
CNB Economic Research in 2016

I. Introduction

The aim of the CNB's economic research is to produce research outcomes relevant to the CNB that are of high academic quality. This Report summarises the outcomes of the research projects and research activities undertaken by the CNB in 2016.

The Report provides an overview of research publications (Part II), their relevance and impact (Part III) and international cooperation and events organised (Part IV).

II. CNB Research Publications

The CNB's economic research is published in two series of publications, which are intended to disseminate the results of the CNB's research projects and other research activities of the staff of the CNB and collaborating contributors. Both series are refereed internationally. Working Papers (WPs) aim to present original research contributions relevant to central banks. Research and Policy Notes (RPNs) present topics related to strategic issues or specific aspects of monetary policy and financial stability in a less technical manner than WPs.

The CNB published 17 WPs and RPNs per year on average in 2008–2016 (Table 1). Out of these, 15 were WPs and 2 were RPNs.

Table 1. CNB research publications*

Year	2008	2009	2010	2011	2012	2013	2014	2015	2016	Av. 2008–2016
WPs total	14	15	15	15	15	15	16	16	12	15
RPNs total	1	0	0	3	3	2	4	1	0	2
Total publications	15	15	15	18	18	17	20	17	12	17

* As of December 2016.

A list of CNB research publications in 2016 is provided in Table 2. These working papers deal with long-term determinants of economic growth (1/2016), monetary transmission (2/2016), co-movement between key macroeconomic variables (3/2016), transmission of financial shock contagion (4/2016), the interaction between monetary and macroprudential policies (6/2016), the sensitivity of household consumption to income (8/2016) and the dynamics of Czech trade (12/2016) – all these studies conduct empirical analyses. The other papers contribute to methodology, exploring new methods in forecasting (5/2016), modelling market confidence in a DSGE framework (7/2016) and examining credit constraints (10/2016), or combine modelling with empirics (9/2016) and apply forecasting tools to the CNB's specific needs (11/2016).

Table 2. CNB research publications in 2016*

CNB Working Paper Series		
12/2016	Kamil Galuščák Ivan Sutóris	<i>Margins of trade: Czech firms before, during and after the crisis</i>
11/2016	Oxana Babecká Kucharčuková Jan Brůha	<i>Nowcasting the Czech trade balance</i>
10/2016	Alexis Derviz	<i>Credit constraints and creditless recoveries: An unsteady state approach</i>
9/2016	Jan Babecký Michal Franta Jakub Ryšánek	<i>Effects of fiscal policy in the DSGE-VAR framework: The case of the Czech Republic</i>
8/2016	Tomáš Havránek Anna Sokolova	<i>Do consumers really follow a rule of thumb? Three thousand estimates from 130 studies say "Probably not"</i>
7/2016	Volha Audzei	<i>Confidence cycles and liquidity hoarding</i>
6/2016	Simona Malovaná Jan Frait	<i>Monetary policy and macroprudential policy: Rivals or teammates?</i>
5/2016	Michal Franta	<i>Iterated multi-step forecasting with model coefficients changing across iterations</i>
4/2016	Luboš Komárek Kristyna Ters Jörg Urban	<i>Intraday dynamics of euro area sovereign credit risk contagion</i>
3/2016	Michal Andrlé Jan Brůha Serhat Solmaz	<i>On the sources of business cycles: Implications for DSGE models</i>
2/2016	Aleš Bulíř Jan Vlček	<i>Monetary transmission: Are emerging market and low-income countries different?</i>
1/2016	Tomáš Havránek Roman Horváth Ayaz Žeynalov	<i>Natural resources and economic growth: A meta-analysis</i>

* As of December 2016.

In addition, the CNB Economic Research Bulletin summarises the outcomes of research projects relating to a pre-selected topic in the form of several short articles. It is written in non-technical language in order to make the CNB's research results more accessible to the general public. In 2016, the May edition of the CNB Economic Research Bulletin presented selected publications on labour market topics, while the November edition focused on banking and finance issues (Table 3).

Table 3: CNB research bulletins in 2016

CNB Economic Research Bulletin		<i>Articles:</i>
May 2016	<i>Topics in labour markets</i>	<i>Empirical analysis of labour markets over business cycles: An international comparison</i> (J. Brůha and J. Polanský) <i>Labour market modelling within a DSGE approach</i> (J. Tonner, S. Tvrz and O. Vašíček) <i>Firm-level labour demand: Adjustment in non-crisis times and during the crisis</i> (J. Babecký, K. Galuščák and L. Lízal) <i>Labour market adjustment since the global financial crisis: Evidence from a survey of Czech firms</i> (J. Babecký, K. Galuščák and D. Žigraiová)
November 2016	<i>Financial cycles, macroprudential and monetary policies</i>	<i>In the quest of measuring the financial cycle</i> (M. Plašil, T. Konečný, J. Seidler and P. Hlaváč) <i>Confidence cycles and liquidity hoarding</i> (V. Audzei) <i>Limited liability, asset price bubbles and the credit cycle: The role of monetary policy</i> (J. Matějů and M. Kejak) <i>Monetary policy and macroprudential policy: Rivals or teammates?</i> (S. Malovaná and J. Frait)

III. The Relevance and Impact of CNB Research Publications

According to an internal survey, around 57% of the CNB's research publications were directly used in CNB documents or official statements or by ECB Committees in 2008–2015 (Table 4, first row). For example, in 2016 the outcomes of research projects were used during the forecasting process with the CNB's core model for simulations at the zero lower bound and as an independent check for forecasting the relevant balance of payment items, to produce a box on wage and unemployment dynamics for the CNB's analyses of the Czech Republic's current economic alignment with the euro area in 2016, and to produce inputs to the CNB Financial Stability Report 2015/2016, such as an analysis of portfolios in the insurance sector and a complementary indicator for setting the countercyclical capital buffer.

More than half of directly relevant research publications have been published in refereed academic journals (Table 4, second row). Research publications that were both relevant and published in journals accounted, on average, for one-third of all WPs and RPNs issued (Table 4, third row). The decreasing numbers for recent years reflect the publication lag – it takes time for research articles to be published in academic journals, typically two to three years. This can also be illustrated by comparing the relevance found in the 2016 survey with that for 2015 (shown in parentheses where different): the 2016 numbers are equal to or higher than those for 2015. The average RePEc impact factor of the published papers was just above two, which corresponds to a ranking of 375th–380th out of over 1,600 economic journals listed in RePEc. CNB WPs and RPNs published in journals in 2015 had an average impact factor of 4.86 (last row of Table 4), corresponding to a ranking of 185th.

Table 4. Relevance and impact of CNB research publications*

Year of WP/RPN publication	2008	2009	2010	2011	2012	2013	2014	2015	Av. 2008–2015
Direct relevance: WPs and RPNs with directly identified relevance (% of issued)	53	53	87	67	61	47 (35)	50 (40)	35	57 (54)
WPs and RPNs published in refereed academic journals (% of issued)	40	67 (60)	80	78 (72)	61 (56)	53 (35)	25 (10)	12	52 (46)
Best performers: WPs and RPNs with directly identified relevance and published in refereed academic journals (% of issued)	27	47 (40)	73	50 (44)	39	18 (12)	20 (10)	0	34 (31)
Average impact factor per WP/RPN – sorted by year of WP/RPN	0.49	1.77 (1.71)	2.77	2.89 (2.84)	2.30 (2.07)	3.29 (2.79)	1.56 (1.14)	1.31	2.05 (1.89)
Average impact factor per WP/RPN – sorted by year of academic publication	1.64	0.45 (0.38)	0.48	1.51	1.86	2.37	3.61	4.86	2.10 (2.09)

* Calculations based on data from the 2016 survey, as of May 2016. The numbers in parentheses are as of May 2015 where different from May 2016. Academic quality and best performers are computed using the RePEc simple impact factor for 2008–2015. The average impact factor in rows 4 and 5 is the RePEc simple impact factor.

The following journals featured follow-up CNB publications in 2015–2016: Journal of the European Economic Association, Journal of International Economics, Journal of Economic Surveys, IMF Economic Review, Journal of Empirical Finance, Journal of Forecasting, Economic Systems, Journal of Policy Modeling, Open Economies Review and Economic Modelling.

The CNB as an institution is ranked among the top 5% of research institutions in Europe according to the [RePEc aggregate ranking](#). The CNB also ranks among the top 1% of institutions in the Transition Economics category – the CNB ranked 8th in May 2016. The CNB has consistently ranked among the top two economic research institutions in the Czech Republic. As of May 2016, 34 economists affiliated with the CNB were among the top 25% (equivalently 94 economists) in the Czech Republic.

According to the RePEc impact factor measures, the CNB WP series gained an average impact factor of 0.92 in 2008–2014 (Table 5). The average RePEc immediacy index, which shows citations to documents published in a given year, was 0.36. The decreasing number of citations for recent years is due to the time it takes for citations to appear and be registered in the RePEc database.

Table 5. CNB WP citation statistics in RePEc*

	2008	2009	2010	2011	2012	2013	2014	2008–2015
No. of documents published	14	15	15	15	15	15	16	105
No. of citations to documents published in given year ^{a)}	85 (66)	90 (72)	48 (33)	66 (55)	61 (44)	18 (8)	10	378
RePEc impact factor ^{b)}	1.53 (1.4)	0.74 (0.71)	0.79 (0.76)	0.63 (0.57)	0.70 (0.63)	1.50 (1.47)	0.57	0.92
RePEc immediacy index ^{c)}	0.64	0.27	0.27	n.a.	0.60	0.20	0.19	0.36

* As of May 2016. The numbers in parentheses are as of May 2015 where different from May 2016.

^{a)} Total number of citations as of May 2016 to documents published in year t .

^{b)} The RePEc impact factor is defined as the number of citations as of year t to documents published in years $t-1$ plus $t-2$ divided by the number of documents published in years $t-1$ plus $t-2$; this definition (called the two-year impact factor) is comparable to the impact factor available on the Web of Science.

^{c)} The RePEc immediacy index is defined as the number of citations to documents published in a given year divided by the number of documents published in the same year.

IV. International Cooperation and Events Organised

The CNB puts a lot of emphasis on international cooperation in its economic research. First, the CNB runs a Research Visitor Scheme, mainly for co-authors who are working with CNB researchers on projects and for invited speakers presenting papers of particular interest to CNB experts or discussing papers produced by CNB staff. Typically, there are more than ten visitors each year.

The CNB runs a consulting scheme, inviting leading experts to hold short-term courses on topics directly relevant and tailored to the CNB's analytical work. The following course was held in 2016:

- 11 November 2016 – Enabling Deeper Negative Rates by Managing the Side Effects of Paper Currency at Par – Miles Kimball (University of Colorado)

The CNB organises research seminars and conferences with the aim to foster interaction and exchange of research ideas. In 2016, the CNB hosted the following seminars, given by distinguished experts in the field:

- 21 March 2016 (seminar jointly organised with the Czech Economic Society) – Fiscal and Financial Crises – Michael D. Bordo (Rutgers University and NBER)
- 24 May 2016 – Does Bank Competition Reduce Cost of Credit? Cross-Country Evidence from Europe – Laurent Weill (Université de Strasbourg)
- 25 May 2016 – Empirical Properties of Inflation Expectations and the Zero Lower Bound – Mirko Wiederholt (Goethe University Frankfurt)
- 8 September 2016 (seminar jointly organised with the Czech Economic Society) – The Macroeconomics of Central Bank Issued Digital Currencies – Michael Kumhof (Bank of England)
- 20 September 2016 – A Lesson from the Great Depression that the Fed Might have Learned: A Comparison of the 1932 Open Market Purchases with Quantitative Easing – Michael D. Bordo (Rutgers University and NBER)
- 3 November 2016 – Unpleasant Monetarist Arithmetic: Macroprudential Edition – Jan Libich (La Trobe University and VŠB-TU Ostrava)
- 10 November 2016 – 18 Misconceptions about Eliminating the Zero Lower Bound (and Any Effective Lower Bound on Interest Rates) – Miles Kimball (University of Colorado)

- 25 November 2016 (seminar jointly organised with the Czech Economic Society) – Insider-Outsider Labor Markets, Hysteresis and Monetary Policy – Jordi Galí (CREI, Universitat Pompeu Fabra)
- 1 December 2016 – Challenges for Macromodels Used by Central Banks – Rafael Wouters (National Bank of Belgium)
- 9 December 2016 – What Is Inflation-Forecast Targeting and Who Is Practicing It? – Aleš Bulíř (IMF)

The following three economic conferences were organised in 2016:

(i) 21–22 April – 12th CompNet Conference “Productivity and External Rebalancing”

The twelfth conference of the Competitiveness Research Network (CompNet) was organised jointly with the European Central Bank. The conference focused on such topics as export performance and current account determinants, resource misallocation and global value chains. Andrew B. Bernard (Tuck School of Business at Dartmouth) and Jan De Loecker (Princeton University) gave keynote speeches. Detailed information, including the programme, selected presentations and a summary of contributions are available at the [conference website](#).

(ii) 16 May – 12th CNB Research Open Day

The CNB organises an annual Research Open Day, at which CNB researchers and researchers from domestic and international institutions discuss the CNB’s research outcomes. The twelfth CNB Research Open Day Conference was held on 16 May 2016. Boris Vujčić, Governor of the Croatian National Bank, gave the keynote speech “Economic Policy Challenges in CEE Countries”. This was followed by presentations by CNB researchers. The papers presented were discussed by experts from the European Central Bank, the European Stability Mechanism, the International Monetary Fund and Sant’Anna School of Advanced Studies. The programme and presentations can be accessed at [this link](#).

In order to motivate researchers to submit their CNB WPs and RPNs to academic journals the ERD awards prizes for the best research papers. Prizes are awarded for papers which have made a substantial contribution to resolving economic problems relevant to the CNB and which have been published in academic journals with a high impact factor. During the 12th CNB Research Open Day, the following two research publications were awarded prizes:

- CNB WP 2/2015: *Bank Competition and Financial Stability: Much Ado About Nothing?* by Diana Žigraiová and Tomáš Havránek (published in the Journal of Economic Surveys);
- CNB WP 15/2014: *Spillover of the ECB’s Monetary Policy Outside the Euro Area: How Different is Conventional from Unconventional Policy?* by Oxana Babecká Kucharčuková, Peter Claeys and Bořek Vašíček (published in the Journal of Policy Modelling).

(iii) 6–7 October – CNB-IES Conference “Challenges for Financial Stability in Europe”

This two-day conference was organised jointly with the Institute of Economic Studies, Faculty of Social Sciences, Charles University. The conference focused on broad theoretical and empirical issues related to current challenges to financial stability in Europe. Jon Danielsson (London School of Economics) participated as a keynote speaker. Detailed information is available at [this link](#).

CNB researchers are involved in research networks organised within the European System of Central Banks (ESCB), which facilitates cooperation and exchange of research expertise. The CNB took an active role in the [ESCB Wage Dynamics Network](#) (WDN). Based on a harmonised questionnaire, a survey of firms on changes in the economic environment, employment, wage-setting and price-setting practices since the 2008/2009 crisis was organised in 25 countries. In the Czech Republic, the survey was conducted in May to September 2014. The results of the survey were summarised in CNB RPN 1/2015 *Labour Market Adjustment since the Global Financial Crisis: Evidence from a Survey of Czech Firms*. In 2016, CNB researchers participated in several follow-up projects, for example investigations of the reasons for the jobless recovery and of the main channels of adjustment to shocks.

Since 2015 the CNB has been involved in the [ESCB Household Finance and Consumption Network](#) (HFCN) with observer status. The objective of the network is to gather micro-level information on households' assets and liabilities in the euro area countries with the aim of understanding the economic decisions taken by households and thus obtaining insights into monetary policy transmission and financial stability issues. The fieldwork of the second wave of the survey was carried out in 19 euro area countries, Hungary and Poland in 2013–2014.

In 2012, the CNB became a sponsoring institution for the [International Journal of Central Banking](#) (IJCB). The IJCB is a quarterly journal publishing the best articles on central bank theory and practice. Despite its relatively short history since 2004, the IJCB has become an influential journal in the field. CNB economists have published several articles in the IJCB in recent years.

The CNB has been an institutional member of the [Euro Area Business Cycle Network](#) (EABCN) since 2009. The EABCN provides a forum for the better understanding of the euro area business cycle, linking academic researchers and researchers in central banks and other policy institutions involved in the empirical analysis of the euro area business cycle and related research topics. CNB economists regularly attend EABCN conferences and summer schools, which in 2016 were focused on advances in Bayesian analyses of DSGE models and micro-structure of trade.

The CNB's research results are also presented regularly at prestigious conferences, such as the annual conferences of the European Economic Association and the European Association of Labour Economics. CNB researchers actively participate in the Biennial Czech Economic Society conference, including in the organisation thereof. CNB economists also regularly present their research at conferences of various central banks and meetings of the ESCB networks.

Looking Ahead

In 2017 a new era of economic research at the CNB has been initiated. The CNB Board has decided to strengthen the CNB's economic research, and the Economic Research Department has been incorporated into the Monetary Department and the Financial Stability Department as from 1 January 2017. This reorganisation of economic research at the CNB aims at strengthening the link between research work and the central bank's core activities while maintaining the academic excellence of CNB research outputs and publications.

