



6 ECONOMIC RESEARCH

Through its economic research activities, Národná banka Slovenska (NBS) provides answers to some of the complex questions related to financial, economic and monetary developments at home and abroad. In 2018 these activities were spread almost evenly among the key thematic areas specified in the bank's medium-term research strategy. A slightly higher number of research projects focused on financial stability, while the other research areas that produced interesting findings included the following: the euro and convergence; economic modelling; monetary policy; fiscal policy; the labour market; and the real economy.

The trend of giving greater visibility to NBS research work continued in 2018. The number of NBS research outputs published in foreign journals included in Current Contents rose in 2018, and there was increasing cooperation with experts from other central banks and from other domestic and foreign institutions.

Nine new specialist articles by NBS staff members were published in peer-reviewed journals in 2018. Of those articles, eight were published in respected foreign journals, including, for example, the *Journal of International Money and Finance*, *Economics Letters*, the *Review of World Economics*, and the *Journal of Financial Stability*. A number of NBS research outputs of regional interest were published in the Slovak journal *Ekonomický časopis*.

NBS research outputs are mostly published in a standard manner as peer-reviewed papers, analyses, or commentaries, all of which are freely available on the NBS website.²⁹ In 2018, five working papers and one occasional paper were published on the NBS website, and NBS researchers contributed to the same number of papers published on the following websites of foreign institutions: the European Central Bank (ECB); the Oesterreichische Nationalbank; the Becker Friedman Institute; and Birbeck, University of London.

Studies in the area of financial stability looked at financial literacy, income inequality, and fi-

ancial transaction taxes. A detailed study of differences in financial literacy across countries showed that differences in basic individual characteristics (education, age, sex) explain only one-third of the financial literacy gaps across countries. It confirms that there is scope to reduce cross-country differences in financial literacy by improving socio-economic conditions.

Another study looked at the potential impact of introducing a financial transaction tax and found that such a tax could have several adverse consequences. The tax reduces trading volumes by raising transaction costs. When transaction costs rise, experts have a greater incentive to misreport information, so the quality of advice worsens and trading volumes decline.

A study of income inequality concluded that an increase in income inequality in Slovakia is associated with stronger economic growth in the short run. This is not found to be the case for the euro area, where, in the short run, an increase in income inequality has a greater downward impact on domestic demand and weighs on economic growth. In the long run, however, policies that reduce income gaps are beneficial for both Slovakia and the euro area as a whole.

Research related to economic modelling produced interesting outcomes in regard to selecting the optimal methods for testing the symmetry of macroeconomic and financial time series. Other research outcomes in this area are important for the accurate calculation of prediction intervals and for fan-chart modelling.

In 2018 NBS staff analyses falling under the broadly defined topic of the euro and convergence provided evidence that Slovakia has in recent years stopped catching up with advanced EU economies. The process of catching up with average EU productivity is being hampered by, among other factors, low efficiency firms, including those that do not demonstrate sufficient viability. Looking at the Slovak economy's development over a longer term indicates that

²⁹ The full texts are available at <http://www.nbs.sk/sk/publikacie/publikacie-vyskumu> a <http://www.nbs.sk/sk/menova-politika/analyticke-komentare>.



the trends of economic fundamentals have been affected by the introduction of the euro. Since the euro changeover, Slovakia's overall growth in output and productivity has been stronger than it would have been if the country had not adopted the euro.

The international cooperation in which NBS research staff are heavily engaged centres largely on activities related to ESCB research clusters and networks. With the Wage Dynamics Network (WDN) having ceased operation, there were only two ESCB research networks operating in 2018.

In 2018 NBS members of the Household Finance and Consumption Network (HFCN) focused on cleansing and imputing data from the third wave of the Household Finance and Consumption Survey. Once the data from Slovakia has been harmonised with that from other countries, a new dataset of information on the financial situation and consumption of European households will be available. This dataset will support responses to key questions about monetary policy transmission to households and the impact of monetary policy decisions on financial stability.

In 2018 a new ESCB research network called PRISMA (price-setting micro data analysis) was established with the task of conducting in-depth analysis of price-setting behaviour of individual firms. Its main objective is to document the relationship between price-setting and aggregate inflation dynamics. Among the key questions in this area is whether price-setting behaviour changes according to the business cycle or to the monetary policy stance.

In addition to these networks there are three ESCB research clusters whose purpose is to support close cooperation between researchers at ESCB national central banks, largely via workshops and joint research projects. In 2018 the first cluster addressed the issue of the optimal design of monetary policy under uncertainty. NBS involvement in the clusters in 2018 centred on the second cluster, which produced new findings on the microeconomic determinants of

productivity growth and competitiveness. Under the third cluster, which has a financial stability remit, discussions took place on the implications of bank capital and liquidity requirements for bank behaviour and money markets.

Besides being involved with ESCB research networks and clusters, NBS also cooperates closely with the Competitiveness Research Network (CompNet) – an independent network dedicated to research on competitiveness. One of the network's most important activities in 2018 was the completion of a new firm-level based dataset covering 18 EU countries.

In 2018 NBS research staff participated not only in events organised by national central banks, but also presented their latest research findings at several domestic and foreign conferences hosted by academic and supranational institutions.

The bank's cooperation with academia continued to be enriched in 2018 by the visiting researcher programme. Under this programme, one foreign researcher had a short internship at NBS and worked together with one NBS expert on joint research on the topic of digital skills in the Slovak market place.

As part of its efforts to promote its research outputs and to extend its cooperation with the external environment, NBS hosted 25 research-related seminars in 2018. Around half of them were opportunities for NBS researchers to present their own studies at various stages of completion and to receive informed feedback. The others included presentations from invited experts from abroad. In June 2018 the bank hosted an international conference entitled "The Challenges for Central Banking", which was divided into three sessions focusing on different topics: the goals of financial stability and price stability; the nature and significance of financial cycles; and the future of financial services. The three discussion panels included a total of 12 prominent experts (four on each panel), most of whom were foreigners from international financial institutions, commercial banks, or academia.