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CESEE Research Update

Central, Eastern and Southeastern Europe Section

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

Central, Eastern and Southeastern Europe, Section
OeNB



Highlight of this Issue

**Summary: 90th East Jour Fixe: Can we win the battle
against uncertainty?
New approaches to macroeconomic forecasting in
CESEE**

**and expert meeting on Forecasting macroeconomic
developments in the Western Balkans**

Over the last 15 years, professional forecasters have been confronted with several crises, each of them distinct in terms of underlying causes, international propagation, policy responses and economic impact. Each crisis has also brought about advances in modeling and data. The 90th East Jour Fixe organized by the Oesterreichische Nationalbank (OeNB) on October 4, 2022, brought together professional forecasters from international institutions, central banks and academia to share lessons learned from past crises, explore latest trends in forecasting and discuss challenges associated with data availability.

In her welcome remarks, Birgit Niessner (Director of the Economic Analysis and Research Department, OeNB) highlighted the OeNB's long track record in forecasting GDP for selected economies in Central, Eastern and Southeastern Europe (CESEE) and the current challenges associated with producing timely and accurate forecasts.



This was followed by a lecture by Robert C. M. Beyer, economist at the IMF, on satellite imagery as a proxy for economic data in uncertain times. Beyer highlighted that satellite data in general have four main advantages: usually, they (1) contain information that is difficult to obtain with other data, (2) are available at high spatial resolution, (3) have high geographic coverage and (4) have low financial costs. He proceeded to talk about nighttime light data as one form of satellite data that has been frequently used by economists. The provision of annual DMSP-OLS data was discontinued in 2013. According to Beyer, research based on monthly VIIRS data, available from 2012, is still lacking. He highlighted that any nighttime light data have shortcomings, e.g. noisiness, but showed examples of interesting questions that can be answered with these data. For instance, Beyer talked about studies estimating the economic impact of COVID-19 containment measures and natural disasters. Regarding the use of nighttime light data for forecasting, Beyer noted that first efforts have been made. So far, it seems that the benefits of using these data are particularly high when there is little other data available. He also highlighted that a lot of work still needs to go into the meaningful aggregation of nighttime light data.

Session 1 was chaired by Julia Wörz (Head of the Central, Eastern and Southeastern Europe Section, OeNB). Alexander Plekhanov (Director for Transition

Impact and Global Economics, European Bank for Reconstruction and Development) elaborated on his experience in gauging economic activity during the COVID-19 pandemic with high-frequency mobility data. Mobility turned out to have high predictive power for tracking the COVID-19 downturn and recovery in most countries, but some measurement issues challenged the use of mobility indices for nowcasting, particularly noise in the data and country-specific mobility patterns. Estimates yield that a 10% drop in mobility translated into an approximately 2% drop in GDP growth. Over the course of the pandemic, some of the cyclical differences in mobility have become structural, which implies that the link between mobility and economic activity has changed. Still, stronger economic activity later in the pandemic can be attributed to recovering mobility – but mobility itself did not recover fully in all places. In general, mobility-based nowcasts performed better than random walk and other naïve forecasts, except for Ireland, Greece and Russia, where the nowcasts performed poorly for different reasons. Plekhanov concluded that, as with nighttime light as a proxy for economic activity, forecasters have to be aware of what they are trying to estimate and what information their input signals transfer.



Olga Pindyuk (Senior Economist, Vienna Institute for International Economic Studies) discussed the literature on the role of expert judgment in short-term economic forecasting. Macroeconomic forecasts should be treated with caution, especially in times of crisis. Forecasting models are far from accurately capturing complex, dynamic modern economic and commercial systems in which humans play a decisive role. Forecasters make

systematic errors when economies are subject to major perturbations. They tend to overestimate growth in downturns, miss the onset of recessions and underestimate recoveries and booms. Still, forecasts are crucial for policymaking. Like medical doctors, they cannot predict illness but help us understand why one got sick. Forecasts provide information on the main interaction forces in the economy and assess the balance of risks and uncertainties regarding the economic outlook and policy responses. Pindyuk stressed that expert judgment improves forecasts' precision, particularly in shorter-term forecasting. It is especially useful if important variables are missing from the causal model, data are poor, relationships are mis-specified or may have changed, or the environment has changed. To exploit the benefits, it is necessary to address the caveats too. Cognitive factors and motivational biases can lead to the inefficient use of information by experts. Therefore, the wiiw implemented several support systems to support the accuracy of expert judgment and as a result of the forecasts.

Svetlana Makarova (Associate Professor, University College London, Vistula University, Poland) presented insights from her research on economic uncertainty and natural language processing for the case of Russia. Makarova and her coauthors were able to construct a text-based country-specific (economic policy) uncertainty index based on media publication in Russian – capturing linguistic undertones, sentiments and reporting styles more accurately than English translations. Moreover, the lexicon-based approach outperformed machine learning because of the complex conjugation that is typical for Slavic languages. The derived uncertainty index for Russia tracks the underlying series of predefined uncertainty-generating events with an accuracy of 92%. Based on Bloom et al. (2018)¹, Makarova showed that the uncertainty shocks as signaled by the uncertainty index have predictive power for negative real effects in Russia.

Session 2 was chaired by Gerhard Fenz (Head of the Business Cycle Analysis Section, OeNB) and featured three presentations. Nikodem Szumilo (Associate Professor, University College London) discussed a recently produced Warcast Index, which tracks economic activity during the war in Ukraine. The index was designed

specifically for use by the Ukrainian authorities, who were interested in timely estimates for regional economic developments. The model was designed to be simple (linear OLS model) and uses publicly available data only. Specifically, Szumilo and his coauthors were able to calibrate a model that very closely tracks Ukrainian pre-war GDP by using nighttime light data, Twitter data and Google Trends data. Szumilo highlighted that the model was a black box and recapped points made in session 1 about the difficulties associated with deciding and understanding what kind of activity a model actually measures or should measure. The presentation contained a visualization of the results until May 2022 for a number of regions, which showed that the war led to a dramatic decrease in economic activity in all regions, but in safe areas the economy quickly rebounded. Economic activity in Western regions rose to above pre-war levels, while occupied regions recovered slowly, even though liberating a region accelerated its economic recovery.



Klaus Vondra (Principal Economist, Business Cycle Analysis Section, OeNB) presented forecast efforts of the OeNB during the pandemic. He showed the weekly GDP indicator that was based on novel, partially confidential daily and weekly data. He showed that the indicator worked very well in forecasting realized GDP during the COVID-19 pandemic but noted that it required a lot of time and effort and data mining. These challenges are part of the reason why the indicator was discontinued during the summer of 2022. However, the OeNB still uses credit card payments data to forecast tourist

¹ Bloom, N., M. Floetotto, N. Jaimovich, I. Saporta-Eksten and S.J. Terry. 2018. Really uncertain business cycles. In: *Econometrica* 86(3). 1031–1065.

overnight stays for the purpose of nowcasting. This approach produces very accurate results and improves the nowcast, given the high importance of tourism for the Austrian economy. The OeNB's Business Cycle Analysis Section has been continuously working on improving its models and forecasting methodology.

Finally, Thomas Warmedinger (Deputy Head of Division, Business Cycle Analysis, European Central Bank) talked about the learning experiences of the ECB regarding forecasting during the COVID-19 pandemic and since the start of the war in Ukraine. He highlighted four main lessons learned: First, narratives are vital in communicating forecasts, as they provide a consistent story that includes underlying assumptions. Second, developing and utilizing new tools and indicators is important, particularly during crises. For instance, the ECB expanded its use of high-frequency indicators and nonlinear modeling and put more emphasis not only on shocks to growth but also on the trajectory of GDP levels. Third, forecasters need good approaches to deal with uncertainties. These could be projection ranges or scenarios, for instance. In all cases, transparency regarding assumptions is crucial. Finally, the ECB adapted standard models and procedures. For instance, it allowed more flexibility in certain procedures to accommodate

exceptional, last-minute updates of data or information. In the Q and A session, Warmedinger and Fenz also briefly discussed difficulties and ongoing efforts to improve high-frequency inflation forecasts.

The presentations and the workshop program are available at [90th East Jour Fixe of the Oesterreichische Nationalbank - Oesterreichische Nationalbank \(OeNB\)](#).

The following day, an informal expert meeting on Forecasting macroeconomic developments in the Western Balkans – exchange on data sources, models and experience was organized by the OeNB. The event started with a presentation of the OeNB'S CESEE forecast. Then central bank forecasters from the Western Balkan countries (namely from Albania, Bosnia and Herzegovina, Kosovo, Montenegro, North Macedonia and Serbia) gave country specific insights into models and data sources used for their economic projections. Moreover, current and structural challenges related to forecasting were highlighted by the central bank representatives. The event was rounded off by a presentation of the European Commission explaining their approach to economic forecast for Western Balkan countries. Representatives from the European Commission, the World Bank and the European Central Bank enriched the discussion.

OeNB-BOFIT Outlook for selected CESEE economies

Economic growth slows sharply in the CESEE-5 region despite initial resilience; war and sanctions are triggering a protracted recession in Russia



In the first half of 2022, the economies of Bulgaria, Czechia, Hungary, Poland and Romania (CESEE-5) weathered the sharply deteriorating external environment caused by the war in Ukraine better than initially anticipated. Compared

to our spring projections, we revise our aggregate GDP growth forecast for the CESEE-5 upward by 0.8 percentage points to 4.1% year on year in 2022. Only Poland already recorded weakening economic activity in the second quarter of the year, leading us to revise the country's projected growth down by 0.5 percentage points. Over the remainder of the year, GDP growth will slow considerably in all

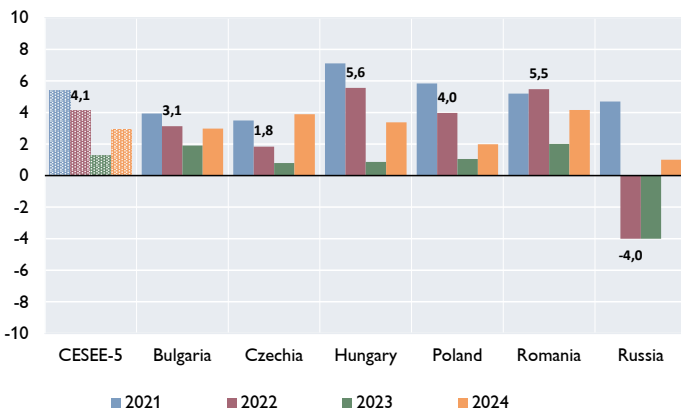
economies and drop to a meager 1.2% per annum in 2023 for the CESEE-5 aggregate before stabilizing at 3% in 2024. While domestic demand held up well until mid-2022, its contribution will fade, and even turn negative in 2023 in Bulgaria and Hungary. As a result, going forward, import growth will diminish more strongly than export growth, thus rendering the negative contribution of net exports smaller in 2023 and 2024. Like all previous global shocks, this crisis will delay income convergence. The positive growth differential compared to the euro area of 1 percentage point in 2022 will shrink notably in 2023, to only 0.3 percentage points, before recovering again to 1 percentage point in 2024. Our projections hinge crucially on the external environment and in particular on developments in the euro

area. Uncertainty remains exceptionally high and the balance of risks continues to be tilted to the downside.

Russia's war in Ukraine and severe Western sanctions have caused Russia to plunge into recession. We project that GDP will decline by about 4% in 2022 and by another 4% in 2023, before growth will bounce back to about 1% in 2024. The factors shaping the continuing slide of the Russian economy differ from 2022: In 2023, net exports will likely turn strongly negative because Russia is not likely to find new buyers for the amount of oil deliveries affected by the EU oil embargo; domestic demand drivers will marginally weaken, while imports are expected to recover at least slightly.

Real GDP growth in selected CESEE economies

year-on-year growth in %



Note: realized values for 2021, OeNB-BOFIT projections for 2022 to 2024
Sources: Eurostat, Rosstat, OeNB, BOFIT.

CESEE-5: all demand components will continue to weaken well into 2023, EU funds keep supporting investments

The first two quarters of the year 2022 surprised with strong growth in all countries except for Poland. However, high-frequency indicators signal that the economies' resilience in the face of the sharply deteriorating external environment shaped by high inflation and the war in Ukraine is dwindling. We base our forecast on the assumption that the status quo concerning the war in Ukraine will remain more or less unchanged over the projection horizon. This implies that sanctions will remain in place, with the EU import embargo on Russian oil taking effect at the end of this year. Inflation will remain one of the decisive factors shaping our forecast, we do not expect inflation to recede notably before mid-2023. Monetary policy will be challenged to find the right balance between keeping inflation expectations well anchored while not dampening economic activity too

much while fiscal policy will continue its overall supportive stance.

The second half of 2022 will be marked by a notable weakening in all demand components. At the country level, the picture is mixed: Private consumption will hold up better in Poland and Romania, in Bulgaria and Hungary it will record a decline and in Czechia, private consumption will almost stagnate in both, 2022 and 2023. Public consumption will show a constant but small positive contribution (of about 0.3 percentage points) to GDP growth over the entire projection horizon in the CESEE-5 aggregate. On aggregate, gross fixed capital formation is the demand component that is holding up best against the growth slowdown. This is the result of counteracting factors at play: the sharp slowdown in growth in major advanced economies, coupled with the projected weakness of the Chinese economy, and tightening financing conditions. On the other hand, strong EU fund inflow will counteract these dampening factors.

The outlook for exports is clearly dim: The number of export markets is diminished by Russia having left the scene already some months ago. The repercussions of the war imply a notable growth slowdown in major Western export markets as well, such as Germany. In addition, China is struggling with a property market crisis and the authorities are not shying away from imposing severe local lockdowns in pursuit of the zero-COVID strategy. Final demand from China constitutes an important factor for European value chains (especially in the automotive industry). Also supply disruptions may reappear and affect varying production lines at different stages in the production. Yet, even more than outright shortages, soaring input prices will constitute a growing problem for many exporters, especially small and medium-sized firms. The decline in import growth will be even more pronounced, imports will almost stagnate next year.

The extremely high level of uncertainty has not abated since our last projections and geopolitics continue to dominate economics. Hence, the major risks are: developments in major trading partners, the evolution of the Russian war in Ukraine and future inflation developments (increasingly including second-round effects arising from a prolonged high-inflation period). While renewed large-scale lockdowns appear unlikely from the current perspective, possibly lasting (structural) supply chain disruptions pose a further major risk on top of the currently already extreme level of uncertainty.

War and sanctions are triggering a protracted recession in Russia

Russia's invasion of Ukraine and severe Western sanctions have caused Russia to plunge into recession. However, this downswing has so far been milder than originally expected because of the Russian authorities' quite effective macroeconomic response. Policy actions have included capital controls that have helped block large capital outflows and prevent massive bank runs. The resulting restabilization of the ruble in turn has contributed to reining in inflation. Other forces that cushioned the downswing were still sizable revenue inflows stemming from high oil prices and the fact that Russia redirected some energy (particularly oil and coal) deliveries to nonsanctioning countries.


GDP is projected to shrink by about 4% in 2022 and by another 4% in 2023, before growth will return to positive territory at about 1% in 2024. Private consumption will decrease markedly, in line with retail trade, destabilized by the swelling of inflation and uncertainty. Indeed, private consumption is seen as the major factor pulling the Russian economy into recession in 2023. Gross capital formation is also expected to contract sharply, largely on account of a massive drawdown of inventories following Western trade restrictions covering various sectors. On the other hand, net exports are expected to skyrocket in 2022, given a combination of a sharp sanctions-triggered drop of imports and a mild decline of exports (notably of natural gas, coal, wood and steel, while oil exports largely remain on 2021 levels). Meanwhile the fiscal stimulus delivered in 2022 promises to remain modest. Different forces from those seen in 2022 are expected to drive the continuing slide of the Russian economy in 2023: Specifically, net exports will likely plunge deep into negative territory, assuming that the planned EU embargo on Russian tanker-transported oil is implemented from late 2022, because Russia is not likely to find new buyers for the entire amount of oil deliveries in question. Moreover, Russian imports are expected to recover at least slightly. Private consumption will marginally weaken or stagnate on its new-found lower level; the same goes for public consumption and gross capital formation. In 2024, the Russian economy is projected to revert to – very low – growth of 1% again.

Risks for this forecast are tilted downward. Uncertainty is huge and possible major defeats in the ongoing war in Ukraine may have destabilizing political and economic effects. An escalation of the war and/or the economic conflict with the West (including a threatened Russian oil

embargo in response to the imposition of a unilateral price cap on Russian oil envisaged by the G7) could exacerbate Russia's recession in 2023 and further weaken the global economy with spillbacks on Russia. Given these various imponderables, the Urals export prices for 2023 and 2024 are very difficult to predict. In any case, the oil price ranges Russia can fetch are likely to be lower than in 2022, so probably no additional growth boost can be expected from oil.

For more information see: https://www.oenb.at/dam/jcr:1caeeab7-76bc-426f-b242-58e6cd4a6b7b/Outlook-for-selected-CESEE-countries-and-Russia_October-2022-fee-i-fv.pdf

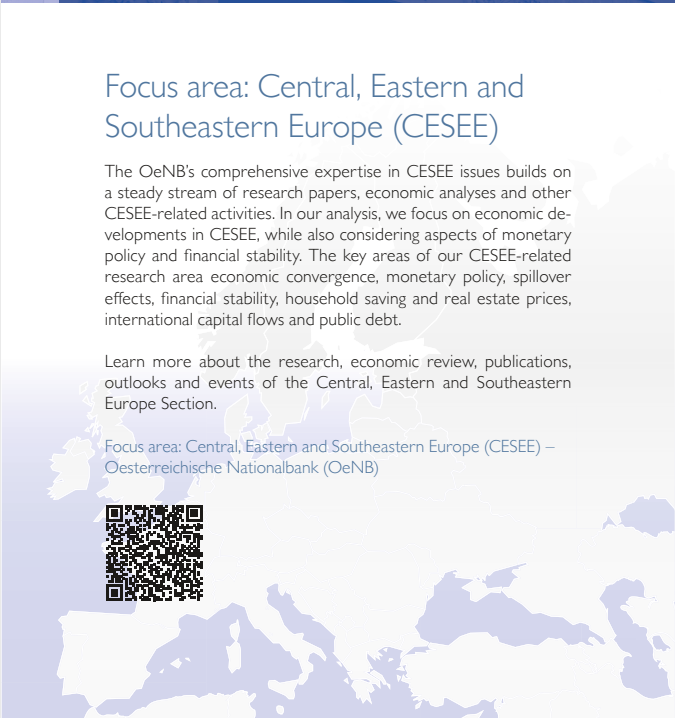

Focus area: Central, Eastern and Southeastern Europe (CESEE)



The OeNB's comprehensive expertise in CESEE issues builds on a steady stream of research papers, economic analyses and other CESEE-related activities. In our analysis, we focus on economic developments in CESEE, while also considering aspects of monetary policy and financial stability. The key areas of our CESEE-related research area economic convergence, monetary policy, spillover effects, financial stability, household saving and real estate prices, international capital flows and public debt.

Learn more about the research, economic review, publications, outlooks and events of the Central, Eastern and Southeastern Europe Section.

Focus area: Central, Eastern and Southeastern Europe (CESEE) – Oesterreichische Nationalbank (OeNB)



Save the Date

Conference on European Economic Integration (CEEI) 2022
Economic and monetary policy under wartime conditions –
implications for CESEE



Organized by the Oesterreichische Nationalbank (OeNB)

November 21 and 22, 2022

Hybrid in-person and online event

CONFERENCE ASPECTS

The world is facing a concurrence of crises: the war in Ukraine and the ongoing recovery from COVID-19 on top of the effects of climate change. While differing very much in nature, these crises all have a decisive effect on economic and monetary policy. With our conference, we seek to develop a deeper understanding of how these transformational crises are likely to impact the economies of Central, Eastern and Southeastern Europe (CESEE) in the short and medium term. Moreover, we aim to offer a glimpse into what a sustained geopolitical fragmentation and economic deglobalization could mean in the long term. Geopolitically, Russia's invasion of Ukraine threatens to re-establish an iron curtain in Europe. Economically, the war affects the outlook ahead as it has upended established trading patterns and started to change the structure of the energy sector. Related supply shortages and sanctions add to sharply accelerating prices in particular in energy and other commodity markets. This may speed up the green transition toward more sustainable and less energy-dependent economies. Furthermore, labor markets are being transformed by migration driven by conflicts and crises in the short term, and they undergo structural changes driven by digitalization and aging in the long term. Specific issues the conference will address include:

- What will be the impact on CESEE economies amid the threat of a new iron curtain?
- What are the challenges for monetary policy given high inflation, elevated political uncertainty and locally diverging interest rates?
- How to deal with demographic challenges and the related transformation of CESEE labor markets?
- Will the current energy crisis trigger faster restructuring toward renewable energy sources and alternative suppliers?

For more information, see [Conference on European Economic Integration 2022 - Oesterreichische Nationalbank \(OeNB\)](#)

OeNB Euro Survey



The OeNB Euro Survey has been conducted since 2007 in ten Central, Eastern and Southeastern European (CESEE) countries. Its central focus is on exploring different dimensions and drivers of currency holdings and households' saving and borrowing behavior. The main results of the OeNB Euro Survey are published on the OeNB's website at <https://www.oenb.at/en/Monetary-Policy/Surveys/OeNB-Euro-Survey/Main-Results.html>. The charts are available for download in different file formats and the underlying data can be exported as CSV files.



The questionnaires of the OeNB Euro Survey have recently been published on the website. The access to microdata for research projects has also been further facilitated. See: <https://www.oenb.at/en/Monetary-Policy/Surveys/OeNB-Euro-Survey/data-sharing.html>

On how to access Euro Survey Data:



Forthcoming study in Focus on European Economic Integration Q4/22 (full version)



[Is it easy to hide money in the crypto economy? The case of Russia](#)

Armin Ahari, Johannes Duong, Jakob Hanzl, Elsa Maria Lichtenegger, Lukas Lobnik, Andreas Timel

Upcoming Events

The following events are organized by the OeNB and i. a. 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.



November 21 – 22, 2022

Conference on European Economic Integration (CEEI) on “Economic and monetary policy under wartime conditions – implications for CESEE”

June 1, 2023

91st East Jour Fixe: Property Markets in Austria and CESEE (working title)

OeNB Courses at the Joint Vienna Institute (JVI) 2022

The JVI resumed classroom training in June. All participants have to follow the JVI's COVID-19 Guidelines.

For the most up-to-date information on JVI training courses, please click the following link:

<https://www.jvi.org/courses/course-schedule-2022.html>

Upcoming OeNB courses

Title	Organization	Date
Cash Circulation and Payment Systems in Austria	Oesterreichische Nationalbank	November 21 – 23, 2022
Monetary and Financial Statistics Collected and Compiled by the ESCB	Oesterreichische Nationalbank	November 21 – 25, 2022

OeNB Courses at the Joint Vienna Institute (JVI) 2023

Title	Organization	Date
Financial Stability and Supervisory Stress Testing for Banking Systems	Oesterreichische Nationalbank	January 16 – 19, 2023
Financial Education	Oesterreichische Nationalbank	February 20 – 24, 2023
Monetary Policy Implementation	Oesterreichische Nationalbank in cooperation with the JVI and the Deutsche Bundesbank	February 27 – March 3, 2023
HR Issues and Compliance	Oesterreichische Nationalbank in cooperation with the Deutsche Bundesbank	March 13 – 17, 2023
Macrofinancial Stability in Central, Eastern and Southeastern Europe	Oesterreichische Nationalbank in cooperation with the JVI and the National Bank of Slovakia	April 17 – 26, 2023
Euro Area Integration	Oesterreichische Nationalbank	May 8 – 12, 2023
Climate Change and Green Finance	Oesterreichische Nationalbank	June 26 – 30, 2023
Diversity and Inclusion	Oesterreichische Nationalbank	November 6 – 8, 2023