

July 2018

CESEE Research Update

Foreign Research Division

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Content

82 nd East Jour Fixe	2
FEEL Special Issue	4
Digging into the composition of government debt in CESEE: a risk evaluation	4
CESEEnet Research Workshop hosted by Národná banka Slovenska	6
Focus on European Economic Integration Q 2/18.....	10
Visiting Research Program 2018	11
OeNB courses at the JVI.....	12

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The CESEE Research Update is released quarterly by the Foreign Research Division of the Oesterreichische Nationalbank (OeNB). The aim of this newsletter is to inform readers about OeNB analysis and research output on Central, Eastern and Southeastern Europe (CESEE) as well as past and forthcoming CESEE-related events.

Foreign Research Division
OeNB

Highlight of this Issue

82nd East Jour Fixe: Debt in Central, Eastern and Southeastern Europe: vulnerabilities and opportunities

The 82nd East Jour Fixe organized by the Oesterreichische Nationalbank (OeNB) focused on recent developments, opportunities and challenges related to the indebtedness of both the public and private sectors in the Central, Eastern and Southeastern (CESEE) European countries. The event took place at the OeNB's premises on June 11, 2018. The participants were from diverse backgrounds and presented academic, political and other professional expertise to a selected audience.

In her introductory statement, Doris Ritzberger-Grünwald, Director of the OeNB's Department for Economic Analysis and Research, highlighted that in most of the CESEE countries, high credit growth and foreign currency lending had fuelled external and internal vulnerabilities during the boom. However, she pointed out that on a positive note, credit growth had also been a distinctive part of the growth model of the region and an intrinsic part of the convergence process. Following a rather controlled process of deleveraging after the global financial crisis (GFC), indebtedness, especially in the private sector, has been on the increase again recently.

As of public debt, it has been on the rise since 2008 with some countries posting an increase of nearly 30 percentage points of GDP by end-2017. Therefore, a contraction of fiscal space would potentially weaken the scope for public investments and would be less supportive in case of vulnerabilities due to private sector debt, among others. Going further, although debt levels in CESEE still remain below the levels seen in the euro area countries, in recent years, private sector credit growth has rebounded to a varying extent in the CESEE countries, which again raises questions regarding the drivers of private debt, its sustainability (also due to potential spillovers of the “normalization” of monetary policy in major advanced countries) and the “wise” (i.e. productivity-enhancing) use of private debt in the corporate sector.

The keynote speech was given by *Laura Papi*, Assistant Director of the IMF’s European Department. After giving an overview of debt developments in CESEE since the GFC and putting them into regional perspective, *Papi* highlighted that the timing of the workshop is very good as policymakers are now already able to tackle debt issues in a more sustainable manner in contrast to crisis-related ad-hoc measures. She pointed out that there is no consensus among academics and policymakers



on how high a debt level would be detrimental but stressed that a granular approach, i.e. paying attention to the underlying dynamics and composition, is of utmost importance. Using data from the newly released IMF Global Debt Database, *Papi* showed that external debt in CESEE is elevated as compared to peers. At the same time, debt is currently on the rise in the private sector rather than in the public sector in CESEE. In particular, the household sectors are leading a new spike, while mainly institutional and structural gaps in

the majority of CESEE countries are still holding back a robust recovery of corporate lending.

The event then took a sectoral approach, and session 1, chaired by *Doris Ritzberger-Grünwald*, focused on the structure and sustainability of public debt in CESEE as well as on the role of fiscal rules in this framework. *Stéphanie Pamies Sumner*, Head of Sector in the European Commission’s (EC) Directorate General for Economic and Financial Affairs, introduced the EC’s framework to assess public debt sustainability. She emphasized that public debt burdens appear on average more contained in the eleven CESEE EU Member States (CESEE-11) than in the EU as a whole, but pointed also to considerable cross-country heterogeneity. Government debt-to-GDP ratios in the CESEE-11 are still lower and the overall increase since 2007 has been smaller compared to the EU aggregate. However, a few CESEE-11 countries have experienced extra-large increases in government debt ratios, i.e. Croatia, Latvia and Slovenia. To ensure fiscal sustainability, *Pamies Sumner* recommended rebuilding fiscal buffers in high-debt countries, improving fiscal frameworks, reforming pension and health care systems, making taxation and expenditure more efficient, improving tax rules and



administration, and strengthening the supervision of the financial sector and pursuing efforts to reduce NPLs. The second speaker in this session, *Markus Eller*, Principal Economist in the OeNB’s Foreign Research Division, examined the composition of government debt in a broad set of CESEE countries (his research findings are summarized on page 4 in this research update). He showed that the increase in government debt levels recorded in CESEE since the GFC, together with an increased role of foreign portfolio investors with a typically short-term orientation, has accentuated

refinancing risks. At the same time, refinancing risk has also been alleviated as governments increasingly were able to issue longer-term debt instruments. Moreover, a still large share of FX-denominated public debt – in combination with increased debt stocks – reveals serious exposure to exchange rate risks in a few countries. Regarding policy implications, *Eller* stressed that special emphasis should be placed on fostering CESEE capital markets to strengthen government borrowing at home and in the local currencies and to further develop derivative products to hedge interest and exchange rate risk.

Session 2, chaired by *Julia Wörz*, Head of the CESEE Analysis Unit of the OeNB's Foreign Research Division, put a spotlight on the composition and drivers of private debt in CESEE. In his presentation, *Miquel Dijkman*, Head of Unit of the World Bank's Financial Sector Advisory Center, took a closer look at the debt of nonfinancial corporates. He stressed firm size and institutional gaps, in particular (the lack of) bankruptcy legislation, as means to gain a better understanding of current debt developments. *Dijkman* outlined that large corporates account for the lion's share of nonfinancial corporate credit and NPLs, while collateral requirements are often the reason for a lack of lending to SMEs. At the same time, entrepreneurs are facing real finance constraints, particularly in the less established sectors of the economy. *Dijkman* highlighted the importance of the strengthening of insolvency frameworks, the reinforcement of the functioning of the judiciary as well as the creation of alternatives for formal court-based insolvency proceeding (e.g. out-of-court restructuring) to unlock the growth potential for the economy. In her presentation, *Mariya Hake*, Senior Economist in the OeNB's Foreign Research Division, built a bridge between the analysis of income inequality and household credit in a sample of ten CESEE countries. Based on data from the OeNB's Euro Survey, *Hake* presented a paper showing novel estimates of income inequality at the regional level. She related these to 2015. The results indicate that after 2009 predominantly households with incomes above the median had a loan and this likelihood increased with regional income inequality (i.e. consumption-smoothing). Consequently, income inequality is also used as an additional factor by banks to evaluate the creditworthiness of borrowers (i.e. signalling effect).

The third session, chaired by *Helene Schuberth*, Head of the OeNB's Foreign Research Division, dealt with the role of institutional arrangements, and especially the “normalization” of monetary policy. *Marek Licak*, Director of the Macroprudential Policy Department, Národná Banka Slovenska (NBS), gave an overview of the developments in the housing loan segment in Slovakia and the response of the NBS. The current high credit growth rates and increased household indebtedness in Slovakia – already above levels suggested by fundamentals – are being addressed exclusively with macroprudential tools. In particular, the NBS aims to reduce the speed of credit growth by encouraging responsible lending requirements and to increase the resilience of the banking sector by higher capital buffers. *Licak* reported that there is tentative evidence that the measures implemented since 2014 are showing some positive effects and the NBS expects that a new package of measures adopted recently will decrease loan growth to 9% on annual basis. The implications of monetary policy normalization for debt developments in CESEE were discussed by *Birgit Niessner*, Head of Analysis Financial Institutions & Countries at Raiffeisen Bank International AG. She stressed that corporate debt levels should receive more attention as they are the likeliest source of the next debt crisis. In addition, several countries already show large gaps between foreign assets and liabilities (e.g. Croatia, Russia, Turkey). She outlined that mitigating factors regarding the vulnerability of CESEE due to the normalization of monetary policy are, for instance, the high share of euro-denominated debt, strong and resilient FDI flows and intercompany funding and the good reserve coverage of external debt financing. *Niessner* added that CESEE was more resilient than some other emerging market regions, given that it was not the main destination for “hot money.” The third presentation was given by *Belma Colakovic*, Chief Economist, Central Bank of Bosnia and Herzegovina, on the impact of EU institutional arrangements on debt developments in the Western Balkans. *Colakovic* mentioned specifically Article 114 of the CRR/CRD IV, according to which EU subsidiaries of banks need to apply a 100% risk weight to exposures to non-EU sovereigns and central banks. She pointed out that in particular Western Balkan countries with a high share of government debt held by EU subsidiary banks could be affected by this

regulation. *Colakovic* illustrated also that the average household in the region is not in a position to save; rather, the recent increases in deposit levels were largely driven by the wealthiest individuals.



Wrapping up the event, *Tina Zumer*, Senior Economist in the Euro Area External Sector & Euro Adoption Division of the European Central Bank, concluded that private sector debt in CESEE should be seen rather as

an opportunity for long-term growth despite a likely negative impact on growth in the medium term. On the contrary, she stressed higher public debt to be rather detrimental to economic growth. *Zumer* emphasized that despite the still comparatively low levels, vulnerabilities resulting from indebtedness are likely to increase risks. On the one hand, this would be due to monetary policy normalization and the likely deterioration of debt-servicing capacities. On the other hand, heightened global uncertainty would lead to higher costs, liquidity and refinancing risks. Summing up, *Zumer* underlined the need for country-specific assessments as well as (structural) policy measures to ensure fiscal sustainability, a resilient and supportive institutional framework and strong preventive arm through macro- and microprudential measures.

The presentations and the workshop program are available at: <https://www.oenb.at/en/Monetary-Policy/Research/workshops.html>

FEEI Special Issue “Europe 2030: Challenges and opportunities for European integration and convergence”

On the occasion of the Austrian presidency of the Council of the European Union in the second half of 2018, the OeNB is going to publish a special issue in its “Focus on European Economic Integration” series.¹ The topics of the studies collected in this issue have been closely aligned with the priorities of the Austrian presidency and include among others (1) the sustainability

of convergence and integration, (2) EU budget and structural reform priorities, (3) EU enlargement and neighborhood policy, (4) financial sector development and stability as well as (5) labor markets and migration in CESEE. The findings of these studies will also be presented at an East Jour Fixe scheduled for September 18, 2018.

Digging into the composition of government debt in CESEE: a risk evaluation

Non-technical summary of a study by Markus Eller and Johannes Holler recently published in Focus on European Economic Integration, Q2/18, pp. 56–80

Several countries in Central, Eastern and Southeastern Europe (CESEE) had limited scope for expansionary fiscal policy measures to mitigate the economic downturn

during the 2008/2009 recession. Despite the comparatively low levels of government debt reported before the 2008 global financial crisis, CESEE countries were struggling to finance their deficits as they soared due to tight market conditions following a sharp rise in global risk aversion and liquidity shortages in government debt

¹ To be published in Focus on European Economic Integration Q3/18.

markets. Sovereign liquidity constraints were moreover aggravated by unfavorable compositions of government debt.

Against this backdrop, research interest has increased in sovereign balance sheet structures and in the impact of sudden changes in financial market conditions on sovereign liquidity and solvency. Our work further elaborates on the importance of debt composition by identifying and analyzing key elements that determine the implied risk potential. With respect to risks that may emerge from surging interest payments given high government bond yields (market risk) and from the inability to raise enough money to roll over maturing debt and finance running deficits (roll-over/liquidity risk), we consider currency composition, credit and maturity structures as well as interest variability to be the key drivers of debt portfolio risk.

Based on the development of these key characteristics we show that on the aggregate level, despite the strong increase of government debt-to-GDP ratios following the 2008 global financial crisis, the shift to longer-term issuance has reduced refinancing and rollover risk in the CESEE region. Nevertheless, the development of the key risk characteristics shows a mixed picture and the current debt composition of several CESEE countries implies substantial vulnerabilities. An increased share of government debt owed to foreign portfolio investors (especially pronounced in CESEE EU countries) points to substantial risk in the case of sudden changes in global risk aversion. In line with this reliance on foreign investors, most CESEE countries also show a large share of foreign currency-denominated government debt (see chart 1). Historical default episodes underline the risky feature of large shares of foreign currency-denominated government debt. At the same time, the average time to maturity of the debt portfolio has broadly lengthened and only a few countries face a considerable share of debt falling due in 2018 and/or meaningful short-run repayments in foreign currency (see chart 2). We further underline that the partially high level of risk for several countries implied by large shares of foreign currency and short-term debt is only partly due to high-risk debt management strategies – much rather, this situation also reflects the limited ability to issue low-risk long-term government bonds in domestic currency under the given market conditions. The further strengthening of domestic capital markets in CESEE and the use of exchange rate swaps to hedge

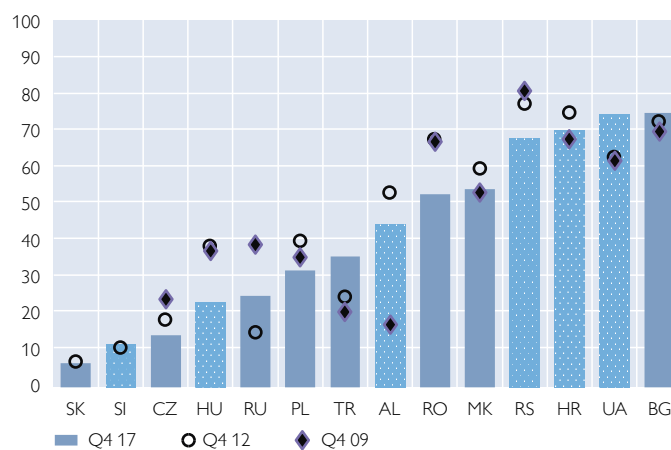
exchange rate risk appear to be key elements in order to reduce the potential default risk implied by the structure of the government debt portfolios. Therefore, special emphasis should be put on fostering capital markets in the region.

More Information: https://www.oenb.at/dam/jcr:96273829-255a-4cf9-8e9c-538353f18785/04_feei_2018_q2_screen_Eller_Holler.pdf

Chart 1

Government debt denominated in foreign currency

% of total debt



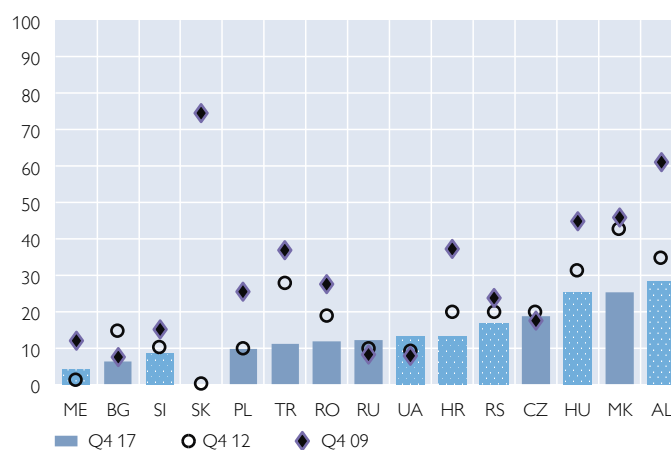
Source: Bloomberg, OeNB calculations.

Note: Shaded bars indicate high-debt countries (with government debt ratios of more than 60%).

Chart 2

Short-term debt as percentage of total government debt

Outstanding general government debt maturing within one year, % of total debt



Source: Bloomberg, OeNB calculations.

Note: Shaded bars indicate high-debt countries (with government debt ratios of more than 60%).

CESEEnet Research Workshop hosted by Národná banka Slovenska

On May 14–16, 2018, Národná banka Slovenska (NBS) hosted a research workshop in cooperation with CESEEnet – a platform launched by the OeNB to stimulate interaction on macroeconomic research in central bank-relevant areas with a regional focus on Central, Eastern and Southeastern Europe. 18 participants from nine ESCB central banks and two experts from Smokovec in the High Tatras to discuss pressing questions related to both long-term and short-term challenges for the CESEE region. Topics ranged from structural issues related to growth and the real economy – such as the strong decline in productivity growth in CESEE since the global financial crisis, the associated risk of not overcoming the middle-income trap, external imbalances and the impact of trade liberalization on labor markets – to challenges for monetary policy and financial stability including a discussion of how global monetary policy normalization will impact on the CESEE economies. Further, the participants discussed modeling techniques for estimating the effects of capital requirements and for forecasting.



The first session on “Growth and the real economy” focused on labor market issues. More specifically, it examined potential crowding-out between public and private employment and the impact of public wage growth on private sector wages with a focus on Romania. Another presentation looked into the effects of labor market legislation on labor market outcomes, finding rather small differences between Slovakia – with many changes to labor codes – and Poland with almost no such changes. Further, non-linearities in the Phillips curve were explored and their influence on the inflation-output

relation was discussed. With respect to overall growth drivers, a growth accounting framework was presented. The results showed the decline in the contribution of total factor productivity (TFP) in the CESEE economies since the crisis. In fact, during the global financial crisis, the TFP contribution to overall GDP growth had even turned negative and has remained negligible since then.

The second session, inter alia, dealt with monetary policy spillovers – both between the U.S.A. and the euro area and between the euro area and CESEE countries. Spillovers were found to be important and to be fostered by a more open environment. Moreover, an analysis of the levels of indebtedness in individual sectors in CESEE economies showed that private sector debt induces greater vulnerability than public sector debt. Nevertheless, private sector debt levels still appear to be well contained, while public sector debt levels have reached levels that are not yet worrying but should be monitored more closely. Finally, the influence of the low-interest rate environment on risk taking was explored and differences of banks’ risk-taking behavior in CESEE as compared to results from the literature were discussed. In many instances, participants referred to the particularities inherent in catching-up economies. Therefore, many of the relationships discussed in the workshop as well as observed deviations from textbook results should be seen in the context of the convergence process still underway in CESEE.

The last day saw more modeling-oriented contributions, with applications to the effects of capital requirements, inflation forecasting and nowcasting.

In a nutshell, the workshop provided ample room for in-depth, stimulating discussions, constructive criticism and helpful suggestions for the presenters.

For the program of the workshop, please go to: <https://www.cesee.net/events.html>.



OeNB Euro Survey

The OeNB Euro Survey of households has been conducted since 2007 in ten Central, Eastern and Southeastern European (CESEE) countries. With a strong focus on exploring different dimensions and drivers of currency holdings and households' saving and borrowing behavior, the OeNB Euro Survey additionally provides information on various aspects of financial

literacy of CESEE households. **The main results of the survey will be released in the second half of July 2018 with 2017 data.** See <https://oenb.at/en/Monetary-Policy/Surveys/OeNB-Euro-Survey.html>.

For detailed results on the four indicators, see the OeNB's website.

Save the Date I

83rd East Jour Fixe of the Oesterreichische Nationalbank (OeNB)

Catching the wind: current challenges and opportunities for European integration and convergence

On the occasion of the Austrian presidency of the Council of the European Union

September 18, 2018

Oesterreichische Nationalbank (OeNB), Vienna
OeNB Kassensaal

Torn between deeper integration and enlargement, with Brexit weighing on the negotiations of the next budget, migration pressure at its borders and rising influence of Russia and China in its southeastern neighborhood, the EU is facing formidable challenges today which will be discussed at the 83rd East Jour Fixe to be hosted by the Oesterreichische Nationalbank on September 18, 2018. After all, as stated by European Commission President Juncker in his speech on the state of the European Union in September 2017: „The wind is back in Europe's sails. But we will go nowhere unless we catch that wind. (...) Now is the time to build a more united, stronger and more democratic Europe for 2025.“

Renowned speakers representing a variety of international institutions and think tanks (including the European Commission, Bruegel and The Bank of Finland Institute for Economies in Transition) will present and discuss selected studies with a regional focus on Central, Eastern and Southeastern Europe (CESEE) published in a special issue of the OeNB's quarterly publication Focus on European Economic Integration (FEEI, to be released by end-August). Keynote/special speeches will be given by István-Pal Székely (Director in the European Commission's DG ECFIN) and Wolfgang Petritsch (President of the Austrian Marshall Plan Foundation).

Both the 83rd East Jour Fixe and the special FEEI issue have been organized on the occasion of the Austrian presidency of the Council of the European Union in the second half of 2018. The topics have been closely aligned with the priorities of the Austrian presidency and address, among others: (1) the sustainability of convergence and integration, (2) EU budget and structural reform priorities, (3) EU enlargement and neighborhood policy, (4) financial sector development and stability as well as (5) labor markets and migration in CESEE.

More information: <https://www.oenb.at/en/Calendar/2018/2018-09-18-east-jour-fixe-83.html>

Save the Date II

Global Economy Lecture on

Trade, Inequality, and Populism

Speaker

Caroline Freund

Director, Macroeconomics, Trade & Investment, The World Bank

Introduction

Ewald Nowotny

Governor, Oesterreichische Nationalbank

Chair

Robert Stehrer

Scientific Director, The Vienna Institute for International Economic Studies (wiiw)

Date

Monday, October 1, 2018, 4:00 p.m.

Venue

Veranstaltungssaal, Ground Floor

Oesterreichische Nationalbank

Otto-Wagner-Platz 3, 1090 Vienna

This year's Global Economy Lecture will be given by Caroline Freund, Director of Macroeconomics, Trade and Investment of The World Bank.

Ms Freund is the author of the book "Rich People Poor Countries: The Rise of Emerging Market Tycoons and their Mega Firms". Her extensive research focuses on multinationals and export superstars. Before taking over her current position at The World Bank, she was a Senior Fellow at the Peterson Institute for International Economics, after several engagements at the Federal Reserve Board, the IMF and The World Bank.

The Global Economy Lecture is jointly organized by the Oesterreichische Nationalbank (OeNB) and The Vienna Institute for International Economic Studies (wiiw).

Save the Date III

Conference on European Economic Integration (CEEI) 2018: How to finance cohesion in Europe?

organized by the Oesterreichische Nationalbank (OeNB)
November 26 and 27, 2018
Vienna Marriott Hotel
Parkring 12a, 1010 Vienna, Austria

How can financial flows help the EU fulfill its mandate to “promote economic, social and territorial cohesion, and solidarity among Member States”? After all, real per capita income convergence is both an objective and a condition of European integration. Against the background of the Austrian EU Presidency, join the CEEI 2018 for a discussion of

- how to best advance and fund the catching-up of economies in the euro area and in Central, Eastern and Southeastern Europe (CESEE),
- whether and how to stem deindustrialization in CESEE and the euro area,
- how the EU's regional policy can better meet persistent investment needs,
- which policies can incentivize investors to contribute to economic and social development without compromising profitability,
- what institutional and structural changes can raise countries' capacity to absorb funds.

Confirmed Keynote Speakers:

Benoît Cœuré

Member of the Executive Board, European Central Bank

Jeffrey D. Sachs

Professor, Columbia University

Focus on European Economic Integration Q2/18 – latest issue ([full version](#))

Developments in selected CESEE countries

Strongest economic upswing since 2008 amid booming domestic demand

Compiled by Josef Schreiner with input from Katharina Allinger, Stephan Barisitz, Markus Eller, Tomáš Slačik and Zoltan Walko



Outlook for selected CESEE countries

Boom in CESEE-6 has peaked, stable but moderate growth in Russia

Compiled by Antje Hildebrandt with input from Katharina Allinger, Stephan Barisitz, Markus Eller, Tomáš Slačik and Zoltan Walko

Studies

Digging into the composition of government debt in CESEE: a risk evaluation, Eller, M., Holler, J.

Explaining the impact of the global financial crisis on European transition countries: a GVAR approach, Hoxha, A.

Other publication

Oesterreichische Nationalbank Working Paper 222

Income inequality and trust in national governments in Central, Eastern and Southeastern Europe, Belabed, C. A., Hake, M.

Abstract:

Using unique evidence from the OeNB Euro Survey, this paper sheds light on the correlation between the distribution of income and trust in national governments in ten Central, Eastern and Southeastern European (CESEE) countries between 2009 and 2015. By applying multilevel modeling to account for the hierarchical structure of the data, our main findings indicate that trust in national institutions increases with the individual's position in the regional income distribution but it overall declines with the increase of regional and country income inequality. This result is valid across different measures of income inequality and despite the slight decrease of income inequality over the period. Our analysis shows that perceived high corruption and weak rule of law are key determinants of distrust in national governments, while the negative link between income inequality and trust in national governments is more pronounced in the non-EU countries in our sample.

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

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.

The OeNB offers a stimulating and professional research environment in close proximity to the policymaking process. Visiting researchers are expected to collaborate with the OeNB's research staff on a prespecified topic and to participate actively in the department's internal seminars and other research activities. They will be provided with accommodation on demand and will, as a rule, have access to the department's computer resources. Their research output may be published in one of the department's publication outlets or as an OeNB Working Paper. Research visits should ideally last between three and six months, but timing is flexible.

Applications for 2019 should be e-mailed to eva.gehringer-wasserbauer@oenb.at by November 1, 2018.

Applications (in English) should include

- a curriculum vitae,
- a research proposal that motivates and clearly describes the envisaged research project,
- an indication of the period envisaged for the research visit, and
- information on previous scientific work.

Applicants will be notified of the jury's decision by mid-December 2018.

See also: [Visiting Research Program](#)

Upcoming Events

The following events are organized by the OeNB and cover CESEE relevant topics.

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 event-management@oenb.at.

September 18, 2018	83 rd East Jour Fixe: "Catching the wind: current challenges and opportunities for European integration and convergence" - On the occasion of the Austrian presidency of the Council of the European Union
October 1, 2018	Global Economy Lecture on Trade, Inequality, and Populism jointly organized by the Oesterreichische Nationalbank (OeNB) and The Vienna Institute for International Economic Studies (wiiw)
November 26-27, 2018	Conference on European Economic Integration 2018: "How to Finance Cohesion in Europe"

OeNB Courses at the Joint Vienna Institute (JVI)

For further details see: [Course Schedule 2018](#)

January 15–18, 2018	Advanced Course on Financial Stability Stress Testing for Banking Systems
January 22–26, 2018	Banking Supervision within the Basel Framework (in cooperation with JVI and Deutsche Bundesbank)
March 5–9, 2018	HR Issues and Compliance (in cooperation with Deutsche Bundesbank)
March 12–16, 2018	Monetary Policy Implementation (in cooperation with JVI and Deutsche Bundesbank)
May 14–18, 2018	Integration in Europe: European Union and Eurasian Economic Union (in cooperation with the Austrian Federal Ministry of Finance)
September 10–14, 2018	Challenges for Candidate and Potential Candidate Countries in the EU and EMU Accession Process (in cooperation with the Austrian Federal Ministry of Finance and ECB)
October 15–19, 2018	Macrofinancial Stability in Central, Eastern and Southeastern Europe
November 5–7, 2018	Cash Circulation and Payment Systems in Austria
November 19–23, 2018	Financial Education
November 26–30, 2018	Monetary and Financial Statistics Collected and Compiled by the ESCB