



NÁRODNÁ BANKA SLOVENSKA
EUROSYSTEM

CHAPTER 8

ECONOMIC RESEARCH

8



8 ECONOMIC RESEARCH

The introduction of the euro and adoption of the common monetary policy has also been reflected in the focus of the economic research conducted by Národná banka Slovenska, which is shifting towards ancillary economic policies. Research activities are gradually being standardised and are taking on the quality of those conducted by other euro area national central banks. International cooperation with the ECB and with research teams at the EU level is being deepened.

The substance of economic research remains unchanged. Its prime focus is the analysis of economic and financial relations in the economy and how they are linked to monetary policy. This predominantly takes the form of applied research. The focus of the research is to an increasing extent directed not only at the domestic economy, but also at the external economy, particularly that of the euro area. The primary areas of economic research comprise economic development modelling, monetary and fiscal policy, the labour market and financial stability.

The most important results and findings were published in several specialist articles. The more extensive outputs were published as reviewed working papers, financial stability reports, and policy or occasional papers. The full texts are also available on the NBS website under the section "Working papers".¹⁹

A total of eight research papers intended for the public were completed and published during the course of 2009. Four of them were working papers, two can be classified as discussion papers, and the other two took the form of policy papers. Although most of the authors of these papers were members of the Research Department staff, there was increased cooperation with staff from other NBS departments and with external authors and co-authors.

At the thematic level, most of the papers produced in 2009 were in the field of monetary and fiscal policy. Among the issues examined were theoretical starting points for the calculation of the equilibrium interest rate and the scope for

its application in Slovakia. Monetary policy decisions, especially on the key interest rate, were analysed for their effect on output, prices, the exchange rate, and short-term interest rates. Questions at the boundaries between monetary policy, fiscal policy and financial stability were addressed in a paper examining the factors that determine the development of long-term interest rates in EU countries. The key findings included estimates of the effect of fiscal policy on the business cycle. One paper that attracted a great deal of interest from the professional community proposed a new institutional arrangement in which fiscal policy is based on the concept of national net worth. No less important has been the progress in economic modelling. In 2009, a medium-sized neo-Keynesian dynamic stochastic general equilibrium model for Slovakia was completed and published. The other two principal papers in the area of economic research focused on the variability of economic developments at the turn of 2008 and 2009, with emphasis on the nominal and real convergence and competitiveness of Slovakia. The economic research team published a number of important findings as annexes to the financial stability reports. These annexes included an evaluation of housing affordability in the region (from the view of lending, the rate of construction, and prices of flats), as well as an analysis of the international financial integration of Slovakia in terms of its development and characteristics, and a concept for a new framework of financial regulation and supervision. Further details of the published papers are given in Box 1.

A number of other non-published research results and many interesting theoretical and methodological issues were the subject of lectures given by internal and external experts at periodical seminars organised by the Research Department. In all, 40 of these seminars were held in 2009, and there was a year-on-year increase both in the number of seminars attended by representatives of other specialist institutions based in Slovakia, as well as in the number of presentations given by speakers from abroad. Compared with the focus of the research papers, the expert seminars centred more on the

¹⁹ <http://www.nbs.sk/en/publications-issued-by-the-nbs/working-papers>.



issue of economic modelling and the theoretical assumptions underpinning monetary developments and the long-term sustainability of public finances.

Národná banka Slovenska has joined several international research teams. An NBS representative attends the meetings of Heads of Research of EU national central banks. Two such meetings were held in 2009 and they contributed to the further convergence of research activities across the euro area. Staff engaged in economic research gained access to new data and specialist publications on economics. In addition to its membership of two expert groups of the European System of Central Banks, Národná banka Slovenska joined further groups during the course of 2009.

The Wage Dynamics Network (WDN) is a research network consisting of economists from the ECB and the national central banks of the EU countries, which aims at studying in depth the features and sources of wage dynamics and their implications for monetary policy. In spring 2009, as part of its involvement in this network, NBS carried out a harmonised survey of enterprises aimed at studying the features and sources of wage dynamics. The survey's results were processed towards the end of year and presented within the network; they will be put to use in several planned research projects. In December 2009, the Eurosystem presented and published a final report summarising the cross-sectional findings across the network and analysing the implications of wage dynamics for the monetary policy of EU countries.

The Household Finance and Consumption Network (HFCN) consists of statistical survey experts, statisticians and economists from the ECB, the Eurosystem national central banks and a number of national statistical institutes. Its purpose is to implement and further develop the Household Finance and Consumption Survey. In 2009, the involvement of NBS experts in the HFCN con-

cerned mainly the preparation of the Slovak version of the harmonised system.

The financial crisis pointed to gaps in the expertise on macrofinancial stability. In response, an international contact group was established with the task of examining the feasibility of a common research project, the availability of data, and the capacities of individual national central banks. The contact group recommended the establishment of a new working group called the Macro-prudential Research Network (MaRs), its purpose being to produce key conceptual frameworks, models and tools that will help to enhance the conditions in which macroprudential supervision is exercised in the European Union. The emphasis will be on the development of macrofinancial models that link financial stability with the real economy, on early warning systems and systemic risk indicators, and on the assessment of contagion risk.

In the field of financial stability, long-term international cooperation with another two groups was continued in 2009. ECONET is a group of economists specialising in the area of financial stability, and its main task is to monitor and analyse developments in European financial markets and to assess the impact of existing and proposed regulation in the financial markets field. In 2009, as part of its first round of tasks, ECONET periodically submitted to meetings of the Economic and Financial Committee (EFC) and the Financial Services Committee (FSC) its assessment of the risks and trends in European financial markets. Within the second round of tasks, ECONET members produced impact assessments for proposed legislative measures.

The Working Group on Macro-prudential Analyses (WGMA) focuses on identifying and assessing risks in the EU banking sector. It determines the subject matter and special topics that are to be included in the publications ECB Financial Stability Review and EU Banking Sector Stability.



Box 1

PAPERS PUBLISHED IN 2009

WP 1/2009 Michal Benčík: The equilibrium interest rate – theoretical concepts and applications

The paper summarizes several theoretical concepts of the equilibrium real interest rate, applies several of them to the conditions in Slovakia, and at the same time assesses the potential impact of the changeover to the European single currency. It presents calculations of the neutral real interest rate and long-term equilibrium interest for both Slovakia and the euro area as a whole. The neutral interest rate is determined by the relationship between savings and investments (the so-called “IS curve”) and the relationship between nominal wages and unemployment (the “Phillips curve”). Although its values are close to zero, they are skewed by the general excess of savings over investments. The long-run equilibrium interest rate is computed directly using a modified Ramsey-Keynes rule (the marginal substitution rate between consumption in various periods should be equal to the marginal transformation rate between output in these periods), and its values are in the region of 2.5%. The calculations indicate that following Slovakia’s entry into the monetary union, differences could arise between the neutral interest rate in the euro area and the rate in Slovakia. Other economic policy measures will probably be necessary to offset the expansionary impact of interest rates.

WP 2/2009 Michal Benčík: An analysis of the impact of fiscal policy on the business cycle – a SVAR approach

The paper outlines the theoretical concepts behind models that evaluate the effect of time series of several variables and their time-shifted values (VAR models), and various methods of identifying them. It summarises the results of model estimates for the general government deficit, the real interest rate, GDP growth, and the GDP deflator, using data for the Slovak Republic for the period 1997–2007. The analysis was conducted on the basis of several external approaches. The impact of fiscal policy on the

business cycles is identified as being predominantly in accordance with the features predicted by neoclassical theory. If the ratio of the budget deficit to GDP records a permanent increase of 1%, the immediate effect on the rate of GDP growth is an increase of only 0.4% per year. That effect falls to 0.2% in subsequent periods and peters out completely after six quarters, when the rate of GDP growth returns to its original level. However, the increase in the deficit leads also to a permanent rise in interest rates. The reliability of these results may be impaired by the small number of observations and qualitative changes in the period under review.

WP 3/2009 Juraj Zeman and Matúš Senaj: DSGE model – Slovakia

The paper presents a medium-sized neo-Keynesian DSGE model of an open economy that is designed to simulate developments in the Slovak economy. The model consists of more than fifty equations and contains all the key macroeconomic variables, including GDP and its main components – consumption, investment, government expenditure, exports and imports. The model also uses three factors of production – labour, capital and energy. Price developments were tracked by the consumer price index and by the import and export price index. Other important variables included the nominal interest rate and exchange rate. Most of the model’s parameters are calibrated, while a minority are estimated using various estimation techniques. The appropriateness of the model is tested in several ways – by comparing statistics of simulated variables with empirical data, by analysing impulse response functions, and by reproducing historical time series.

WP 4/2009 Ján Žilinský: What determines borrowing costs of EU countries?

Through a detailed examination of long-term interest rates, the paper finds that the correlation between the size of government debt and long-term interest rates in EU countries is no



more than weak. While this runs counter to theory, it can be explained by the institutional differences existing across Europe. Countries that have high democratic capital (established traditions) have lower margins compared with new democracies. Although debt reduction is a worthy objective, the results presented in the paper indicate that a country's reputation may be of more importance than purely its economic indicators.

DP 1/2009 Judita Jurašeková Kucserová: Effects of monetary policy shocks in Slovakia

The paper presents the results of empirical research into how monetary policy shocks affect the economy in Slovakia. Real output, prices, the exchange rate, and the short-term interest rate were monitored for their reactions to structural shocks, which were based on a SVAR model and selected by the sign restriction method. In most cases, historical shocks are also identified in order to define the monetary shock in more precise terms. The results indicated that an unforeseen rise of 50 basis points in the key interest rate causes prices to fall by up to 0.4%.

As predicted, the effect reaches its peak around one year, at the latest, after the initial shock. However, the results for the effect on GDP are inconsistent and indicate that shifts in monetary policy are no more than a minor factor in real output changes.

DP 2/2009 Michal Horváth and Ľudovít Ódor: Making fiscal commitments credible – institutions for responsible and transparent fiscal policy in Slovakia

The paper analyses the weaknesses of the current fiscal institutions in Slovakia and proposes a new institutional framework for fiscal policy, one based on the concept of net worth and international best practices. The crux of the proposal is to introduce supplementary fiscal rules to the Stability and Growth Pact – an upper limit on gross debt, expenditure ceilings, new rules for local authority budgets, and requirements for greater transparency. For the checking and monitoring of fiscal rules and processes, the paper proposes that a Council

for Fiscal Responsibility be established under the authority of the Slovak Parliament. Such a framework should increase Slovakia's credibility when it comes to seeking exit strategies after the adversities of the current economic crisis, and it should lead both to lower interest rates, and to faster and more balanced growth in the long run.

PP 1/2009 Judita Jurašeková Kucserová, Ľudovít Ódor, Matúš Senaj and Juraj Zeman: Selected indicators of competitiveness: a brief outline

Competitiveness is crucial to maintaining productivity growth and to raising living standards, particularly in small open economies that are based on international trade and are heavily dependent on foreign direct investment. According to one definition, competitiveness means a country's ability to sell its goods and services in a given market. The term also includes, for example, a country's overall business environment, its physical infrastructure and knowledge base, as well labour market indicators, financial market regulation and the regulation of markets in goods and services. Therefore the monitoring of competitiveness cannot be narrowed down just to the monitoring of exchange rate movements. The aim of this policy paper is to evaluate the development of competitiveness in Slovakia, particularly in relation to the depreciating currencies of neighbouring countries.

PP 2/2009 Tibor Lalinský: An analysis of the Slovak economy's convergence

Towards the end of 2008, the effects of the global financial crisis began to be seen in the real economy. The fastest and most intensive economic downturns were recorded in those countries that had been directly affected by the financial crisis. But in the case of other countries, including Slovakia, the adverse effects were not felt until the beginning of 2009, when the slump in demand from advanced industrial countries began to take its full toll. In March 2009, despite a slowdown in consumer price inflation, Slovakia ceased to meet the Maastricht inflation criterion. After several years of progress, the trend of



nominal and real convergence within the EU came to a halt. For a certain time, we will be witnessing more economic divergence than convergence. The outlook for the years ahead indicates also that the pace of Slovakia's convergence to the average EU level will slow down considerably. Because of adverse developments in the global and domestic econ-

omy, Slovakia will have an excessive deficit this year and also in the next two years. As regards compliance with the Maastricht criteria in those EU countries that are outside the euro area, none of them are complying with all of the criteria and therefore the next expansion of the euro area will not come under consideration for several years.