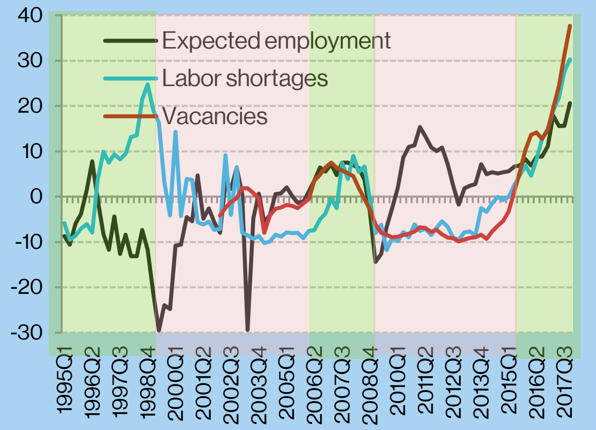
The Slovak economy is currently experiencing a third phase of labour market overheating, with some characteristics analogous to those pre-crisis. The current macroeconomic forecast thus provides an update of non-accelerating inflation rate of unemployment (NAIRU). The NAIRU estimate fell to 9.8 per cent in last year, and we expect further widening of the differential between NAIRU and the actual rate of unemployment, which is to exert additional upward pressure on wage growth.

The Slovak labour market has reached an all-time high, with exceptional employment levels close to 2.4 million, reinforcing the declines in the rate of unemployment. According to our recent estimates, merely 8.2 per cent of economically active population was unemployed in 2017, which constitutes the bottom since 1993.

Moreover, the economy faces a labour shortage, since the labour market rebounded in 2014. In addition to the peaking data on vacancies, conjectural surveys likewise indicate overheating, with record-high number of businesses expecting exceptionally high employment, and facing production limits due to labour shortage in the months to come *(Chart A)*.

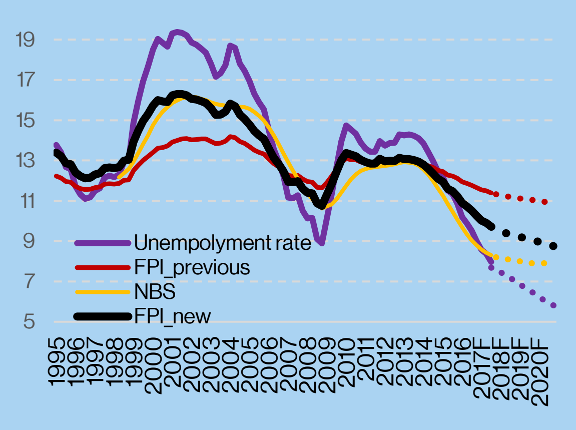
Rapid wage growth dynamics is further indicative of labour market tensions. The third quarter of 2017 surprised to the upside as nominal wages grew by over 5 per cent annually, and simultaneously constituted the strongest growth rate since 2008. In the meantime, nominal wage growth has been subdued compared to the pre-crisis period, in spite of the tight labour market conditions. Solid growth rates are partially offset by the entry of long-term unemployed and foreigners into the labour market. Last year, for example, foreign workers occupied a quarter of newly-created jobs, mainly as machinery operators and installers in industry.

Chart A: Indicators of overheating of the labor market (normalized in %)



Source: SO SR, UPSVaR

Chart B: Unemployment rate and NAIRU estimates (in %)



Source: SO SR, NBS, IFP

In the current forecast, we have updated the structural unemployment estimate, NAIRU.[4] The gap between NAIRU and the actual rate of unemployment – the unemployment gap – affects wage dynamics.

The NAIRU estimate follows a Kalman filter-based model[5]. The Phillips Curve (Equation 1) is based on Gordon's "triangle model," where the rate of inflation[6] π_t is determined by inflation expectations (in our case, its approximation through past values), the unemployment gap *Ugap*, and supply shocks z_t (prices abroad and oil prices). The second equation consists of the unemployment rate calculation using NAIRU and Ugap unemployment gaps. The NAIRU itself (Equation 3) is modelled as a random walk, while Ugap (Equation 4) is an autoregressive AR process (1):

$$(1)\ \ \Delta\pi_t = \alpha\Delta\pi_{t-1} + \beta Ugap_t + \gamma(L)\Delta z_t + \varepsilon_t, \quad \text{where } \varepsilon_t \sim N(0, \sigma_\varepsilon^2)$$

$$(2)\ \ U_t = NAIRU_t + Ugap_t$$

$$(3)\ \ NAIRU_t = NAIRU_{t-1} + v_t, \quad \text{where } v_t \sim N(0, \sigma_v^2), \text{ while } cov(\varepsilon_t, v_t) = 0$$

$$(4)\ \ Ugap_t = \delta Ugap_{t-1} + \xi_t$$

Our updated estimate stands at 9.7 per cent for 2017, which is 1.7 percentage points lower than the previous one, with steeper trajectory which better reflects actual developments. Nonetheless, the changes are only marginal, reflecting the assumption that structural unemployment – in response to macroeconomic and institutional shifts – changes only gradually[7]. Compared to the previous estimate, the gap for 2017 was reduced by more than a half.

The magnitude of labour market overheating is akin to 2008 level. In particular, the unemployment rate historically undershot the NAIRU at three instances. Over the period 1996-1998, the enacted expansive fiscal policy ensued internal and external imbalances, with NAIRU firing up to 16 per cent. In 2001, structural reforms and FDI inflows benefitted the economy, boosting production capacities and resulting in NAIRU falling to 11 per cent. These favourable developments led to a period of labour market overheating, which was halted by the onset of the 2009 crisis. The negative trend reversed in H22013, when NAIRU began its descend from the 13 per cent post-crisis peak. The actual rate of unemployment caught up with NAIRU in H22015. Currently, we estimate the gap between NAIRU and unemployment rate to stand at 2008 level.

[4] VZPS Methodology.
[5] Habrman and Rybák (2016) http://www.finance.gov.sk/en/Components/CategoryDocuments/s_LoadDocument.aspx?categoryId=742&documentId=896
[6] Core inflation
[7] The model specification requires, in addition to defining the system, the setting of specific parameters and values. The ratio of dispersions of stochastic components (σ_v ^ 2) / (σ_ε ^ 2), the so- "Signal-to-noise ratio" plays a key role in setting the NAIRU variability. This is basically an arbitrary choice. In addition to adjusting the signal-to-noise ratio, we also set the initial value for NAIRU, the covariance matrix value between the unobserved variables and the initial coefficient values (that results from the OLS regression).