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Studies

Saving behavior along the income distribution during the COVID-19 pandemic

Elena Ellmeier, Melanie Koch, Thomas Scheiber[1]

Aggregate data suggest that in several middle- and high-income countries, household savings increased during the first phase of the pandemic. Statistics from countries in Central, Eastern and Southeastern Europe (CESEE) also point in this direction. However, data and research on how this increase in savings is distributed along the income distribution are scarce. We provide evidence for eight CESEE countries, evaluating data from the OeNB Euro Survey wave 2021 on that matter. More precisely, we focus on how saving behavior of individuals differs across income and education groups. We find that, in general, people with higher levels of income and education have higher saving abilities – this is true before and during the pandemic. However, overall, only very few individuals have increased their saving since the start of the pandemic. When asked about saving intentions after the pandemic, particularly individuals from the highest income tercile say that they expect to increase their saving in the future. The combined evidence of aggregate and survey data points to a high degree of saving inequality across the population in all countries.

JEL classification: D14, D31, G51
Keywords: household saving, inequality, survey data, CESEE

Across Europe, aggregate statistics show that the household sector accumulated substantial savings during the first one and a half years of the COVID-19 pandemic (European Commission, 2021). Also for the countries in Central, Eastern and Southeastern Europe (CESEE), for which the household saving ratio is not always available, aggregate statistics point in this direction (see chart 1): The growth rate of household deposits remained positive, sometimes even accelerated, over the course of the pandemic (Astrov et al., 2021). Yet, how the rise in household savings is distributed across the population cannot be easily inferred from these aggregate numbers. It is commonly believed that while some households may have increased their saving stocks and flows, many others have been forced to dissave.[2]

In general, differences in saving behavior during the pandemic can be attributed to pre-existing inequalities prior to the pandemic or to changes of factors which determine the ability to smooth consumption in crisis times. Early evidence suggests that the economic impact within countries was felt rather unevenly (e.g. Alstadsæter et al., 2020, for Norway; Adams-Prassl et al., 2020, for Germany, the UK and the US; Bundervoet et al., 2022, for 34 countries; Scheiber and Koch, 2022, for CESEE). The pandemic impacted households' disposable income in the EU significantly – with lower-income households being more severely hit (Almeida et al., 2021). Underlying inequalities, including socioeconomic status, education,

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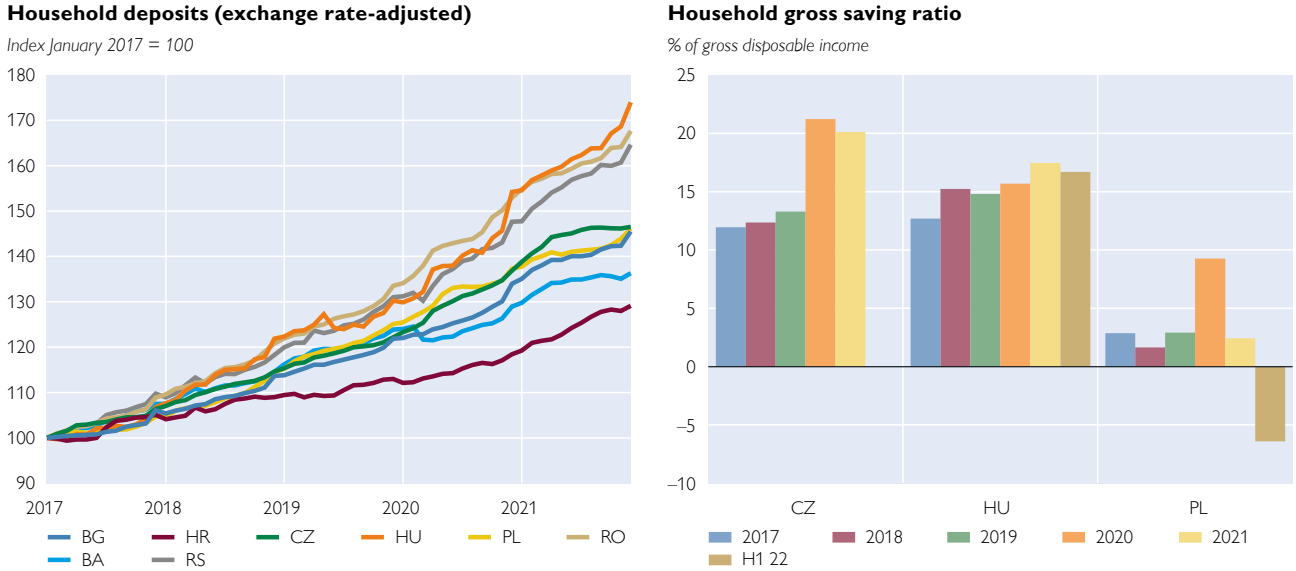
[2] *In emerging or developing countries where institutions are weaker and labor informality is prevalent, private agents resort to various modes of precautionary behavior not captured with the precautionary saving theory (Aizenman et al., 2015).*

Chart 1

Aggregate household savings in CESEE



Source: Eurostat.

Note: The gross saving ratio of the household sector (including nonprofit institutions serving households) is defined as the ratio of gross savings to gross disposable income. No data available for Czechia for H1 22 at the time of printing.

age, gender, ethnicity and geography, are crucial to understand the impact of the pandemic itself. The pandemic crisis has potentially exacerbated pre-existing inequalities and it will leave legacies that will impact inequalities in the long run (Blundell et al., 2020; Adams-Prassl et al., 2020; Bundervoet et al., 2022).[3] Furthermore, from a cross-country perspective, Wildman (2021) finds that countries with high levels of income inequality prior to the outbreak of the COVID-19 pandemic have performed significantly worse when dealing with the COVID-19 outbreak in terms of registered cases and deaths. Income inequality can be interpreted as a proxy for many elements of socioeconomic disadvantages that impede an effective response to the pandemic.

Concerning consumption smoothing, it is a well-established fact for advanced economies that the household saving ratio increases during recessions (Adema and Pozzi, 2015). This is attributed to higher unemployment risk, lower household wealth and tighter credit constraints. Recent literature looks beyond conventional recessions and examines the effects of the pandemic on saving. Jordà et al. (2022) use historical data for Europe back to the 14th century and argue that pandemics induce persistent shifts toward higher precautionary saving. Similarly, Pozzi and Sabada (2022) find more volatile and higher saving ratios during macroeconomic disasters (wars, pandemics, depressions). They attribute this to a reduction in consumption smoothing opportunities, i.e. credit-constrained households consume

[3] *The return on assets of wealthy households in the USA during the pandemic has risen faster than that of other households, reinforcing the wealth concentration at the top. Kartashova and Zhou (2021) show that the increase in wealth inequality was driven by portfolio heterogeneity and asset price movements, whereas differences in the saving ratio played a minor role.*

according to their (decreasing) current income while more affluent households choose to increase precautionary saving. MacGee et al. (2022) conduct macroeconomic simulations with heterogenous agents with respect to income, unemployment risk, debt portfolios and consumption baskets and conclude that during the pandemic most unplanned savings have been accumulated by high-income households that face lower unemployment risk and larger consumption expenditures in areas affected by lockdowns and social distancing rules (i.e. forced savings). However, more clear-cut, microeconomic evidence for this conclusion is currently small.

This is where we want to contribute with our short study. We provide survey evidence for eight different countries in CESEE and look at saving behavior along the income distribution. We also look at education as a proxy for lifetime income (e.g. Tamborini et al., 2015, again show the positive correlation between education and lifetime earnings). Our descriptive results based on data from the 2021 wave of the OeNB Euro Survey show that the observed increase in aggregate savings associated with the pandemic is not at all equally distributed over the population in CESEE countries. Only few individuals in CESEE increased their saving or started to save at all. The results point toward decreasing saving ability for individuals with lower levels of income and lower educational attainments, but due to the low number of savers per country, detecting significant differences suffers from low power at the country level. When asked about planned saving after the pandemic, particularly individuals from the highest income tercile say that they expect to increase their saving in the future.

Several works study household savings in the wake of COVID-19. Most of them point into the direction of significant increases in aggregate household savings (e.g. Basselier and Minne, 2021; Bryne et al., 2020; Dossche and Zalatnos, 2021). However, few researchers investigate distributional effects, for which microdata are required.[4] For instance, Dang and Nguyen (2021) look at gender inequality in income and savings during the beginning of the pandemic in six different countries. They find that in this early stage of the pandemic, women were more likely to have increased their savings and reduced their consumption than men.

Investigating the unequal distribution of saving can provide deeper insights into the impact of the pandemic on the financial situation of households and the shape of the recovery for private consumption. Overall, saving behavior along the income distribution during the pandemic has not been well monitored, especially not in CESEE, although it has important implications for the financial resilience of households in the region. Our short study reveals some discrepancies between macro- and microdata but cannot close this research gap. We proceed as follows: In section 1, the OeNB Euro Survey data and variables are described. In section 2, we present and discuss the results, and section 3 concludes.

1 Data

We base our analysis on data from the OeNB Euro Survey. The main focus of this survey lies on the financial behavior of individuals in CESEE and the extent of euroization in this region. The survey is an annual, repeated cross section with

[4] *For studies combining macro- and microdata to derive some distributional insights with respect to consumption and savings, see Hacioglu-Hoke (2021), Banco de Portugal (2020), Bryne et al. (2020) as well as Guglielminetti and Rondinelli (2021).*

face-to-face interviews of about 1,000 persons per country. Our analysis includes eight of the ten countries, i.e.: Bosnia and Herzegovina, Bulgaria, Czechia, Croatia, Hungary, Poland, Romania and Serbia.[5] In order to provide representative samples for each of the countries' population, we work with population weights for individuals. Weights are calculated with respect to age, gender and the region a respondent is living in (urban versus rural), sometimes additionally with respect to education and ethnicity.

1.1 Evidence for saving during the pandemic

To shed some light on saving behavior around the COVID-19 pandemic, we included a special module on this topic in the 2021 wave of the OeNB Euro Survey. The data were gathered between October and November 2021, thus amid the pandemic.[6] Moreover, the interviews took place after the first, mostly energy-related, price hikes in early fall. It is reasonable to assume that, by that point in time, people must have adapted their saving behavior to the pandemic situation and started to feel the pressure of these hikes.

In this short study, we limit our analysis to five different questions from that special survey module. The first question refers to regular saving prior to the pandemic as a basis for investigating the overall change in saving behavior:

Box 1

Question 1

If you think about the time before the Covid-19 pandemic: At the end of the month, did you usually have[7] some money left that you were able to save for large purchases or emergencies, or to accumulate wealth?

1. Yes 2. No

The second and third questions were asked to find out whether regular saving has changed since the start of the pandemic. These are the core questions under investigation. Depending on whether respondents answered "yes" or "no" to question 1, they were directed to either question 2 or 3:

Box 2

Question 2 (if answer to question 1 was "Yes", "Don't know" or "No answer")

Has the level of your monthly savings changed since the start of the Covid-19 pandemic compared to pre-pandemic times?

1. Yes, I have been saving more than before

[5] *We exclude Albania because of ongoing data checks for the survey waves 2020 and 2021 for this country. North Macedonia is excluded due to a translation error in two of the questions we use.*

[6] *As explained in Scheiber and Koch (2022), data collection was finalized mostly before the countries were hit by the next infection wave. Although increasing, nonresponse rates were in the range of previous years in Croatia, Czechia, Hungary, Poland, Romania and Serbia. A sharper increase was only observed in Bosnia and Herzegovina. In Bulgaria, the nonresponse rate marginally decreased.*

[7] *The original English master questionnaire read "do you usually had" – however, this error was not reflected in the translations into the national languages for the survey.*

2. Yes, I have been saving less than before
3. No, I have been saving as much as before
4. No, I did not have the money to save before the pandemic and I have not been able to save during the pandemic

Box 3

Question 3 (if answer to question 1 was "no")

During the lockdowns, spending possibilities were limited. Have you saved some money since the start of the Covid-19 pandemic?
1. Yes, I have saved some money since the start of the pandemic
2. No, I have not managed to save any money since the start of the pandemic

Subsequently, those people who say that they have saved more since the start of the pandemic, i.e. those who choose option 1 in question 2 or option 1 in question 3, are asked why they have saved more. The reasons mainly revolve around forced or precautionary saving. However, an open answer category was offered as well. Respondents could choose more than one option.

Box 4

Question 4 (if answer to question 2 was option 1 or answer to question 3 was option 1)

I am now going to read out some reasons why your monthly savings might have increased during the pandemic. Please pick all reasons that apply to you.
1. I have been saving more because spending was limited during the lockdowns
2. I decided to save more for precautionary reasons due to the pandemic
3. Other reasons: _____

Our last question focuses on future saving intentions in order to provide some insights into the beliefs people in CESEE held in fall 2021.

Box 5

Question 5

Looking ahead to post-pandemic times: Do you intend to save more or less compared with what you used to save before the pandemic?
1. Yes, I intend to save more than before
2. Yes, I intend to save less than before
3. No, I intend to save as much as before the pandemic
4. No, I did not have the money to save before the pandemic and am unlikely to save after the pandemic

Note that given the questions, savings are not measured according to economic standard theory as income minus consumption and liabilities. Instead, they are purely self-reported perceptions of saving behavior. As discussed below, this might

blur the relationship between saving and income as well as education. Some people might not be aware of a change in their savings flow or might not take everything into account that should be considered as savings.

1.2 Measures for income and education

We look at saving outcomes along the income distribution. In the survey, information on both the monthly net income of the respondent and the monthly net income of the whole household is elicited. Of these two income types, we will use household income, as many people do not save on their own but together with other people in their household. Moreover, within a household, income, expenses and savings are often shared. We take the different composition of households into account by calculating the equivalized monthly net income of the household.[8] To better illustrate effects along the income distribution, we then divide the sample into income terciles, separately for each country, creating groups with low, middle and high income.[9]

Income is measured at the time of the interview on the basis of the last 12 months; it is not observed over the last few, pre-pandemic years. To get a feeling how saving behavior might be related to expected lifetime income or pre-shock income, we also look at education. Education is a useful proxy for lifetime earnings. Moreover, it is potentially a more stable measure of the general income level of a person than income itself during a shock period like the one we are looking at. Education in the 2021 survey wave was measured with individual categories in each country but was ex post harmonized using the ISCED-2011 categorization, which classifies people's education into nine levels.[10] However, as some of these levels produce very few observations, we again divide the sample into three groups: low, medium and high education.[11] It should be noted that in contrast to the income terciles, the education groups are not equally sized. In most countries, the bulk of respondents have a medium level of education.

Since nonresponse is quite common for all income figures in the OeNB Euro Survey, we use the imputed datasets Enzinger et al. (2022) constructed for their study. For the 2021 (and 2020) wave, they performed multiple imputation using chained equations to receive values for household income, the three education categories, ownership of durables and real estate as well as debt statistics whenever the values were missing in the original data. Five imputed datasets were obtained with this procedure. Following their approach, we adjust statistics presented in

[8] *Equivalized income is obtained by multiplying reported income with a household's equivalence factor. The OECD-modified scale for this factor assigns a value of 1 to the first adult, 0.5 to each additional adult and 0.3 to each child.*

[9] *We cannot use more granular income percentiles due to the power issues previously mentioned.*

[10] *0 — early childhood education, 1 — primary education, 2 — lower secondary education, 3 — upper secondary education, 4 — post-secondary non-tertiary education, 5 — short-cycle tertiary education, 6 — bachelor's or equivalent level, 7 — master's or equivalent level and 8 — doctoral or equivalent level.*

[11] *ISCED-2011 levels 0–2 were grouped into low education, levels 3 and 4 to middle education and every level from level 5 on was regarded as high education.*

our study using Rubin's rules (see Little and Rubin, 2019) if necessary.[12] However, none of our saving variables were used in the imputation procedure. This might downward bias their correlation with income as well as education (e.g. White et al., 2011).

Overall, income and education are correlated to each other but even if categorized into three broad groups, they are far from perfectly aligned. The relationship of both variables to saving behavior can reveal important heterogeneities within the population, like the shock-absorbing capacity of the household sector.

2 Results

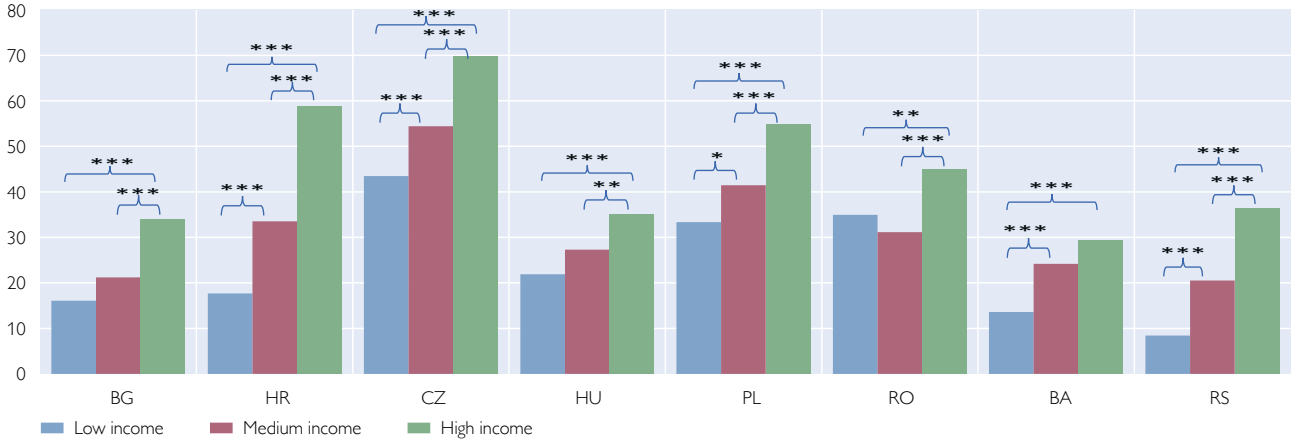
First, using question 1, we calculate the share of people who were able to save regularly before the pandemic. Persons who answered "don't know" or gave "no answer" to this question are treated as unable to save regularly prior to the pandemic.[13]

As we can see in chart 2, the share of individuals who saved regularly before the pandemic markedly increases with income in all eight countries. On average across countries, 44% of high-income respondents were regular savers, whereas the average among individuals with low income is only 22%. The difference in the share of savers with low and high income is statistically significant in all reviewed countries but least pronounced in Hungary and Romania. In Romania, the share of regular

Chart 2

Share of individuals who saved regularly before the pandemic – by income

% of individuals in the indicated income tercile



Source: OeNB Euro Survey 2021.

*Note: Weighted averages based on datasets for which education, income, debt statistics and asset ownership were imputed. Weights are calibrated on census population statistics for age, gender, region and, where available, education and ethnicity (separately for each country). *** p<0.01, ** p<0.05, * p<0.1.*

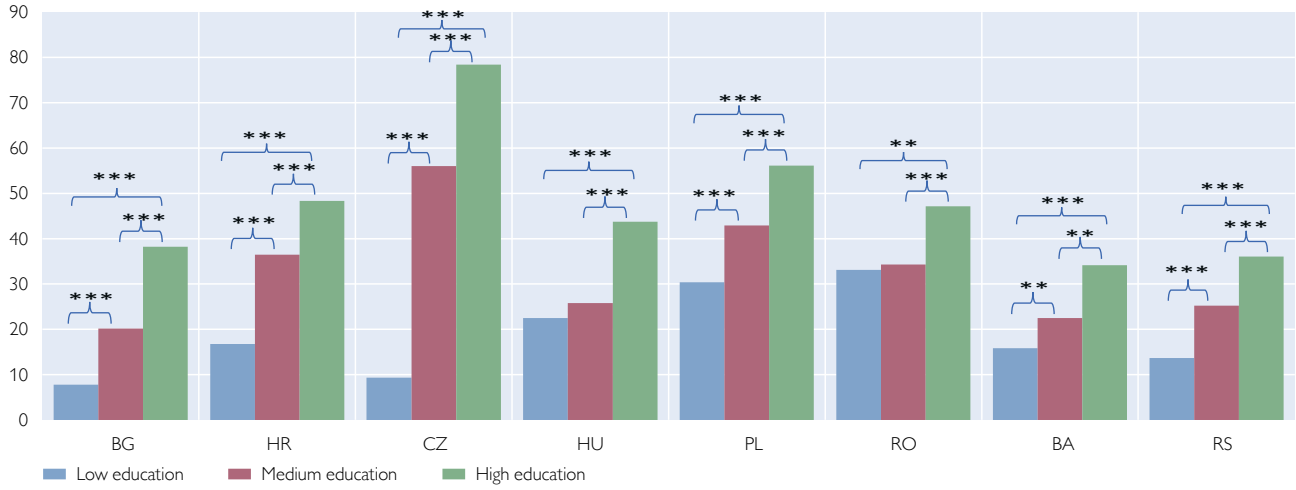
[12] *The income terciles are based on the sample at hand, not on official thresholds as in the case of education. This makes their construction nontrivial as values change from dataset to dataset. Therefore, we calculated the threshold values for the income terciles not separately for each dataset but across all imputed datasets. This means that for each country and across all datasets, there is a common value below which a respondent is classified as "low income" or as "middle income."*

[13] *Alternatively, treating these cases either as being able to save regularly or completely excluding them does not change our results tremendously. The largest differences can be observed in countries with relatively high nonresponse rates, i.e. Bulgaria, Poland and Bosnia and Herzegovina. The share of savers increases marginally, if at all, when excluding nonresponse cases. It naturally increases more if the cases are treated as being savers. Still, significance levels are very similar under all three approaches.*

Chart 3

Share of individuals who saved regularly before the pandemic – by education

% of individuals in the indicated education group



Source: OeNB Euro Survey 2021.

*Note: Weighted averages based on datasets for which education, income, debt statistics and asset ownership were imputed. Weights are calibrated on census population statistics for age, gender, region and, where available, education and ethnicity (separately for each country). *** p<0.01, ** p<0.05, * p<0.1.*

savers is smaller for medium-income households than for low-income respondents, albeit not significantly so. Overall, in all countries except Bulgaria, Hungary and Romania, the share of low-income respondents who saved regularly is even significantly smaller than the share of medium-income respondents who saved regularly. For education, which serves as a proxy for lifetime income, similar patterns can be observed (see chart 3). On average, around 43% of highly educated people and only 19% of people with low education levels indicated that they saved regularly prior to the pandemic. Again, the gap differs across countries but the positive correlation between education and saving ability is present in every country.

So how did the savings flow change during the pandemic? We analyze this issue by looking at questions 2 and 3. What can already be inferred from charts 2 and 3 is that more individuals answered question 3 than question 2: Except in Czechia and Poland, in every country there are more people who did not regularly save before the pandemic than people who did.[14] This ratio did not change in favor of regular saving through the first 18 months of the pandemic. Rather, saving ability decreased across all income and education groups after the onset of the pandemic. Many more individuals reported to have been saving less rather than saving more compared to pre-pandemic times. For some income and education groups, *saving less than before* was the most frequently chosen answer to question 2 (top panels of charts 4 and 5). Similarly, the vast majority of people who did not save prior to the pandemic – who answered question 3 – did not start to save after the onset of the pandemic (bottom panels of charts 4 and 5). Of all respondents, only around 8% reported either having saved more or having started to save (see also pie chart in chart 6) whereas 11% reported having saved less. Only in Croatia and Czechia did

[14] *See also Koch and Scheiber (2022), who use data from 2019 directly, and come to the same conclusion.*

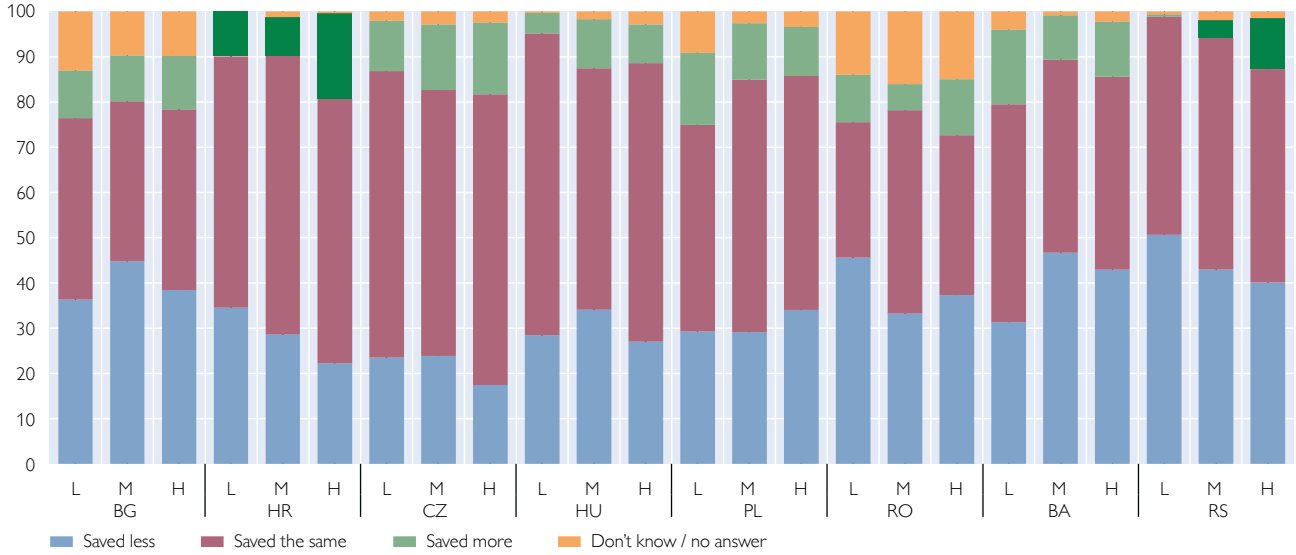
those who saved more make up for those who saved less, at least on the extensive margin.

Chart 4

Changes in saving behavior after the onset of the pandemic – by income

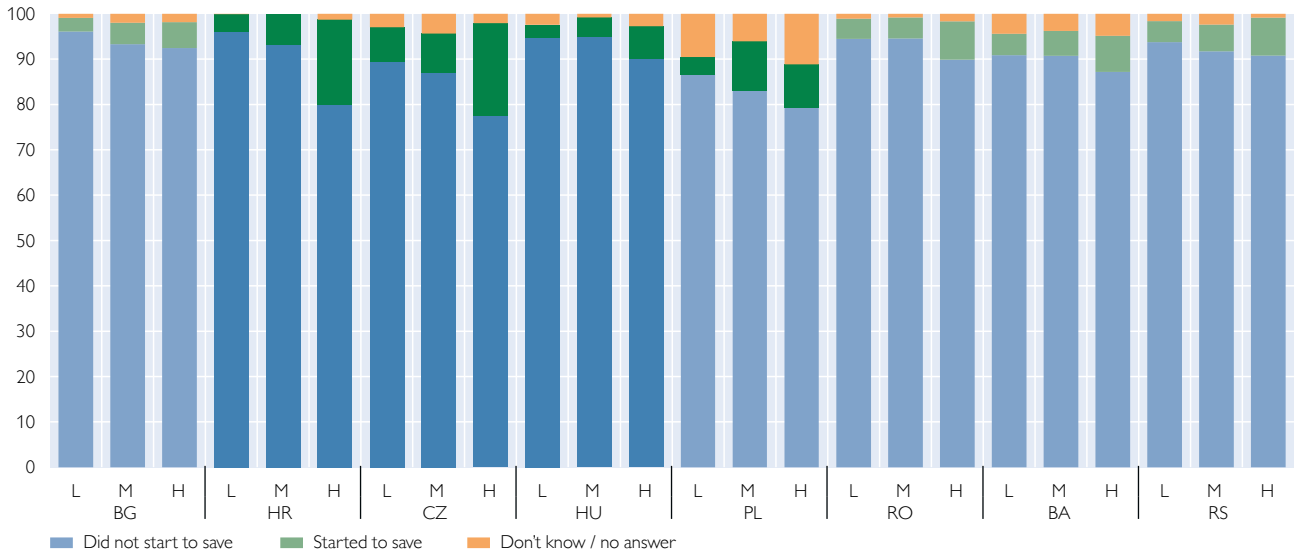
Change in saving behavior among those who answered "yes" to question 1

% of individuals in the indicated income tercile: low (L), medium (M) and high (H) income



Change in saving behavior among those who answered "no" to question 1

% of individuals in the indicated income tercile: low (L), medium (M) and high (H) income



Source: OeNB Euro Survey 2021.

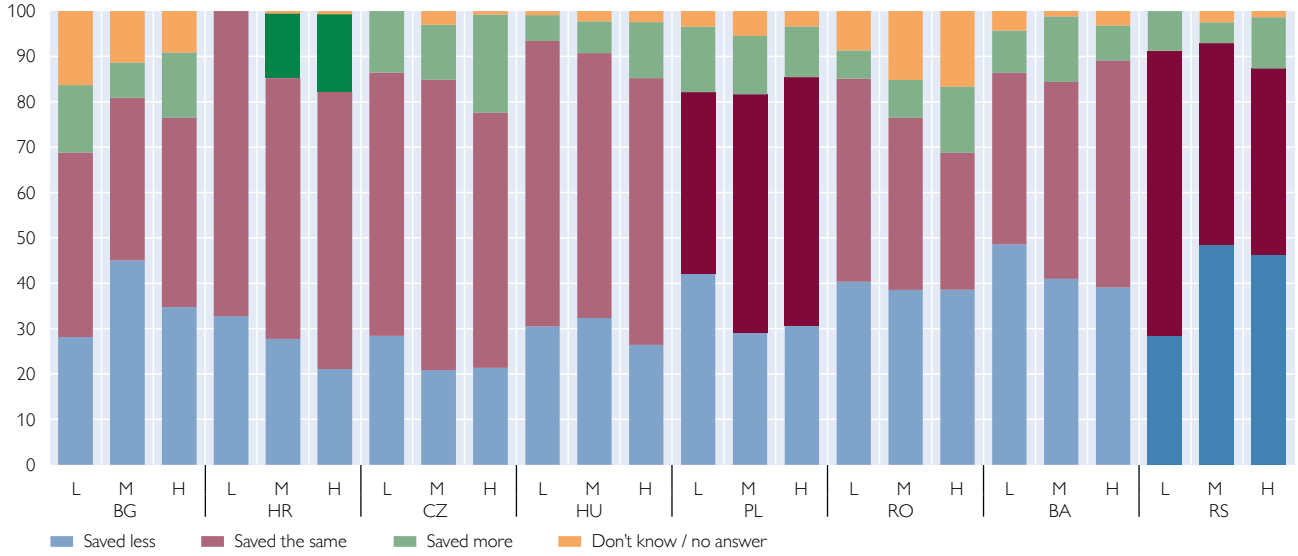
Note: The top panel is based on question 2. "Saved less" combines response options 2 and 4, "saved the same" corresponds to option 3 and "saved more" to option 1. Darker bars indicate that the difference between low/middle and high income is significant for that answer category (excluding don't know/no answer). Weighted averages based on datasets for which education, income, debt statistics and asset ownership were imputed. Weights are calibrated on census population statistics for age, gender, region and, where available, education and ethnicity (separately for each country).
The bottom panel is based on question 3. "Did not start to save" corresponds to response option 2 and "started to save" corresponds to option 1. Darker bars indicate that the difference between low/middle and high income is significant for that answer category (excluding don't know/no answer). Weighted averages based on datasets for which education, income, debt statistics and asset ownership were imputed. Weights are calibrated on census population statistics for age, gender, region and, where available, education and ethnicity (separately for each country).

Chart 5

Changes in saving behavior after the onset of the pandemic – by education

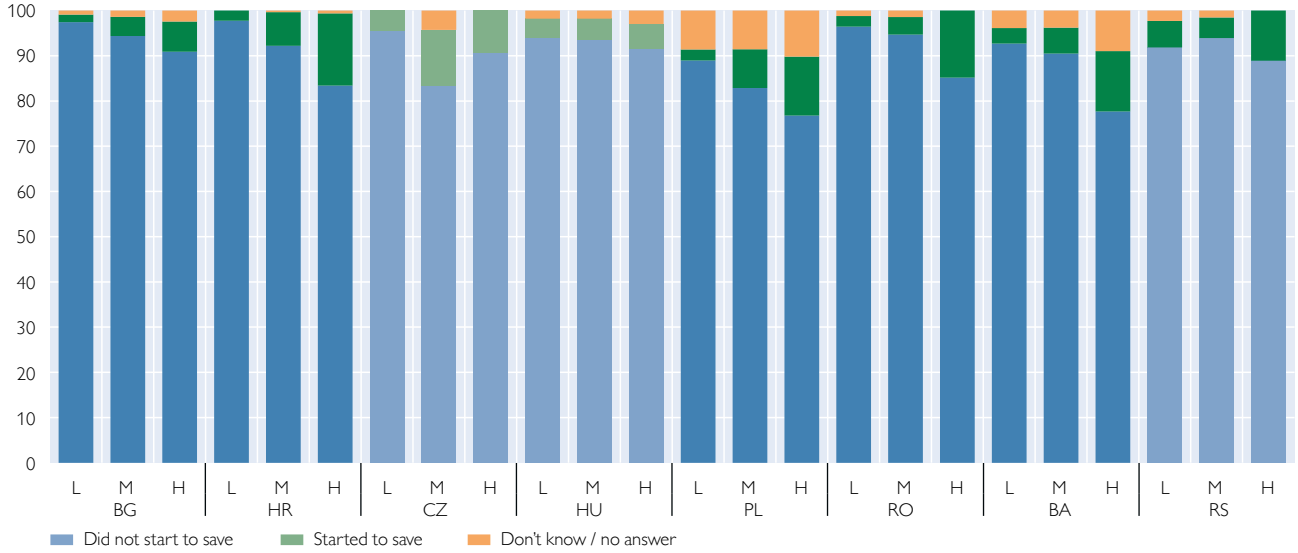
Change in saving behavior among those who answered "yes" to question 1

% of individuals in the indicated education group: low (L), medium (M) and high (H) education



Change in saving behavior among those who answered "no" to question 1

% of individuals in the indicated education group: low (L), medium (M) and high (H) education



Source: OeNB Euro Survey 2021.

Note: The top panel is based on question 2. "Saved less" combines response options 2 and 4, "saved the same" corresponds to option 3 and "saved more" to option 1. Darker bars indicate that the difference between low/middle and high education is significant for that answer category (excluding don't know/no answer). Weighted averages based on datasets for which education, income, debt statistics and asset ownership were imputed. Weights are calibrated on census population statistics for age, gender, region and, where available, education and ethnicity (separately for each country).
The bottom panel is based on question 3. "Did not start to save" corresponds to response option 2 and "started to save" corresponds to option 1. Darker bars indicate that the difference between low/middle and high education is significant for that answer category (excluding don't know/no answer). Weighted averages based on datasets for which education, income, debt statistics and asset ownership were imputed. Weights are calibrated on census populations statistics for age, gender, region and, where available, education and ethnicity (separately for each country).

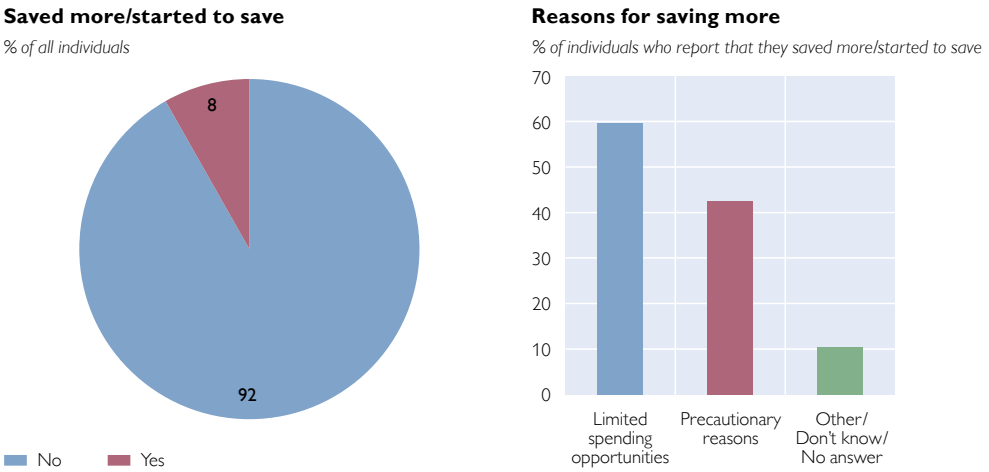
Income and education effects are more ambiguous than those seen in question 1. In some countries, the share of high-income savers who answered that they have been saving less was lower than the share of low-income savers who gave that answer. But in some countries, it seems to be the other way around. In any case, differences in both directions are often small and power can be worryingly low. For former nonsavers, differences in education and income seem to point in the direction that the share of high-income and high-education respondents who began saving after the onset of the pandemic is larger than the share of low-income and low-education respondents who began to save. However, on average, only 6% of the nonsavers stated explicitly that they had begun saving. The small share of new savers in most countries makes comparison across income and education groups noisy and less reliable.

Still, across all countries, the data show that the likelihood to save more than before the pandemic slightly increases with income and education. Among savers with high income, the average share of those who have been saving more since the start of the pandemic is about 14%, among nonsavers with high income, the average share is about 9%. For low-income respondents, the shares amount to 10% and 4%, respectively. The numbers are comparable to the results related to education. However, at the country level, differences are mostly not significant because sample sizes get very small and differences, in the end, are not that large. Thus, it is hard to tell from our data if regular saving has increased more in the affluent part of the population because we hardly see an increase in saving at all. Much more often, the savings flow stayed the same or decreased across all population groups.

Eventually, one further possible aspect should be considered. It is possible that respondents simply do not realize that they have saved more since the start of the pandemic. Given the nature of the pandemic shock, some additional savings are

Chart 6

Only few started to save more after the onset of the pandemic



Source: OeNB Euro Survey 2021.

Note: The multiple-choice question underlying the right-hand panel reads as follows: "I am now going to read out some reasons why your monthly savings might have increased during the pandemic. Please pick all reasons that apply to you." "Other" was an open answer option. Weighted averages based on datasets for which education, income, debt statistics and asset ownership were imputed. Weights are calibrated on census population statistics for age, gender, region and, where available, education and ethnicity (separatly for each country). Results not weighted by country size.

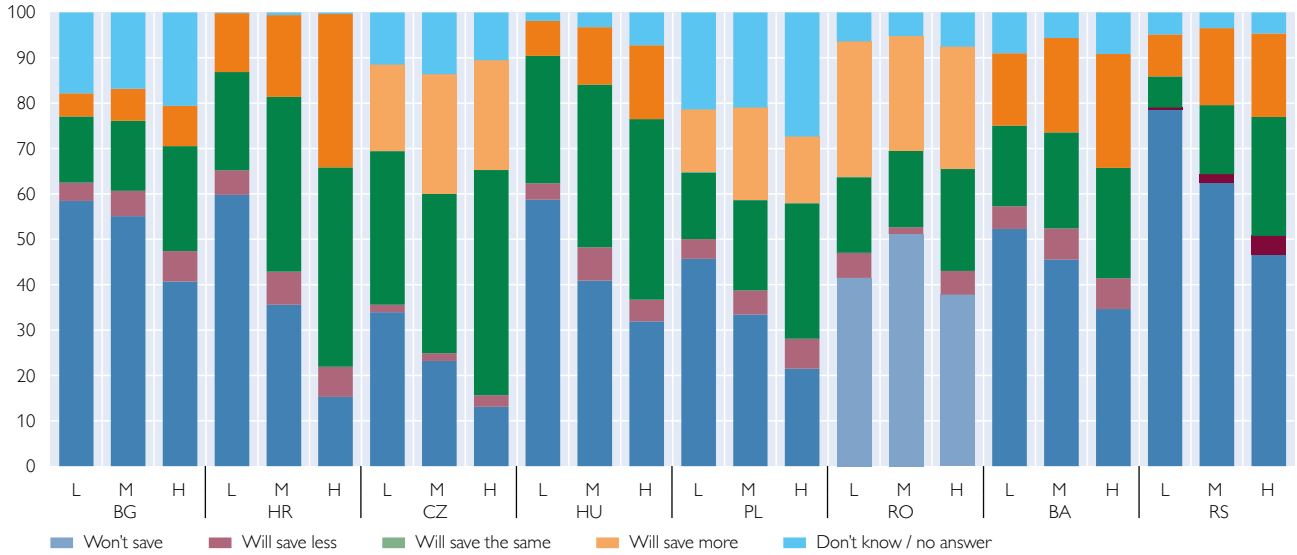
believed to be involuntary or forced savings. Lockdown policies, traveling restrictions and reduced social interactions all limited consumption opportunities. This may have led to an automatic increase in saving that may have gone unnoticed by some households. We find that forced saving is indeed an important motive, at least among those who noticed increased saving, i.e. the few who reported having saved more. On average, around 60% of this minority reported limited spending opportunities as one of the reasons why they saved more after the onset of the pandemic (chart 6). Over the whole sample, the share of high-income savers who mentioned forced saving as a motive is significantly larger than the share of low-income savers (66% versus 56%). Precautionary saving motives are frequently mentioned as well. Here, we do not find significant differences between high- and low-income savers. Results for low- and high-education groups are very similar.[15] Again, it has to be stressed that sample size for these results is low but still these results could be an indication that forced saving plays a crucial role.

Looking ahead, we additionally included a question regarding saving intentions after the pandemic (see charts 7 and 8). These intentions reveal considerable heterogeneities along the income and education distributions. For instance, the share of people reporting they will not save because they lack money decreases drastically with higher income and education levels. More precisely, the share for the groups with a high level of income and education who report lacking money averages 31% and 33% across countries. For low-income individuals, on average,

Chart 7

Saving intentions after the pandemic – by income

% of individuals in the indicated income tercile: low (L), medium (M) and high (H) income



Source: OeNB Euro Survey 2021.

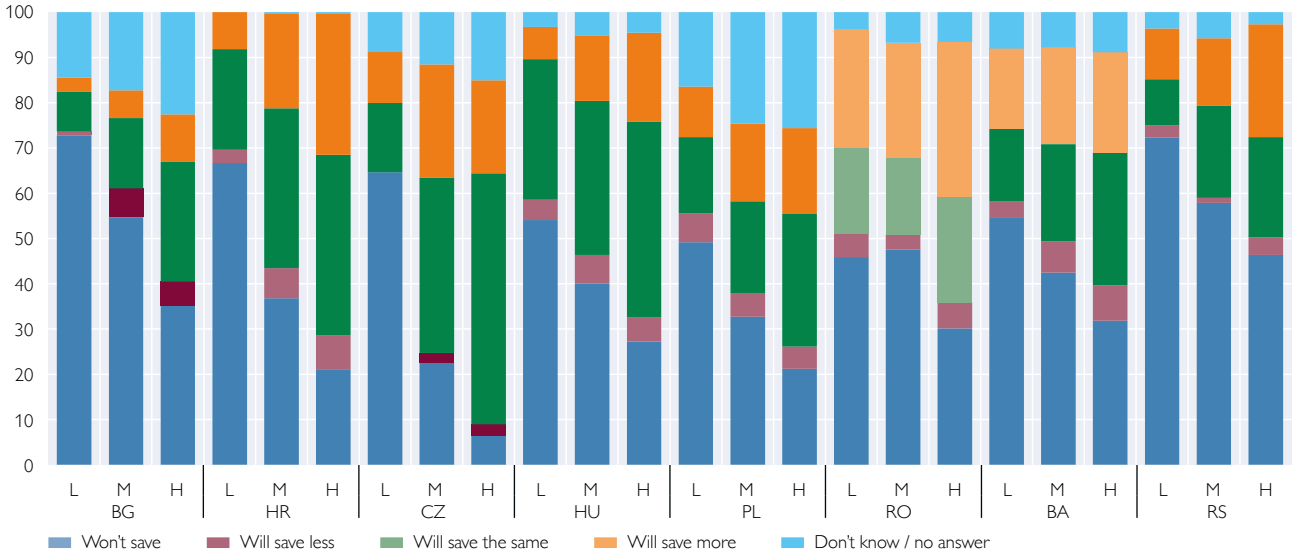
Note: Based on question 4. "Won't save" corresponds to response option 4, "will save less" corresponds to option 2, "will save the same" corresponds to option 3 and "will save more" corresponds to option 1. Darker bars indicate that the difference between low/medium and high income is significant for that answer category (excluding don't know/no answer). Weighted averages based on datasets for which education, income, debt statistics and asset ownership were imputed. Weights are calibrated on census population statistics for age, gender, region and, where available, education and ethnicity (separately for each country).

[15] *The most frequently mentioned „other reasons" for higher saving have been higher income.*

Chart 8

Saving intentions after the pandemic – by education

% of individuals in the indicated education group: low (L), medium (M) and high (H) education



Source: OeNB Euro Survey 2021.

Note: Based on question 4. "Won't save" corresponds to response option 4, "will save less" corresponds to option 2, "will save the same" corresponds to option 3 and "will save more" corresponds to option 1. Darker bars indicate that the difference between low/middle and high education is significant for that answer category (excluding don't know/no answer). Weighted averages based on datasets for which education, income, debt statistics and asset ownership were imputed. Weights are calibrated on census population statistics for age, gender, region and, where available, education and ethnicity (separately for each country).

57% indicated they will be unable to save. For individuals with a low level of formal education, that share is even higher with 60%. Similarly, the share of high-income and high-education respondents who plan to save more is larger than among persons with low income and a low level of education. The difference for the income tercile is significant in all countries except Czechia, Poland and Romania. As common for survey items dealing with expectations, the share of nonresponse is relatively large for future saving intentions. Nevertheless, the results point to persistent inequality in saving ability.

3 Conclusion

Descriptive results based on the 2021 wave of the OeNB Euro Survey show that the observed increase in aggregate savings associated with the pandemic is unequally distributed across CESEE citizens. Only 8% of individuals in the covered eight CESEE countries were able to save more during the first one and a half years of the pandemic. Yet, most of the individuals who were able to save prior to the pandemic reported that they continued to save after the onset of the pandemic, while some were forced to save less. Among those who did not save before, only a few started to save during the pandemic – mostly individuals from high-income households. In general, the likelihood to save more than prior to the pandemic slightly increases with income and education, which is a proxy for lifetime income. These results point to a persistent inequality in saving ability also during the pandemic in the CESEE region. However, due to the low number of new savers per country, detecting significant differences suffers from low power at the country level.

Moreover, across the region, forced saving was significantly more often cited as a motive by high-income savers than by low-income savers. Precautionary motives are mentioned frequently as well, but with no significant differences across income groups. Referring to planned saving after the pandemic, particularly individuals from the highest income tercile expect to increase their saving in the future. Whether this indicates a presumably persistent higher demand for precautionary saving in the future as historic examples would suggest (Jordà et al., 2022) remains open.

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Russia's banking sector and its EU-owned significant banks, against the backdrop of war and sanctions

Stephan Barisitz, Philippe Deswel[1]

Russia's invasion of Ukraine in February 2022 and unprecedented waves of Western sanctions have worsened the overall economic environment for the Russian banking system and European banks that are active in the country. The suspension of the publication of key prudential indicators by the Bank of Russia (CBR) since the outbreak of the war has also rendered an analysis of most recent banking developments much more difficult. After initial sanctions-triggered instability in March 2022, the authorities managed to re-establish some fragile macroeconomic and financial stability later in spring. Nevertheless, Russia is moving from a resilient post-COVID recovery to a pronounced recession in 2022 and the economy will likely bottom out in 2023. The banking sector, dominated by a few large state-owned players, has gone from driving growth through lending expansion to being affected by the downturn and supported by credit subsidy programs. The largest Russian banks (including Sberbank) have been sanctioned and barred from SWIFT (market share of these banks: almost two-thirds of total sector assets). Due to sanctions and the downswing, the banking sector made a loss of about USD 25 billion in the first half of 2022 (around 12% of its registered capital or more than a fifth of its additional capital buffers at end-2021), the sector's first loss in seven years. Although Western jurisdictions froze about half of Russia's sizable international reserves in February, the authorities have continued to benefit in recent months from substantial revenue inflows due to very high energy prices. The CBR and the government currently appear prepared to support the economy and banks through 2022 and probably 2023, even in the likely event that banks lose a much larger share of their capital due to the unfolding crisis. In this context, the European banks that qualify as significant institutions (Raiffeisenbank Russia, Rosbank/Société Générale and UniCredit Bank Russia) have been fundamentally revising their strategies and activities. The war in Ukraine and Western sanctions have strongly increased the level of risk of their activities and led them to initiate various disengagement strategies (ranging from full exit to a material reduction of operations). Their provisioning levels have noticeably increased, especially with respect to credit risk in a situation where the risk outlook has materially deteriorated for a wide range of counterparties. Emerging risk factors like cyber risk, exchange rate risk (with the complexity of hedging strategies), market risk (given increased volatility and funding costs) and noncompliance risk with the latest sanctions regime have required enhanced monitoring. Reputational risk appears as a key risk factor. Available projections show a capacity for European banks to resist further shocks. They are also accumulating capital in light of the resilient war-time profitability they have shown so far and their incapacity to distribute dividends abroad. Yet Russia's war in Ukraine represents a paradigm shift given the large share of previously identified threats (in the pre-war period) that materialized in swift succession.

JEL classification: G21, G28, P34
Keywords: banking sector, European banks, Russia, financial stability, sanctions, COVID-19, crisis, crisis-response measures, credit risk, nonperforming loans, profitability, regulatory forbearance, shock-absorbing factors

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Given dramatic developments in recent months triggered by Russia's invasion of Ukraine in late February 2022, this brief study constitutes an update of the authors' article "European banks in Russia: developments and perspectives from 2017 through the COVID-19 pandemic (2020/2021)" published in Focus on European Economic Integration Q3/21 (Barisitz and Deswel, 2021). This update covers the period from 2021 to October 2022. We appear to be witnessing a decisive change, and the war and sanctions have rendered European banks' activity in Russia – which remained resilient and profitable in the past few years – considerably more difficult and brought material financial and reputational risks. After a snapshot of developments in the macroeconomic environment and overall Russian banking sector (section 1), the study focuses on recent experiences of the three large European banks in Russia (Raiffeisenbank, Rosbank/Société Générale and UniCredit Bank; it does not necessarily apply to other European banks that have or had exposure to Russia)[2] with an update in light of the war and new sanctions (section 2). Conclusions (section 3) on current risks and shock-absorbing factors and an outlook (section 4) wrap up the study.

1 Developments in the macroeconomic environment and overall banking sector

1.1 From strong post-COVID recovery in 2021 to pronounced recession triggered by war and sanctions in 2022

The oil price recovery from its pandemic-related low in spring 2020 has given a fillip to Russia's economy throughout the last two years. 2021 GDP growth of 4.7% by far offset the COVID-triggered shrinkage of 2020 (−2.7%). Brisk 2021 growth was driven by private consumption and fixed investment. The average Urals oil price rose by almost two thirds to USD 69 per barrel in 2021 against the previous year, and further rose by about 22% in the period from January to September 2022 (to USD 81, year on year). Rising oil prices were driven by the global economic recovery, the OPEC+ agreement and, from early 2022, escalating geopolitical tensions in Eastern Europe. The Russian unemployment rate (ILO methodology) declined to 3.9% in August 2022 – the lowest post-Soviet level to date.

Russia's invasion of Ukraine (from February 24, 2022) and the unprecedented waves of Western sanctions[3] that ensued profoundly changed the playing field. Punitive measures include the freezing of almost half (about USD 300 billion) of the Bank of Russia's international reserves (of USD 630 billion in late February) – the part placed in Western countries' jurisdictions – a unique step so far.[4]

[2] *More precisely, as in the abovementioned previous study, we focus on the three EU-owned banks qualifying as significant institutions in the Russian market (until May 2022, when one was sold to a domestic investor). For readability purposes, the three credit institutions named above are hereafter referred to as "EU-owned significant banks." There are no other foreign-owned significant banks in the country.*

[3] *In our paper, "Western" generally refers to the EU and the G7 (EU member countries France, Germany and Italy as well as the United States, the United Kingdom, Canada and Japan).*

[4] *Given that Russian (Minister of Finance Siluanov) and other sources (e.g. Véron and Kirschenbaum, 2022) argue that frozen CBR reserves total about USD 300 billion, the remainder of these reserves, can therefore be considered unfrozen.*

Moreover, the assets of a number of Russian banks, including the largest, Sberbank,[5] were frozen and/or banks were excluded from the international financial messaging service SWIFT.[6] Additional export controls were imposed, on top of existing controls on high-tech products and aircraft parts and components. G7 countries unilaterally stripped Russia of its most favored nation status in trade with them. The US furthermore issued an embargo on purchases of oil, gas and gold, and the EU on purchases of coal from Russia; in June, the EU decided to ban all oil imports from Russia delivered by tankers (the majority of EU oil imports), but only from late 2022. A number of renowned Western firms have already withdrawn or curtailed their activities in the country.[7] Russia has responded with selective punitive countermeasures (e.g. cessation of gas exports to EU members that refuse to comply with Russia's demand to pay for gas in ruble, followed in September by near-total suspension of gas deliveries to the EU).

On February 28, in order to prevent monetary and financial destabilization, the Bank of Russia (CBR) more than doubled its key rate (policy rate) from 9.5% to 20.0%, following four previous raises over six months that had added up to three percentage points. Exporters were instructed to exchange 80% of their forex proceeds into ruble, and some other capital controls were established (e.g. restrictions on retail forex purchases, on withdrawals from forex-denominated accounts and on capital or dividend transfers abroad).[8] The CBR moreover intervened with the unfrozen part of its reserves and reportedly spent USD 34 billion (Le Monde, 2022a) to support the ruble. Thanks also to asset valuation changes, this unfrozen part shrunk to USD 252 billion (about 14% of GDP) as of mid-November. The Moscow Stock Exchange was closed for a couple of weeks, then reopened in late March, although a "temporary" ban was imposed on foreign firms and nonresidents selling Russian assets and repatriating the proceeds. A broad sell-off resumed when the market reopened with a sustained downward trend. The ruble – no longer fully convertible – initially lost almost half of its value against the US dollar and the euro from mid-February, but fully recouped its losses

[5] *Altogether, the assets of credit institutions accounting for about three quarters of total banking sector assets were frozen. Ten banks (including seven of the ten largest, see table 3) were excluded from SWIFT, namely Sberbank, Vneshtorgbank (VTB), Rosselkhozbank (Russian Agricultural Bank), Moskovsky kreditny bank (Credit Bank of Moscow), Bank Otkrytie, Sovcombank, Promsvyazbank, Novikombank, Bank Rossiya, Vneshekonombank (VEB). These ten banks' assets exceed 60% of total sector assets (Allinger et al., 2022; p. 57; Deuber and Gadeev, 2022).*

[6] *While the banning of Sberbank and some other Russian banks from SWIFT had a smaller impact on the domestic Russian market – as explained in subsection 1.2 – these new measures contributed to a run on customer deposits at Sberbank's foreign subsidiaries. In early May, its Austrian-based European business (Sberbank Europe) that operated 187 branches across Central Europe with 770,000 customers (0.8% of the total number of Sberbank's customers) was put into orderly liquidation – the first credit institution to fail following the sanctions on Russia (Financial Times, 2022a) and an efficiently managed cross-border resolution under the Single Resolution Mechanism (SRM). VTB Bank Europe, the second bank to fail under sanctions, was also a subsidiary outside Russia (Wiener Zeitung, 2022) and wound down.*

[7] *Many of the firms that withdrew from Russia appear however to have secured contractual return options (Die Welt, 2022).*

[8] *To be more precise with respect to the retail forex sector: retail purchases of forex cash in banks were prohibited in early March and a limit of the equivalent of USD 10,000 was established for withdrawals from forex accounts, while larger amounts can be withdrawn in ruble at the exchange rate of the day of the withdrawal. The ban on cash forex purchases was loosened in late May in the sense that banks can sell dollar or euro that they have received since April 9.*

by mid-April, and as of early November, was even 15% to 20% more expensive than prior to the invasion. This is largely due to a combination of still very high levels of energy prices and revenues (even after generous discounts), the authorities' remaining capital controls (even after some easing), the impact of Western trade sanctions mostly cutting into Russian imports, and the Russian gas-for-ruble scheme imposed on EU importers.[9]

CPI inflation (year on year), pushed by strong domestic demand and structural bottlenecks, grew from 5% to 6% in early 2021 to 9.2% at end-February 2022. Post-invasion, it rapidly accelerated to 17.8% at end-April (the highest level in the last 20 years), before easing to 12.6% (end-October). The sharp rise in March-April was largely due to a convergence of temporary factors (the initial ruble plunge, consumers panic-buying food and durables, and a spike in households' inflation expectations) and longer-lasting factors (sanctions- and uncertainty-driven supply chain disruptions) (Ekonomicheskaya Ekspertnaya Gruppa, 2022a; pp. 5, 6, 28). Once temporary factors, inflation dynamics and inflation expectations had weakened or were weakening, the CBR successively cut back its key rate to 17% in early April, 14% in early May, 11% in late May, 9.5% in mid-June, 8% in late July and 7.5% in mid-September. The decline of inflationary pressure and the restabilization of the ruble persuaded the authorities, in late May 2022, to cut the share of exporters' mandatory exchange of forex proceeds from 80% to 50% and, in mid-June, to abolish the mandatory exchange rule.[10]

According to the CBR, the Russian economy has entered a phase of far-reaching "structural adjustment" toward more self-reliance and less dependence on Western imports, which will also modify the domestic price structure and put upward pressure on the prices of certain products (Bank Rossii (ed.), 2022a). Notwithstanding gathering economic difficulties, GDP continued to expand by 3.5% in the first quarter of 2022 (year on year), driven largely by consumption, fixed investment and exports. Yet in the second and third quarters, growth turned strongly negative to −4.1% and −4.0%, respectively (year on year), producing an overall economic contraction of 1.8% in the period from January to September (as against the same period of the previous year).

In 2021, the general government budget again produced a surplus (of 0.7% of GDP), after deficit spending in the 2020 recession. Buoyed by very high oil prices, fiscal surpluses continued in the first half of 2022, but turned into hefty monthly deficits in July and August, followed by a smaller shortfall in September, yielding only a very modest surplus (about 0.1% of pro rata GDP) in the period from January to September. The most recent fiscal deterioration was due to a combination of ruble appreciation (against USD-denominated oil sales), declining import tax revenues and boosted spending. The assets of the National Wealth Fund (NWF) were slightly larger at end-October 2022 (USD 184.8 billion or about 8% of GDP) than at the beginning of the year.[11] In reaction to the sanctions, the authorities announced increased social assistance payments, pension adjustments, tax breaks and financial support for enterprises. That said, a substantial anticyclical fiscal stimulus

[9] *For a more precise discussion of the factors influencing the ruble's exchange rate post-invasion see Itskhoki and Mukhin (2022).*

[10] *Since then, a government commission has decided amounts of mandatory exchange.*

[11] *69% of these assets, or USD 127.9 billion, are reported to be liquid assets on accounts of the CBR.*

Table 1

Russia: selected macroeconomic indicators

	2019	2020	2021	H1 22	2022[6]
	%				
Real GDP growth (year on year)	2.2	–2.7	4.7	–0.5	–3.4
Inflation (CPI, end of period, year on year)	3.0	4.9	8.4	15.9	..
Unemployment rate (ILO definition, average)	4.6	5.8	4.8	June: 3.9	4.2[5]
Budget balance (general government, % of GDP)	1.9	–4.0	0.8	4.1	–2.0[5]
National Wealth Fund[1] (end of period, % of GDP)	6.9	11.7	10.4	11.8	..
General government gross debt (end of period, % of GDP)	12.4	17.6	16.0	13.3	13.0[5]
Current account balance (% of GDP)	3.9	2.4	6.9	16.1	13.0[5]
Net private capital flows (% of GDP)	–1.6	–3.1	–4.6	..	..
Gross external debt (end of period, % of GDP)	29.0	29.2	28.4	19.7	19.0[5]
Gross international reserves (including gold, end of period, % of GDP)	32.6	38.2	35.5	15.0[3] / 31.9[4]	..
CBR key rate[2] (end of period)	6.25	4.25	8.5	9.5	..

Source: Rosstat, Bank of Russia, Ministry of Finance.

[1] *The predominant part of this fund is also included in Russia's gross international reserves.*
[2] *The Russian central bank's one-week-repo rate.*
[3] *Remaining accessible reserves after Western countries froze large portions of these reserves located in their jurisdictions (ca. USD 300 billion).*
[4] *Total gross international reserves, including frozen portions.*
[5] *wiiw forecast, October 2022.*
[6] *IMF October forecast.*

is reportedly not planned. The oil price rise contributed to boosting the country's current account surplus to 6.9% of GDP in 2021 and further to a record 16% of (pro rata) GDP in the first half of 2022. Yet theses surpluses were all but offset by net private capital outflows. Russia's gross foreign debt shrunk slightly in the first six months of 2022 and came to 26.6% of GDP at end-June. Despite partial freezing of reserves, continuous substantial inflows of oil and gas proceeds in the first half of 2022 contributed to maintaining Russia's ability to pay. Notwithstanding the authorities' ability and willingness to pay, Russia defaulted on its foreign debt in June (for more details, see section 3).

1.2 Banks continued to drive growth until early 2022 but now face major impacts from economic downswing

Apart from the oil price, *banking activity,* particularly retail lending, was one of the driving forces of Russia's post-COVID economic recovery in 2021 and the first months of 2022. While available data show a substantial weakening of the economy and bank lending and less so of deposit-taking from March 2022, a number of key macroprudential data – including growth in nonperforming loans (NPLs), forex ratios, external debt ratios, profitability, capital adequacy and loan loss provisions – have not been released since end-January 2022. This of course makes it more difficult to assess the impact of the war and sanctions on banking risks. Moreover, regulatory lenience regarding the measurement of banks' assets and provisioning, which had been lifted in mid-2021 following the weakening of the pandemic, was reinstated in late February 2022 as a crisis-response measure.

In any case, as table 2 shows, banking activity continued its expansion from late 2020 through late February 2022. Loans to enterprises expanded at rates of 3% to 5%, and growth rates of loans to households increased from 8% (end-2020) to 13% to 14% (early 2022) (in real terms and exchange rate-adjusted). Accelerating retail

lending rates were driven by subsidized[12] mortgage loans (+16% to 17% in early 2022), that made up almost half of total retail credit, and by (partly unsecured) consumer loans (+10% to 11% in early 2022). Robust credit expansion contributed to a decline of the NPL ratio from 9% (narrow definition) or 17% (broader definition)[13] at end-2020 to 7% and 15%, respectively, in early 2022. Loan loss provisions remained slightly above the narrow NPL level. Notwithstanding the slide of the ruble, which accelerated from January 2022 before reversing in late March to April, forex loans' share in total loans remained relatively low (at 16% in early 2022, also on account of the long-standing ban of forex lending to households). Low real interest rates and growing attractiveness of alternative investments in the Russian stock market during most of the observation period (end-2020 to end-September 2022) contributed to the erosion of household deposits (in real terms and exchange rate-adjusted), while enterprise deposits continued to expand and have outsized retail deposits since mid-2021. Banks have remained net external creditors.

After relatively modest profitability during the pandemic with a return on equity (ROE) of 15.7% at end-2020, the sector's ROE exceeded pre-pandemic levels in 2021 (end of year: 21.1%) before easing in early 2022 (end-January: 20.5%). The capital adequacy of the sector, which is dominated by large state-owned banks,[14] remained at about 12% to 12.5% through most of the observation period, before weakening slightly in early 2022 (end-January: 11.8%). As mentioned earlier, the CBR unfortunately discontinued publication of certain important prudential indicators in end-February 2022, including those just mentioned (see also table 2).

The latest available data for banks' credit and deposit dynamics (in real terms and exchange rate-adjusted), for March to September 2022, indicate an abrupt stoppage or reversal of growth, as shown in table 2 and in chart 1. According to the CBR, the sanctions-triggered outflow of households' funds in late February to early March came to RUB 2.4 trillion or 7% to 8% of total retail deposits (Bank Rossii (ed.), 2022b). Looking at month-to-month data, the more than doubling of the key rate at end-February (to 20%) triggered increased credit and deposit rates in March, sharply reducing credit demand, particularly from households, while bringing about a return flow of ruble retail deposits which fully compensated for the outflow by end-April. The return flow was also helped by the ruble's recovery from late March. Outflows of forex deposits were reined in in March by the abovementioned regulatory means. Extra liquidity was also provided to credit institutions.

While retail deposits have since stabilized overall, confidence has remained fragile. Heightened uncertainty contributed to a substantial shift from long-term

[12] *Mortgage credit is supported by a preferential state program providing interest rate subsidies to a wide range of households. It was originally to expire in July 2021, but was extended until end-2022.*

[13] *The narrow definition of NPLs refers to the share of problem and loss loans in total loans, whereas the broad definition of NPLs encompasses the share of doubtful, problem and loss loans in total loans (according to CBR regulation no. 254). For further details see footnotes 3 and 4 in table 3 and Barisitz (2019; pp. 64, 70).*

[14] *As of end-November 2021, state-owned banks accounted for about two-thirds of the sector's total assets. As table 3 shows, the three largest credit institutions were state-owned (Sberbank: 32.2% of total assets, VTB Bank: 16.6%, Gazprombank: 7.1%), followed by the largest private bank (Alfa-Bank: 4.6%), and another state-owned bank (Rosselkhozbank: 3.4%). The three largest EU-owned banks in Russia (Raiffeisenbank, Rosbank/Société Générale and UniCredit Bank) together made up about 3.6% of total assets and occupied, respectively, ranks 10, 11 and 12.*

Table 2

Russia: recent banking sector data (2020–2022)

	End-2020	Mid-2021	End-2021	End-Jan. 2022	End-Mar. 2022[9]	End-June 2022	End-Sep. 2022
Credit risk							
Loans to enterprises[1] (RUB trillion)	44.76	48.14	52.65	53.22	55.37	50.09	54.23
- real annual growth, exchange rate-adjusted (%)	4.8	4.4	3.1	3.0	–3.1	–6.0	–1.6
Loans to households[2] (RUB trillion)	20.04	22.76	25.07	25.31	25.76	25.57	26.51
- real annual growth, exchange rate-adjusted, %	8.2	14.4	13.7	13.5	3.9	–2.9	–3.1
Mortgage loans (real annual growth, exchange rate-adjusted, %)	15.3	20.8	16.6	16.5	8.7	1.6	2.1
Share of mortgage loans in total household loans (%)	47.5	47.6	47.9	48.0	49.3	49.8	..
Consumer loans (real annual growth, exchange rate-adjusted, %)	3.7	9.9	10.8	10.6	–0.6	–7.1	–7.7
Share of consumer loans in total household loans (%)	48.4	46.8	46.5	46.4	45.3	44.9	..
Loans to state structures (RUB trillion)	0.81	0.62	0.46	0.41	..	..	..
NPL ratio (share in total loans, %, narrow definition)[3]	9.0	8.4	7.1	7.1	..	..	..
NPL ratio (share in total loans, %, broader definition)[4]	17.0	16.2	15.1	15.1	..	..	..
Market and exchange rate risk							
Forex loans (share in total loans, %)	17.9	15.8	15.7	16.2	..	..	..
Forex deposits (share in total deposits, %)	26.1	24.2	23.9	25.7	..	..	..
Liquidity risk							
Deposits of enterprises[5] (RUB trillion)	32.65	33.41	38.29	39.54	40.63	36.65	40.81
- real annual growth, exchange rate-adjusted (%)	10.5	9.1	8.9	9.9	1.5	2.6	9.6
Deposits of households[6] (RUB trillion)	32.83	32.38	34.70	34.20	33.27	32.94	33.14
- real annual growth, exchange rate-adjusted (%)	–0.7	–3.4	–2.5	–2.4	–12.9	–8.5	–8.8
Government deposits (RUB trillion)	3.99	8.26	6.26	6.55	..	..	..
Loan-to-deposit ratio (%)	94.4	96.6	98.6	98.3	..	..	..
Loan-to-deposit ratio (enterprises and households, %)	99.0	107.8	106.5	106.5	109.8	108.7	109.2
Banks' external assets[7] (share in total assets, %)	9.5	8.8	8.1	8.6	..	..	..
Banks' external liabilities[8] (share in total liabilities, %)	3.1	3.1	3.1	3.2	..	..	..
Profitability							
Return on assets (ROA, %)	1.7	2.1	2.1	2.1	..	..	..
Return on equity (ROE, %)	15.7	20.4	21.1	20.5	..	..	..
Shock-absorbing factors							
Capital adequacy ratio (capital to risk-weighted assets, %)	12.5	12.6	12.3	11.8	..	..	..
Tier 1 capital ratio (%)	9.7	10.3	9.6	9.2	..	..	..
Loan loss provisions (relative to total loans)	9.1	8.7	7.8	7.8	..	..	..
Memorandum items							
Total banking sector assets (% of GDP)	96.7	94.4	92.0	..	92.1	..	..
Total number of operating credit institutions	406	378	370	368	365	363	362

Source: Bank of Russia, in particular: various issues of "O razvitii bankovskogo sektora Rossiskoy Federatsii," "Statisticheskie pokazateli bankovskogo sektora Rossiskoy Federatsii," authors' own calculations.

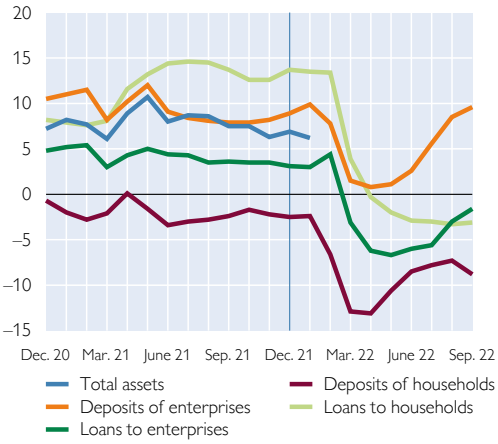
[1] *Corporate loans granted to nonfinancial organizations, individual entrepreneurs and financial institutions.*
[2] *Loans granted to individuals.*
[3] *Share of problem loans (category IV) and loss loans (category V) in total loans (according to CBR regulation no. 254).*
[4] *Share of doubtful (category III), problem (category IV) and loss loans (category V) in total loans (according to CBR regulation no. 254).*
[5] *Funds of corporate customers (nonfinancial organizations, individual entrepreneurs and financial institutions).*
[6] *Funds (deposits) of individuals.*
[7] *Funds (including correspondent accounts with banks and securities acquired) placed with nonresidents.*
[8] *Funds raised from nonresidents (including deposits of legal entities and individuals).*
[9] *From end-February 2022, the CBR has not published some important prudential indicators, like the NPL ratio, share of forex loans, banks' external assets, profitability, capital adequacy, loan loss provisions.*

to short-term household deposits in the spring of 2022. Some deposit flows from sanctioned (SWIFT-excluded) to unsanctioned banks, including EU-owned significant banks, have also been registered and undermine the lending capacity of sanctioned banks (Litova, 2022). That said, oil price rise-triggered growth of government revenues reportedly led to a strong increase in public sector deposits in March (BOFIT Weekly, 2022a). The move to short-term deposits was mostly reversed over the summer. On the other hand, the badly organized partial

Chart 1

Growth rates of banking sector assets, deposits and loans

Real year-on-year growth in % (exchange rate-adjusted)



Source: Bank of Russia.

mobilization in September to October reportedly triggered deposit withdrawals of around RUB 500 billion (about 1.5% of total retail deposits) before the situation calmed down somewhat in late October/early November. Lending in foreign currencies (notably in US dollar and euro) has declined in recent months and some banks have converted existing forex loans to ruble loans (Ekonomika i Zhizn, 2022; p. 4). The share of forex deposits in total deposits reportedly declined from about a quarter before the war to 12% at end-August 2022 (BOFIT Weekly, 2022b). Overall, on a year-on-year basis, by end-September the growth of loans to enterprises (−2%) as well as to households (−3%) was negative (in real terms and exchange rate-adjusted),[15] while enterprise deposits continued to expand (10%, probably helped by inflows from oil and gas firms and/or state-owned firms) (Bank Rossii (ed.), 2022e; p. 2), and retail deposits strongly declined (−9%) (as shown by table 2 and chart 1).

Given at least temporary financial stabilization – notwithstanding persistently high inflation – the gradual reduction of the key rate between March and June back to its pre-war level of 9.5% and, beyond that, to 7.5% in September, may have helped borrowers but was certainly insufficient to restore lending activity, given the Russian economy's unfolding recession. The government, in cooperation with the monetary authority, therefore launched subsidized lending programs focusing on systemically important enterprises, trade corporations, the agroindustrial complex and SMEs, in addition to existing mortgage credit subsidies which were adjusted in late June with interest rate caps lowered from 9% to 7%. Repayment holidays for distressed borrowers, discontinued in mid-2021, were resumed and have met substantial demand.

Nonetheless, the deepening recession and foreign exchange operations[16] are reportedly responsible for Russia's banks chalking up a loss of RUB 1.5 trillion (about USD 25 billion) in the first half of 2022. That represents about 12% of the sector's regulatory capital as of end-2021 or around 1.3% of its total assets, with the sector going into the red for the first time in seven years. Most loss makers are relatively large players: Five of the thirteen systemically important credit institutions reportedly made losses in the first six months (see table 3), while eight were profitable, as were the overwhelming share of medium-sized and small banks (Bank Rossii, 2022f). Some minor recapitalization measures totaling about

[15] *Overall, (subsidized) mortgage loans were the only credit category that still featured a positive (+2.1%) growth rate in September (year on year).*

[16] *The latter included transactions with derivative financial instruments (mostly swaps, forward dealings and futures contracts) against the backdrop of the yo-yoing exchange rate and the exceptional financial instability of early spring 2022. Meanwhile, banks' net interest income in the first half of 2022 only declined 5% (year on year).*

Table 3

List of systemically important credit institutions according to CBR (as of December 1, 2021)

Rank	Bank name	Ownership	Assets	Share of total banking assets
			RUB billion	%
1	Sberbank	State	37,500	31.5
2	VTB Bank (Vneshtorgbank)	State	19,300	16.2
3	Gazprombank	State (indirect)	8,300	7.0
4	Alfa-Bank	Private (domestic)	5,400	4.5
5	Rosselkhozbank (Russian Agricultural Bank)	State	4,000	3.4
6	Moskovsky kreditny bank (Credit Bank of Moscow)	State	3,400	2.9
7	Bank Otkrytie	State	3,100	2.6
8	Sovcombank	Private (domestic)	1,800	1.5
9	Promsvyazbank	State	n/a	n/a
10	Raiffeisenbank	Private (foreign)	1,500	1.3
11	Rosbank (Société Générale)	Private (foreign)	1,500	1.3
12	UniCredit Bank	Private (foreign)	1,200	1.0
13	Tinkoff Bank	Private (domestic)	1,100	0.9

Source: Bank of Russia (2022; p. 37).

USD 3.5 billion, relating to state-owned banks such as Gazprombank and VEB (Vneshekonombank, a development bank), and financed by the NWF, have already been carried out in recent months.

In 2021 and early 2022, some important and promising bank privatization efforts were made, which were unfortunately only partly successful. After nationalizing and restructuring the Aziatsko-Tikhookeansky Bank (ATB, Asian-Pacific Bank), a medium-sized credit outfit, through the CBR-owned Banking Sector Consolidation Asset Management Company, the ATB was successfully sold to a Kazakh strategic investor for USD 180 million in fall 2021. The next step should have been the sale of nationalized and restructured Bank Otkrytie,[17] the country's seventh-largest credit institution in terms of assets in late 2021 (see table 3). Privatization negotiations with a prominent Italian investor had reached an advanced stage in January 2022, when deepening geopolitical tensions, Russia's attack on Ukraine and Western sanctions imposed on Otkrytie itself forced the CBR to put off the sale.[18]

Furthermore, two recent institutional adjustments are highly relevant for banks: after a first wave of Western sanctions were imposed on Russia in the wake of the country's annexation of Crimea in 2014, the CBR developed the SPFS (Systema peredachi finansovykh soobschenii, or System for the Transfer of Financial Messages). By 2018, almost all Russian banks had adopted the transaction system. This helped SPFS take the place of SWIFT for domestic payments of banks excluded by Western sanctions in early 2022. Yet, according to the CBR, SPFS possesses

[17] *For more information on Otkrytie's past turbulences and resolution see Barisitz (2018; pp. 61, 63–64).*

[18] *In late April, the CBR put forward a new plan, not to privatize but to merge Otkrytie with state-owned VTB (Vneshtorgbank, Russia's second-largest bank) and its former subsidiary, RNKB (Rossisky natsionalny kommerchesky bank/Russian National Commercial Bank), which is focused on serving the Crimean peninsula annexed from Ukraine in 2014. The CBR's proposal apparently received the go-ahead from President Putin (Financial Times, 2022b).*

links with 70 foreign banks in only twelve countries, including Belarus, making it an only partial SWIFT replacement for Russian players.[19]

From 2014 to 2017, moreover, the CBR developed the Mir card payment system for electronic fund transfers. The authorities mandated that all state welfare and pension payments be processed through the system by 2018, which boosted the acceptance of Mir cards. As of end-2021, 87% of the Russian population possessed a Mir card, which was the principal means of payment for 42% of people (Teurtrie, 2022; p. 26). When Visa and Mastercard exited Russia under the impact of Western sanctions in 2022, all cards from these international payment systems issued by Russian banks continued to operate for domestic transactions, but cross-border transactions were no longer available. Mir's market share subsequently expanded sharply and there was reportedly little disruption of payments made inside Russia, although Mir's international links are likewise less developed and partly focused on Russian tourist destinations.[20]

2 EU-owned significant banks are fundamentally revising their strategy and activities in the Russian market

The Russian war in Ukraine and Western sanctions strongly increase risk levels for EU-owned significant banks operating in Russia, namely Raiffeisenbank Russia, UniCredit Bank Russia and Rosbank/Société Générale.[21] The prospect of intensifying sanctions risks, shrinking foreign investments and high recessionary pressures means a decisively more challenging environment than anticipated before the war. The war and sanctions undermine the different customer segments of EU-owned significant banks, although risk models may not fully reflect these specific risk factors. The risk-taking capacity of European parent institutions for Russian direct and indirect exposures is also starkly reduced. This situation can nonetheless be partially offset by temporary profitability boosts, such as from net fee and commission income generated by increasing demand for forex-related transactions, from trading-related income or income derived from high deposit inflows in a context of increased demand[22]. EU-owned significant banks have different profitability trajectories in 2022.

[19] *According to Vice-Governor Skorobogatova, the number of SPFS participants grew from 389 companies and banks at end-2021 to 453 at end-May 2022 (about 4% of the total number of participants in SWIFT) (Interviu Olgy Skorobogatovoy agenstvu TASS, 2022).*

[20] *At end-March 2022, the number of Mir and Mir-compliant cards in circulation reportedly exceeded 125 million. Outside Russia, in the spring of 2022 Mir cards were accepted in Armenia, Belarus, Kazakhstan, Kyrgyzstan, Tajikistan, Türkiye, the United Arab Emirates, Uzbekistan and Vietnam (Mironline (ed.), 2022). In July 2022, Iran also decided to join the Mir card system and ATMs in Cuba started to accept Mir cards (Kurier, 2022; Interfax, 2022a). However, following threats of US sanctions in September 2022, some important Turkish, Kazakhstani, Uzbekistani and Vietnamese banks recently suspended operations with Mir cards (Pitel, 2022; Russland Aktuell, 2022).*

[21] *To measure the different components of EU-owned significant banks' exposures in Russia, the most relevant items are local equity, loans (local exposures and via the parent institution), liquidity and funding (including intragroup) and off-balance sheet items (such as derivatives or certain types of guarantees). Banks having a multiple point of entry (MPE) resolution strategy were incentivized to clearly separate local operations from their mother company (e.g. regarding their funding or IT infrastructure), although some interdependencies remain.*

[22] *As an impediment to benchmarking, publication of some of the previously disclosed financial indicators stopped in Russia from February 2022 onward, limiting the possibility of quantitative comparisons in the local market for the different quarters of 2022. For EU-owned significant banks IFRS financial data published on Russian activities is a relevant alternative.*

While their rise remained moderate during the pandemic, impairments of EU-owned significant banks have noticeably increased in the context of the war, reflecting worsening risk levels, especially regarding credit and sanctions risks. In the first half of 2022, Russia-related impairments represent a significant share of overall provisions of parent institutions[23] and deviate from sectoral trends. Impairment policies (and their conservatism) differ between banks and are impacted by management overlays. Asset quality deterioration and asset valuation discounts also generate higher risk-weighted assets requirements (which have tended to double compared to 2021), along with forex- and liquidity-related effects. At the same time, capital considerations have become central in the context of the war. EU-owned significant banks have kept sufficient and adequate capital levels in the recent past, including in 2020 and 2021 and analysis of worst-case scenarios disclosed by EU-owned significant banks reveals that capital impacts are significant but can be absorbed (with assumptions simulating the loss of equity participation, debt, intragroup, cross-border and derivatives exposures, with different degrees of recoverability and off-setting impacts[24]). Additional ECB projections premised on a severe loss of cross-border exposures and local banking activities (including intragroup funding and equity) also confirm the ability of these banks to remain compliant with capital requirements[25] despite such shocks (Mazany and Quagliariello, 2022).

Complying with the successive waves of new strict and rapidly evolving sanctions raises operational constraints for EU-owned significant banks, while the consequences of noncompliance are deterrents (including potential fines and reputational risks).

In retaliation to Western sanctions, Russian countersanctions include new restrictions on foreign assets or on the capacity of foreign players to act on the Russian market (including local capital markets). This approach also raised concerns about nationalization risks (which have the potential to concern EU-owned significant banks but have not materialized so far), confiscation and transfer risk. In a context of high uncertainties and increasing reputational risks (with unprecedented pressure from public opinions and financial markets), some foreign companies, including a wide range of economic actors from retail or industrial players to specialized financial services providers like auditing firms, have adopted "self-sanctioning" and exited the market of their own accord.

In the context of the war, EU-owned significant banks need to reconsider their strategy, contingency and business plans defined in peacetime. Pre-war, they were expected to engage in selective risk-taking to preserve asset quality in the aftermath of the pandemic, embrace cost discipline with restructuring measures, and move forward on digitization with more services. The sharp worsening of risks requires

[23] *Russia-related risks have also triggered a market price correction for the parent institutions of EU-owned significant banks active in Russia and sector-wide. It is notable moreover that, when it comes to exposure levels, these banks represent the most material risk for the European banking sector (compared with less material exposures at parent institution level).*

[24] *Off-setting impacts to capital loss scenarios include the RWA relief coming from lost exposures, RUB appreciation effects and the result of de-risking actions (exposure reduction, portfolio disposals, coverage by collateral). Internal capital generated and not distributed as dividends due to local restrictions provides an additional buffer.*

[25] *More broadly, specific European stress test projections in the form of a vulnerability analysis also confirmed the capacity of euro area banks' capital to resist negative impacts from exposures to vulnerable sectors, worsening macrofinancial conditions and market-related revaluation risks (ECB, 2022; p.74).*

adequate management of the new challenges in close liaison with parent institutions and banking supervision authorities, which have developed a comprehensive framework at the European level to address the impacts of the war and sanctions for banks (Mazany and Quagliariello, 2022).

In the months before the war some EU-owned significant banks considered expanding further into the Russian markets (with reported interest in banking entities or portfolio acquisitions). This approach was completely reversed after the war in Ukraine broke out, at a time when the market valuation of these was also undermined by the war. The three EU-owned banks qualifying as significant institutions in the Russian market initiated different forms of disengagement strategies. Players either implemented or considered exit strategies, echoing the acceleration of withdrawal initiatives observed for less significant European and American institutions still active in Russia. Concrete actions taken include strong restrictions on new lending (up to freezes), de-risking initiatives and a substantial reduction in cross-border activities.

With the most advanced exit strategy, Société Générale announced in May 2022 that it had completed the sale of Rosbank to a local investor for a loss of around EUR 3.2 billion, negatively impacting the Group's profitability but with a limited capital impact of less than 10 basis points. The parent institutions of Raiffeisenbank Russia and UniCredit announced they were reviewing exit options in an ongoing process. In general terms, such options can take different forms, for instance with a wind-down strategy, a sale (to a local or foreign investor, or partially involving local management), or a deconsolidation via a "bad bank" special purpose vehicle, which all have both advantages and disadvantages. In July 2022, Russian officials indicated that, in the current environment, they would block the sale of foreign banks active in Russia and review any disposal plan case-by-case.

A key consideration regarding such disposals is value preservation. EU-owned significant banks in Russia remained fairly profitable in the years before the war, although with various levels of performance and material impact on the Group's risk profile (from low to medium). The higher the share of Russian activities in overall profits or total capital, the more sensitive exit strategies become, especially as uncertainties are very high on the medium-term outlook and the next stages of the conflict. As such, EU-owned significant banks can consider options that would avoid a full write-off of Russian operations. Those remaining active on the Russian market can also have certain competitive advantages compared to local peers (not being directly subject to sanctions and ties with parent companies which have broader access to international markets) and can position themselves as key partners for European investors that have not fully exited the market. However, there is a reputational risk of negative coverage (from the press, rating agencies or investors) and public pressure for not leaving as the country gradually becomes a war economy.

3 Risks and shock-absorbing factors

After projecting GDP drops of 10% to 15% in spring, many institutions have considerably scaled back their forecasts of the depth of the Russian recession in 2022 while now expecting the recession itself to be more protracted and substantially affect 2023. The IMF adjusted its GDP forecast for Russia for 2022 from −8.5% in March to −6% in July and −3.4% in October; at the same time it

changed its 2023 forecast from −2.3% to −3.5% and (back) to −2.3%. The Vienna Institute for International Economic Studies (wiiw) expects a recession of −3.5% in 2022, followed by a further contraction of −3% in 2023.

These changes are largely due to the authorities' unexpectedly successful (at least temporary) stabilization of the financial sector and the ruble in the weeks following the major initial onslaught of the sanctions in late February and early March 2022. Moreover, the authorities also front-loaded a drive to diversify their energy exports away from Western countries in April to June and made some headway (as mentioned above), although the decisive test will come in late 2022, when the EU has resolved to stop 80% to 90% of its oil imports from Russia (except via pipelines). If actually carried out in the coming late fall/winter, this ban will probably have an appreciable impact on the Russian economy. This blow and a possible global recession or stagnation, perhaps exacerbated by a further retaliatory squeeze on remaining Russian gas deliveries to the EU, may explain Russia's likely continued, if milder, recession in 2023.

The key rate, which was high throughout most of spring 2022, cut demand for credit. Moreover, ongoing or completed withdrawal from Russia by many foreign investors dampened credit demand. While the key rate was subsequently reduced beyond even its pre-war level in summer 2022, which should support resumed lending, the sanctions-triggered downswing since April, production disruptions and high uncertainty are having the opposite effect and continue to erode the basis for credit demand.

Credit risk will therefore become more pronounced as the recession further unfolds in late 2022, directly through sanctions-triggered production, sales and revenue disruptions[26] and indirectly through the recessionary impact on borrowers and demand.

For EU-owned significant banks, a credit risk deterioration is likely across segments and regions, as the different components of their credit portfolios are impacted, ranging from domestic retail customers to nonretail counterparties (Russian and international). In parallel, for parent institutions, new regulatory caps regarding the amount of money Russian nationals (nonresidents) can hold as deposits in the European Economic Area may further limit flows with Russian clients. Overall, increasing credit and sanctions risks are grounds for a further increase in loan loss and sanctions-related provisions, depending on the levels already booked proactively at the outset of the war (to anticipate risk at managerial level in Q1 and Q2 2022 as some banks front-loaded material provisions). In turn, this may reduce profits and negatively impact ROE, cost-income ratios and dividend payment capacities. As per available projections, EU-owned significant banks have enough capital to absorb further losses. Nevertheless, the introduction of dividend bans by Russian authorities means that profits made by these banks cannot be taken out of Russia, while war-driven restrictions strongly limit potential support from parent companies in case of difficulties. This situation has the potential to block

[26] *Some of these disruptions have (so far) been marginally softened by Russia's new policy of legalizing "parallel imports" of sanctioned products – via alternate channels, typically retail trade, without permission of trademark owners – in response to sanctions. In the period from mid-May to end-August 2022, for instance, such parallel imports came to about USD 9.4 billion, according to estimates of the Federal Customs Service. In September, industry minister Manturov forecast parallel imports to top USD 20 billion at end-2022 (RIA Novosti, 2022).*

capital flows abroad in the medium term, and to become a structural factor and a performance differentiation factor with local peers over time.

Regarding interest rate risk, the CBR pointed out, as it announced its September 2022 key rate cut and again confirmed in October, that its cycle of loosening may have come to an end, given the shift in the balance of deflationary and inflationary risks toward the latter and continued high inflationary expectations. Further, the risk remains that Russian producers' search for new suppliers or logistical chains or rising demand for domestic production given restrained import possibilities could push up inflationary pressures. That could trigger an upward key rate correction and, in turn, dampen lending activity.

Exchange rate risk is currently less of a problem, given that energy prices are high and the ruble is, in any case, no longer fully convertible. But exchange rate risk, including possibly heightened volatility, might become a problem in 2023, following the substantial expected further tightening of the EU's oil purchase restrictions from late 2022 (as mentioned above). Likely weaker overall Russian oil exports as a result,[27] coupled with a degree of recovery of imports (after a reorganization of some supply chains), could put pressure on the ruble in 2023. This might exceed the "corrective" depreciation that some government or industrial groups would favor anyway to ease pressures on the budget and facilitate import substitution (Bank Rossii, 2022c).

For EU-owned significant banks and parent institutions, foreign currency risks remain a key risk requiring adequate management using hedging strategies which are increasingly expensive and complex given possible ruble volatility or increased scarcity of hedging products. The overall risk situation is also heightened by the perspective of second-order effects on top of direct impacts. These banks can have exposures to international players dependent on activities with Russia and Ukraine (in terms of revenues, energy or supply chain) or to sectors which are particularly vulnerable in the context of the war and in the aftermath of the pandemic. From a credit risk perspective, certain counterparties are likely to be negatively impacted by the deteriorating macro environment with slower growth, high prices (especially energy prices), higher debt yields and a loss of confidence among economic actors (reducing consumption or investment levels). Potential contagion effects related to global markets are to be anticipated. Market risk considerations come alongside higher funding costs or enhanced volatility for certain market products like commodity derivatives. Climate and environmental risk are also becoming more critical in bank loan books given disruptions in the energy sector, the search for short-term solutions to energy shortages (which can increase fossil fuels production and consumption) and the shift toward a "war economy" in Russia and Ukraine with a lesser focus on environmental footprint.

Concerning shock-absorbing factors, Russian banks went into the current crisis with a capital adequacy ratio of 11.8% at end-January 2022, which is relatively

[27] *Meanwhile, in recent months Russia has been striving to swiftly redirect some of its oil exports to non-Western destinations, including China, India and Türkiye. For example, in May 2022, Russia displaced Saudi Arabia as the top crude oil supplier to China, and Russia advanced to become India's second-largest oil supplier (following Iraq) (Murtaugh and Chakraborty, 2022). Whereas in February 2022, the EU and Britain still accounted for 53% of Russia's total crude oil deliveries, this share fell to 21% in October, while emerging, primarily Asian, countries' share (including China, India, Türkiye and others) expanded from 30% in February to 76% in October. Total Russian monthly oil exports increased from 3.0 to 3.3 million barrels per day in this period (Le Monde, 2022b).*

weak compared to other economies of Central, Eastern and Southeastern Europe (CESEE). That said, as table 3 shows, the largest players are state-owned and therefore possess an implicit state guarantee. Loan loss provisions in early 2022 covered NPLs as narrowly defined. The overall loan-to-deposit ratio was quite moderate at 98% (as of end-January 2022)[28]. At end-2021, the regulatory capital of the banking sector came to about RUB 12.6 trillion (or approximately USD 165 billion, capital adequacy ratio: 12.3% – see table 3). Moreover, according to the CBR, banks' accumulated capital cushions, taking into account various buffers, including macroprudential ones, came to around RUB 7 trillion (USD 90 billion to USD 95 billion), or more than half of overall capital (Bank Rossii (ed.), 2022b). Given the loss figures of the first half of 2022 (RUB 1.5 trillion) and a lack of more detailed information, a simplified argument could be made that more than one-fifth of that capital cushion had evaporated by mid-2022, and erosion is continuing. Overall, the CBR, in the second quarter, perceived the sector's loss of about half of its capital by end-2022 under the impact of the unfolding recession and sanctions as a "likely scenario," which however "does not raise concern" given that "there is a margin of safety" and that the authorities plan to "support lenders if necessary" (Interfax, 2022b; Bank Rossii, 2022f).[29]

While the capital cushion exceeding the minimum ratio appears sizable, it is distributed unevenly across the sector, and a major crisis like the current downswing will very likely require CBR support measures for at least some players.[30] In late July 2022, the CBR pointed out that restructuring activities showed a substantial number of debtors experiencing repayment difficulties, which pointed to expanding NPLs and provisioning needs which in turn weighed on capital adequacy. In the of summer of 2022, the CBR reportedly carried out a detailed preliminary analysis to study possible recapitalization variants with the government, which would also enhance banks' lending potential (Ekspert, 2022).[31] As of mid-November, the CBR stated that "negative financial results of the banking sector have declined in recent months" – without substantiating, while "the year 2022 as a whole will hardly yield a profit" (TASS, 2022).

Another at least theoretically cushioning factor is credit institutions' net external assets, representing around 5% to 6% of total assets. However, the share of these assets currently inaccessible because of freezes is not clear. Russia's accessible international reserves (those not placed in Western jurisdictions) currently stand at about USD 252 billion or 14% of GDP (see above). These have of course been starkly diminished since the freezing of almost half of the original amount of USD 630 billion in late February. Yet given the high current energy prices, Russia has most recently been able to earn tens of billions of dollars of fresh

[28] *The loan-to-deposit ratio for enterprises and households only (i.e. disregarding the government sector) was 109% at end-September and thus only three percentage points higher than in early 2022 (see table 2).*

[29] *The regulatory minimum capital (own funds) adequacy ratio (N1.0) for credit institutions in Russia is 8.0%, the minimum tier 1 capital ratio (N1.2) is 6.0% (CBR regulation no. 646-P, dated July 4, 2018). It should of course be noted that in the reinstated regime of regulatory forbearance valid from end-February 2022, actual bank compliance with capital ratios is no longer stringently measurable.*

[30] *A European Commission assessment of late June 2022 appeared to be more pessimistic, however, and considered about half of Russia's banks to be in need of recapitalization (information from John Berrigan, EU Commission).*

[31] *As mentioned above, some smaller recapitalization measures of state-owned banks have already been taken.*

revenues[32]. The authorities also stand to benefit from the NWF and its liquid assets of about 6% of GDP at the disposal of the CBR (also see above).

Notwithstanding recent inflows of sizable forex-denominated public proceeds, Russia defaulted on its foreign debt on June 27 (Bloomberg, 2022). This was due to the authorities being rendered technically unable to forward bond repayments to creditors in US dollar due to sanctions. While the consequences of this technical default are not yet clear, punitive measures have already excluded Russian access to Western financing and the country has done without such access for years. In any case, Russia's general government gross debt remains at a very modest level of GDP (16% to 17%) compared to most advanced economies.

The picture is completed by Russia's strong fiscal and current account positions achieved in the first half of 2022. While the current account surplus may reach a record level this year (due to continuing high energy prices and a contraction of imports triggered by sanctions and recession), the deepening economic downturn in the third and fourth quarters will probably push the budget into the red. The Ministry of Finance views a year-end federal budget deficit of up to 2% of GDP as possible.

4 Outlook: banks can cope in the short term, major risks lying ahead

Although faced with severe Western sanctions, Russian authorities and banks can cope in the short term. Yet, major risks are lying ahead and European players are at a crossroads. The authorities still appear financially prepared to support the economy and banks through the pronounced recession in 2022 and a probable further contraction in 2023. This will apply even if banks lose up to 50% of their capital due to the crisis – something reported as likely by the CBR a couple of months ago. That said, still ample government financial means will likely soon be dented by the impact of the imminent EU oil embargo. What is more, oil and gas money cannot help circumvent Western technology or banking sanctions. In any case, Sberbank felt compelled in mid-May to sell off large parts of its "ecosystem," into which it had invested major resources over years, to a tiny little-known company in order to protect its digital services from US sanctions.[33] With this company, Sberbank intends to "maintain partner-like relations in the realization of marketing and operational activities" (Korolev et al., 2022). This may be just one example of economic costs and losses some leading Russian banks, firms and entrepreneurs may have to sustain from now on.

The outlook for the Russian banking sector and EU-owned significant banks will be sensitive to the next phases of the Russia-Ukraine conflict. A consolidation tendency around larger state-supported players appears likely. Available projections show a capacity for EU-owned significant banks to resist further shocks, especially from a capital perspective. Escalation scenarios could nonetheless increase economic damage, vulnerabilities and second-order effects generated by the war and sanctions. Additional cuts to Russian energy flows to Europe are a key risk, and their financial consequences would depend on the price and availability of

[32] *Federal oil and gas revenues from late February to end-September 2022 exceeded USD 95 billion (Ekonomicheskaya Ekspertnaya Gruppa, 2022c; pp. 23–24).*

[33] *The company's name is "Novye vozmozhnosti." It was established in March 2022, information on its CEO and shareholders is classified under Russian law (see also Allinger et al., 2022; p. 58).*

alternatives. At the same time, a scenario with a sudden or step-by-step easing of tensions would have positive impacts, although it appears less likely at the moment. Beyond the benefits of peace, it would reduce recession risk, facilitate post-pandemic recovery and offer the perspective of certain sanctions being lifted over time. The probability of these different options will have to be included in the new strategies defined by the remaining EU-owned significant banks, which have disclosed that they are considering all options, including exiting the Russian market.

Overall, Russia's war in Ukraine represents a paradigm shift given a large share of previously identified threats (in the pre-war period) that materialized in a short period of time, while emerging risks like cyber risk and to a certain extent climate and environmental risks have intensified. Moreover, the war in Ukraine and related Western sanctions do not only have regional consequences (such as impacting the capacity of EU-owned significant banks to operate in their local environment and leaving the banking sector exposed to second-order effects): they also darken the outlook for the global economy with slowing growth, increasing inflationary pressures and disrupted trade flows (including in key sectors like energy, commodities and technology). A further decoupling between Europe and Russia, which seems to be looking to build closer economic and energy ties with alternative partners in Asia and elsewhere, could make the war a turning point with wide-ranging economic, financial and geopolitical consequences in the medium term.

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Event wrap-ups

27th Global Economy Lecture

Sergei Guriev on "The political economy of Putin's war in Ukraine"

Compiled by Maria Silgoner[1]

On January 11, 2023, the Oesterreichische Nationalbank (OeNB) and The Vienna Institute for International Economic Studies (wiiw) hosted the 27th Global Economy Lecture[2], which was delivered by *Sergei Guriev*, Professor of Economics and Provost at Sciences Po in Paris and former chief economist of the European Bank for Reconstruction and Development (EBRD). From 2004 to 2013, Guriev was rector of the New Economic School in Moscow. He has published numerous articles on contract theory, corporate governance, political economics and labor mobility. Together with Daniel Treisman, he recently published the book "Spin Dictators" (Princeton University Press, 2022).

In his introductory remarks, OeNB Governor *Robert Holzmann* praised Sergei Guriev as one of the most renowned experts on the Russian economy. Being a Russian, Guriev was able to observe and analyze his native country from the inside until he had to emigrate in 2013. He is a critical and committed scientist, deciphering the complex developments in Russia and other authoritarian political regimes. Governor Holzmann emphasized the tremendous dimension of suffering and destruction the war in Ukraine has brought about but also raised the question of the war's global impact and the risk that the war and the related sanctions might result in a bipolar world.

Professor Guriev started his lecture by pointing out that modern autocrats want to be popular. Instead of scaring people into obedience, these autocrats – for whom Guriev coined the term "spin dictators" – manipulate information to project an image of competent leadership. A leader's popularity, in turn, is highly correlated with economic performance. Turning to Russia, Guriev explained that President Putin enjoyed a decade of approval rates of about 80% (based on data provided by the Levada Center) before Russia's GDP growth started to decline in 2010/11, causing Putin's popularity to wane. This decline in popularity, in turn, prepared the ground for Russia's invasion of Crimea, which can be seen as Putin's attempt to regain popularity. Indeed, Putin's approval rates recovered thereafter but decreased again when he decided to raise the retirement age in Russia and had to face adverse media campaigns. Russia's invasion of Ukraine must thus also be seen against the background of Putin's historically low popularity.

Guriev then elaborated in more detail on pre-war economic conditions in Russia. The Russian economy had faced years of slow and below-potential economic growth, falling household incomes, large capital outflows, and low and stagnating investment ratios. The Russian growth model was based on widespread corruption that led the country into a middle-income trap, causing it to lag behind the other BRICS countries. At the same time, robust macroeconomic fundamentals – a balanced budget, low sovereign debt (20% of GDP), large currency reserves (40% of GDP), a sovereign wealth fund of 12% of GDP and a sound monetary framework

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[2] *The Global Economy Lecture is an annual event organized jointly by the OeNB and The Vienna Institute for International Economic Studies (wiiw).*

characterized by a move toward flexible exchange rates and inflation targeting – gave Putin a false sense of security. In response to the COVID-19 pandemic, he opted for fiscal austerity rather than economic stimulus in order to remain independent of financial markets. As his approval rates plummeted, Putin responded by media repression, leaving the "spin dictator" track.

As Guriev put it, Putin's major mistake ahead of the invasion of Ukraine was to overestimate Russia's own financial and military strength while underestimating the courage of Ukraine, the unity of the Western world and the power of sanctions. Several studies have found that the sanctions adopted after the invasion of Crimea had only a minor impact on trade or GDP. By contrast, the sanctions adopted in response to the war against Ukraine went much farther, comprising the switching-off of SWIFT, the freezing of currency reserves, comprehensive export controls (also for central items such as microchips, aircraft and software) and – starting from December 2022 – oil sanctions. These steps were reinforced by a voluntary trade boycott by more than 1,200 Western and several non-Western companies.

As a result, Russia's trade with the US and the EU declined by at least one-third. Russian GDP, which – before the invasion – was forecast to grow by at least 3% in 2022, declined by 3%. This recession was much milder than what had been forecast for the entire year in mid-2022 (–8%). However, in times of war, GDP is not a good measure of economic activity as it includes the production of ammunition. Other indicators suggest that Russia's economic performance is much worse: The country's retail turnover is 10% lower than one year ago, household incomes declined by 10%, and non-oil taxes are 9% lower than in the previous year.

That the economic slump did not get any worse than that is the merit of a very competent central bank. Still, the Russian ruble is much weaker than could have been expected on the basis of current oil prices. Although additional revenues from high oil prices compensated some of the losses from frozen reserves, Russia's fiscal accounts turned from a surplus into an annualized deficit of about 2.5% of GDP by the end of 2022. This forced Putin to take unpopular decisions, such as cutting pension spending or declaring a partial mobilization instead of relying on mercenary soldiers. However, it has required huge repression efforts to hold back protests.

Over the next few months, Russia will experience a continued recession, fiscal fallouts and ongoing capital flight and brain drain, all with a major adverse growth impact in the long term. According to estimates by the International Monetary Fund (IMF), Russia will see a permanent growth loss of 10 percentage points by 2026 compared to the pre-war potential. Sanctions constrain Putin's military spending and access to technology. But all these restrictions, according to Guriev, will not be enough to stop him right away. Instead, he will complete the shift from spin dictatorship to fear dictatorship, tightening censorship and repression and cleansing Russia of "national traitors."

Coming back to the question Governor Holzmann raised about the war's impact on the global economy, Professor Guriev pointed to global growth damage, the current gas shortages (reminding the audience that large quantities of gas reserves, which currently are at comfortable levels, are still of Russian origin) and the war's contribution to prevailing inflation trends. In his opinion, whether the war will result in a bipolar world will ultimately depend on Putin's success in convincing the global South that the West is a threat.

The Global Economy Lecture was followed by a vivid discussion, with contributions from both the in-person and online audience (more than 300 persons in total). The debate revolved, inter alia, around China's pivotal role as an important buyer of Russian oil. On the other hand, China has so far refrained from supplying military equipment to Russia. The war hurts China as the country's growth and employment depend on the global economy. Whether the likelihood of a Chinese invasion of Taiwan might be influenced by the outcome of this war is unclear. Regarding the reliability of popularity data, Professor Guriev said that polls on political approval do not have a huge bias even in totalitarian regimes but are unreliable in times of repression, when survey participants fear being wiretapped by national security.

When asked how long he thought Russia's war against Ukraine would go on, Sergey Guriev emphasized that a war like this may continue forever, as we can see in Korea, where no peace agreement has ever been reached. Sanctions, the supply of military equipment and financial support certainly tilt the balance of power in favor of Ukraine. But Ukraine will not accept anything less than getting back all its territory plus financial reparations, while Putin would not risk a huge popularity damage by losing this war. Whatever the outcome will be, we should not expect Putin to go back to spin dictatorship anytime soon. Instead, Professor Guriev explained, he will keep repression at high levels.

Conference on European Economic Integration 2022

Economic and monetary policy under wartime conditions – implications for CESEE

Compiled by Antje Hildebrandt[1]

This year's Conference on European Economic Integration (CEEI) was held in November 2022. The annual conference hosted by the Oesterreichische Nationalbank (OeNB) was organized in a time in which 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. The aim of the CEEI 2022 was 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. More than 400 participants from various countries attended the conference in person or online.

OeNB Governor *Robert Holzmann* opened the conference by pointing out that unlike in pre-industrial times, there is little economic rationale for war today. He quoted the German philosopher Immanuel Kant who stated as long ago as the end of the 18th century that "the spirit of trade cannot coexist with war." Austria's chief central banker stressed that military conflicts usually benefit only a few individuals and companies, while inflicting suffering on the vast majority. Pivoting to the current Russian invasion of Ukraine, Governor Holzmann acknowledged that economic sanctions have not left as deep a mark on the aggressor's economy as was largely expected. However, he expressed confidence that sanctions will bite harder in the longer run. Looking at the European economy, even though it has fared better than expected so far in 2022, the Governor cautioned that the economic consequences of the conflict have darkened the short-term economic outlook and pushed up inflation. In contrast, medium- and long-term impacts of the war will depend on future evolvement. However, they might bring opportunities for the European economy e.g. in the form of nearshoring or trade diversion in its favor. Governor Holzmann moved on to stress that while the war has pushed other enormous challenges the human race has been facing, namely the pandemic and climate change, somewhat into the background, they will have to be brought back to the forefront soon. The host of the conference concluded his introductory statement on a positive note. He believes that despite the widespread doom-mongering, there is no compelling reason to be too pessimistic about global developments in future. No matter how improbable it may seem today, it is well possible – and in fact necessary – that the West and (hopefully a new) Russia will find a way to coexist peacefully, while meeting the security needs of both Ukraine and Russia.

In the ensuing keynote lecture, *Graciela L. Kaminsky* from George Washington University compared the current triple crisis in the form of the pandemic, global

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economic crisis and war on European soil with past crisis episodes (particularly) in CESEE. A general stylized observation is that the severity and persistence of past crises tend to be larger in the case of crises which started in the financial sector. Professor Kaminsky sketched out imbalances that had built up in the run-up to the global financial crisis in CESEE. Large current account deficits, external debt and exuberant credit growth fueled by dramatic capital inflows amid falling USD interest rates had created a lot of intrinsic instability and overheating. After the crisis was triggered in the US and spread out across the world, CESEE countries faced partially large exchange rate depreciations and reserve losses. In contrast, the genesis of the current crisis was very different as there were no signs of worrisome economic overheating this time. The current economic malaise was not preceded by massive current account deficits. External debt – even though still partially high – has declined over the last decade. Moreover, there was no credit bonanza prior to the current crisis. While real estate prices did increase, the extent of this was nothing in comparison to the bubble before the global financial crisis of 2008–2009 (GFC). Professor Kaminsky allocated the roots of these crucial differences to the fact that the GFC started out in the financial sector in the US and that the current crisis was thus not heralded by dramatic bonanzas. She concluded her lecture by saying that even though the impact of the crisis is likely to be less severe this time there are still risks that need to be kept closely monitored as we look ahead. In particular, a close eye needs to be kept on rising global economic uncertainty, mounting financial fragilities and sovereign risk especially in Latin America, South Asia and Africa. In the ensuing discussion, participants from the audience remarked that it is crucial to make a distinction between the role of private and public borrowing. In order to safeguard financial stability in the aftermath of the GFC, the public sector had to bail out the private sector thus increasing its indebtedness. While capital controls could help, they also bear the risk of introducing distortions. Another conference participant commented on the first signs of a bust that we are starting to observe. Against this background he was wondering about the odds that deflation rather than inflation will be Europe's main concern in two years' time.

Gerhard Fenz, Head of the OeNB's Business Cycle Analysis Section, chaired session 1 on economic prospects beyond the war. In his introduction, he pointed to the sequence of crises and their combined effects on economic development, the effects of the decoupling of Russia, and the reconstruction of Ukraine as important issues for discussion.

The first speaker in session 1, *Elena Flores Gual*, Deputy Director General, European Commission, highlighted that EU economies were coming out of the COVID-19 crisis when Russia's war against Ukraine started. Some challenges were already present, such as signs of emerging inflation. The war brought about rising commodity prices, further supply chain disruptions and uncertainty. Flores Gual drew attention to risks of economic divergence in the EU due to different exposures to war-related shocks. She emphasized that it was important to get the mix between fiscal and monetary policies right. Fiscal support for high energy prices should be temporary and well-targeted, while excessive distortions in price signals should be avoided. She argued that the green transition has to continue, which would entail a large need for investment. With regard to Ukraine, Flores Gual pointed to the EUR 18 billion support package for 2023 that the European Commission proposed recently.

Subsequently, *Franziska Ohnsorge*, Manager of the Prospects Group at the World Bank, gave a global perspective on the outlook for growth and inflation. She showed that currently the global economy is facing the fourth-steepest slowdown since 1970. Moreover, she highlighted the sharp downward revisions of short-term growth forecasts made in the course of 2022. Then she elaborated on inflation developments, globally and in different regions of the world. The World Bank's model-based global CPI inflation projections show that inflation is expected to decline from record highs but will remain above the 2015–2019 average until the end of 2024. In this projection, energy prices will no longer drive up inflation starting from 2023. Finally, she made the point that even under a global recession scenario triggered by sharp monetary tightening, inflation would stay elevated through 2024.

The third speaker of this session *Mario Holzner*, Executive Director, The Vienna Institute for International Economic Studies, focused on CESEE. He highlighted the region's dwindling importance in the world economy. Holzner also showed that some CESEE countries are among the most open economies worldwide. Based on a survey conducted among German companies, Holzner brought in some thoughts about the potential for nearshoring. He pointed to the unprecedented demographic decline in CESEE countries as a major challenge, particularly in the working age population. With regard to the upcoming economic slowdown, he argued that the EU Recovery and Resilience Facility will act as an important shock absorber. In this context, Holzner stated that Western Balkan countries should get more access to the EU budget and that the NGEU package was a missed opportunity in this respect. He also made clear that Ukraine will not be able to finance the enormous costs of reconstruction from its own resources.

After delivering their presentations, the speakers discussed questions and comments from the audience. Issues addressed included the new EU fiscal rules, model assumptions with regard to the World Bank scenarios as well as dependence on Russian energy and essential nonenergy imports. It was also discussed how far it would be realistic for the EU to increase its transfers to Western Balkan countries.

In opening the first panel discussion, OeNB Governor *Robert Holzmann* pointed to continuously high and still rising inflation and high uncertainty and invited his colleagues from two inflation-targeting countries, Poland and Romania, to explain how they assess the role of global policy spillovers and what role exchange rate developments play in their conduct of monetary policy. Deputy Governor *Leonardo Badea* from the National Bank of Romania (NBR) noted that spillovers from euro area policy are felt primarily in exports, but nevertheless the NBR puts its focus primarily on inflation rather than on the exchange rate. The NBR started its tightening cycle by reducing unconventional measures before raising interest rates. The fight against inflation was conducted in a balanced way without harming economic growth. *Marta Kightley*, First Deputy Governor of the National Bank of Poland (NBP), explained the current high inflation level in Poland (almost 18%) by the rather successful performance of the country in the pandemic. With a relatively mild recession of only −2% in 2020, Poland mastered the first recession since the start of transition relatively well. This was followed by a fast recovery, backed by the fiscal impulse, strong export demand and low unemployment, which in turn led to faster consumer price growth than in the euro area. Yet, the NBP started its hiking cycle somewhat later than other central banks in the region. Given a high

share of variable loans in Poland and the strong impact on the economy, this hiking cycle has now been paused and the peak of inflation is expected to be passed soon. In Kightley's view, exchange rate developments are mostly driven by the geopolitical situation and less by NBP policy. Yet, in her view, spillovers from the euro area's monetary policy help to tame inflation as this policy implies an appreciation of the PLN against the USD.

Prompted on comparatively lower inflation in Albania, Governor *Gent Sejko* from the Bank of Albania referred to two factors: lower energy prices as a result of low import dependence for electricity as well as a strong exchange rate which results from capital inflows related to FDI, tourism and remittances. In contrast, the rather high inflation in the Baltic countries is ascribed to the special consumption basket in the region with above-average weights for heating and fuels according to Governor *Gediminas Šimkus* from the Bank of Lithuania. Referring to Lithuania's exposed position, he emphasized the advantage of being a member of the EU, NATO and the euro area. While Lithuania failed to join the euro area before the global financial crisis, it has entered the pandemic with strong fundamentals which were also backed by euro area membership. Marta Kightley countered that, for Poland, the same recipe would not have worked as the exchange rate acted as a buffer in the global financial crisis, thus helping Poland to avoid a recession then. Leonardo Badea joined the discussion by pointing to the importance of credibility. He stated that Romania would be better inside the euro area even though current monetary policy independence can help to alleviate idiosyncratic shocks.

Governor Holzman inquired about the role of ECB liquidity lines to the region during the pandemic, which were likely helpful in stabilizing capital flows and asked about potentially remaining pockets of risks in local housing markets or from the fiscal side. Gedimas Šimkus noted the important role of macro- and micro-prudential policies which have to be considered a marathon, not a sprint. Gent Sejko saw a major challenge from banking sector consolidation in Albania while housing market risks appear to be well manageable. In Poland, the situation was stable as house prices had long been rising in tandem with incomes. Although rising interest rates and the high share of variable rate loans pose a challenge, the banks are well capitalized. The BNR also considers the banking sector to be resilient in Romania but is remaining vigilant according to Leonardo Badea.

Prompted on a potential financial stability risk arising from the high share of variable rate loans in Poland, Marta Kightley emphasized that this also supports the monetary policy transmission. However, the rapid increase in installments for households may justify targeted measures. Gedimas Šimkus added that risks for households can and should be limited via borrower-based measures, such as debt service-to-income ratios and the like. On Governor Holzman's initial question on the future of repo lines, Gent Sejko underlined the usefulness of the instrument and noted that Albania had already renewed its repo line with the ECB. Gedimas Šimkus pointed out the clear set of rules by the ECB according to which liquidity lines are granted.

In session 2, chaired by *Soňa Muzikářová*, macroeconomist and policy advisor, three panelists discussed the topical issues of flight and migration, brain drain and population aging in the CESEE region. In her introductory remarks, *Olga Popova*, senior researcher at the Leibniz Institute for East and Southeast European Studies, drew attention to the high share of people with migration intentions in CESEE

countries. She further touched upon employment gaps between immigrants and refugees in the EU: Refugees start with a larger disadvantage in terms of employment probability than (economic) immigrants. While both groups eventually catch up with natives, the process takes considerably longer for refugees. Relying on Czech data, she argued that current refugees from Ukraine are economically very active and half of the economically active are in paid work. Wages of refugees are low, however, not least due to skill mismatches. She concluded that support in language acquisition as well as the recognition of qualifications are particularly important integration policies. *Isilda Mara*, senior economist at The Vienna Institute for International Economic Studies, highlighted changing mobility patterns in CESEE. While most countries in the region were net senders of migrants, more recently some had turned into net receivers. Changes are also visible in terms of migrants' education: while Western Balkan countries still face net outward migration of the highly skilled, other countries such as Estonia, Poland or the Czech Republic became net receivers of highly skilled migrants. She also emphasized that the pandemic increased remote and online work – telemigrants are becoming more frequent and might reverse the trend of brain drain. *Róbert Iván Gál*, senior researcher at the Hungarian Demographic Research Institute, focused on demographic developments in the region and painted a rather optimistic picture: he emphasized the considerable increase of the effective retirement age in most countries of Central and Eastern Europe and highlighted that life expectancy at the age of retirement was not increasing. Gains in life expectancy were thus absorbed by the labor market and did not increase the years spent in retirement. Pointing toward strong improvements in human capital, he saw scope for further increases of the retirement age in the future.

The subsequent discussion focused on refugees from Ukraine and their potential to alleviate labor shortages in the CESEE countries. Panelists argued that while Ukrainian refugees tend to be highly educated, the majority of refugees are women, many with childcare duties. Also, labor shortages prevail largely in male-dominated professions and for these reasons panelists' confidence in Ukrainians easing labor shortages in a significant way was limited. Panelists further doubted that the current influx of Ukrainian refugees would lead to a paradigm shift in CESEE countries' openness toward immigration.

Amid the overall gloomy and highly challenging outlook which was at the heart of many discussions, the day ended on a positive note when *Sanja Tomičić*, Executive Director, Hrvatska narodna banka, delivered her dinner speech, reviewing Croatia's successful integration process, which will culminate in the adoption of the euro on January 1, 2023. The preparations for this important step started a rather long time ago and she reminded the audience that joining a monetary union is a marathon, albeit one that includes some sprints. Croatia had pursued an ambitious time frame and started from a difficult initial position. After the global financial crisis, it fell into a six-year-long recession which almost caused enthusiasm for the project to disappear. In addition, the procedure for entering ERM II was anything but clear for the Croatian authorities. Yet, in mid-2013 the country joined the EU and the 2016 New Year's meeting hosted by the Prime Minister revived the process. A strategic document was launched including a detailed cost-benefit analysis, the discussion of economic policies consistent with euro introduction started and after the presentation in October 2017 a road show started throughout

the country. Sanja Tomičić shared her experience that sometimes fast moves are necessary to capture opportunities when they arise: the time of good economic performance in Croatia allowed tightly set fiscal targets to be achieved so that Croatia could exit the excessive deficit procedure. The rest – so to say – is almost history: Croatia joined the ERM II in July 2020 and engaged in close cooperation within the newly established Single Supervisory Mechanism. Yet, two more unexpected stumbling blocks appeared in late 2019 when an earthquake struck the capital city area and the pandemic broke out. But there was no time to be paralyzed by these events; instead Croatia made the best out of the EU presidency, which it was holding at this time. Thus, since July 2020, focus could be put on administrative and operational issues until sharply rising global inflation and the Russian attack on Ukraine suddenly threatened the timeline for euro adoption. Fortunately, the inflation criterion was met and the EU and ECB convergence reports gave the green light in June 2022. Despite some criticism, financial market indicators show that Croatia's economy is ready for the euro. Also the majority of the population supports it, even though this is already the third currency changeover since the start of transition. Tomičić concluded by expressing gratitude for the support that Croatia has received from the European Commission, the ECB and not least from the OeNB through a bilateral informal dialog that had started back in 2005. The discussion centered around potential inflationary effects from euro introduction as well as Croatia's experience in dealing with high inflation that the new member would be able to bring to the ECB's governing council.

Birgit Niessner, Director of the OeNB's Economic Analysis and Research Department, opened the second day of the conference by referring to the fast-changing nature of Europe's energy dependency. In particular, dependence on gas from Russia has been high in Europe, especially so in the CESEE countries, and Russia had already ceased to be a reliable supplier of gas to Europe before it invaded Ukraine and triggered sanctions. As a consequence, many countries, in particular the Baltic countries, Poland, Romania and Croatia, decreased their dependence on Russian gas sharply. The EU Economic and Investment Plan for the Western Balkans will also work in this direction. *Guntram Wolff*, Director and CEO of the German Council on Foreign Relations, started his speech by pointing to the important role of gas for Europe. While prices rose sharply in response to supply shortages, the industry reacted very flexibly by relocating energy-intensive parts of production. He distinguished between short-term and medium-term consequences of the supply shortage caused deliberately by Russia: the redirection of gas flows occurred in a very short time. The importance of Norwegian gas and liquified natural gas (LNG) have increased and Germany has become a hub from West to East. In addition, measures such as the German gas price cap also include incentives to save gas. Wolff emphasized that adjustment must take place with the fewest possible frictions in order to avoid any suffering of the deeply integrated EU supply chains. In the medium term, Europe must build on projects of common interest with a strong focus on Southern and Southeastern European counties. The increase in wind and solar energy in the last few years was moderate and energy generation from renewables peaked in 2020. If all measures from the REPowerEU plan were to be implemented, Russian gas could be entirely replaced within five years. The huge increase in imports of solar panels from China observed since the start of the war can partly be attributed to price increases (which he also considered temporary)

but there was also an increase in terms of gigawatts to be produced. In addition, the significant buildup of LNG import capacity via floating or fixed terminals represents good news for Europe. Wolff concluded by alluding to the necessity to maintain the integrity of the energy market. Germany will increasingly function as a transit hub and the West-East flow of gas will be complemented by North-South flows including the Baltics and the Balkans. European, and especially Norwegian, infrastructure needs to be protected against hybrid attacks. Yet, the EU must be mindful to avoid building up new dependencies. In the ensuing discussion he clarified that this does not mean that Europe should reshore energy supply and production processes entirely. However, diversification of sourcing countries is key. Prompted on fiscal coordination in Europe he referred to the fact that the powerful "double ka-boom" in Germany has made this discussion obsolete.

The third session chaired by *Bernhard Grossmann*, Head of the Office of the Fiscal Advisory Council and Productivity Board at the OeNB, focused on what fiscal policy can do to alleviate the negative impact of high inflation and commodity price surges on the economy in the short run. How to avoid social unrest while stepping up sanctions against Russia? And how to preserve fiscal space in times of crisis?

Baiba Brusbārde, Chief Economist of the Macroeconomic Analysis Division at Latvijas Banka discussed the short-term fiscal policy response of Latvia that aims at both protecting all vulnerable low- and middle-income households against extreme price increases and retaining incentives to save energy. Only households that have insufficient disposable income after deducting all necessary housing and heating expenses are eligible for direct benefits. The monitoring of the state support by the central bank shows that the targeted measures dampened the inflation increase in 2022 and will contribute positively to GDP growth in 2023. The Latvian experience demonstrates that a broad information campaign is necessary since vulnerable households are typically less informed.

Belma Čolaković, Chief Economist at the Central Bank of Bosnia and Herzegovina emphasized the role of country specifics in tailoring short-term fiscal policy responses to the energy crisis in CESEE. For instance, Western Balkan countries have a comparably higher share of vulnerable households with little savings and very low incomes. Price shocks hit consumers differently due to the high weight of food items in the consumption basket, which amounts to about 33% compared to 11% in the euro area. She also pointed to the strong dependence on fossil energy, which goes beyond consumption patterns and also implies labor market dependencies. Hence, the region appears to be locked into nonsustainable energy production and consumption. Alluding to stepped up sanctions against Russia, she mentioned the rather low direct economic impact on Western Balkan economies, including Bosnia and Herzegovina, due to comparatively low trade volumes and low dependency on Russian oil and natural gas. Only Serbia may be somewhat more dependent.

Zsolt Darvas, Senior Fellow at Bruegel, agreed that the current situation warrants government support to vulnerable households. Fortunately, surprise inflation temporarily increases the fiscal space of governments through higher tax revenues and falling debt-to-GDP ratios. However, state support measures should restore affordability without fueling further inflation. Particularly, they should not weaken the price signal because some underlying factors of the inflation spike will

be long-lived. Hence strong price signals are important to foster adjustment and reallocation – accompanied by structural reforms. Finally, measures need to be (and should have been more) targeted, temporary and tailored to preserve fiscal space even during crisis times. The EU Recovery and Resilience Facility will play an important role in stepping up the short-term fiscal policy response and fostering the urgently needed transition to less dependency on fossil fuels and more generally to a green economy. In the medium- to long-term, fiscal sustainability also requires countercyclical policies during good times.

Zsolt Darvas noted that energy and producer prices had already started to increase rapidly prior to the Ukraine war. Moreover, the drop in the supply of gas to the EU was caused by Russia and not by EU sanctions. Additionally, EU sanctions are gradually becoming more and more effective, impacting Russia's manufacturing adversely and eroding its productive capacity. According to mirror trade statistics, Russia is cut off from high technology from non-EU countries too, and Russian imports and exports dropped except for fossil fuels. Moreover, people need to be reassured on energy security.

Session 4 under the title "Addressing long-term supply challenges via structural policies and green transition" was chaired by *Julia Wörz*, Head of the OeNB's Central, Eastern and Southeastern Europe Section. She asked whether the current multiple shocks, and responses to them, are accelerating or slowing down the green transition. *Veronika Grimm*, Member of the German Council of Economic Experts and Professor at Friedrich-Alexander-Universität Erlangen-Nürnberg, spoke of a gas price tsunami that had already started before the war and will not disappear before 2024. Gas prices will stay structurally higher in Europe than in America and Asia, which implies that here hydrogen will sooner become competitive to gas. Grimm commended Germany's well-targeted gas cost subsidies. EU policies, however, should ease the subsidy pressure with new energy supplies mobilized through common gas procurement, expansion of renewables, temporary reactivation of nuclear power sources and coal, and energy efficiency. She also stressed the need to prepare for green hydrogen. In order to avoid new dependencies on raw materials critical for the green transition she advocated diversity, not to be confused with "friend-shoring."

Elena Paltseva, Associate Professor at the Stockholm Institute of Transition Economics, asked whether the EU gas crisis is mobilizing the green transition. She said that the share of Russian gas fell from 45% to 18% of EU imports while LNG increased its share to 39%. However, the massive gas infrastructure investment currently being undertaken is not necessarily good news for the green transition, since natural gas is essentially methane, and LNG imports – typically shale gas from the US – emit twice as much greenhouse gases (GHG) as Russian pipeline gas. Moreover, new investment creates carbon lock-ins and eventually would become stranded assets. To reduce the implied uncertainties, Paltseva proposed first to assess LNG infrastructure investment correctly, second to mobilize existing infrastructure and third stimulate sustainable energy investment.

Thomas Reininger, Senior Principal at the OeNB, spoke about the green transition in CESEE EU member states, most of which have lagged behind in terms of reducing their carbon intensity relative to GDP per capita. While their GHG emissions had fallen sharply from 1990 due to economic transition, since 2008, they have made only small progress. Energy industries' emissions are substantially

larger in CESEE than in the EU-16, while the opposite is true regarding the transport sector – of course, these region-wide aggregates mask great variability at the country level. On the upside, the post-pandemic EU funds envisaged for spending in 2021–2026 appear to appropriately address climate-related weaknesses in energy industries, energy efficiency and transport in CESEE EU, according to their national recovery and resilience plans. These countries tend to benefit most from the EU grants, generally dedicated by more than 40% to climate-related measures. The subsequent discussion on all three presentations covered a variety of issues such as labor shortages, the role of biogas, cycle economy, the insufficiency of funds alone and the low public acceptance of green transition in CESEE.

The CEEI concluded with a second panel discussion titled "Banks in transition: is there a need for rescoping toward sustainable markets and products?" The OeNB's Vice-Governor *Gottfried Haber* kicked off the exchange of views among distinguished bank practitioners by sketching out the turning points that we are currently facing in several respects. These include inflation, recession, rising interest rates, limitations on the supply side and at the same time globally rather tight labor markets. Vice-Governor Haber pointed out that European banks have built up resilience over the last decade, but it remains to be seen whether it will suffice in the future.

Elena Carletti, Professor at Università Bocconi, pinpointed three key elements of the current uncertainty. First of these is the geopolitical instability in Europe, which is neither predictable nor controllable. Second, in a striking contrast to the pandemic, during which economic policies were largely aligned, currently there is a significant divergence between monetary and fiscal policy. Third, while it is relatively easy for banks to assess their direct exposure to the countries involved in the war, it is much more difficult to assess the spillover effects. Models based on history are no longer informative so that much more forward-looking analysis is needed. Turning to the issue of high interest rates, Professor Carletti explained why they are boon and bane for banks at the same time. Banks not only benefit from high rates but also face risks from them. It is not only credit risk that needs a watchful eye but also interest rate risks related to banks' derivatives exposures. In reaction to a question about the risks of a rising sovereign-bank nexus, Professor Carletti stressed that the banks are not only exposed to (worldwide) increased government debt but also to government guarantees stemming from the pandemic. Nonetheless, despite the intensified sovereign-bank nexus, she senses a bigger risk in the fragmentation of sovereign spreads in Europe.

Gunter Deuber, Head of Research at Raiffeisen Bank International, started out by referring to the main theme of the conference and emphasized that his bank is conducting banking under war conditions, which has only been possible thanks to thousands of employees in Russia, Ukraine and Belarus. He moved on to point out that Western banks have been de-risking and shifting away from Eastern European countries toward more predictable EU markets since 2014. Yet a turning point has occurred not only on the geopolitical level but also on the funding side. This is because times of ample deposit funding are coming to an end and at the same time bond market funding has become more expensive. There will be a certain competition for deposits because major disposable income losses are still ahead of us. However, green funding provides an interesting opportunity, especially in the CESEE region, where this market segment is still rather underdeveloped.

Boštjan Jazbec, board member of the Single Resolution Board, played – in his own words – the devil's advocate by pointing out that despite significant efforts there is still not much of a European banking system. We rather have competing national banking systems which are mainly preoccupied with supporting their national economies as the rather stagnant level of cross-border lending over the last twenty years suggests. Even the Basel regulation does not treat the euro area as a common market since it requires additional capital buffers for cross-border activities. On a more positive note, Jazbec stated that we have managed to build rather resilient banking systems and that despite recent major shocks the prophecies of doom about the next financial crisis have not materialized. This is not least due to the stricter regulatory and supervisory framework which, however, at the same time is reaching the point where it obstructs banks' profitability and business models. Jazbec also cautioned against the view according to which the European market as a whole is overbanked as two out of three banks in Europe are in Germany and Italy. He concluded his initial statement by saying that we have still not completed the banking union. We are still only at its second pillar – the Single Resolution Mechanism (SRM) – which is still very fragmented in the sense of different insolvency regimes in different countries. The third pillar – the European deposit insurance scheme (EDIS) – is a complete "dead end" according to Boštjan Jazbec.

In the lively ensuing discussion, the panelists agreed that the main – though not the only – obstacle to green investment is the lack of policy credibility and the regulatory risk. This starts with the taxonomy, which not only keeps changing but is also being watered down by political compromises. The issue of the incomplete banking union also resonated a lot in the discussion. While Gunter Deuber argued that his bank has contributed a lot to banking market integration, Boštjan Jazbec countered that this is just reaching out to non-banking union jurisdictions when what we need is a common banking system in the EU. Jazbec sees one reason for the fragmented banking market in the lack of trust as there is a strong instinct to resolve ailing banks on the national level. National resolution authorities have a lot of power in contrast to supervisory authorities.

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