

# Research Update

## Economic Analysis and Research Department

### Content

BIS-OeNB Conference .....	2
Results of the OeNB's Economic Indicator .....	5
OeNB Summer School 2016 .....	6
200 years of central banking in Austria .....	4
21 <sup>st</sup> Global Economy Lecture.....	7
OeNB Periodical Publications.....	10
OeNB Working Papers.....	10
Call for Applications: Visiting Research Program .....	11
External Publications by Staff Members .....	11
Upcoming and Recent Events.....	11
OeNB Courses at the Joint Vienna Institute (JVI).....	12

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### Editorial



by Doris Ritzberger-Grünwald  
Director of the Economic Analysis and Research Department

#### 200 years of OeNB history – a look back and forward

2016 has been an exciting year for us. To mark its 200<sup>th</sup> anniversary, the OeNB published two books: “The Quest for Stable Money” and “Memories of a Central Bank. Oesterreichische Nationalbank. Since 1816”. We also dedicated a special double issue of “Monetary Policy & the Economy” to significant aspects of monetary policy and related topics from a historical perspective.

In June – right after the Governing Council's meeting in Vienna – President Draghi, Professor Goodhart and Professor Eichengreen gave presentations at our anniversary ceremony. In mid-September, the joint BIS-OeNB research and policy conference (many thanks to Dubravko Mihaljek, who organized this conference together with us) highlighted core issues in contemporary central banking, exploring how central bank mandates are evolving, to what extent monetary policy is independent of a financially integrated world, and whether current inflation targets are still appropriate. A special anniversary collection of these valuable contributions will soon be published on our website.

So, what will await future generations in the next 200 years? Perhaps some basic monetary policy principles such as transparency and accountability will stand the test of time, while others, like the institutional setting of the EU or the euro area, might not prove as steadfast. Technology will doubtless revolutionize monetary policy and banking in the next 200 years at least as much as it did in the last 200 years. In this vein, our next conference (May 29 and 30, 2017) will shed some light on “The financial system of the future”.

Seasonal greetings to everyone and all the best to you in 2017!

Doris Ritzberger-Grünwald

## “Central Banking in Times of Change”: Summary of the 200<sup>th</sup> Anniversary Conference of the OeNB

One of the highlights of the 200<sup>th</sup> jubilee events of the Oesterreichische Nationalbank was a research and policy conference organized jointly with the Bank for International Settlements and held in Vienna on 13–14 September 2016. The selection of the conference themes and speakers reflected an attempt to focus on some of the core issues in contemporary central banking: how central bank mandates were evolving; to what extent monetary policy was independent in a financially integrated world; and whether current inflation targets were still appropriate. The three sessions on the program included each an academic and a central bank speaker, and current or former senior central bankers as session chairs and discussants.

and financial integration, and long-term structural influences on inflation – that have shaped our thinking about central banking over time.



The conference was opened by the OeNB Governor Ewald Nowotny and the BIS General Manager Jaime Caruana. Both drew in their speeches parallels between the current and historical challenges facing the central banks. Governor Nowotny reminded the audience that the 70 years of post-war prosperity were unprecedented in European history. When thinking about the current economic and political headwinds, we should not forget that the key ingredient of this success had been the European integration process, including the creation of the common currency. Jaime Caruana highlighted two aspects of continuity – central banks' involvement with government finances and with the banking sector – and two aspects of change – greater economic

The first session dealt with the evolution of central bank mandates. The chair, Anne Le Lorier, Deputy Governor of the Banque de France, asked in her introductory remarks whether, looking at the history, central bank mandates were evolving after all. Professor Alan Taylor from the University of California at Davis suggested that we were at a unique moment in history, when the profession and the public questioned simultaneously all three central bank mandates: for financial, price and output/employment stability. He argued that more instruments would be needed to target more goals in the future and that new frameworks would be needed to design and operate these instruments.

Cecilia Skingsley, Deputy Governor of the Sveriges Riksbank, argued that central banks needed to create a balance between, on the one hand, the desire of the legislator to give the central bank a clear mission and mandate, and, on the other, the scope of the central bank to perform its tasks independently and flexibly. Regarding macroprudential policy, one way to address this challenge could be to appoint an independent committee with clear objectives and highly transparent work. Professor Patrick Honohan from Trinity College Dublin, former Governor of the Central Bank of Ireland, noted in his discussion that central banks could not decline the

wider mandates, as no other institution was capable of generating the convening power, vision, expertise and agency to achieve these goals. However, non-core tools such as micro and macroprudential regulation were inherently intrusive.



The second session discussed monetary policy independence in a financially liberalized world. Federico Sturzenegger, Governor of the Central Bank of Argentina, noted that productivity and population growth slowdown could account for at most one quarter of the decline in global interest rates since 1980; the rest was probably due to a secular demographic transition. Sturzenegger discouraged the use of negative nominal interest rates and “helicopter money”. Drawing on over a century of Argentina’s experience, he argued that negative interest rates had virtually destroyed financial intermediation in his country.

Professor Graciela Kaminsky from the George Washington University presented the results of her research comparing the episodes of financial liberalization and financial repression in emerging market economies. Kaminsky found evidence that financial deregulation in EMEs promoted institutional reforms, central bank credibility, lower inflation, and contributed to greater countercyclicality of monetary policy compared with episodes of financial repression.

Yi Gang, Deputy Governor of the People’s Bank of China concurred in his discussion with the view that opening-up helped reform domestic banking systems, by acting as a powerful force against domestic lobbies extracting rents from financial protection. However, interest rate and exchange rate policies had to be set

properly in order for an economy such as China’s to benefit from free capital flows and to manage adequately the risks they brought along.



In concluding the session, the chair Marek Belka, former Governor of the National Bank of Poland, remarked that the tendency to expand the range of central bank policies was a symptom of the crisis of democracy: central banks were left to do the job that politicians themselves did not want to do.

The third session addressed perhaps the hottest monetary policy topic today: is the 2% inflation target still appropriate? The chair, Klaas Knot, Governor of De Nederlandsche Bank, pointed in his opening remarks to the evidence on central banks’ poor inflation forecasting performance. Professor Frederic Mishkin from Columbia University proposed in his contribution (presented by Gabriel Fagan, Chief Economist of the Central Bank of Ireland) a pragmatic solution. The 2% benchmark makes sense for the long-run inflation target, but with interest rates currently at or even below the zero bound, the target should be modified to an average rate of inflation over a particular period. Given past undershoots of the 2% target, this would require central banks to aim to exceed the 2% for the next couple of years.

Claudio Borio, Head of the Monetary and Economic Department of the BIS, argued in his contribution that a financial stability-oriented monetary policy (“leaning against the wind”) could yield net benefits. But to do so, it would need to respond systematically during both booms and busts. It would also need to avoid being too far from financial equilibrium, as the policy of “selective attention”, ie only occasional leaning against the wind,

could backfire. In discussing the two contributions, Charles Bean, former Bank of England Deputy Governor, argued that the monetary expansion was not totally ineffective, but its risk-return trade-off was becoming progressively less appealing. In particular, monetary policy could not deal with the decline in the natural interest rate. Fiscal and structural policies had to play a bigger role, notably discourage excessive saving and encourage public and private investment. Central bank mandates should allow policymakers to deviate from inflation target for financial stability reasons.



The conference concluded with an open policy forum of central bank governors and heads of international institutions, moderated by Governor Nowotny. Jaime Caruana supported efforts to make financial stability a part of monetary policy frameworks. However, in a financially integrated world “keeping one’s house in order” could not ensure financial stability, as policies of major central banks had effects beyond their jurisdictions. Reaching a common understanding on how these spill-overs worked would be a useful first step. An array of possibilities could then be considered in terms of the depth of international policy cooperation. Norman Chan, Chief Executive of the Hong Kong Monetary Authority, described how Asian economies had made huge adjustments in the aftermath of the 1997–98 crisis, making financial stability a centerpiece of their policies. But although the region was less affected by the global financial crisis, the unconventional monetary policies of major central banks limited monetary policy independence in Asia.

Már Guðmundsson, Governor of the Central Bank of Iceland, concurred with the view that “keeping one’s

house in order” was not sufficient to achieve monetary and financial stability in small open and financially integrated economies. The difference between monetary and financial stability objectives in such economies was blurred, and central banks often had to use the same set of tools to address the two objectives. In some cases they also had to use capital flow management tools to avoid exchange rate overshooting and collapses.

Klaas Knot, Governor of De Nederlandsche Bank, highlighted high indebtedness and weak bank balance sheets as the main obstacles to normalizing monetary policy in major advanced economies. He thought that monetary policy was already sufficiently flexible to deal with low inflation. In particular, the measures already taken by the ECB would continue to have expansionary effects until the end of 2020. But the markets demanded still more accommodation, because there was a disconnect between their view and the ECB’s views of the monetary policy stance.



Thomas Wieser, President of the Economic and Financial Committee of the Council of the European Union, contrasted progress made by central banks in extending their institutional reach since the crisis (eg, the creation of ESRB and ESM), with the almost insular discourse of euro area finance ministries. He was concerned that the high inclusiveness of different EU institutions did not go hand in hand with accountability and policy effectiveness.

One of the conference highlights was a dinner speech by Jacob Frenkel, Chairman of JPMorgan Chase International and former Governor of the Bank of Israel. Frenkel made a passionate plea for monetary policy normalization and continued close dialogue of central banks as the most effective way to regain a lasting monetary and financial stability.

## The OeNB's most recent economic forecast: Investment and consumer spending drive economic upswing

The Oesterreichische Nationalbank expects the Austrian economy to have grown at an accelerated pace of 1.4% in 2016 after having expanded by less than 1% per annum the previous four years. The annual rate of growth for 2017 to 2019 is estimated at 1.5%.

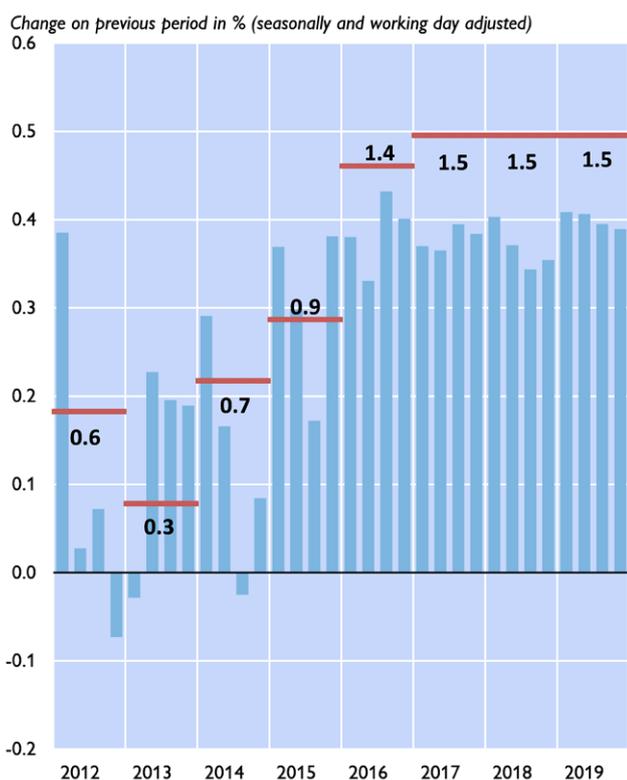
Growth will be fueled by domestic demand. Private consumption is expected to expand by slightly more than 1% per year over the forecasting horizon. This expansion will be attributable, among other things, to the income tax reform that took effect in January 2016, refugee-related spending as well as a rebound in employment. The labor market has already benefited from the economic upturn, with growth of full-time positions having turned positive again in 2016. As a result, not only the number of employees continues to increase, but also – if at a somewhat slower pace – the number of hours worked. Over the forecasting horizon, payroll employment is projected to expand by an annual 1% to 1½% and the number of hours worked is expected to climb,

on average, by slightly less than 1% per year. Robust employment growth notwithstanding, the unemployment rate is estimated to rise from 5.7% in 2015 to 6.2% in 2019 on account of an increase in the participation of older workers and the increased supply of foreign labor.

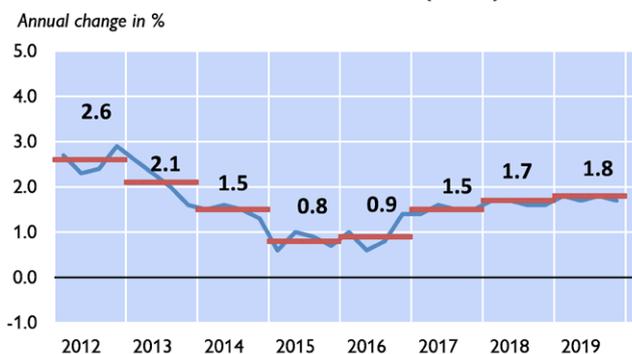
In addition to private consumption, investment is a key pillar of economic growth. Since the beginning of 2015, Austrian businesses have increasingly invested in machinery and vehicles, with investment in equipment set to advance by more than 6% in 2016. The traditionally short investment cycle of equipment investment will flatten out in 2017. After 3½% in 2016, the growth of total gross fixed capital formation will therefore hover between 1½% and 2% from 2017 to 2019.

Amid stable growth in Europe, Austrian goods exports to euro area countries have been increasing steadily in 2016, whereas trade outside the European Union, especially with Russia, the U.S.A. and Turkey, has been contracting. Moreover, Austria's tourism industry has

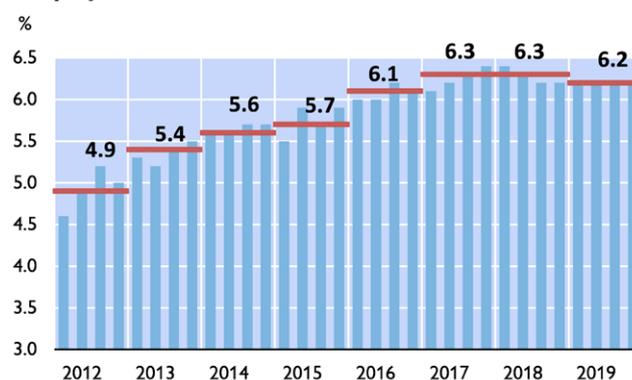
### Real GDP growth



### Harmonised Index of Consumer Prices (HICP)



### Unemployment rate



Source: Austrian Institute of Economic Research, Statistics Austria, OeNB December 2016 outlook.

posted a record result for this summer. At +2.3%, the year-on-year growth of exports of goods and services has slowed down slightly in 2016. Austria's exports to non-euro area countries are expected to accelerate again in tandem with the gradual recovery of global trade that is assumed in the OeNB's economic outlook. Overall exports are hence projected to grow at 3½% to some 4% per year from 2017 to 2019.

At 0.9%, HICP inflation in 2016 will be only marginally higher than in 2015; it will accelerate to 1.8% by 2019,

mostly on the back of recovering commodity prices. The general government budget deficit will temporarily widen to -1.6% of GDP in 2016. This is primarily attributable to effects resulting from the tax reform and expenditure related to assistance for refugees. In light of the improved economic outlook, lower interest payments and the expiration of special factors, the budget deficit is projected to contract to -0.6% of GDP by 2019.

## OeNB Summer School 2016: “Microsimulation methods for policy evaluation,” taught by Andreas Peichl

The 13<sup>th</sup> OeNB Summer School was dedicated to microsimulation methods for policy evaluation. From August 22 to 26, 2016, Prof. Andreas Peichl, Head of the Research Group “International Distribution and Redistribution” at the ZEW Mannheim and Professor of Quantitative Public Economics at the University of Mannheim, shared his knowledge with economists from the OeNB, other ESCB central banks (BE, EE, LU, MT, RO and the ECB), the Institute for Employment Research (IAB), the European Centre for Social Welfare Policy and Research, the Austrian Parliament, the Austrian Federal Chamber of Labour, the Joint Vienna Institute and the Vienna University of Economics and Business. In sum, 25 economists participated in the course, which was held at the Joint Vienna Institute.

The course provided useful insights into the policy-relevant field of microsimulation methods. The main focus of the course was a review and evaluation of the main types of structural microsimulation models, including selected extension issues and common complications in taxation and labor supply applications, like for example the use of taxable income elasticities, or of bunching approaches. Furthermore, special application areas of microsimulation models were covered, like assessing welfare effects or using microsimulation models for macro questions. Finally, reflections on linking microsimulation and macro models were presented. Theoretical lectures were complemented by presentations of applications at the frontier of research, including examples of



estimating labor supply elasticities, labor supply effects of tax reforms, effects of tax policy on inequality, or estimating income and interest rate shocks on household vulnerability.

The participants very much appreciated the meaningful and intuitive presentation of complex material and the stimulating discussions with the lecturer, and they

strongly agreed that the knowledge provided by the course would certainly add value to their professional work.

## 21<sup>st</sup> Global Economy Lecture by Sir Paul Collier: “How should Europe meet the duty of rescue towards the displaced and the poor?”

On November 28, 2016, the OeNB hosted the 21<sup>st</sup> Global Economy Lecture<sup>1</sup>, which was delivered by Sir Paul Collier, Professor of Economics and Public Policy at the Blavatnik School of Government, Oxford University, and a Professorial Fellow of St Antony’s College. Professor Collier started out by explaining that a society’s duty of rescue consists of two aspects: first, help when someone is in need and, second, collectively bring back hope to people in despair. In other words, ensure that displaced people can live a normal life again.

longer-term assistance would need to be installed for refugees to be able to integrate and earn a living.

According to Collier, Europe has failed to provide safe havens with the financial aid necessary to enable the displaced to stay near their former homes. Also, Europe has failed to assess the effects (e.g. brain drain) an uncontrolled influx of (mostly well-educated) refugees to Europe has on the conflict countries.

As a solution, he suggested to offer education and – more



In Collier’s view, neither of these two objectives can be achieved by migration to far-removed destinations (i.e., in the current situation, Europe). Displaced persons or refugees do not, as a rule, seek better chances (a “honeypot” destination), but safety.

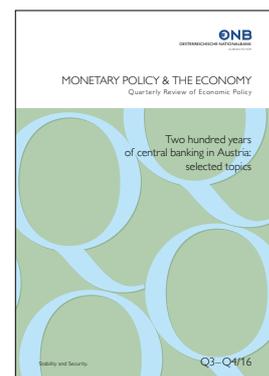
The post-war refugee instruments – the Geneva Convention and the UNHCR – no longer suffice to adequately respond to the current refugee challenge. Today,

importantly – to bring economic opportunities to these (mostly African) countries. As the latter often lack “organizational capital” and because of high risks involved, modern firms whose business models rest on high productivity, scale effects and specialization, avoid these markets. Therefore, effective state subsidies would be required to provide incentives for firms to act as pioneers in these regions.

<sup>1</sup> The Global Economy Lecture is an annual event organized jointly by the Oesterreichische Nationalbank (OeNB) and The Vienna Institute for International Economic Studies (wiiw).

## 200 years of central banking in Austria

On the occasion of the OeNB's 200<sup>th</sup> anniversary a special issue of our quarterly publication "[Monetary Policy & the Economy](#)" (Q3–Q4/16) looks at the many facets of central banking in Austria in a very long-run perspective: the quest for stable prices, the exchange rate regime, the facilitation of both cash and non-cash payments, the relationship to the government and last but not least the maintenance of financial stability.



### Contents

#### [A \(not so brief\) history of inflation in Austria](#)

Christian Beer, Ernest Gnan, Maria Teresa Valderrama

An analysis of the eventful history of inflation in Austria over the past two centuries against the background of institutional, economic and political developments.

#### [The measurement of inflation in Austria: a historical overview](#)

Manfred Fluch

In Austria, consumer price indices have been consistently available since 1800. Though simple, the indices followed today's basic structure, and chaining the various generations of indices allows for conclusions to be drawn for a period now spanning more than 200 years.

#### [Two centuries of currency policy in Austria](#)

Heinz Handler

The author looks at currency policies in Austria over the last 200 years, attempting to sketch historical developments and uncover regularities and interconnections with macroeconomic variables.

#### [The financial relations between the Nationalbank and the government](#)

Doris Prammer, Lukas Reiss, Walpurga Köhler-Töglhofer

While the central government has held a major share in the Austrian central bank only since 1955, it has always participated significantly in the Nationalbank's profits. This article analyses how the various channels have evolved over time.

#### [Florin, crown, schilling and euro: an overview of 200 years of cash in Austria](#)

Clemens Jobst, Helmut Stix

This article provides an overview of the supply and demand for cash in Austria over the past 200 years and presents several stylized facts about the long-run evolution of cash demand.

### [Cashless payments in Austria: the role of the central bank](#)

Hans Kernbauer

Austria was a latecomer in the use of cashless payment techniques. This paper traces back the long history of a catching-up process.

### [Principles, circumstances and constraints: the Nationalbank as lender of last resort from 1816 to 1931](#)

Clemens Jobst, Kilian Rieder

A discussion of the role the Austrian central bank played as a lender of last resort during selected episodes of financial distress from the Nationalbank's foundation in 1816 until the Creditanstalt crisis of 1931.

### [The changing role of macroprudential policy in Austria after World War II](#)

Sophia Döme, Stefan W. Schmitz, Katharina Steiner, Eva Ubl

The need for and implementation of macroprudential supervision was a key lesson from the global financial crisis of 2008. However, historical protocols, legislation, policy agreements as well as the literature bear witness of a longer history of macroprudential policy in Austria.

### [The OeNB's reaction to the end of the Bretton Woods system: tracing the roots of the Indicator](#)

Stefan W. Schmitz

The end of the Bretton Woods system posed significant challenges to monetary policy and required a new political consensus. The OeNB invented the so-called Indicator, which became the basis for the later successful peg to the German mark.

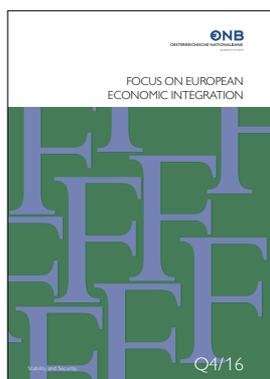
## OeNB Periodical Publications

From Q1/2016, OeNB publications will be available in electronic format only (<https://www.oenb.at/en/Publications.html>), as the OeNB has decided to follow the international trend toward digital publishing.

We invite you to subscribe to our newsletter at <https://oenb.at/en/Services/Newsletter.html> to be notified via e-mail that a new issue is available.



### List of all Publications since 2001 (by staff of the Economic Analysis and Research Section)



#### Focus on European Economic Integration Q4/16

**Developments in selected CESEE countries: Temporarily sluggish investment dampens CESEE growth whereas domestic demand continues to thrive**

(Compiled by Josef Schreiner)

**Outlook for selected CESEE countries: Steady growth in CESEE-6 after temporary dip in early 2016 – trough reached in Russia**

(Compiled by Antje Hildebrandt)

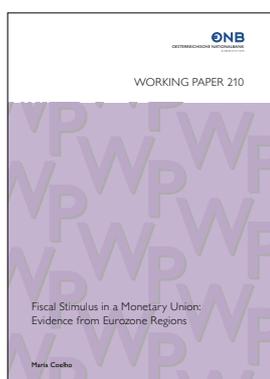
**On the optimal number of indicators – nowcasting GDP growth in CESEE**

(David Havrlant, Peter Tóth, Julia Wörz)

**Currency substitution in CESEE: why do households prefer euro payments?**

(Thomas Scheiber, Caroline Stern)

[See more](#)



#### Working Papers

<http://www.oenb.at/en/Publications/Economics/Working-Papers.html>

**Fiscal Stimulus in a Monetary Union: Evidence from Eurozone Regions**

Maria Coelho (Working Paper 210)

This paper contributes to the open economy local fiscal multiplier literature by estimating regional output and employment responses to federal expenditure shocks in the European Union. In particular, similarly to the literature on foreign aid and growth, I use shocks to the supply of federal transfers

(European Commission commitments) of structural fund spending by subnational region as instruments for annual realized expenditure in a panel from 2000-2013. I find a large, contemporaneous multiplier of 1.7 which translates into a cumulative multiplier of 4 three years after the shock. Furthermore, using a novel dataset on bilateral trade between EU regions, I find evidence of demand-driven spillovers up to three years after a shock.

## External Publications by Staff Members

### Changes in Prudential Policy Instruments — A New Cross-Country Database

by Eugenio M Cerutti, Ricardo Correa, Elisabetta Fiorentino and Esther Segalla

*IMF Working Paper No. 16/110*

This paper documents the features of a new database that focuses on changes in the intensity in the usage of several widely used prudential tools, taking into account both macro-prudential and micro-prudential objectives. The database coverage is broad, spanning 64 countries, and with quarterly data for the period 2000Q1 through 2014Q4. The five types of prudential instruments in the database are: capital buffers, interbank exposure limits, concentration limits, loan to value (LTV) ratio limits, and reserve requirements. A total of nine prudential tools are constructed since some useful further decompositions are presented, with capital buffers divided into four subindices: general capital requirements, real state credit specific capital buffers, consumer credit specific capital buffers, and other specific capital buffers; and with reserve requirements divided into two sub-indices: domestic currency capital requirements and foreign currency capital requirements. While general capital requirements have the most changes from the cross-country perspective, LTV ratio limits and reserve requirements have the largest number of tightening and loosening episodes. We also analyze the instruments' usage in relation to the evolution of key variables such as credit, policy rates, and house prices, finding substantial differences in the patterns of loosening or tightening of instruments in relation to business and financial cycles.

### Call for Applications: Visiting Research Program

The Oesterreichische Nationalbank (OeNB) invites applications from external researchers (EU or Swiss nationals) for participation in a Visiting Research Program established by the OeNB's Economic Analysis and Research Department. The purpose of this program is to enhance cooperation with members of academic and research institutions (preferably postdoc) who work in the fields of macroeconomics, international economics or financial economics and/or with a regional focus on Central, Eastern and Southeastern Europe.



See also: [Visiting Research Program 2017](#)

## Upcoming and Recent Events

The following events are organized by the OeNB. Please note that attendance is by invitation only. If you are interested in participating in one or more of the events, please send an e-mail to [OeNB.ResearchUpdate@oenb.at](mailto:OeNB.ResearchUpdate@oenb.at) or take a look at <http://www.oenb.at/en/Calendar.html>

### Upcoming

January 16, 2017	Seminar on World Bank Report: "Risks and Returns: Managing Financial Trade-Offs for Inclusive Growth in Europe and Central Asia" (by invitation only)
January 19, 2017	Presentation of the EBRD Transition Report jointly by the BMF and the OeNB (by invitation only)

January 26, 2017	Fourth Research Workshop of the Task Force on Banking Analysis for Monetary Policy of the MPC (by invitation only)
January 26 and 27, 2017	HFCS-CESEE Workshop: "How to use survey data for financial stability analysis in CESEE countries" (by invitation only)
March 31, 2017	80 <sup>th</sup> East Jour Fixe: "Bulgaria and Romania – 10 years after EU accession" (by invitation only)
May 29 to May 30, 2017	44 <sup>th</sup> OeNB Economic Conference in cooperation with SUERF: "The Financial System of the Future" (by invitation only)

## Recent

December 12, 2016	Press conference: OeNB Forecast
December 5, 2016	Press conference: Financial Stability Report 32
December 2, 2016	Thomas Noe (Oxford University): Lending without creditor rights, collateral, or debtor reputation – The "trusted-assistant" loan in nineteenth century China

## OeNB Courses at the Joint Vienna Institute (JVI)

For further details see: [www.jvi.org](http://www.jvi.org)

January 23 – 26, 2017	Advanced Course on Financial Stability Stress Testing for Banking Systems
January 30 – February 3, 2017	Banking Supervision within the Basel Framework (in cooperation with JVI and DBB)
March 2 – 3, 2017	International Cooperation in Central Banks
March 13 – 17, 2017	Monetary Policy Implementation (in cooperation with JVI and DBB)
March 20 – 22, 2017	Financial Education
May 8 – 12, 2017	Integration in Europe: European Union and Eurasian Economic Union (in cooperation with the Austrian Federal Ministry of Finance)
September 11 – 15, 2017	Challenges for Candidate and Potential Candidate Countries in the EU and EMU Accession Process (in cooperation with the Austrian Federal Ministry of Finance and the ECB)
October 9 - 13, 2017	Implementing Early Warning Frameworks for Macro-Financial Stability Assessments in Central, Eastern and Southeastern Europe
November 22 – 24, 2017	Financial Translation and Editing: New Skills for New Challenges
November 27 – 29, 2017	Cash Circulation and Payment Systems in Austria