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What you don't know can't help you: public perception of COVID-19 loan repayment moratoria

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Security through stability.

What you don't know can't help you: public perception of COVID-19 loan repayment moratoria

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We analyze public perceptions of borrower relief measures, i.e. loan repayment moratoria, implemented during the COVID-19 pandemic, aiming to better understand potential frictions in the transmission of these policies. Using data from an international survey, we document substantial cross-country differences in respondents' awareness and use of borrower relief measures, their attribution of the measures to different institutions and their reasons for not using the measures. We relate these findings to differences in the designs of moratoria across countries, concluding that respondents' awareness and use is positively correlated with how borrower-friendly the measures were. Regarding respondents' socioeconomic characteristics, we find that awareness is correlated with several characteristics, including ownership of financial assets and liabilities or the level of education and financial literacy. In terms of policy conclusions, we are most concerned by respondents' low awareness of borrower relief measures in some countries and by potential implications resulting from high shares of borrowers reporting that they did not use the measure due to ineligibility.

JEL classification: G28, G21, G51

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During the COVID-19 pandemic, loan repayment moratoria for households (subsequently referred to as "moratoria") were one of the relief measures implemented in many countries. These moratoria were largely complementary to other measures aimed at preventing household liquidity crunches and subsequent solvency issues. Studying the effectiveness of the relief measures taken to achieve this aim is central for policymakers and has therefore received most of the attention in the literature.

Our paper has a somewhat different aim, however, which has mostly been neglected in the existing literature: We study how the COVID-19 borrower relief measures implemented in nine Central-, Eastern- and Southeastern European (CESEE) countries[2] were perceived by the public. In this context, we mostly focus on the following variables: awareness of the measures, usage of the measures and reasons for not using them.

All three aspects are important for different reasons and should concern policymakers: Being aware of a measure is clearly a prerequisite for being able to use it. Awareness can even matter for people who are not eligible for the measures, as this might affect their trust, expectations and, subsequently, decision-making. Regarding the usage of measures, we are most interested in the reasons people give for not using them, as this indicates whether people understood the measures correctly and thought they were eligible. In annex C, we also study how people attributed the measures to different institutions, which could be related to take-up. People might be reluctant to use measures offered by institutions they do not trust.

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[2] Six CESEE EU countries (Bulgaria, Croatia, Czechia, Hungary, Poland, Romania) and three CESEE EU candidate countries (Bosnia and Herzegovina, North Macedonia and Serbia).

We analyze these topics along two dimensions: First, we study how different designs of moratoria are related to people's perceptions and use of moratoria. We exploit the fact that while the objectives of the moratoria were largely the same in the countries covered, they were implemented very differently. Second, we analyze which observable characteristics of individuals help explain the variation in perceptions and take-up.

For our analyses, we use survey data collected in fall 2021. Based on these data, we can shed light on what individuals thought about the different aspects of the moratoria.

In our cross-country comparisons, we find marked differences in our variables of interest. Regarding people's awareness of moratoria, we find that awareness is relatively low in some countries, even among the target group of borrowers. When put in the context of different moratorium designs, we conclude that, above all, awareness and use of moratoria are strongly related to design features. Moreover, the reasons given for not using moratoria vary across countries and show no clear pattern when analyzed against moratorium designs. In most countries, having "no need" for taking up moratoria was the answer given most frequently. In three countries, "not being eligible" was mentioned by even more respondents.

Finally, we study the correlation of our variables of interest with socioeconomic characteristics for the pooled sample and for each country separately. We find that despite some heterogeneity across countries, the patterns of correlations are relatively similar. Awareness increases with several characteristics, mostly related to respondents' ownership of financial assets and liabilities as well as their level of education and financial knowledge. In some countries, there is a high degree of variation in awareness across regions, while in others, the shares are relatively similar across regions. For moratorium use, the most important factor was whether respondents were financially affected by the COVID-19 pandemic.

Our study belongs to the literature assessing borrower relief programs, which largely consists of studies on the effects of borrower relief on debt distress, debt taking, consumption and employment on a household or regional level (Agarwal et al., 2017, 2023; Cherry et al., 2021; Dobbie and Song, 2020; Dinerstein et al., 2023; Piskorski and Seru, 2021; Giné and Kanz, 2018; Kanz, 2016; Mukherjee et al., 2018; Fiorin et al., 2023). Recent studies related to the COVID-19 pandemic and CESEE include, e.g., the study by Aczél et al. (2023) who show that participation in moratoria in Hungary is correlated with subsequent defaults. Cesnak et al. (2023) use survey data for indebted households in Slovakia to study which households used the moratorium and how it impacted their finances. An earlier paper using data from the OeNB Euro Survey by Allinger and Beckmann (2021) finds that individuals who had exited moratorium programs by fall 2020 were not more likely to be in arrears with loan repayments than individuals who had not used these programs.

While these papers provide crucial evidence on the effectiveness of borrower relief measures, there are few papers on potential frictions in the transmission of such measures on the borrower side, such as low awareness, difficulties in understanding the measures and non-monetary costs. Johnson et al. (2019) combine administrative and survey data to study motives for not accepting refinancing offers of a US borrower relief program. They find that suspicion toward refinancing offers is significantly related to take-up, as is awareness of the offer and perceived eligibility. Allen et al. (2022) investigate two COVID-19 debt relief programs in Canada and find that take-up was low. They report that this is partially due to people's low awareness of the programs. Jacob et al. (2023) complement their study on debt relief for US teachers with evidence from focus groups which suggests that administrative barriers and program complexity hindered take-up.

We are not aware of any papers that present evidence on public perceptions of COVID-19 loan moratoria in the CESEE region or borrower relief programs in a cross-country setting, linking public perceptions to the design of the policies. Thus, our study fills a gap in the literature. Moreover, it is very topical in the context of high inflation and interest rates, as some household finances are under pressure and a renewal of loan repayment moratoria has been discussed.

The study is structured as follows: In section 1, we provide a review of the designs of moratoria implemented in the CESEE countries and of the guidelines issued by the European Banking Authority (EBA) on moratoria. In section 2, we briefly discuss the data and methodology we use. In section 3, we present our data analysis, shedding light on people's awareness and use of moratoria from a cross-country perspective. Section 4 focuses on a within-country perspective, using socioeconomic characteristics and geographic data. Section 5 summarizes and provides some policy conclusions.

1 Implementation of moratoria

This section first outlines what is meant by EBA-compliant moratoria and then proceeds to compare the designs of moratoria implemented in nine CESEE countries during the COVID-19 pandemic. We mostly use national sources, complemented with information collected by the EBA (2020d). Our task is complicated by the fact that the characteristics of moratoria changed in most countries over the course of the pandemic. Moreover, in some countries, several moratorium schemes existed in parallel, applying different conditions. On top of that, banks could always negotiate with clients bilaterally. Thus, the characteristics of moratoria could differ drastically even within a given country.[3]

1.1 EBA guidelines on legislative and non-legislative moratoria

On April 2, 2020, the EBA published its guidelines on legislative and non-legislative moratoria on loan repayments applied in the light of the COVID-19 crisis (subsequently referred to as "EBA GL"; European Banking Authority, 2020a). The EBA GL set out the conditions for legislative and non-legislative general payment moratoria, which did not automatically trigger a reclassification of the exposure as forborne (in accordance with Article 47b of the Capital Requirements Regulation (CRR)) or defaulted (Article 178 of the CRR). These general payment moratoria stood in contrast to the usual regulatory forbearance approach, asking banks to carefully assess each borrower's situation and tailor forbearance measures to the borrower. In fact, the COVID-19 moratoria had to be sufficiently broad in terms of both the participating creditors and the borrowers. The EBA GL thus excluded initiatives designed and implemented by a single bank, as well as solutions tailored to individual clients. The conditions offered by EBA-compliant moratoria needed to be the same for the same type of borrower or exposure. Thus, different conditions could only be specified for groups of borrowers or products, e.g. for mortgage loans. Only the payment schedule should be affected by the moratorium, while other terms (e.g. the contractually agreed interest rate) should remain unaffected. Contracts concluded after the start of the COVID-19 pandemic were not eligible.

The application deadline for moratoria under the EBA GL was extended twice. After the deadline had first been extended from June to September 30, 2020, the EBA decided in September 2020 to suspend its GL. However, due to the second COVID-19 wave, the GL were re-activated in early December 2020 and the application deadline was set to the end of March 2021. An

[3] Given these difficulties, information on moratoria had to be collected on a best-effort basis.

additional condition was introduced, specifying that loan repayments could be deferred for a maximum of 9 months for the moratorium to remain compliant with the GL (European Banking Authority, 2020b, 2020c).

1.2 Moratoria in CESEE

Most CESEE EU countries modeled their moratoria at least partially on the EBA GL. However, compliance varied across countries and over time. Moreover, even while adhering to the EBA GL, there was substantial room for variation in the design of moratoria. We summarized some of the most important characteristics of, and differences between, moratoria in table B4 in annex B. In the subsequent paragraphs, we discuss some of the more distinctive features of the moratoria across countries.

Certainly, two of the more important distinctions were, first, whether respondents had to apply for, i.e., opt in to the moratorium or, second, whether the moratorium applied automatically unless clients actively opted out (or simply continued to make their loan repayments). Besides being more convenient for borrowers, opt-out moratoria were available to all borrowers. Opt-in moratoria in CESEE were mostly tied, directly or indirectly, to whether borrowers' finances were affected by the COVID-19 pandemic.

Another distinction was whether moratoria were based on legal documents issued by governments, central banks or regulatory authorities, thus constituting public moratoria (see column 3 in table B4 in annex B), or whether they were based on private agreements, e.g., between members of banking associations. Public moratoria usually implied that participation was compulsory for banks and that any conditions of the moratorium outlined in legal texts or guidelines were followed closely, as they were legally binding. The latter is difficult to verify in retrospect and without insights into banks' practices. However, the Polish central bank noted that "banks in Poland have not developed a uniform standard of loan moratoria. As a result, borrowers face various conditions on the suspension of loan repayment depending on the lending bank" (Narodowy Bank Polski, 2020, box 4.1.). This seems to support the theory that in the case of private moratoria, as in Poland, banks had more leeway when implementing the measures.

Along these two dimensions, the CESEE countries were split almost evenly. Three countries – Hungary, North Macedonia and Serbia – had public and, at least partially, opt-out moratoria. Another three countries – Czechia, Romania and Bosnia and Herzegovina – implemented public opt-in borrower relief programs. Finally, the policies in Bulgaria, Croatia and Poland can best be characterized as private and opt-in policies.[4]

Of all the moratoria, the one in Hungary had the most generous terms, as it applied for a very long time and was changed from an opt-out to an opt-in moratorium relatively late. The Hungarian central bank was quite critical of the many blanket extensions of the moratorium granted by the government. Only from November 1, 2021, onward were the conditions of the moratorium tightened so that only specific groups (e.g. retirees, families with children) remained eligible. Overall, the moratorium applied until end-2022 (Ministry of Justice, 2020a, 2020b; Magyar Nemzeti Bank, 2021, 2022a, 2022b).

In Czechia, on the other hand, the government applied some of the tightest conditions among the CESEE EU countries by explicitly excluding revolving products and setting a comparatively early end-date for moratorium use, namely on October 31, 2020 (Act No. 177/2020, 2020).

[4] However, there are some cases that are not entirely clear-cut, again speaking to the complexity of characterizing the moratoria. For instance, Poland briefly had a short legislative moratorium, and Serbia switched to an opt-in moratorium already in December 2020.

Regarding private moratoria in Bulgaria, Croatia and Poland, these were largely established with strong involvement of the respective banking associations. Given their non-legislative nature, these moratoria were largely voluntary for banks, but information by the EBA suggests that in all three countries (almost) all banks participated. Bulgaria and Croatia definitely saw active involvement of their central banks. The Bulgarian central bank outlined the conditions of the moratorium on April 10, 2020 (Bulgarian National Bank, 2020), and these were then adopted by the Bulgarian banking association. In Croatia, the central bank sent several Circular Letters to the banks regarding the application of the EBA GL (Hrvatska narodna banka, 2020a, 2020b, 2020c, 2020d). According to the Polish banking association, the latter agreed on the moratorium with the Polish government (ZBP, 2020).[5]

In the CESEE EU candidate countries, a special feature was that borrower relief was defined more broadly than just loan moratoria. In Serbia, for instance, the second part of the borrower relief program from mid-December 2020 onward required clients to opt in and was tied to eligibility criteria, i.e., to whether clients were negatively financially affected by the COVID-19 pandemic. Moreover, banks could choose from several options how to help borrowers in need (Narodna banka Srbije, 2020a, 2020b, 2020c). In North Macedonia, borrower relief generally included two offers made to clients (one in March and one in September 2020), providing for favorable changes in loan terms. The conditions of these changes were determined by the banks (National Bank of the Republic of North Macedonia, 2020a, 2020b). In Bosnia and Herzegovina, the banking agencies of the two entities adopted decisions in March 2020, establishing a temporary moratorium. The latter was intended to apply only until the end of the state of emergency (i.e. until May 2020) and mostly served to give banks and clients time to work out the right medium-term modalities for repayment. The decisions also detailed all modalities available, including the option to defer repayments for a maximum of six months. In August/September 2020, the banking agencies extended the application deadline for moratoria and other relief measures outlined in the decisions until end-2020, effectively allowing loan postponements until mid-2021 at the latest (ABRS, 2020a, 2020b; FBA, 2020a, 2020b; UBBIH, 2020).

2 Data and methodology

This section discusses the data and methodology used. It describes the construction of a design index for moratoria as well as key features of the data.

2.1 Constructing a design index for moratoria

The information contained in table B4 in annex B simplifies the complexity of COVID-19 moratoria. However, the information is still too detailed for further use in the paper, which is why we select three key characteristics from table B4 to construct a simple numeric index that captures certain design features of the moratoria discussed: i) the scope of eligible borrowers (opt-in/opt-out moratoria); ii) the binding nature of the moratoria (public/private); and iii) the duration of the moratoria. We chose these characteristics, as they seem to be good proxies for how generous the moratoria were for borrowers. The calculation of the index is shown in table 1. The results are displayed in the first panel of chart 1.

All other characteristics that we could have used to create more differentiation in the index across countries presented us with the following issues: The information available was incomplete across countries; the criteria were too unique and/or minor (e.g. only one country would get a

[5] From June 24, 2020, onward, there was also a brief legislative moratorium based on Articles 31fa-fc of the Act of 19 June 2020 on interest rate subsidies. The articles set out that borrowers could apply for moratoria of a maximum of 3 months.

score of 1 versus 0 for all other countries based on a minor aspect); or the criteria were collinear with characteristics already contained in the index. For instance, the latter would apply for eligibility criteria related to COVID-19, as these criteria existed in all opt-in countries, but not in the opt-out countries. In our opinion, information gathered through expert interviews with policymakers and bankers in the region would be needed to markedly improve the index.

Table 1

Design index for moratoria in CESEE

	BG	HR	CZ	HU	PL	RO	BA	MK	RS
Opt-out (1)/opt-in (0)	0	0	0	1	0	0	0	1	0.5
Public (1)/private (0)	0	0	1	1	0.5	1	1	1	1
Maximum duration	0.5	0.5	0	1	0	0.5	0	0	0
Sum	0.5	0.5	1	3	0.5	1.5	1	2	1.5

Source: Authors' compilation based on information provided by the EBA as well as various national competent authorities and banking associations.
Note: Opt-in moratoria refer to moratoria for which borrowers needed to apply. Opt-out moratoria applied automatically unless borrowers opted out. Serbia has a score of 0.5, as borrowers had to opt out of the initial moratorium and opt in to its extension in 2020. Public moratoria refer to moratoria established by law, ordinances or decisions issued by governments, central banks or other financial authorities. Poland has a score of 0.5, as it had rather limited public and much broader private moratoria. The maximum duration refers to the date when the last moratoria expired and is judged relative to the EBA GL (maximum duration until December 31, 2021). Moratoria that were in place longer get 1 point, those in place shorter get 0 points. Moratoria in place for as long as indicated in the EBA GL receive 0.5 points.

Thus, the design index clearly contains many assumptions that have implications for our conclusions. However, instead of viewing the index as a perfect representation of how generous moratoria were in the countries, we consider it a necessary and helpful tool for subsequent analyses using publicly available information on moratorium designs. We provide some robustness checks in annex B.

2.2 The OeNB Euro Survey and module on borrower relief measures

The remainder of the paper uses data from the 2021 wave of the OeNB Euro Survey.[6] The OeNB Euro Survey is an annual survey among individuals in ten CESEE economies that has been conducted since 2007. The countries included in the survey are 6 EU member states, namely Bulgaria (BG), Czechia (CZ), Croatia (HR), Hungary (HU), Poland (PL) and Romania (RO) as well as four EU candidate countries, namely Albania (AL), Bosnia and Herzegovina (BA), North Macedonia (MK) and Serbia (RS). The sample for each OeNB Euro Survey wave consists of 1,000 randomly selected individuals per country and is designed to represent the adult population with respect to gender, age and regional distribution. Due to issues with data quality in Albania, the country is excluded from this study (Olbrich et al., 2024).

The OeNB Euro Survey wave conducted in October 2021 included a module on borrower relief during the COVID-19 pandemic. In this study, we present results for a couple of questions from the module (for more details, see table A1 in annex A):

[6] For details, see the OeNB Euro Survey website.

- **Awareness:** *"Are you aware of any measures your government or banks in [YOUR COUNTRY] adopted because of the pandemic to support borrowers (for example enabling borrowers to postpone repayments without penalties, offering borrowers favorable changes in loan terms)?"*
- **Usage:** *"Since the beginning of the COVID-19 pandemic, have you taken advantage of any measures that were adopted to support borrowers?"*
- **Reasons for non-usage:** *"Could you tell us why you didn't make use of the measures? Please mention all reasons that apply." Answer options: see table A1 in annex A.*

Except for usage, the aspects listed above cannot be studied without survey data. However, survey data have some caveats: Given the international dimension of the survey, we needed to find a term suitable for all countries covered. As discussed in section 1, the EU candidate countries in our sample allowed for borrower support to take different forms. We therefore settled on the term "borrower relief" rather than "moratoria" for the survey module. Thus, using the terms "moratoria" and "borrower relief" interchangeably throughout the paper is not entirely precise in the case of the candidate countries. Moreover, while the OeNB Euro Survey is designed to represent the adult population in the surveyed countries, missing data and the fact that we occasionally work with quite small subsamples mean that we need to be careful when trying to interpret our findings for the entire population of a given country or subsamples of that population. For instance, given the lack of statistics on debtor characteristics for the respective countries, we cannot check the representativeness of our debtor sample or correct for imbalances ex post.[7] This is why we focus on the entire population of a given country rather than on subsamples of that population, wherever possible.

2.3 Methodology for cross-country and within-country analyses

In section 3, we present descriptive results for our questions on awareness, usage and non-usage of moratoria and discuss differences across countries.[8] While the cross-country heterogeneity is already interesting in itself, we hypothesize that policy design matters. We expect a positive correlation, meaning that the more borrower-friendly a measure, the higher people's awareness and usage of the measure and the lower the share of people who did not use the measure because they were not eligible.

In section 4, we use a large set of available variables on respondents' socioeconomic characteristics, preferences and beliefs to shed some light on within-country differences. We define binary dependent variables for each of our main questions of interest and estimate the following model(s) with probit regressions:

$$P(y_i = 1) = \Phi(\beta X_i + \varepsilon_i) \quad (1)$$

where, depending on the model, $P(y_i = 1)$ stands for the probability that the respondent i is aware of borrower relief programs, or used the programs. X is a vector of explanatory variables and ε is an error term. Standard errors are clustered at the level of the primary sampling unit (PSU), which refers to a selected starting point for the random route of the interviewer. This level

[7] See annex A for a description of all variables used in this study (including the corresponding questions) as well as summary statistics.

[8] For these analyses, we use the post-stratification weights of the OeNB Euro Survey calculated based on age, sex, education and region and additional variables in a few countries.

is chosen given the sampling design of the survey (Abadie et al., 2023; Cameron and Miller, 2015). Moreover, within-PSU correlation is likely, given potential interviewer and network effects.[9]

Given the different dependent variables, we have different samples for each regression: for awareness, all respondents that answered "yes" or "no" to the corresponding question; for usage, all respondents with bank or nonbank loans or revolving debt, such as overdraft or credit card debt (subsequently referred to as "borrowers").

With the exception of "having debt," we use the same explanatory variables in the probit estimations for awareness, attribution and usage to facilitate comparisons. We use theoretical considerations and statistical methods and choose the following variables: having debt/loans, planning to take out a loan in the next 12 months, having no savings, owning investment products, having been negatively financially affected by the COVID-19 pandemic, living in the capital city, trust in banks and trust in the government, education, financial literacy, income[10] and employment status. Moreover, we also add further socioeconomic control variables that are not shown in the coefficient plots in section 4, namely age, gender, being married and household size. All pooled regressions contain country dummies. Correlations between the explanatory variables are rather low (see table A3 in annex A), as are variance inflation factors for the regressions shown in this study.

The main aim of the simple regressions is to provide some sense of the correlations between socioeconomic characteristics and awareness and usage of moratoria, respectively. The variables are selected to test different hypothesis for each dependent variable. We outline these hypotheses before presenting the results in section 4. We do not claim causality in the results we report, given the shortcomings of our design index as well as the fact that we cannot control for all relevant variables, e.g. different media landscapes/coverage or political factors.

3 Cross-country variation by moratorium design

In this section, we focus on cross-country variations in respondents' average awareness and use of moratoria as well as their reasons for not using them, considering the different design features of moratoria.

The upper panel of chart 1 shows the results of our simple design index listed from highest to lowest value. Hungary stands out with the maximum value, followed by North Macedonia, which also had a public, opt-out moratorium. Serbia is on a par with Romania according to our index. So are Czechia and Bosnia and Herzegovina, both with a score of 1, while Bulgaria, Croatia and Poland come in last with a low average score of 0.5. This ranking of the countries is maintained in the middle and lower panels of chart 1, enabling us to see at first glance that while there is strong variation across countries, there seems to be at least some correlation between the design features of moratoria and respondents' awareness and use of the latter. The Pearson correlation coefficients between the design index and the means of awareness and usage are 0.87 and 0.90, while the Spearman rank correlation coefficients are similar but slightly smaller.

[9] For robustness, we cluster pooled regressions at a higher level, namely at the level of regions (74 clusters). While the standard errors are higher in this case (see table D2 in annex D), the change is not large enough to affect the graphic results in the main text.

[10] Income is included as dummies for income terciles and a dummy variable if the answer was "Don't know" or "No answer," given high income nonresponse. The results of the pooled regressions barely change when we exclude respondents with missing income information as a robustness check (results available upon request).

3.1 Awareness of moratoria

At roughly 70%, the share of respondents aware of borrower relief measures is by far the highest in Hungary. Hungary is followed by the other two opt-out countries, namely North Macedonia and Serbia, both with shares of over 50%. In Czechia and Romania, the shares come to around 40%. In the remaining countries, the shares are close to or below 35%, with a low of 20% in Bosnia and Herzegovina.[11] Since the relief measures are targeted at borrowers, we also plot the shares of borrowers aware of the measures in red. While these shares are higher in all countries and reach almost 100% in Hungary, they remain rather low in the last four countries displayed, i.e. in Bosnia and Herzegovina, Bulgaria, Croatia and Poland. If we consider an even smaller subgroup, namely borrowers affected by the COVID-19 pandemic, the results differ markedly across countries. Awareness is actually lower among borrowers affected by the pandemic than among those unaffected in six out of nine countries. Only in Czechia, Bosnia and Herzegovina and North Macedonia, affected debtors are more aware of the measures than unaffected ones (see table A4 in annex A).

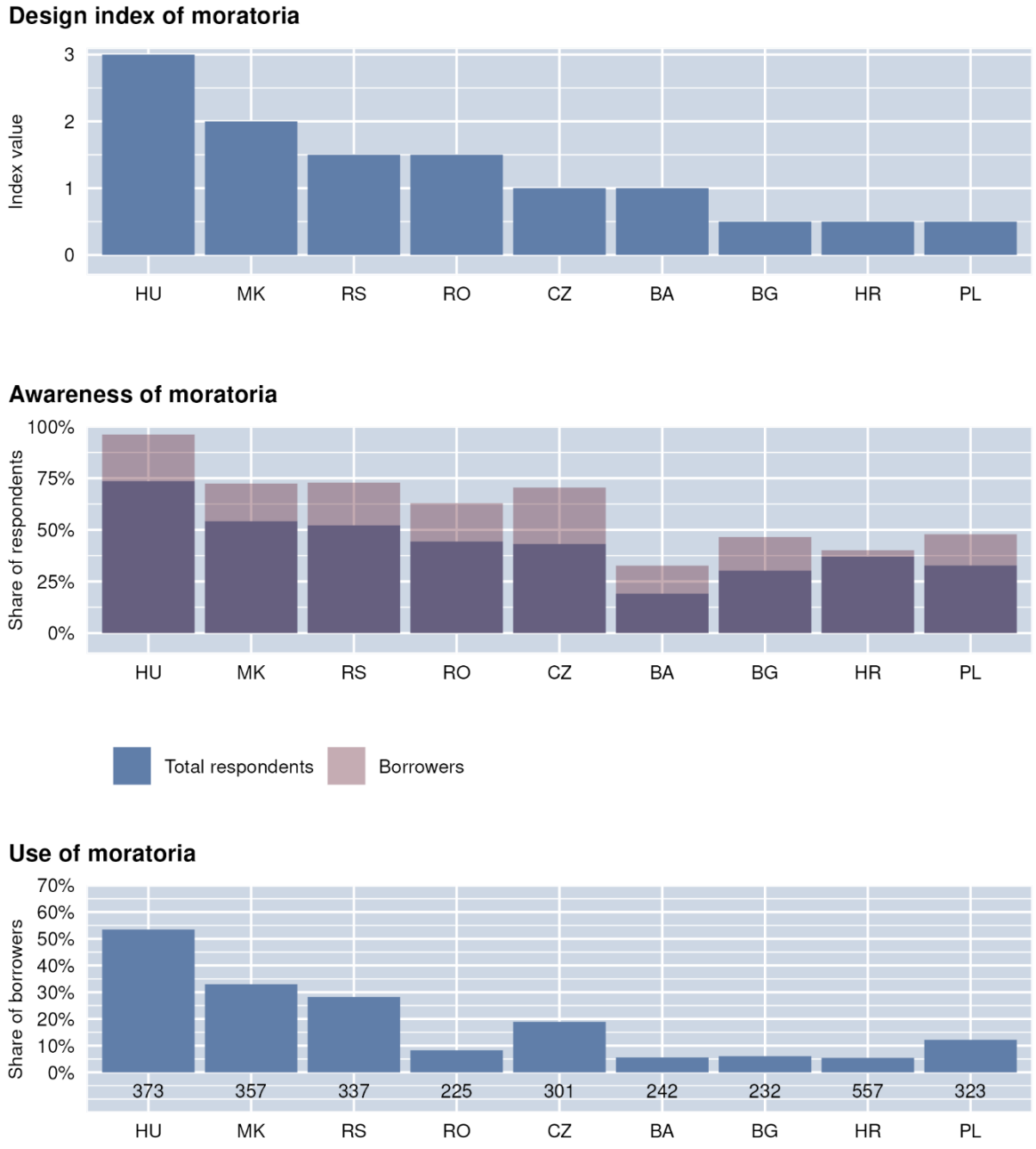
In terms of design features, the ranking for awareness comes close to the results obtained for the design index. This suggests that more generous moratorium designs were related to higher awareness in the population. Intuitively, this makes sense, as more generous support measures were probably more present in the media. Also, opt-out moratoria certainly created more awareness among debtors, as most banks likely informed their debtors about the changes in their loan terms. Despite the intuitiveness of the correlation, it seems striking how large the variation between the countries is and how few people in some countries claimed to be aware of the measures taken.

The lack of awareness is potentially concerning from a policy perspective. While there may be good reasons to have tight eligibility criteria for a borrower support program, every borrower should at least be aware of the existence of the program to assess whether they are eligible and want to use it. If awareness is very low, potentially interested borrowers might not have been able to benefit from the measure, as they were simply not aware of it. A complementary explanation might be that since very low awareness mostly concerns private moratoria, the communication of such measures might have been different: They might have been communicated less through official channels and the media, or they might have simply not been communicated and noticed as broad-based policy measures related to COVID-19. After all, borrowers in difficulty can always discuss restructuring their loan with their banks.

[11] Respondents who stated "Don't know" or "No answer" are excluded from the total. Poland has by far the highest share of respondents stating "Don't know" (20%). Higher shares were also reported for Bulgaria and Czechia (12%–14%). When including these respondents as not being aware of borrower relief measures, the shares of respondents aware of these measures would be lower in Poland (26%), Bulgaria (25%) and Czechia (36%).

Chart 1

Design index, awareness and use of moratoria in CESEE



Source: 2021 OeNB Euro Survey wave.
Note: Means are calculated with post-stratification weights. In the lower panel, the number of observations for the borrower subsample is indicated below the bars. The question on awareness was posed to all respondents.

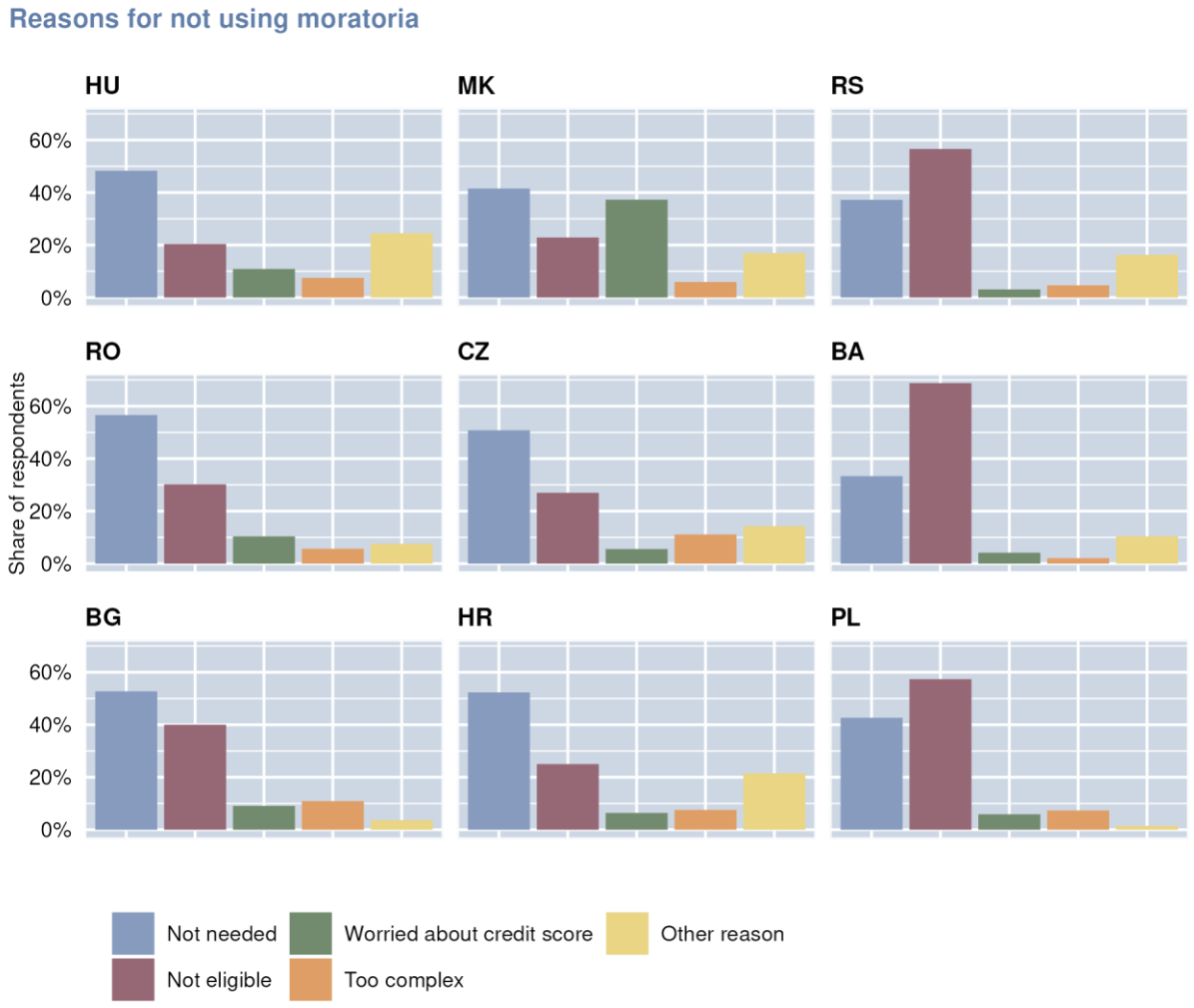
3.2 Use of moratoria

The lower panel in chart 1 shows the use of borrower relief measures among borrowers in CESEE. Given the low absolute number of moratorium users in some countries, the means are subject to considerable uncertainty.

We see similar patterns as for awareness and an even higher correlation with the design index. Reported use of borrower relief measures was by far the highest in the opt-out countries, starting with around 55% of debtors in Hungary and around 30% in North Macedonia and Serbia. In Czechia, almost 20% of debtors reported using the relief programs, followed by around 10% in Poland. In the remaining countries, less than 10% of debtors in our sample used the moratoria.[12]

We asked respondents who did not use the relief programs for the reasons behind not using them. Since we only asked debtors who were aware of the programs, we are left with few observations, ranging from 57 in Bosnia and Herzegovina to 188 in Croatia. Moreover, respondents could give more than one answer, even though the vast majority of respondents chose just one option. Keeping these caveats in mind, we nonetheless found some interesting cross-country similarities and dissimilarities evident from chart 2.

Chart 2



Source: 2021 OeNB Euro Survey wave.
Note: Countries are plotted in descending order based on the design index. The number of observations for each country are as follows: Hungary (N = 154), North Macedonia (N = 132), Serbia (N = 142), Romania (N = 118), Bosnia and Herzegovina (N = 57), Czechia (N = 137), Bulgaria (N = 71), Croatia (N = 188), Poland (N = 79).

[12] Regarding the question on how OeNB Euro Survey data on the use of borrower relief measures compares to data from other sources, we refer to Allinger and Beckmann (2021). In this paper, the authors discuss the difficulty of comparing OeNB Euro Survey usage data with the few other statistics available and provide a table comparing usage data from a variety of sources (see table A3 in annex A).

In most countries, respondents not using the moratoria most often stated that they had no financial need to do so. In Bulgaria, Croatia, Czechia, Hungary and Romania, 50% or more of non-users gave this answer. In the remaining countries, around 35%–40% mentioned this reason. Moreover, non-users frequently stated that they were not eligible for the moratoria. In most countries, the shares of non-users mentioning eligibility ranged between 20% and 30%. However, in three countries, this answer was chosen most often, namely in Poland, Bosnia and Herzegovina and Serbia. It is interesting to note that Serbia is among these countries, given that Serbia initially had an opt-out moratorium. We can break down eligibility further to differentiate between debt type, criteria related to the COVID-19 pandemic and other eligibility criteria. In the case of Poland, Bosnia and Herzegovina and Serbia, the high shares of ineligible borrowers are largely due to respondents stating that the types of debt they held were not eligible for a moratorium. This is somewhat puzzling, as our reading of the design features of moratoria suggests that their debt types would have been eligible.

However, respondents might indeed not have been eligible if, e.g., they were in arrears on their loan in March 2020 or had taken out their loan after March 2020. We can also not exclude that respondents accidentally or deliberately gave false answers, not wanting to state the true reasons. The most worrying possible interpretation from a policy perspective is that respondents might have erroneously thought that they were not eligible. This could point to suboptimal communication by policymakers or banks. The data suggest that other borrowers potentially wanted to use the moratoria but were prevented from doing so due to the eligibility criteria defined or their interpretation of these criteria.

Having sorted the countries in chart 2 in descending order based on the design index, we find that there is no clear visual pattern based on moratorium design features for either "not eligible" or "not needed." The computed correlation coefficients for eligibility are –0.44 (Pearson) and –0.54 (Spearman), indicating that a higher design index is associated with lower shares of respondents concerned about eligibility. However, the correlation is not significant. For "not needed," the computed correlation coefficients are both around –0.1 and highly insignificant.

Finally, in most countries, around 5%–10% of respondents who knew about the moratoria but did not use them mentioned the complexity of the related application process. Particularly in North Macedonia, people also seemed to worry about their credit score, which deterred them from using the moratoria. In Croatia, Hungary, North Macedonia and Serbia, almost 20% of respondents also listed other (not specified) reasons.

4 Within-country variation by region and socioeconomic variables

In this section, we discuss the within-country variation in respondents' awareness and use of borrower relief measures both with regressions using socioeconomic variables and, in the case of awareness, regional variation. Results for respondents' attribution of the measures are reported in annex C.

4.1 Awareness of moratoria

With respect to awareness, we formulate several hypotheses about some of the variables we selected for our probit model, while other variables are primarily included as control variables and will therefore not be discussed in detail. We study the awareness of the entire population instead of just debtors for two main reasons: First, awareness of policy measures may have effects on debtors' and non-debtors' overall financial behavior. Those aware are potentially more likely to expect future bailouts by the government, which might alter their risk-taking behavior. Second,

this allows us to exploit the full, representative population sample, which gives our statistical analyses more power. This is particularly relevant for the country regressions.

We assume that the following variables have a positive correlation with respondents' awareness: i) having or planning to take out loans, as it is likely that debtors pay more attention to, and have a different stake in, borrower relief programs than non-debtors. Moreover, they may even have received personalized information from their banks, particularly in opt-out countries; ii) higher level of education and financial literacy, as both likely make it easier for respondents to understand financial policy measures and assess their usefulness and implications; iii) being negatively affected by the COVID-19 pandemic, as this may give respondents an incentive to be more aware of available support measures; and iv) living in the capital city, as this is usually where policies are decided in the CESEE countries and may therefore lead to increased awareness.

We believe that other variables of financial inclusion and sophistication, such has having no savings or owning investment products, are likely also important. However, we are uncertain about the expected direction of the effects. Both savings and investment products may, on the one hand, be an indicator of wealth and thus of the need for support measures. On the other hand, these variables may also be an indicator of financial inclusion and thus of being aware of developments in finance and banking in general.

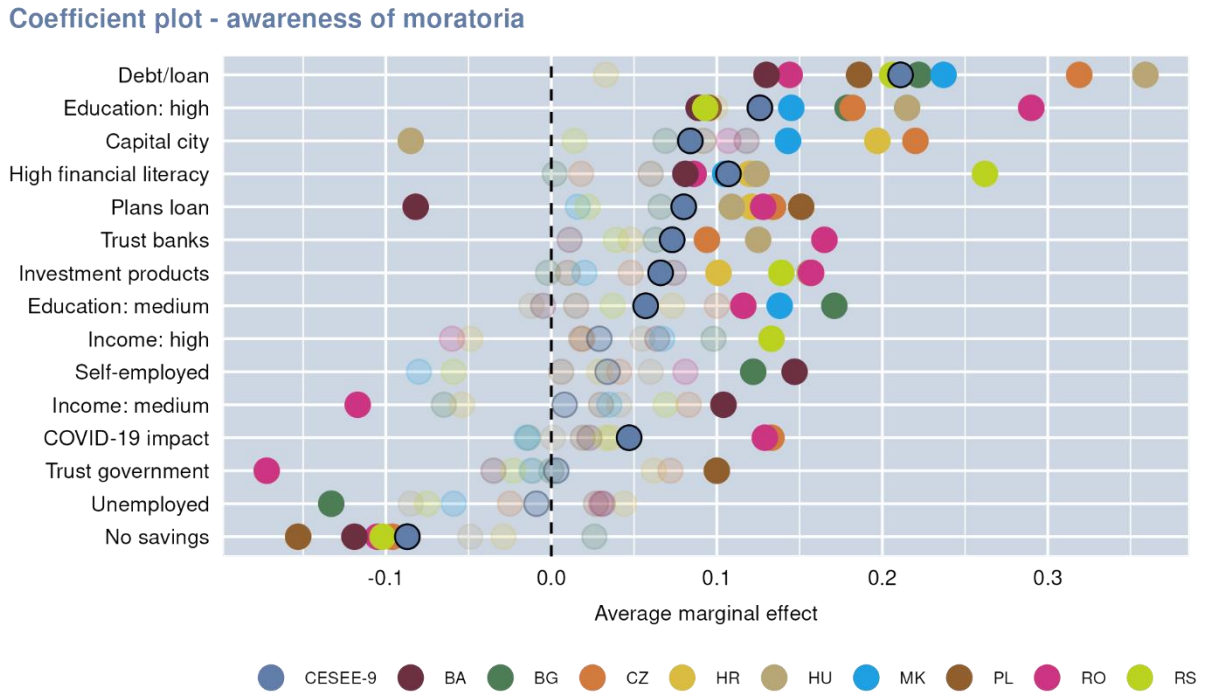
Chart 3 shows the average marginal effects of several probit regressions.[13] The results of a pooled regression are shown in dark blue in addition to the results of country-specific regressions. We can clearly see that the magnitude and significance of the estimates varies across countries. Despite this heterogeneity, some common patterns can be identified.

For the variables that capture having loans, planning to take out loans and having higher levels of education and financial literacy, we find that they are strongly, positively and significantly related to awareness in almost all regressions. With respect to owning investment products or having no savings, the financial inclusion effect seems to dominate the wealth effect. Having no savings is associated with lower awareness of borrower relief measures, and owning investment products with higher awareness – again, this holds for most countries.

Interestingly, if respondents' personal finances were negatively impacted by the COVID-19 pandemic, awareness levels were higher in the pooled regressions. However, the marginal effects appear relatively modest. Moreover, in country-specific regressions, these effects are mostly insignificant. Thus, the results for our initial hypothesis that COVID-19 affectedness correlates with awareness are mixed.

[13] For reasons of scope, not all coefficients are shown in the plot, but they are included in table D3 in annex D.

Chart 3



Source: 2021 OeNB Euro Survey wave.
Note: Dependent variable = 1 if respondent is aware of borrower relief measures. Average marginal effects from a probit model estimated by maximum likelihood. Standard errors are clustered at the PSU level. Full opacity means p-value of t-test < 0.1. Variables not shown include log(Age), Female (0/1), Married (0/1), Income: NA, Size of household.

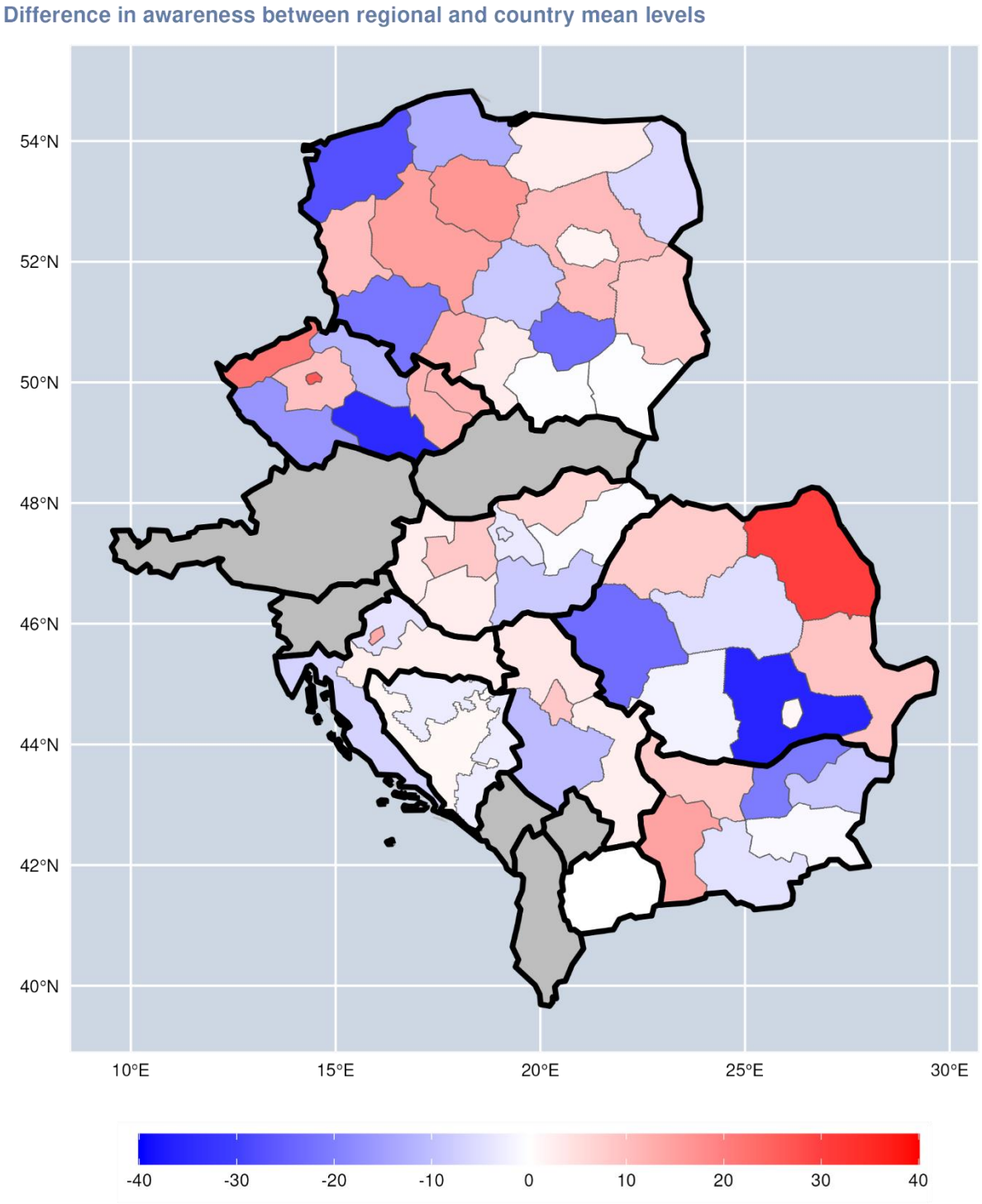
Finally, we find evidence that respondents' awareness is indeed significantly higher in a few country capitals and in the pooled sample, with the exception of Hungary, where awareness is lower in the capital. We cannot say, however, whether this is truly because of the proximity to policymakers, as we hypothesized, or some other, unobserved characteristic of respondents living in the capital city.[14]

Related to this, we also show the geographic distribution of respondents' awareness by country. In figure 1, we present the percentage points difference between the mean of a given NUTS 2 region and the mean of the corresponding country. The scale ranges from –40 to +40 percentage points, indicating considerable within-country fluctuations in awareness in some countries. Countries with an overall lighter, more transparent shade (e.g. Bosnia and Herzegovina, Hungary or Serbia) show less pronounced differentiation around their country mean than those with darker shades (e.g. Czechia, Romania or Poland). Figure E1 in annex E shows respondents' awareness as predicted by our pooled probit model. Looking at both figures helps us better understand whether regional differences in awareness are due to observed or unobserved factors. In some countries (e.g. Bulgaria, Croatia), the figures point to similarities, suggesting that the observed socioeconomic characteristics can explain a large portion of the variation. In other countries (e.g. Poland, especially its eastern parts), the difference between the two figures is

[14] As a small robustness check whether this is indeed a capital or large-city effect, we additionally add a dummy for large cities (we try cut-offs at 50,000, 75,000 and 100,000 inhabitants, respectively). Each dummy is insignificant in all regressions, while the capital city dummies remain significant (results available upon request).

striking. Theoretically, there are many potential confounding factors, including media coverage or social networks, for which we cannot control and which might vary in importance across regions.

Figure 1



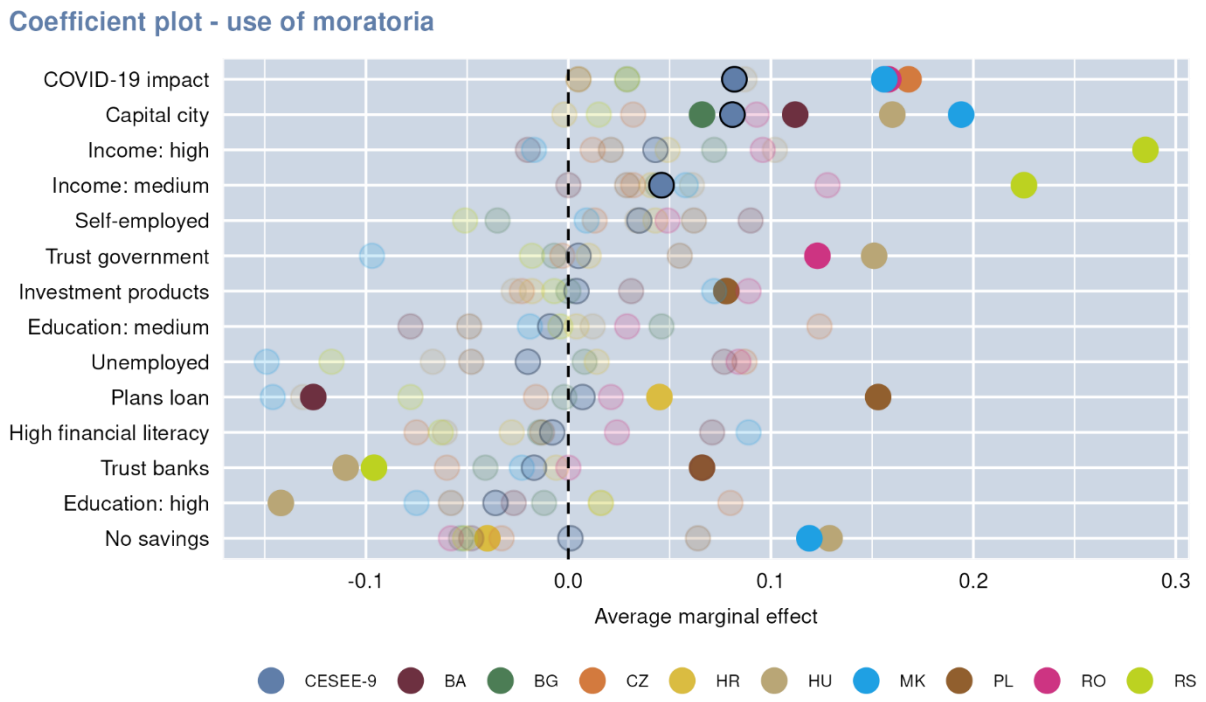
Source: 2021 OeNB Euro Survey wave.
Note: NUTS 2, except for Bosnia and Herzegovina, where regions are defined according to Hijmans (2015). Please refer to table E1 for the numeric values and see also figure E1 in annex E.

4.2 Use of moratoria

Regarding usage, our main hypothesis is that we expect to find broadly similar results to those found by Allinger and Beckmann (2021). In this study, the authors used a different question on moratoria included in the 2020 OeNB Euro Survey wave to assess socioeconomic determinants of moratorium use and the prevalence of arrears. Most socioeconomic control variables used by Allinger and Beckmann (2021) were insignificant in a pooled regression on moratorium use, pointing to the fact that usage was relatively broadly distributed among loan holders. However, several variables associated with the negative financial impact of the COVID-19 pandemic and with having no savings were significant. This makes sense given the larger need for support measures and the conditionality of moratorium programs in many countries.

Despite relying on a different survey wave and question, we find similar results in our current study compared to Allinger and Beckmann (2021). In chart 4 in the pooled regression, very few coefficients are significant. Being negatively financially affected by the COVID-19 pandemic increased the use of moratoria, which is not surprising. The coefficient on the capital city is also significant. Both variables have significant and positive coefficients in three country regressions.

Chart 4



Source: 2021 OeNB Euro Survey wave.
Note: Dependent variable = 1 if respondent took advantage of borrower relief measures. Average marginal effects from a probit model estimated by maximum likelihood. Standard errors are clustered at the PSU level. Full opacity means p-value of t-test < 0.1. Variables not shown include log(Age), Female (0/1), Married (0/1), Income: NA, Size of household.

5 Conclusions

This study compares moratorium designs across nine CESEE countries and uses survey data to analyze how certain aspects of borrower relief programs were perceived by the public. For this purpose, survey data are an excellent source, as they can shed light on individuals' decision-making processes – something that loan-level data available to banks and financial authorities cannot do.

We find large heterogeneity across countries in respondents' awareness of borrower relief measures, their attribution of the measures to different institutions, their use of the measures and their reasons for not using them. Regarding awareness, we find that in some countries, large shares of the overall population and almost all borrowers were aware of the relief measures put in place. In several other countries, however, less than 50% of respondents knew about the relief measures – even when considering the subsample of borrowers only. This could be a cause for concern, as awareness of a policy measure is a requirement for being able to decide whether or not to use it (e.g. Allen et al., 2022). Our findings suggest that awareness was higher in countries with a higher calculated design index for moratoria, which is our gross proxy for how borrower-friendly the implemented measures were. Particularly in countries with very low awareness, the public might not have perceived the implemented moratoria as different to the status quo (of bilaterally negotiating loan restructurings with banks), or banks and authorities may have provided (too) little information regarding the policy measures.

When looking at within-country variation in respondents' awareness, we find relatively similar patterns across countries. Socioeconomic characteristics that proxy financial inclusion and sophistication (e.g. owning investment products) as well as general education and financial knowledge are strongly positively correlated with awareness. Thus, low financial inclusion or limited knowledge could also have contributed to lower aggregate awareness. Awareness also differed quite strongly across the NUTS 2 regions within some countries.

Regarding usage, we find a large dispersion across countries that is highly correlated with the moratorium design index. The more borrower-friendly the design of moratoria, the higher their usage. When looking at the correlations with socioeconomic characteristics, having been negatively financially affected by the COVID-19 pandemic seems to be the most important correlation. This makes sense given that this was one of the conditions tied to moratoria in many countries. When asking borrowers about why they did not use relief measures, they most often stated that they did not have a financial need to do so or that they were not eligible. There is some differentiation between countries regarding which of the two reasons was mentioned more often. However, these cross-country differences do not correlate with the moratorium design index. The fact that in several countries, the shares of non-users mentioning eligibility as an issue were quite high (above 50%), raises some concerns as to whether borrowers might have misunderstood the eligibility criteria defined by authorities and banks.

Overall, our study provides novel insights into differences in moratorium designs coupled with public perceptions of these moratoria. The findings should be evaluated jointly with studies on other aspects of moratoria, most importantly their effectiveness in preventing unnecessary defaults due to liquidity crunches. For the country sample covered in this study, evidence on loan arrears can be found in Allinger and Beckmann (2021). More work on the effectiveness and potential moral hazard implications of moratoria is envisaged based on the OeNB Euro Survey module used in this paper.

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Annex A

Variable list and descriptive statistics

Table A1

Variable definitions

Variable	Definition
Borrower relief variables	
Aware of moratorium	Dummy variable is 1 if respondent answered question "Are you aware of any measures your government or banks in [YOUR COUNTRY] adopted because of the pandemic to support borrowers (for example enabling borrowers to postpone repayments without penalties, offering borrowers favorable changes in loan terms, …)?" with "Yes" and 0 if answer was "No."
Attribution to government	Dummy variable is 1 if respondent answered "Government" to question: "Who, do you think, was the driving force behind the measures that were adopted to support borrowers?" Dummy variable is 0 if one of the following answers was given: commercial banks; both government and commercial banks; some other organization.
Used moratorium	Dummy variable is 1 if borrower answered question "Since the beginning of the COVID-19 pandemic, have you taken advantage of any measures that were adopted to support borrowers?" with "Yes" and 0 otherwise.
Reasons for non-usage: no need	Dummy variable is 1 if respondent answered "I had no financial need to participate" to question: "Could you tell us why you didn't make use of the measures? Please mention all reasons that apply."
Reasons for non-usage: eligibility	Same as above, if answer was either "My types of debt were not eligible" or "I did not fulfill eligibility criteria related to the pandemic (e.g. affectedness)" or "I did not fulfill some other eligibility criteria."
Reasons for non-usage: complexity	Same as above, if answer was "I thought the application process was too complex."
Reasons for non-usage: credit score	Same as above, if answer was "I was worried that it would hurt my credit score."
Reasons for non-usage: other reason	Same as above, if answer was "Some other reason."
Sociodemographic variables	
Log(Age)	Logarithm of age of respondent in years.
Female	Dummy variable is 1 for female respondents and 0 for male respondents.
Household size	Number of household members permanently living in household.
Income (low, medium, high, no answer)	Dummy variable is 1 for each net household income tercile (low, medium, high) by country. Sample values are used to construct terciles. For respondents who did not answer, an additional dummy variable is defined (income − no answer).
Education (low, medium, high)	Three dummy variables that are 1 if respondent has low/medium/high education, respectively. Low education is primary and lower secondary education or less, medium is upper and post-secondary education and high is tertiary education or more. Classification controls for different national education systems and is harmonized across countries.
High financial literacy	Dummy variable is 1 if respondent correctly answered all three financial literacy questions concerning 1) interest rates, 2) inflation, 3) exchange rate depreciation. Dummy variable is 0 if one or more questions were answered incorrectly or with "Don't know." "No answer" responses missing.
Employment status	Two dummy variables included: Unemployed is 1 if respondent is unemployed. Self-employed is 1 if respondent is self-employed. Base category: employed, retired, students.

Other variables	
Capital city	Dummy variable is 1 if respondent lives in the capital city according to the geolocation of the interview.
Debt/loan	Dummy variable is 1 if respondent has either of these financial liabilities: "a bank using a bank loan" and/or "a bank using the overdraft facility of my bank account" and/or "a credit card debt" and/or "a store or company using installment credit, buying on credit" and/or "a leasing contract" and/or "an internet loan provider" and/or "a pay day lender" and/or "another private lender" and 0 otherwise.
Plans loan	Dummy variable is 1 if respondent answered question "If you think about loans in general, both from a bank or from other sources: Do you, either personally or together with your partner, plan to take out a loan within the next 12 months?" with "Yes" and 0 if answer was "No."
No savings	Dummy variable is 1 if respondent answered question "[...] Do you currently have any savings?" with "No" and 0 if answer was "Yes."
Investment products	Dummy variable is 1 if respondent owns any of these financial assets: "life insurance" and/or "mutual funds" and/or "stocks" and/or "pension funds (voluntary)" and/or "bonds" and 0 otherwise.
COVID-19 financial affectedness	Dummy variable is 1 if respondent answered question "How much, if at all, has the financial situation of your household been negatively affected by the COVID-19 pandemic?" with "A great deal" or "A fair amount" or "Just a little" and 0 if answer was "Not at all."
Trust in government	Dummy variable based on the following question: "I would like to ask you a question about how much trust you have in other people and in certain institutions. Please tell me whether you trust or distrust on a scale from 1 (trust completely) to 5 (do not trust at all). The Government?" Answers 1 "I trust completely" and 2 "I somewhat trust" are coded as 1, answers 3 to 5 as 0.
Trust in banks	As above, applied to (domestic and foreign) commercial banks.

Table A2

Summary statistics

	Full sample			Respondents with debt			
	Mean	SD	N	Mean	SD	N	p-value
Awareness (0/1)	0.43	0.49	8,268	0.61	0.49	2,749	0.000
Usage (0/1)	0.20	0.40	2,947	0.20	0.40	2,947	1.000
Attribution to government (0/1)	0.46	0.50	3,357	0.44	0.50	1,601	0.180
Age (in years)	47.28	16.33	9,077	45.21	13.17	2,947	0.000
Female (0/1)	0.54	0.50	9,077	0.55	0.50	2,947	0.350
Married (0/1)	0.65	0.48	9,077	0.74	0.44	2,947	0.000
Size of household (in persons)	2.78	1.34	9,071	2.97	1.29	2,945	0.000
High financially literacy (0/1)	0.32	0.47	8,907	0.36	0.48	2,896	0.000
Unemployed (0/1)	0.12	0.32	9,008	0.08	0.28	2,921	0.000
Self-employed (0/1)	0.08	0.27	9,008	0.09	0.29	2,921	0.010
No savings (0/1)	0.57	0.50	8,794	0.50	0.50	2,878	0.000
Investment products (0/1)	0.15	0.35	9,077	0.21	0.40	2,947	0.000
Trust government (0/1)	0.25	0.43	8,887	0.25	0.44	2,901	0.430
Trust banks (0/1)	0.32	0.47	9,077	0.34	0.47	2,947	0.100
Capital city (0/1)	0.14	0.34	9,077	0.17	0.38	2,947	0.000
COVID-19 impact (0/1)	0.72	0.45	8,781	0.77	0.42	2,894	0.000
Debt/loan (0/1)	0.32	0.47	9,077				
Plans loan (0/1)	0.08	0.26	8,633	0.14	0.35	2,760	0.000
Education: low (0/1)	0.19	0.39	9,058	0.13	0.34	2,943	0.000
Education: medium (0/1)	0.60	0.49	9,058	0.61	0.49	2,943	0.370
Education: high (0/1)	0.21	0.41	9,058	0.26	0.44	2,943	0.000
Income: low (0/1)	0.24	0.43	9,077	0.17	0.37	2,947	0.000
Income: medium (0/1)	0.27	0.44	9,077	0.30	0.46	2,947	0.000
Income: high (0/1)	0.24	0.43	9,077	0.33	0.47	2,947	0.000
Income: NA (0/1)	0.25	0.43	9,077	0.20	0.40	2,947	0.000
Income (in euro)	1,224	1,151	9,077	1,495	1,221	2,947	0.000

Source: 2021 OeNB Euro Survey wave.
Note: The last column shows the results of a Welch 2-sample t-test, i.e. H0: True difference in means is equal to 0.

Table A3

Pairwise correlation table

	Age (in years)	Female (0/1)	Size of house-hold (in persons)	Income: low (0/1)	Income: medium (0/1)	Income: high (0/1)	Education: low (0/1)	Education: medium (0/1)	Education: high (0/1)
Age (in years)									
Female (0/1)	−0.0290*	1.0							
Size of household (in persons)	−0.3284*	0.0016*	1.0						
Income: low (0/1)	0.2488*	0.0317*	−0.3248*	1.0					
Income: medium (0/1)	−0.0184*	0.0022*	−0.0165*	−0.3419*	1.0				
Income: high (0/1)	−0.1323*	−0.0222*	0.2412*	−0.3206*	−0.3441*	1.0			
Education: low (0/1)	0.1471*	−0.0	−0.0455*	0.2135*	−0.0513*	−0.1510*	1.0		
Education: medium (0/1)	−0.0281*	−0.0392*	0.0080*	−0.0481*	0.0969*	−0.0113*	−0.5970*	1.0	
Education: high (0/1)	−0.1087*	0.0478*	0.0345*	−0.1491*	−0.0671*	0.1602*	−0.2495*	−0.6279*	1.0
High financial literacy (0/1)	−0.0020*	−0.0374*	0.0120*	−0.0838*	0.0198*	0.0874*	−0.0949*	−0.0080*	0.1016*
Unemployed (0/1)	−0.1156*	0.1269*	0.1255*	0.1173*	−0.0229*	−0.1233*	0.1087*	−0.0212*	−0.0797*
Self-employed (0/1)	−0.0273*	−0.1049*	0.0674*	−0.0842*	−0.0234*	0.0843*	−0.0708*	−0.0	0.0692*
Debt/loan (0/1)	−0.0411*	0.0136*	0.0994*	−0.1220*	0.0556*	0.1310*	−0.1104*	0.0131*	0.0913*
Plans loan (0/1)	−0.0900*	0.0112*	0.0944*	−0.0458*	0.0025*	0.0831*	−0.0535*	−0.0110*	0.0659*
No savings (0/1)	−0.0497*	0.0236*	−0.0154*	0.1266*	−0.0019*	−0.1779*	0.1560*	−0.0023*	−0.1494*
Investment products (0/1)	0.0230*	−0.0217*	0.0119*	−0.0922*	−0.0105*	0.1349*	−0.1223*	−0.0174*	0.1397*
Trust government (0/1)	0.0416*	0.0134*	0.0169*	−0.0063*	0.0033*	0.0277*	0.0755*	−0.0708*	0.0123*
Trust banks (0/1)	−0.0281*	0.0138*	0.0462*	−0.0556*	−0.0125*	0.0776*	−0.0328*	−0.0233*	0.0600*

	High financial literacy (0/1)	Unemployed (0/1)	Self-employed (0/1)	Debt/loan (0/1)	Plans loan (0/1)	No savings (0/1)	Investment products (0/1)	Trust govern-ment (0/1)	Trust banks (0/1)
High financial literacy (0/1)	1.0								
Unemployed (0/1)	−0.0856*	1.0							
Self-employed (0/1)	0.0372*	−0.1056*	1.0						
Debt/loan (0/1)	0.0591*	−0.0763*	0.0428*	1.0					
Plans loan (0/1)	0.0204*	−0.0099*	0.0421*	0.1774*	1.0				
No savings (0/1)	−0.1594*	0.1344*	−0.1133*	−0.0940*	−0.0654*	1.0			
Investment products (0/1)	0.0963*	−0.0882*	0.1244*	0.1186*	0.0821*	−0.3175*	1.0		
Trust government (0/1)	0.0387*	−0.0505*	−0.0361*	0.0118*	0.0028*	−0.0480*	0.0051*	1.0	
Trust banks (0/1)	0.1148*	−0.0321*	0.0210*	0.0242*	0.0328*	−0.1328*	0.0547*	0.3638*	1.0

Source: 2021 OeNB Euro Survey wave.
Note: Pairwise correlations. Stars indicate significance at 0.95 confidence level. Some variables with low correlations omitted for readability.

Table A4

Share of borrowers aware of relief measures by COVID-19 affectedness

Country	COVID-19 financial affectedness	Share	N
HU	A great deal	0.91	32
HU	A fair amount	0.95	91
HU	Just a little	0.96	146
HU	Not at all	0.99	101
MK	A great deal	0.66	62
MK	A fair amount	0.74	92
MK	Just a little	0.75	130
MK	Not at all	0.72	68
RS	A great deal	0.64	42
RS	A fair amount	0.77	117
RS	Just a little	0.70	112
RS	Not at all	0.79	65
RO	A great deal	0.76	33
RO	A fair amount	0.65	65
RO	Just a little	0.56	59
RO	Not at all	0.58	63
CZ	A great deal	0.67	30
CZ	A fair amount	0.79	66
CZ	Just a little	0.79	88
CZ	Not at all	0.61	106
BA	A great deal	0.43	30
BA	A fair amount	0.31	105
BA	Just a little	0.34	63
BA	Not at all	0.24	42
BG	A great deal	0.40	28
BG	A fair amount	0.32	79
BG	Just a little	0.51	90
BG	Not at all	0.65	22
HR	A great deal	0.41	85
HR	A fair amount	0.33	202
HR	Just a little	0.52	150
HR	Not at all	0.37	119
PL	A great deal	0.54	45
PL	A fair amount	0.43	99
PL	Just a little	0.49	91
PL	Not at all	0.53	7

Source: 2021 OeNB Euro Survey wave.

Annex B

Moratorium characteristics in CESEE countries

This section contains table B4 outlining characteristics of moratoria across countries. Moreover, it discusses some robustness checks regarding the moratorium design index that we constructed from the information underlying this table.

As pointed out in the main text, it is very difficult to find additional criteria to add to the index to increase differentiation. However, we can nonetheless test to what extent changes in the classifications would change the correlations. For this purpose, we draw up table B1, which shows the correlation coefficients and p-values for our main variables of interest and five alternative design indices. The first index is the one we use in the main text. The second index does not allow for the intermediate value 0.5 in the first two categories, and thus classifies Serbia as having a fully opt-out moratorium and Poland as having a fully private moratorium. The third index assigns opt-out moratoria a numeric value of two instead of one, putting more weight on the importance of this criterion. The final index adds an additional dimension, namely whether the maximum number of months during which individuals could have used the moratoria came to more than 6 months or ≤ 6 months. As can be seen in table 1, the numbers are basically equivalent to the values for the application period that we used in the original index. Finally, we use the original index, but remove a country from the top and from the bottom – Hungary and Poland – from the sample.

Table B1 shows that the Pearson correlation coefficients and their p-values barely vary across the indices. Only in the last column, we can see that omitting Hungary and Poland from the sample decreases the correlation and increases the p-value – this is particularly the case for attribution, where the correlation was insignificant to begin with. Regarding the Spearman rank correlations, there is also little variation between the first three indices. However, for the fourth index containing the additional dimension, we see lower correlation coefficients and higher p-values. Moreover, excluding Hungary and Poland again drops the correlation and increases the p-value for attribution. We thus conclude that our index is relatively robust to minor changes, but adding additional criteria could affect the correlations and, in particular, their significance. However, as pointed out in the main text, we have carefully considered possible sensible extensions of our index and have not found any.

Returning to the original design index, we construct binary design features[15] and use them to run two additional checks. First, with t-tests, we can test for the significance of differences in means for each design feature separately – contrary to adding them all together as we do in the main text. The tests show that for opt-out versus opt-in moratoria (for country classifications, see table B4 in annex B or table 1), all means between the groups are significantly different for awareness, attribution and usage. For private versus public, public moratoria have higher means and the test for differences is significant for awareness and usage, but not for attribution. When comparing means between countries by duration, only the difference in awareness is significant. For usage and attribution, the means are very similar.

[15] Thus, in this case, we do not allow for intermediate values. Serbia is classified as "opt-out," Poland as "private" and the application duration is split into countries with a duration equal to or longer than the one outlined in the EBA GL and countries with a shorter application period.

Table B1

Correlation with design index

Index	Awareness		Attribution		Usage	
	Correlation	p-value	Correlation	p-value	Correlation	p-value
Pearson test						
Original	0.87	0.00	0.37	0.33	0.90	0.00
No intermediate values	0.85	0.00	0.33	0.39	0.87	0.00
Double opt-out	0.87	0.00	0.37	0.33	0.91	0.00
Incl. maximum usage	0.80	0.01	0.36	0.34	0.71	0.03
Excl. HU+PL	0.70	0.08	−0.05	0.92	0.78	0.04
Spearman test						
Original	0.85	0.00	0.26	0.50	0.78	0.01
No intermediate values	0.84	0.01	0.29	0.45	0.73	0.02
Double opt-out	0.84	0.00	0.26	0.50	0.74	0.02
Incl. maximum usage	0.73	0.02	0.06	0.88	0.41	0.27
Excl. HU+PL	0.83	0.02	0.00	1.00	0.83	0.02

Source: 2021 OeNB Euro Survey wave. Information provided by the EBA as well as various national competent authorities and banking associations. Authors' calculations.

We also add the design index to our pooled regressions displayed in annex D to test if controlling for socioeconomic variables changes the impact of the design features and whether the design characteristics are significant when included jointly in a regression. Table B3 shows average marginal effects. For each dependent variable, the first column displays the results for the country dummies from the baseline regression with Hungary as the base country. In the second column for each variable, we see the results of a regression excluding the country dummies and instead using dummies for opt-in moratoria, private moratoria and short-duration moratoria. Despite the fact that we control for all design features jointly, the regression results are very similar to the results displayed in table B2. All average marginal effects are negative and significant, except for the private dummy in the attribution regression and the short-duration dummy in the usage regression. The design feature with the highest coefficient is opt-in, even though in the attribution regression the coefficient is roughly the same size as the one for short duration.

Table B2

Results of Welch 2-sample t-test

Test	Mean Group 0	Mean Group 1	Difference	p-value
Awareness, opt_in = 1	0.59	0.34	0.25	0.000
Awareness, private = 1	0.48	0.33	0.15	0.000
Awareness, short application = 1	0.46	0.40	0.06	0.000
Attribution, opt_in = 1	0.51	0.42	0.09	0.000
Attribution, private = 1	0.47	0.44	0.03	**0.107**
Attribution, short application = 1	0.48	0.45	0.04	**0.028**
Usage, opt_in = 1	0.38	0.10	0.29	0.000
Usage, private = 1	0.27	0.08	0.19	0.000
Usage, short application = 1	0.19	0.21	−0.02	**0.157**

Source: 2021 OeNB Euro Survey wave.

Table B3

Average marginal effects of probit regressions for country and design dummies

	Awareness		Attribution		Usage	
	Base	Design	Base	Design	Base	Design
BG	−0.43***		−0.20***		−0.34***	
	(0.03)		(0.05)		(0.04)	
HR	−0.44***		−0.15***		−0.40***	
	(0.03)		(0.04)		(0.03)	
CZ	−0.37***		0.0		−0.23***	
	(0.04)		(0.05)		(0.04)	
HU						
(Base category)						
PL	−0.40***		−0.22***		−0.25***	
	(0.03)		(0.05)		(0.03)	
RO	−0.24***		−0.26***		−0.34***	
	(0.03)		(0.04)		(0.04)	
BA	−0.49***		−0.46***		−0.36***	
	(0.03)		(0.04)		(0.04)	
MK	−0.20***		−0.23***		−0.14***	
	(0.03)		(0.05)		(0.03)	
RS	−0.23***		−0.18***		−0.17***	
	(0.04)		(0.04)		(0.03)	
Opt-in moratoria		−0.22***		−0.07**		−0.20***
		(0.02)		(0.03)		(0.02)
Private moratoria		−0.12***		−0.0		−0.06**
		(0.02)		(0.03)		(0.03)
Short-duration moratoria		−0.13***		−0.07***		−0.0
		(0.02)		(0.03)		(0.02)
Socioeconomic variables	Yes	Yes	Yes	Yes	Yes	Yes
N	7,273	7,273	3,169	3,169	2,554	2,554
Pseudo-R2	0.17	0.16	0.07	0.04	0.17	0.14
Clusters	1,324	1,324	966	966	1,024	1,024
Log-L	−4,140.5	−4,196.0	−2,023.6	−2,091.9	−1,054.8	−1,098.1

Source: 2021 OeNB Euro Survey wave.
Note: Average marginal effects of probit regressions. Standard errors clustered at the PSU level. The dependent variables are binary. All control variables from regressions in main text included.
** p<0.10, ** p<0.05, *** p<0.01*

Table B4

Design features of moratoria in CESEE countries

Country	Legislation	Institutions	Start date	Maximum duration/latest application	Opt-in/opt-out	COVID-19 eligibility criteria	Other characteristics/conditions
BG	Private	National bank, banking association	From March 2020	Up to 9 months, not later than December 31, 2021	Opt-in	Explicitly intended for borrowers directly or indirectly negatively affected	
CZ	Public	Government	From May 2020	Up to 6 months, not later than October 31, 2020	Opt-in	Application required statement that borrower was negatively affected	No leasing products or revolving products
HR	Private	National bank, banking association	From March 2020	Up to 9 months, not later than December 31, 2021	Opt-in	Modalities referred to EBA GL	
HU I	Public	Government	From March 2020	Not later than December 31, 2020	Opt-out	No criteria	
HU II	Public	Government	From January 2021	Until December 31, 2022, for certain groups, otherwise until October 31, 2021	Opt-in for new users	Restricted to specific groups from November 1, 2021 (incl. negatively affected borrowers)	
PL I	Public	Government	From June 2020	Up to 3 months	Opt-in	Loss of job or other main source of income after March 13, 2020	Use of moratorium only possible for one credit agreement
PL II	Private	National bank, banking association	From March 2020	Up to 6 months, not later than March 31, 2021	Opt-in	Explicitly intended for borrowers directly or indirectly affected by COVID-19 pandemic	
RO	Public	Government	From March 2020	Up to 9 months, not later than December 31, 2021	Opt-in	Application required affidavit that borrower was directly or indirectly negatively affected	
BA	Public	Banking agencies	From March 2020	Up to 6 months, not later than June 30, 2021	Opt-in	Explicitly intended for borrowers directly or indirectly affected by COVID-19 pandemic	More options for borrower relief than just moratorium
MK	Public	National bank, government, banking association	Two offers: March and September 2020	Up to 6 months, not later than March 31, 2021	Opt-out	For second offer: banks asked to set out affectedness criteria	More options for borrower relief than just moratorium, not compulsory for banks
RS I	Public	National bank	From March 2020	Up to 6 months or not later than September 30, 2020	Opt-out	No criteria	
RS II	Public	National bank	From December 2020	Up to 6 months, not later than October 31, 2021	Opt-in	Specific criteria for debt relief; banks could voluntarily grant relief to other borrowers	More options for borrower relief than just moratorium

Annex C

Attribution of measures

In this annex, we show some results regarding the attribution of borrower relief measures to different institutions, using the following question from the OeNB Euro Survey:

- **Attribution:** "*Who, do you think, was the driving force behind the measures that were adopted to support borrowers?" Answer options: 1) Government, 2) Commercial banks, 3) Both government and commercial banks, 4) Some other organization.*

We study this variable, as it is interesting per se to know who respondents thought was responsible for the measures. Moreover, attribution could hinder take-up if individuals do not trust the institution deemed responsible for the debt relief offer. The annex shows differences in attribution at the country level, correlations between attribution and trust in institutions at the regional level and correlations between attribution and socioeconomic characteristics and trust at the individual level.

Cross-country variation

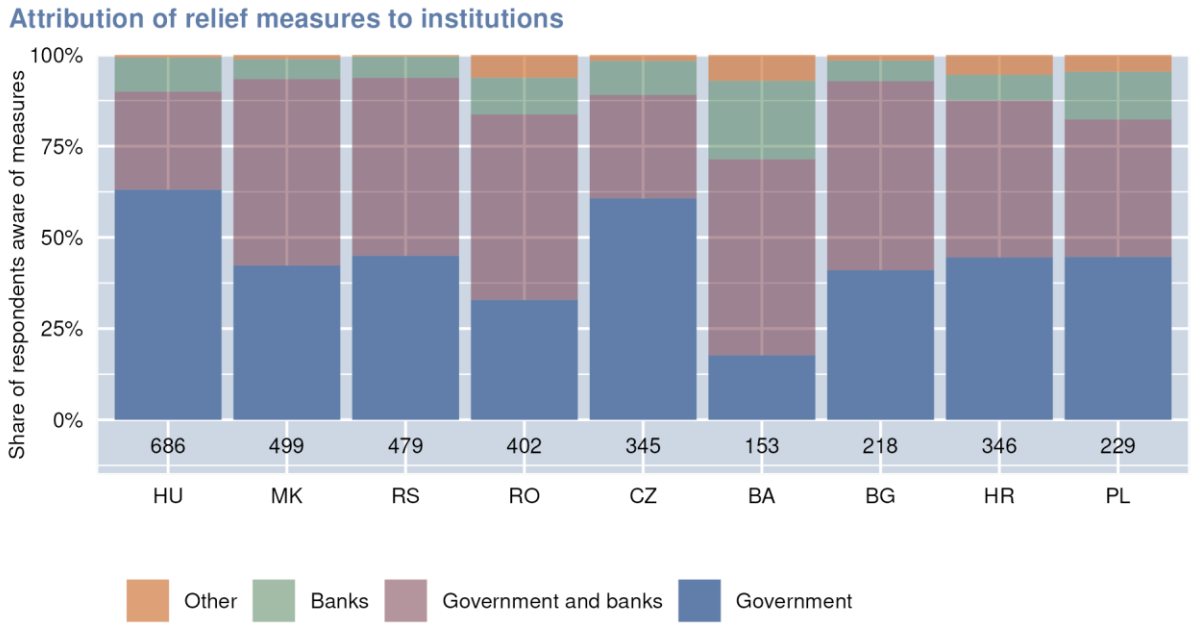
Regarding the attribution of borrower relief measures to certain institutions, we see no reason to expect a significant correlation with the design index. Chart C1 shows to which institutions the respondents aware of relief measures attributed the latter. During the early phase of the COVID-19 pandemic, banks were eager to emphasize that they were stable and part of the solution to the economic turmoil. Moreover, banks shouldered a lot of the burden that came with implementing moratoria, setting up processes, administering applications and interacting with clients. Per se, there is no correct answer to the question "Who was the driving force behind the measures that were adopted?," as both governments and banks were somehow involved in all moratorium schemes.[16]

On average, roughly 44% of respondents aware of the measures thought that the government was responsible for them. 40% attributed the measures to both the government and banks. Only 8% stated that they thought that the banks were the driving force behind the measures. The patterns are similar to the cross-country averages in North Macedonia, Bulgaria, Croatia, Poland and Serbia, but they differ somewhat in the other countries.[17] For instance, Czechia and Hungary stand out with relatively high shares of people attributing the measures solely to the government (around 60%). On the other end of the spectrum, Bosnia and Herzegovina stands out with a very low share (around 16%) of people seeing only the government as the driving force. It also has the highest share of people answering that they think banks alone were responsible (around 20%).

[16] We did not offer "Central banks" as an answer option, because we wanted to keep the answer options simple and because many studies have shown that there is very limited knowledge of central banks and their tasks among the general public (see Blinder et al., 2022).

[17] Shares of "Don't know" answers are highest in Bosnia and Herzegovina, Bulgaria and Poland (around 12%, respectively).

Chart C1



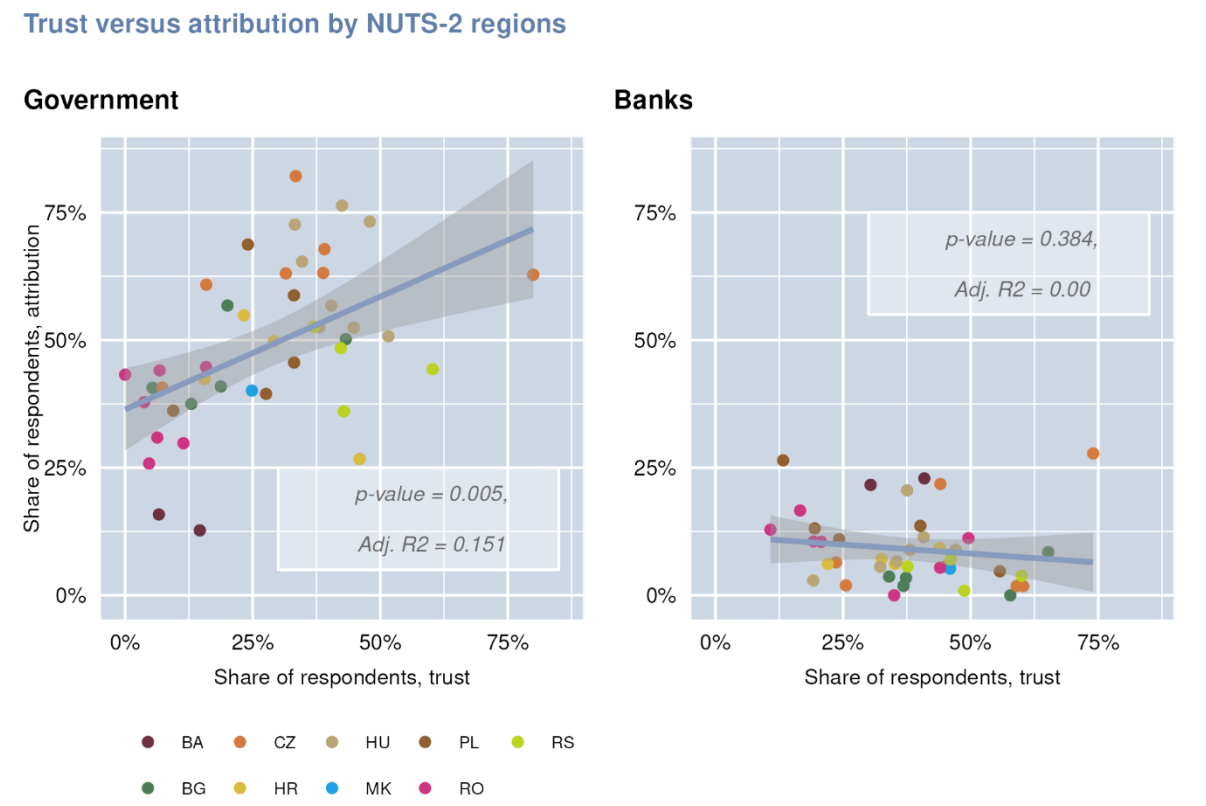
Source: 2021 OeNB Euro Survey wave.
Note: Means calculated with post-stratification weights. Number of observations for subsample of respondents aware of relief measures shown below bars.

Visual inspection suggests a very limited correlation between the index and the attribution of relief measures to the government only. While the computed correlation coefficient is around 0.4, the p-value is too high to exclude that there might be no correlation. However, this is not surprising, as there is no clear reason to assume a strong correlation. There is also no clear correlation with the institutions that were responsible for drawing up key legislation or guidelines, as listed in column 3 of table B4.

It is difficult to say what might drive respondents' perceptions. One possible explanation is that the media might have played an important role in shaping perceptions. Another possible explanation is that respondents might be prone to attribute policies of any nature to the government. A recent study, for instance, found that citizens mostly believe that the government is the main institution responsible for keeping inflation low (Van der Cruijsen et al., 2023), even though experts would likely argue that this is mainly the task of the central bank. People might also attribute support to institutions they already trust.

Using trust variables available in the OeNB Euro Survey, we can show that on the NUTS 2 level, there is a significant correlation between average trust in the government and average attribution of the measures to the government alone. However, the reverse is not true for trust in banks and attribution to banks. This could mean that depending on the institution, two different mechanisms between trust and attribution are at work here. Chart C2 visualizes these results, plotting the means of trust by NUTS 2 region and a regression line. To disentangle potential reverse causality concerns, further analyses would be needed.

Chart C2



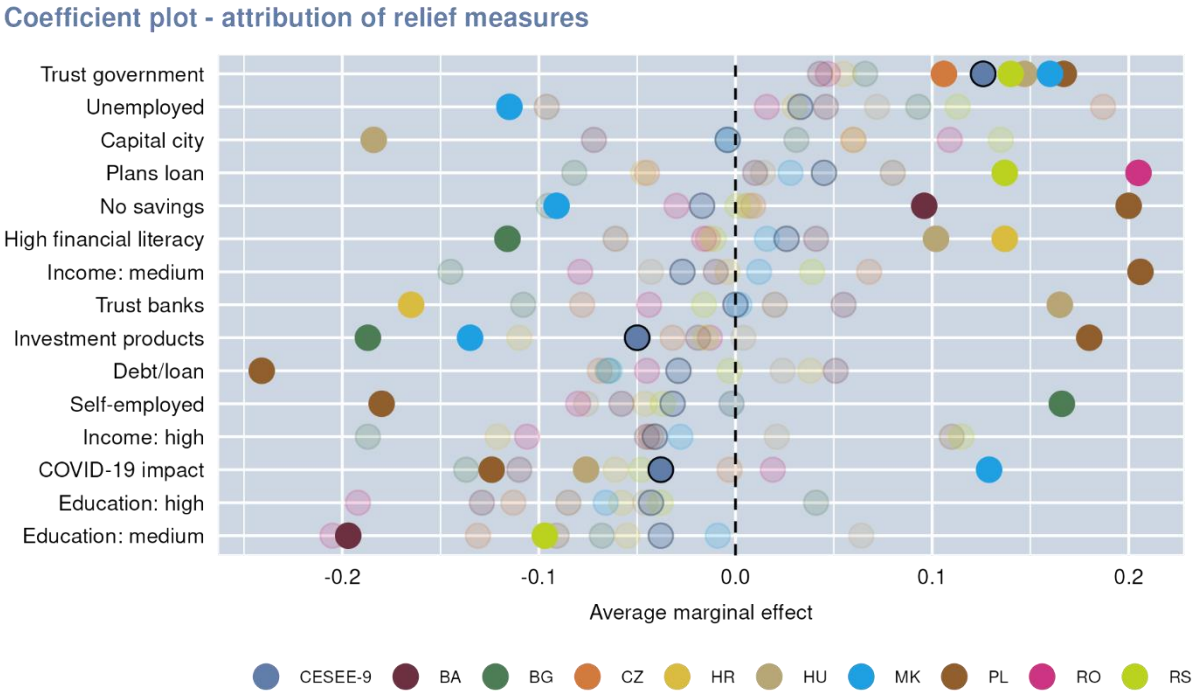
Source: 2021 OeNB Euro Survey wave.
Note: The left-hand panel plots trust in the government against attribution to the government only. The right-hand panel plots trust in banks against attribution to banks only. The sample only includes those respondents who answered the questions on trust and attribution. Only NUTS 2 regions with at least 15 non-missing observations are included, as the means become more unreliable the lower the number of observations. As robustness, we used the following numbers of observations as cut-offs: 0, 5, 25 and 50. For the government, the coefficient is insignificant when including all regions, but relatively unchanged from the baseline shown otherwise. For banks, the coefficient is negative and weakly significant if the cut-off is chosen at or below 5, while the coefficient remains insignificant for higher cut-offs. Means are weighted using post-stratification weights.

Within-country variation

For attribution, we run the baseline regressions from section 4 on the attribution of relief measures to the government only. The sample includes all respondents aware of the measures who gave an answer other than "Don't know." In this case, it is more difficult to formulate hypotheses on socioeconomic variables. As discussed in the cross-country section, it seems likely that factors like media consumption or political affiliation play a role. Thus, our only hypothesis for this section is that trust in the government should be positively related to the attribution of the measures to the government.It is therefore not surprising that in chart C3, only one variable stands out and that is trust in the government. It is strongly and positively correlated with the attribution of the borrower relief measures to the government alone and is significant in five out of nine country regressions.[18]

[18] As robustness, we tried three other alternative dependent variables in the pooled regression, with results on trust in the government always highly significant and with the sign of coefficients as expected: positive (but smaller in size) for 1) government + government and banks, negative for 2) banks only and for 3) banks + government and banks.

Chart C3



Source: 2021 OeNB Euro Survey wave.
Note: Dependent variable = 1 if respondent thinks that the driving force behind the borrower relief measures was the government. Average marginal effects from a probit model estimated by maximum likelihood. Standard errors are clustered at the PSU level. Full opacity means p-value of t-test < 0.1. Variables not shown include log(Age), Female (0/1), Married (0/1), Income: NA, Size of household.

Annex D

Regression tables for coefficient plots

Table D1

Average marginal effects of probit regressions for pooled sample

	Awareness		Attribution		Usage	
	AME	SE	AME	SE	AME	SE
Debt/loan	0.211***	−0.014	−0.029	−0.019		
Plans loan	0.080***	−0.022	0.045	−0.030	0.007	−0.022
No savings	−0.087***	−0.014	−0.017	−0.021	0.001	−0.018
Investment products	0.066***	−0.018	−0.050**	−0.025	0.004	−0.020
COVID-19 impact	0.047***	−0.015	−0.038*	−0.022	0.082***	−0.020
Trust government	0.003	−0.017	0.126***	−0.023	0.005	−0.018
Trusts banks	0.073***	−0.015	0.000	−0.022	−0.017	−0.018
Capital city	0.084***	−0.025	−0.004	−0.033	0.081***	−0.021
Log of age	0.012	−0.017	0.075***	−0.027	−0.029	−0.025
Female	−0.026**	−0.010	−0.034**	−0.017	0.005	−0.014
Size of household	−0.010*	−0.005	0.004	−0.008	0.002	−0.007
Married	0.030**	−0.014	−0.038*	−0.022	0.045**	−0.020
Income: medium	0.008	−0.018	−0.027	−0.027	0.046*	−0.025
Income: high	0.029	−0.021	−0.041	−0.031	0.043	−0.027
Education: medium	0.057***	−0.016	−0.038	−0.026	−0.009	−0.023
Education: high	0.126***	−0.020	−0.043	−0.030	−0.036	−0.027
High financial literacy	0.107***	−0.016	0.026	−0.021	−0.008	−0.017
Unemployed	−0.009	−0.018	0.033	−0.030	−0.020	−0.030
Self-employed	0.034	−0.023	−0.032	−0.029	0.035	−0.025
Country dummies	Yes		Yes		Yes	
N	7,273		3,169		2,554	
Pseudo-R2	0.17		0.07		0.17	
Clusters	1,324		966		1,024	
Log-L	−4,140.5		−2,023.6		−1,054.8	

Source: 2021 OeNB Euro Survey wave.
Note: Average marginal effects (AME) and standard errors (SE) of probit regressions. Standard errors clustered at the PSU level. Country dummies included. For detailed variable definitions, see annex table A1. Baseline for income is low income tercile, baseline for education is low education.
** p<0.10, ** p<0.05, *** p<0.01*

Table D2

Robustness to different clustering: average marginal effects of probit regressions for pooled sample

	Awareness		Attribution		Usage	
	AME	SE	AME	SE	AME	SE
Debt/loan	0.211***	−0.023	−0.029	−0.023		
Plans loan	0.080***	−0.022	0.045	−0.037	0.007	−0.026
No savings	−0.087***	−0.019	−0.017	−0.020	0.001	−0.019
Investment products	0.066***	−0.018	−0.050**	−0.023	0.004	−0.024
COVID-19 impact	0.047**	−0.021	−0.038	−0.024	0.082***	−0.023
Trust government	0.003	−0.022	0.126***	−0.023	0.005	−0.019
Trusts banks	0.073***	−0.015	0.000	−0.023	−0.017	−0.017
Capital city	0.084***	−0.032	−0.004	−0.044	0.081***	−0.020
Log of age	0.012	−0.020	0.075***	−0.024	−0.029	−0.028
Female	−0.026**	−0.012	−0.034**	−0.016	0.005	−0.014
Size of household	−0.010	−0.006	0.004	−0.009	0.002	−0.007
Married	0.030**	−0.015	−0.038*	−0.020	0.045**	−0.020
Income: medium	0.008	−0.021	−0.027	−0.030	0.046*	−0.027
Income: high	0.029	−0.026	−0.041	−0.037	0.043	−0.029
Education: medium	0.057***	−0.017	−0.038	−0.028	−0.009	−0.020
Education: high	0.126***	−0.022	−0.043	−0.027	−0.036	−0.027
High financial literacy	0.107***	−0.023	0.026	−0.022	−0.008	−0.020
Unemployed	−0.009	−0.019	0.033	−0.037	−0.020	−0.027
Self-employed	0.034	−0.026	−0.032	−0.034	0.035	−0.022
Country dummies	Yes		Yes		Yes	
N	7,273		3,169		2,554	
Pseudo-R2	0.17		0.07		0.17	
Clusters	**74**		**71**		**72**	
Log-L	−4,140.5		−2,023.6		−1,054.8	

Source: 2021 OeNB Euro Survey wave.
Note: Average marginal effects (AME) and standard errors (SE) of probit regressions. Standard errors ***clustered at the regional level****. Country dummies included. For detailed variable definitions, see annex table A1. Baseline for income is low income tercile, baseline for education is low education.*
** p<0.10, ** p<0.05, *** p<0.01*

Table D3

Average marginal effects of probit regressions on awareness of borrower relief measures

	BG	HR	CZ	HU	PL	RO	BA	MK	RS
Debt/loan	0.22***	0.0	0.32***	0.36***	0.19***	0.14***	0.13***	0.24***	0.21***
	(0.05)	(0.03)	(0.05)	(0.03)	(0.04)	(0.04)	(0.04)	(0.04)	(0.05)
Plans loan	0.1	0.12*	0.13**	0.11*	0.15**	0.13*	−0.08**	0.0	0.0
	(0.08)	(0.06)	(0.05)	(0.06)	(0.06)	(0.07)	(0.04)	(0.07)	(0.06)
No savings	0.0	−0.0	−0.10*	−0.1	−0.15***	−0.10***	−0.12***	−0.09**	−0.10**
	(0.04)	(0.04)	(0.05)	(0.03)	(0.04)	(0.04)	(0.04)	(0.04)	(0.04)
Investment products	0.0	0.10**	0.1	0.16***	0.0	0.16***	0.1	0.0	0.14**
	(0.05)	(0.05)	(0.04)	(0.04)	(0.05)	(0.06)	(0.09)	(0.05)	(0.07)
COVID-19 impact	−0.0	0.0	0.13***	0.0	0.0	0.13***	0.0	−0.0	0.0
	(0.06)	(0.04)	(0.05)	(0.04)	(0.04)	(0.04)	(0.04)	(0.05)	(0.04)
Trust government	0.0	0.1	0.1	−0.0	0.10*	−0.17***	−0.0	−0.0	−0.0
	(0.05)	(0.05)	(0.05)	(0.04)	(0.06)	(0.06)	(0.04)	(0.04)	(0.04)
Trusts banks	0.1	0.1	0.09*	0.13***	0.1	0.16***	0.0	0.07*	0.0
	(0.05)	(0.05)	(0.05)	(0.04)	(0.05)	(0.05)	(0.03)	(0.04)	(0.04)
Capital city	0.1	0.20***	0.22***	−0.09*	0.1	0.1	0.1	0.14**	0.0
	(0.09)	(0.06)	(0.07)	(0.05)	(0.13)	(0.08)	(0.08)	(0.06)	(0.05)
Log of age	0.0	0.0	0.0	−0.0	0.1	−0.1	0.0	0.1	−0.0
	(0.07)	(0.05)	(0.06)	(0.03)	(0.05)	(0.05)	(0.04)	(0.05)	(0.06)
Female	−0.06*	−0.05*	−0.05*	0.0	−0.0	−0.08**	−0.0	0.08***	0.0
	(0.03)	(0.03)	(0.03)	(0.02)	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)
Size of household	−0.0	0.0	−0.03*	−0.0	0.0	0.0	0.0	−0.05***	−0.03**
	(0.02)	(0.01)	(0.02)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
Married	0.0	0.0	0.1	0.0	−0.0	−0.0	0.0	0.11**	0.09**
	(0.04)	(0.04)	(0.04)	(0.03)	(0.04)	(0.04)	(0.04)	(0.04)	(0.04)
Income: medium	−0.1	−0.1	0.1	0.0	0.0	−0.12**	0.10**	0.0	0.1
	(0.06)	(0.05)	(0.05)	(0.04)	(0.05)	(0.05)	(0.05)	(0.05)	(0.05)
Income: high	0.1	−0.1	0.0	0.1	0.0	−0.1	0.1	0.1	0.13**
	(0.07)	(0.05)	(0.06)	(0.05)	(0.05)	(0.06)	(0.05)	(0.06)	(0.06)
Education: medium	0.17***	0.1	0.1	−0.0	0.0	0.12*	0.0	0.14***	0.0
	(0.05)	(0.06)	(0.07)	(0.03)	(0.04)	(0.06)	(0.04)	(0.05)	(0.04)
Education: high	0.18***	0.1	0.18**	0.22***	0.10*	0.29***	0.09*	0.14**	0.09*
	(0.06)	(0.07)	(0.08)	(0.04)	(0.06)	(0.08)	(0.05)	(0.06)	(0.05)
High financial literacy	0.0	0.12***	0.0	0.12***	0.1	0.09**	0.08**	0.11**	0.26***
	(0.05)	(0.04)	(0.05)	(0.04)	(0.04)	(0.04)	(0.04)	(0.05)	(0.04)
Unemployed	−0.13**	0.0	−0.0	−0.1	0.0	0.0	0.0	−0.1	−0.1
	(0.05)	(0.05)	(0.07)	(0.05)	(0.06)	(0.05)	(0.03)	(0.04)	(0.06)
Self-employed	0.12*	0.0	0.0	0.1	0.0	0.1	0.15*	−0.1	−0.1
	(0.07)	(0.07)	(0.07)	(0.06)	(0.07)	(0.06)	(0.08)	(0.06)	(0.07)
N	709	924	759	905	634	882	729	830	901
Pseudo-R2	0.09	0.07	0.2	0.32	0.11	0.16	0.16	0.17	0.19
Clusters	143	278	88	180	96	150	132	153	104
Log-L	−392.2	−561.4	−412.5	−364.5	−359.4	−507.6	−295.8	−476	−508.1

Source: 2021 OeNB Euro Survey wave.
Note: Marginal effects of probit regressions. Standard errors clustered at the PSU level. Dependent variable is 1 if the respondent stated that they were aware of borrower relief measures and 0 if they were not aware. For detailed variable definitions, see annex table A1. Baseline for income is low income tercile, baseline for education is low education.
** p<0.10, ** p<0.05, *** p<0.01*

Table D4

Average marginal effects of probit regressions on attribution of borrower relief measures to government

	BG	HR	CZ	HU	PL	RO	BA	MK	RS
Debt/loan	−0.07	0.0	−0.07	0.02	−0.24***	−0.04	0.05	−0.06	0
	(0.08)	(0.06)	(0.06)	(0.04)	(0.07)	(0.06)	(0.06)	(0.05)	(0.05)
Plans loan	−0.1	−0.05	−0.05	0.01	0.08	0.20**	0.01	0.0	0.14*
	(0.13)	(0.09)	(0.08)	(0.06)	(0.09)	(0.10)	(0.14)	(0.10)	(0.08)
No savings	−0.1	0.0	0.01	0.0	0.20***	−0.03	0.10*	−0.09*	0
	(0.06)	(0.06)	(0.07)	(0.04)	(0.07)	(0.05)	(0.06)	(0.06)	(0.05)
Investment products	−0.19**	−0.11	−0.0	0	0.18*	−0.01	−0.0	−0.14**	−0.02
	(0.08)	(0.07)	(0.07)	(0.06)	(0.10)	(0.06)	(0.09)	(0.07)	(0.07)
COVID-19 impact	−0.1	−0.1	0	−0.08*	−0.12*	0.02	−0.1	0.13**	−0.1
	(0.10)	(0.07)	(0.06)	(0.05)	(0.07)	(0.05)	(0.08)	(0.05)	(0.06)
Trust government	0.1	0.1	0.11**	0.15***	0.17*	0.05	0.0	0.16**	0.14**
	(0.09)	(0.07)	(0.05)	(0.05)	(0.09)	(0.11)	(0.07)	(0.07)	(0.06)
Trusts banks	−0.1	−0.16**	−0.08	0.16***	0.0	−0.04	0.1	0	−0.0
	(0.08)	(0.06)	(0.06)	(0.06)	(0.07)	(0.06)	(0.07)	(0.06)	(0.06)
Capital city	0.0	0.06	0.06	−0.18**	0.0	0.1	−0.1	0	0.1
	(0.12)	(0.07)	(0.08)	(0.07)	(.)	(0.07)	(0.06)	(0.10)	(0.09)
Log of age	0.1	0.1	0.1	0.1	0.1	0.0	−0.1	0.0	0.1
	(0.14)	(0.09)	(0.09)	(0.06)	(0.10)	(0.07)	(0.09)	(0.08)	(0.08)
Female	0.01	0.01	−0.07	−0.0	−0.0	−0.08	−0.15***	0.01	−0.0
	(0.06)	(0.05)	(0.06)	(0.03)	(0.07)	(0.05)	(0.05)	(0.04)	(0.04)
Size of household	−0.0	0.0	0.03	0.0	0.0	0.0	0.0	−0.01	−0.06***
	(0.04)	(0.02)	(0.03)	(0.02)	(0.03)	(0.02)	(0.03)	(0.02)	(0.02)
Married	0.1	−0.17***	−0.1	−0.0	−0.0	−0.1	0.10*	−0.02	−0.03
	(0.08)	(0.06)	(0.08)	(0.05)	(0.08)	(0.06)	(0.06)	(0.06)	(0.06)
Income: medium	−0.1	0.0	0.1	−0.0	0.21**	−0.08	−0.01	0.0	0.0
	(0.15)	(0.07)	(0.10)	(0.06)	(0.09)	(0.07)	(0.09)	(0.07)	(0.07)
Income: high	−0.2	−0.1	−0.0	0.0	0.1	−0.1	−0.1	−0.0	0.11
	(0.13)	(0.09)	(0.11)	(0.07)	(0.09)	(0.08)	(0.11)	(0.08)	(0.09)
Education: medium	−0.07	−0.1	−0.1	0.1	−0.1	−0.21	−0.20**	−0.01	−0.10*
	(0.16)	(0.10)	(0.16)	(0.04)	(0.08)	(0.13)	(0.09)	(0.07)	(0.05)
Education: high	0.04	−0.1	-0.11	−0.05	−0.08	−0.19	−0.13	−0.07	−0.04
	(0.18)	(0.10)	(0.17)	(0.06)	(0.10)	(0.14)	(0.11)	(0.08)	(0.06)
High financial literacy	−0.12*	0.14**	−0.0	0.10**	−0.1	−0.02	0.04	0.02	−0.01
	(0.07)	(0.06)	(0.06)	(0.05)	(0.07)	(0.05)	(0.06)	(0.07)	(0.05)
Unemployed	0.09	0.0	0.2	0.1	−0.1	0.0	0.1	−0.12**	0.1
	(0.18)	(0.08)	(0.13)	(0.07)	(0.11)	(0.08)	(0.06)	(0.06)	(0.09)
Self-employed	0.17**	−0.1	0.0	−0.1	−0.18**	−0.1	−0.06	0.0	−0.0
	(0.08)	(0.11)	(0.09)	(0.07)	(0.09)	(0.08)	(0.06)	(0.08)	(0.11)
N	211	337	326	652	201	387	136	455	452
Pseudo-R2	0.13	0.08	0.04	0.11	0.12	0.05	0.21	0.05	0.06
Clusters	84	173	72	172	69	115	61	123	93
Log-L	−121.5	−212	−211.5	−383.7	−119.3	−229.9	−42.1	−285	−291.7

Source: 2021 OeNB Euro Survey wave.
Note: Marginal effects of probit regressions. Standard errors clustered at the PSU level. The dependent variable is binary, taking the value 1 if the respondent stated that they attributed borrower relief measures to the government only − as opposed to (1) the government and banks, (2) banks, (3) another institution or (4) don't know. "No answer" responses are coded as missing. For detailed variable definitions, see annex table A1. Baseline for income is low income tercile, baseline for education is low education.

Table D5

Average marginal effects of probit regressions on usage of borrower relief measures

	BG	HR	CZ	HU	PL	RO	BA	MK	RS
Plans loan	0.0	0.05*	−0.02	−0.13	0.15***	0.02	−0.13*	−0.2	−0.1
	(0.05)	(0.03)	(0.08)	(0.08)	(0.04)	(0.06)	(0.07)	(0.09)	(0.07)
No savings	−0.1	−0.04*	−0.03	0.13**	0.06	−0.06	−0.05	0.12*	−0.05
	(0.04)	(0.02)	(0.07)	(0.06)	(0.05)	(0.04)	(0.05)	(0.06)	(0.06)
Investment products	0.0	−0.02	−0.0	−0.03	0.08*	0.09	0.0	0.1	−0.01
	(0.04)	(0.02)	(0.05)	(0.08)	(0.05)	(0.05)	(0.08)	(0.07)	(0.07)
COVID-19 impact	0.0	0.0	0.17***	0.1	0.0	0.16***	0.0	0.16**	0.0
	(0.08)	(0.02)	(0.06)	(0.06)	(0.05)	(0.06)	(.)	(0.07)	(0.08)
Trust government	−0.0	0.0	0.0	0.15**	0.05	0.12*	0.0	−0.1	−0.0
	(0.05)	(0.03)	(0.06)	(0.06)	(0.05)	(0.06)	(.)	(0.06)	(0.05)
Trusts banks	−0.0	−0.0	−0.06	−0.11*	0.07*	0	0.1	−0.02	−0.10*
	(0.05)	(0.03)	(0.07)	(0.06)	(0.04)	(0.05)	(0.05)	(0.07)	(0.06)
Capital city	0.07*	0	0.03	0.16*	0.0	0.1	0.11**	0.19***	0.0
	(0.03)	(0.03)	(0.07)	(0.08)	(.)	(0.06)	(0.05)	(0.07)	(0.07)
Log of age	0.1	0.0	0.1	−0.1	−0.11*	0.0	−0.0	0.0	−0.18*
	(0.08)	(0.03)	(0.10)	(0.08)	(0.07)	(0.06)	(0.05)	(0.11)	(0.10)
Female	-0.07	−0.02	−0.03	0.1	−0.0	0.01	−0.1	0.05	0.0
	(0.05)	(0.02)	(0.04)	(0.05)	(0.04)	(0.04)	(0.05)	(0.05)	(0.05)
Size of household	0.0	0.0	0.01	−0.0	0.0	0.06***	0.0	−0.01	−0.03
	(0.02)	(0.01)	(0.02)	(0.03)	(0.01)	(0.02)	(0.02)	(0.03)	(0.02)
Married	−0.1	0.04*	−0.0	0.1	0.19***	−0.0	−0.0	0.14*	0.09
	(0.06)	(0.02)	(0.08)	(0.07)	(0.06)	(0.05)	(0.05)	(0.07)	(0.07)
Income: medium	0.0	0.0	0.0	0.1	0.0	0.13	0	0.1	0.22**
	(0.08)	(0.03)	(0.09)	(0.09)	(0.07)	(0.08)	(0.06)	(0.08)	(0.10)
Income: high	0.1	0.1	0.0	0.1	0.0	0.1	−0.0	−0.0	0.29***
	(0.10)	(0.03)	(0.10)	(0.10)	(0.06)	(0.07)	(0.08)	(0.09)	(0.10)
Education: medium	0.05	0.0	0.1	0.0	−0.1	0.03	−0.1	−0.02	0.0
	(0.06)	(0.05)	(0.10)	(0.06)	(0.06)	(0.05)	(0.08)	(0.09)	(0.07)
Education: high	−0.01	0.0	0.08	−0.14**	−0.06	0	−0.03	−0.07	0.02
	(0.09)	(0.05)	(0.11)	(0.07)	(0.08)	(.)	(0.09)	(0.11)	(0.08)
High financial literacy	−0.0	−0.03	−0.1	−0.06	−0.0	0.02	0.07	0.09	−0.06
	(0.04)	(0.02)	(0.06)	(0.06)	(0.04)	(0.05)	(0.06)	(0.07)	(0.06)
Unemployed	0.01	0.0	0.1	−0.1	−0.1	0.1	0.1	−0.2	−0.1
	(0.05)	(0.04)	(0.09)	(0.12)	(0.07)	(0.06)	(0.07)	(0.11)	(0.19)
Self-employed	−0.03	0.0	0.0	0.0	0.1	0.1	0.09	0.0	−0.1
	(0.08)	(0.03)	(0.06)	(0.09)	(0.05)	(0.04)	(0.08)	(0.09)	(0.12)
N	170	527	257	353	257	175	133	298	297
Pseudo-R2	0.11	0.1	0.09	0.1	0.21	0.29	0.21	0.1	0.08
Clusters	87	238	75	150	79	89	73	120	91
Log-L	−45	−96	−107.3	−219.6	−87.8	−39.4	−33.5	−167.7	−153.5

Source: 2021 OeNB Euro Survey wave.
Note: Marginal effects of probit regressions. Standard errors clustered at the PSU level. Dependent variable is 1 if the borrower used the moratorium and 0 if they did not use it, regardless of whether they were aware of the measure or not. For detailed variable definitions, see annex table A1. Baseline for income is low income tercile, baseline for education is low education.

Annex E

Complementary table and additional map

Table E1

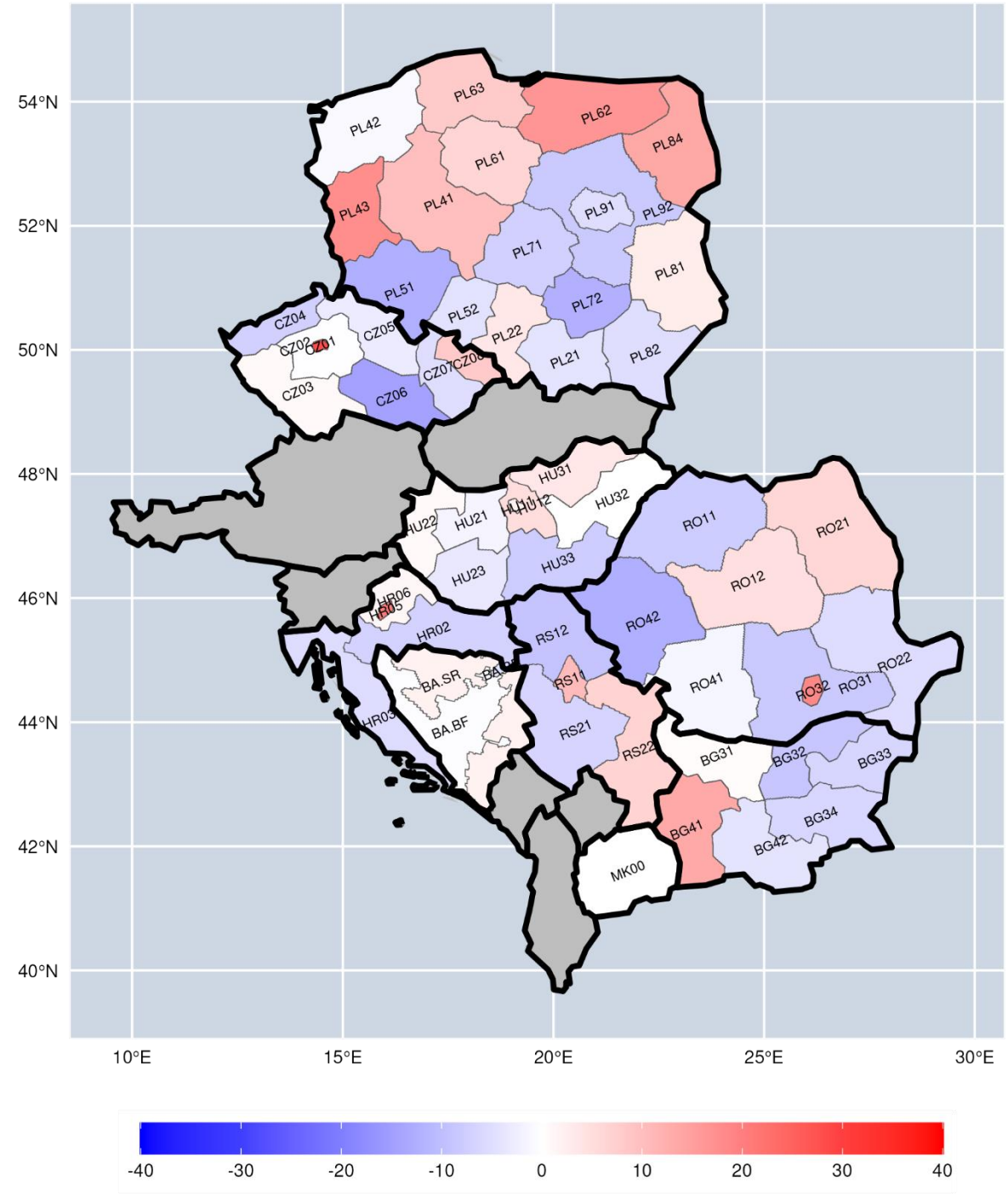
Numeric values displayed in figure 1

NUTS 2/Hijmans	Name	Δ ppt	NUTS 2	Name	Δ ppt
BA.BF	Federacija Bosna i H.	1.2	PL21	Maopolskie	−0.3
BA.BR	Brko	0.0	PL22	Iskie	2.8
BA.SR	Republika Srpska	−2.7	PL41	Wielkopolskie	14.8
BG31	Severozapaden	8.0	PL42	Zachodniopomorskie	−27.4
BG32	Severen tsentralen	−20.5	PL43	Lubuskie	10.2
BG33	Severoiztochen	−8.6	PL51	Dolnolskie	−21.4
BG34	Yugoiztochen	−0.9	PL52	Opolskie	12.6
BG41	Yugozapaden	14.5	PL61	Kujawsko-pomorskie	16.4
BG42	Yuzhen tsentralen	−4.3	PL62	Warmisko-mazurskie	2.8
CZ01	Praha	26.3	PL63	Pomorskie	−12.7
CZ02	Stední echy	9.7	PL71	Łódzkie	−8.6
CZ03	Jihozápad	−16.5	PL72	Świtokrzyskie	−22.5
CZ04	Severozápad	21.8	PL81	Lubelskie	8.3
CZ05	Severovjchod	−11.7	PL82	Podkarpackie	−0.3
CZ06	Jihovjchod	−34.8	PL84	Podlaskie	−5.8
CZ07	Stední Morava	11.7	PL91	Warszawski stoeczny	1.7
CZ08	Moravskoslezsko	11.9	PL92	Mazowiecki regionalny	10.6
HR02	Panonska Hrvatska	2.4	RO11	Nord-Vest	7.9
HR03	Jadranska Hrvatska	−6.8	RO12	Centru	−4.9
HR05	Grad Zagreb	13.5	RO21	Nord-Est	30.3
HR06	Sjeverna Hrvatska	−4.3	RO22	Sud-Est	9.1
HU11	Budapest	−3.9	RO31	Sud-Muntenia	−36.0
HU12	Pest	−3.2	RO32	Bucureti-Ilfov	1.1
HU21	Közép-Dunántúl	8.4	RO41	Sud-Vest Oltenia	−1.9
HU22	Nyugat-Dunántúl	2.7	RO42	Vest	−22.9
HU23	Dél-Dunántúl	2.7	RS11	Belgrad	8.8
HU31	Észak-Magyarország	6.7	RS12	Vojvodina	3.7
HU32	Észak-Alföld	−0.4	RS21	Region umadije i Zapadne S.	−10.5
HU33	Dél-Alföld	−8.0	RS22	Region June i Istone S.	2.4
MK00	Severna Makedonija	0.0			

Source: 2021 OeNB Euro Survey wave.

Figure E1

Differences between the regions' and countries' predicted mean awareness



Source: 2021 OeNB Euro Survey wave.
Note: Dependent variable = 1 if respondent is aware of borrower relief measures. Predictions are based on the same probit model as described in section 4.1. We transformed the predicted awareness levels for individuals to dummies, i.e. $\widehat{awareness}_{dummy} = \mathbb{1}(\widehat{awareness} > 0.5) = 1$ *before aggregating to regional/country levels. NUTS 2, except for Bosnia and Herzegovina, where regions are defined according to Hijmans (2015). NUTS 2 labels are described in table E1.*

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