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Surveying the Impact of the Covid-19 Recession on the Financial Situation of Indebted Households*

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Abstract

We study the situation of indebted households hit by the COVID-19-driven recession, utilizing a unique survey conducted by the National Bank of Slovakia. As many other countries, Slovakia implemented a wide moratorium on debt repayments to financial institutions. While this is an important policy stabilization tool, we need information on the prospects of the households that postponed their debt repayments. The survey shows that 9%-12% of households that took advantage of the moratorium, or any type of forbearance, expect serious difficulties with resuming payments of their debts in the beginning of 2021. We show that the households that were vulnerable already before the crisis were more likely to use the deferral, or other type of easing of credit conditions. We also show that households with steeper income drops, deteriorating DSTI, or self-employed, are more likely to be pessimistic about their debt payment prospects.

JEL codes: C20, E44, G18.

Keywords: financial stability, coronavirus pandemic, household credit risk, household expectations.

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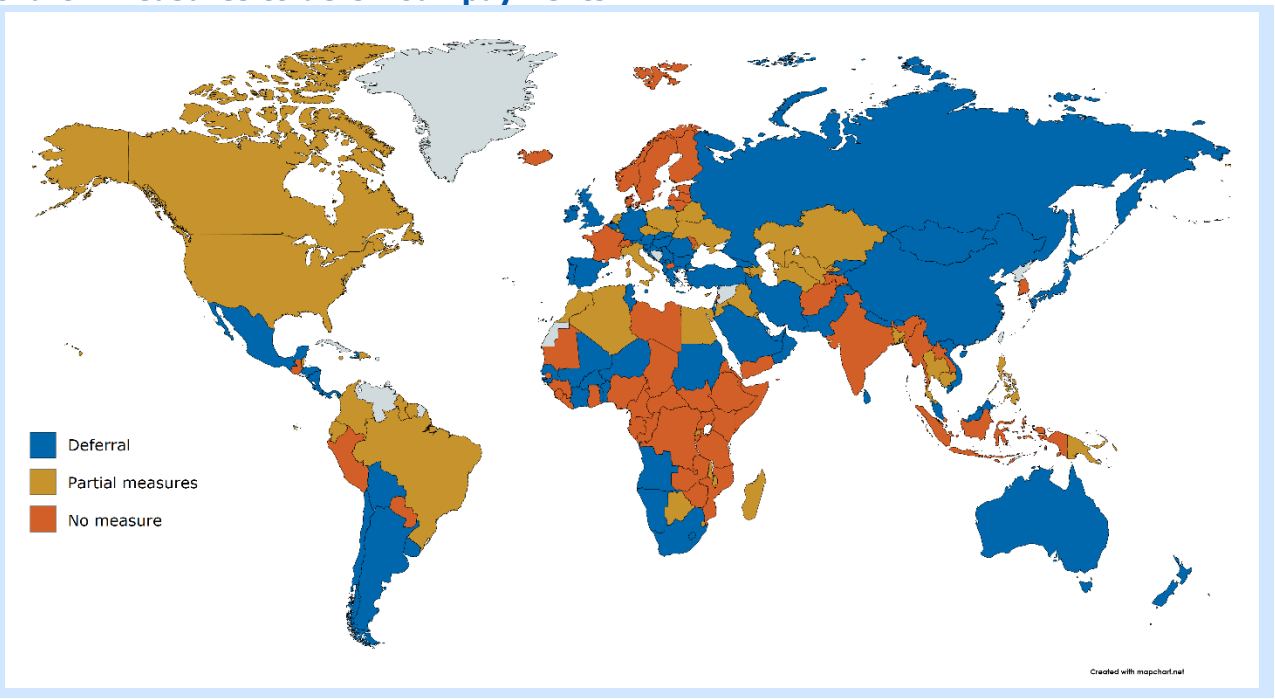
Introduction

Due to the pandemic and the response of the governments throughout the world, global output is projected to decline by 4,4%, while some especially hit countries are set to decline by double digits.[1] A negative impact of the pandemic and the necessary government reaction on income, expenditure and wealth is documented in Hanspal et al. (2020) or Coibion et al. (2020). Moreover, the authors show that most of the decline in the employment, consumer spending as well as the negative outlook can be largely attributed to the lockdowns.

While affecting the real economy first, the pandemic also has negative implications for the financial sector and raises financial stability questions. Some discussion on the necessary steps of bank regulators in the US can be found in Blank et al. (2020). The impact of a response of monetary policy, micro- and macro-supervisors in the Euro area is analysed in Altavilla et al. (2020). They find evidence that in the absence of funding cost and capital relief, banks' ability to support the real economy via the provision of credit would have been severely affected and that the pandemic would lead to a larger decline in employment than observed.

While governments throughout the world have imposed lockdown[2] to slow down the spread of the pandemic, packages of measures have been introduced to support businesses and households. One of the most widespread measures is some form of a loan instalments deferral. According to the policy tracker provided by the International Monetary Fund, around two thirds of countries have introduced such a deferral (Chart 1). 44% of countries implemented this deferral into national legislation. The most frequently used span for the payment moratorium is 3, 6 or 9 months. More details are provided in Appendix A.

Chart 1 Measures to defer loan payments



Source: International Monetary Fund.

[1] IMF World Economic Outlook, October 2020.

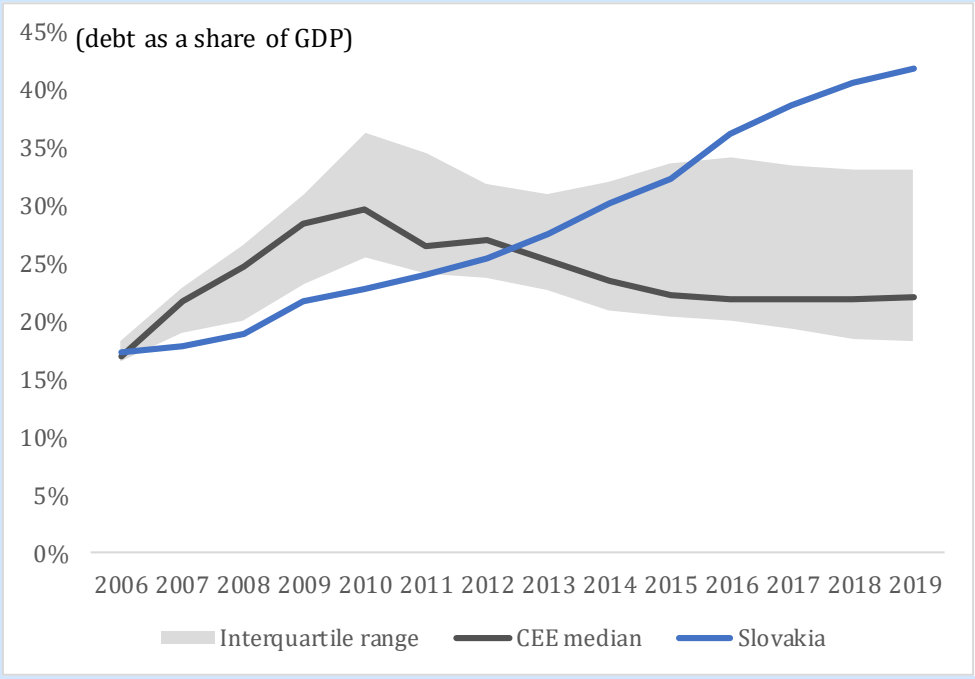
[2] Countries imposed different preventive measures to increase social distance, ranging from closing public spaces such as restaurants or non-essential shops, through closing educational institutions, up to "stay-at-home" orders for the general population. More information about the measures imposed by countries can be found, e.g., here: https://www.ecdc.europa.eu/en/publications-data/download-data-response-measures-covid-19.

The pandemic has so far had a serious adverse impact on Slovakia as well. Due to the lockdown, real GDP decreased by more than 12% in 2020Q2 and is projected to fall by 8.2% annually (NBS, 2020), while unemployment increased to 8.3% in July from 6.1% in February 2020. The government has implemented a broad set of measures concentrating on preserving employment and partially compensating income losses caused by lockdowns.

In terms of financial stability, a worsening financial situation of both non-financial corporations and households affects the demand as well as supply side of the loan market and can lead to an increase of credit risk costs. This is particularly important for the Slovak banking sector, where loans to households represent almost 45% and loans to NFCs almost 22% of total assets. Moreover, Slovakia was among the countries with the fastest increase of households' indebtedness for years preceding the crisis (NBS, 2019). Currently households' indebtedness (in terms of debt-to-GDP) is among the highest compared to other Central and Eastern European countries (Chart 2).

Therefore, one of the most important policy measures from the financial stability perspective was the introduction of the debt payment moratorium for individuals, self-employed and SMEs for at most nine months. As of August 2020, 5.4% of indebted households have opted for a postponement of their monthly instalments, representing more than 10% of the overall retail loan portfolio. This measure can help indebted households to offset a temporary loss of income. However, during the payment moratorium, neither the banks nor the regulators have enough information about the developments of the financial situation of these households.

Chart 2 Households' indebtedness in Central and Eastern Europe



Note: CEE countries in the chart consist of Bulgaria, Czech Republic, Estonia, Croatia, Hungary, Lithuania, Latvia, Poland, Romania, Slovenia and Slovakia.
Debt-to-GDP is calculated as the ratio of an outstanding volume of nominal loans granted to households by banks at the end of respective years and nominal GDP.
Source: ECB SDW, Eurostat.

To gather alternative information, the National Bank of Slovakia has launched a series of surveys among indebted retail clients, focusing on the development of their financial situation and their expectations regarding loan repayments after the moratorium expires in 2021. The survey has a monthly frequency and approximately 1,000 indebted households are being examined from July until December 2020. Currently the results of the first two waves, carried out in July and August 2020, are available.

In this paper, we describe the results of the first two waves with a focus on the risk characteristics of the households opting for payment deferral, the expectations of different types of households, and the changes between the two waves. The paper is organized as follows: in section 1 we briefly describe the

survey and data used. In the next section, we provide an overview of the results of the first two waves. The third section is focusing on the explanation of the decision to postpone monthly payments and the rationale behind expectations using probit regressions. Finally, we conclude.

1. Survey design and data used

The survey focuses on indebted households in Slovakia, i.e. on retail clients that have at least one bank loan. The survey is carried out as a Computer-Assisted Telephone Interview (CATI). Sampled survey participants were selected from the three largest Slovak banks, covering around two thirds of the overall retail bank loan portfolio. The fieldwork for the first two waves was conducted in July and August 2020, respectively, and around 1,000 households were interviewed in each wave. The overall response rate was above 20% for both waves of the survey. Participants were selected based on socio-demographic as well as financial criteria, to construct a representative sample of indebted households based on the distribution of the outstanding amount of loans, income, income source (employees, self-employed or other), education, and the number of household members.

Table 1 Variables used in empirical analyses

Variable	Definition
DEFERRAL	Dummy variable: 1 if a household opted for a debt/loan deferral, and 0 otherwise
EASING	Dummy variable: 1 if a household asked for any adjustments in loan conditions to improve its financial situation (including deferral), and 0 otherwise
EXPECT_STABILIZATION	Dummy variable: 1 if a household expects that it will be able to start repaying its liabilities in the future, and 0 otherwise
INCOME_CHANGE	Change in household net income after the Covid-19 pandemic
EXPENDITURE_CHANGE	Change in household consumption expenditure after the Covid-19 pandemic
STATUS_CHANGE	Dummy variables set for the following categories: • 0 if no household members reported change in economic status • 1 if some but not all household members reported change in economic status • 2 if all household members reported change in economic status (including one-person households)
SELF_EMP	Dummy variable: 1 if respondent is self-employed, and 0 otherwise
DSTI	Debt-Service-to-Income (DSTI) is the ratio between household's overall sum of monthly instalments and monthly net income*
DSTI_CHANGE	Change in DSTI after the Covid-19 pandemic
AGE	Respondent's age
SEX	Dummy variable: 1 if male, and 0 if female
EDUCATION	Dummy variables set for the following categories: • No or primary education • Secondary education • Tertiary education
SENSITIVE_SECTOR	Dummy variable: 1 if respondent works in a sensitive sector (Accommodation and food service activities, Arts, entertainment and recreation), and 0 otherwise

Note: Further there are eight regions in Slovakia, and three main banks which are approximately equally present in the data.

*Debt service-to-income is calculated, in line with the definition used for borrower-based measures introduced by the National Bank of Slovakia,[3] as

$$DSTI = \frac{Overall\ sum\ of\ monthly\ instalments}{Monthly\ net\ income - Minimum\ subsistence\ amount\ of\ the\ household}$$

Minimum subsistence amount of household is given by regulation based on the number of adults and children. If Net income falls below this minimum, DSTI can be negative.

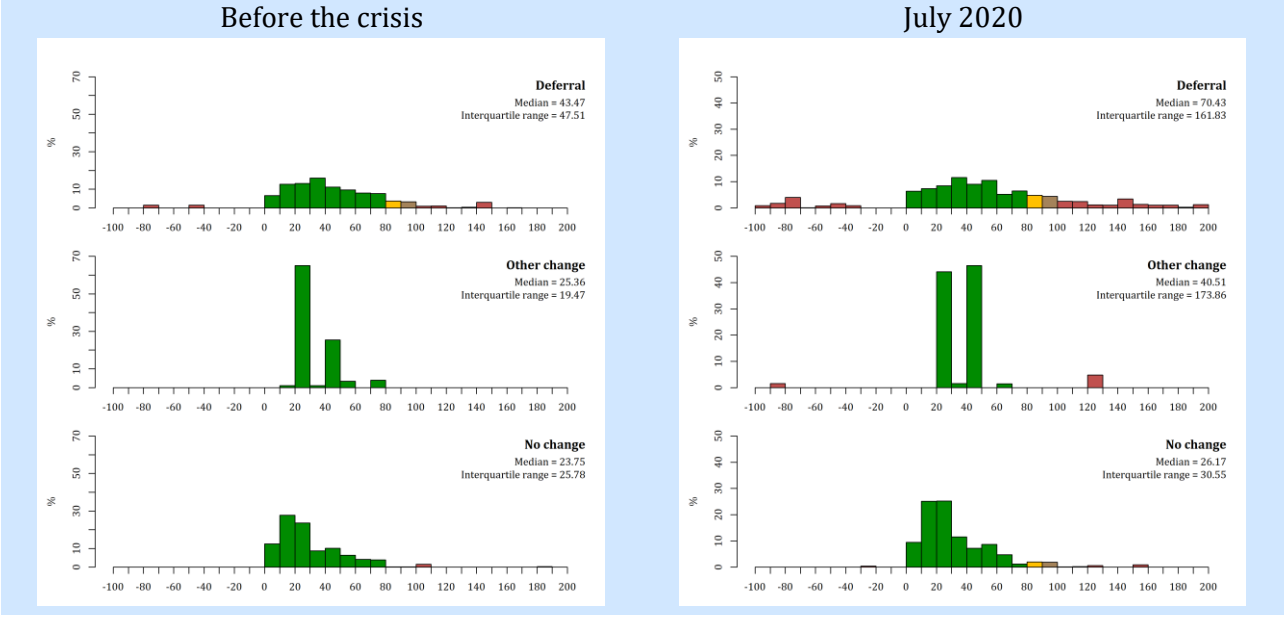
The sample was selected to have a significant overrepresentation of households that utilized the payment moratorium, with a share of at least 50%. This is because the primary focus of the survey is to follow the financial situation of indebted households opting for deferral specifically and ask about their expectations.

The survey collects information at both household- and individual-level. The main focus is to capture the impact of the Covid-19 pandemic on the household economic and financial situation and their future economic expectations. It also collects detailed information on standard socio-demographic characteristics. Description of all variables entering our analysis is given in Table 1 Variables used in empirical analyses. Weights were calibrated to margins including income source, education, age categories, the level of monthly instalment (with the outstanding debt level added in the second wave), and an indicator of whether a household opted for a loan deferral. We have used Calif 4.0 calibration tool[4] to construct the weights, which allows for approximate solutions and is able to calibrate weights based on a broad number of calibration criteria (ESS, 2017) following the state-of-the-art principles (Deville and Särndal, 1992).

2. Main survey results

One of the main indicators of the immediate riskiness of a borrower is the debt service-to-income ratio. This ratio indicates in general what is the share of a household's income that is used for debt repayment. The higher this ratio, the lower the buffer for a household, meaning that even a small unexpected drop in income can lead to a situation where a household is not able to pay its monthly instalments.

Chart 3 DSTI distribution of households opting for deferral, other easing and remaining households before and after the onset of the crisis



[3] https://www.nbs.sk/en/financial-market-supervision1/macroprudential-policy/current-status-of-macroprudential-instruments/current-setting-of-instruments-for-retail-loans.
[4] The calibration tool is available freely on: https://github.com/SO-SR/Calif.

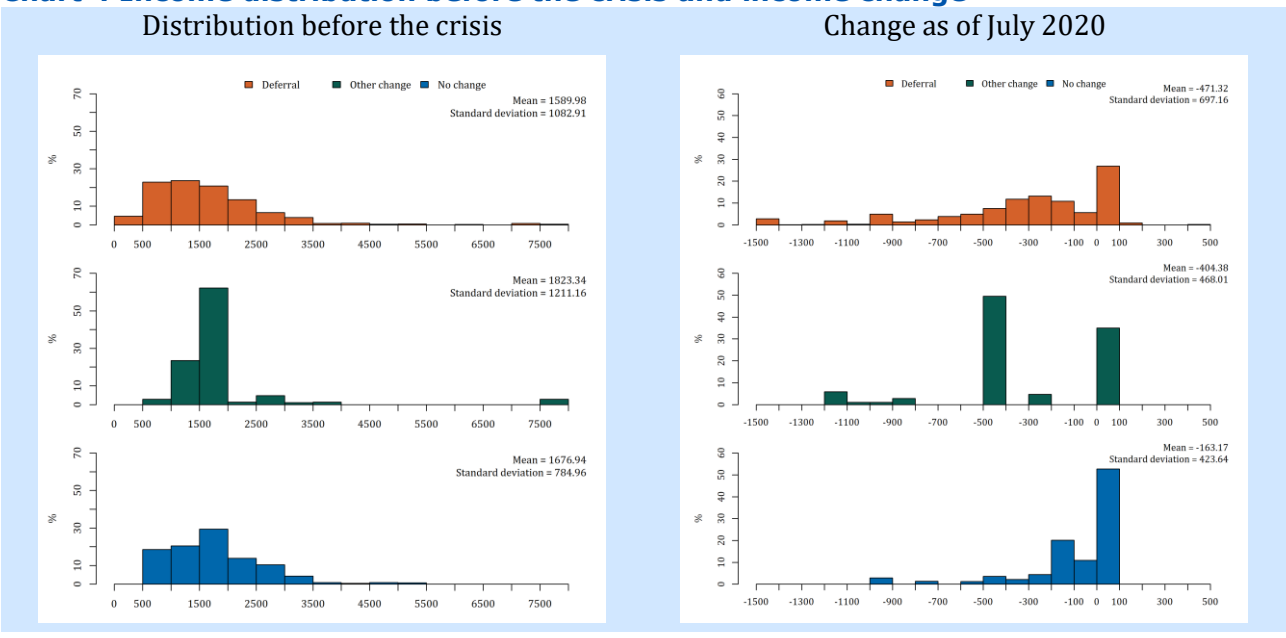
Note: Due to hyperbolic characteristics of DSTI formula, all negative values were replaced by the maximum positive value when reporting medians and IQRs. Negative DSTI can occur when net income falls below minimum subsistence level (see Table 1 Variables used in empirical analyses).
Deferral refers to households that opted for the postponement of their monthly instalments, **Other change** to households that had other type of credit conditions easing (e.g. maturity extension or decrease of monthly instalments), **No change** refers to households with no change in credit conditions.
Source: Survey of indebted households, National Bank of Slovakia.

Based on the results of the first wave, moratorium was chosen mainly by households that already had higher DSTI before the crisis, sometimes well above 80% (or negative DSTI, which means net income of the household does not even cover the minimum subsistence amount, Chart 3). These households, together with households asking for other type of credit easing, where also hit harder by the crisis, with a lot of households ending up with DSTI well above 100% or even with negative DSTI.

Higher pre-crisis DSTI was mainly caused by higher monthly instalments, with the average income being comparable among households utilizing the moratorium or other type of easing and households without any change in credit conditions. Average monthly instalments represented approximately 500 € for households taking advantage of the moratorium and 300 € for households without any change in credit standards. The increase in DSTI after the onset of the crisis is mainly caused by falling income. Households opting for the moratorium or other type of easing reported a significantly larger drop in their net income compared to households not opting for deferral.

Loss of income is highly correlated with deterioration of economic status of the household members. In case of households utilizing the moratorium or other type of easing, a large share, almost 90%, reported worsening of economic status of at least one family member (worsening means e.g. loss of a job/closure of business, partial decline in income, or being forced to change jobs). This share was also relatively high among households without opting for moratorium or other easing, more than 60%. The vulnerability of households utilizing the moratorium or other type of easing is visible also from a sectoral breakdown, where the share of households active in sectors more exposed to the crisis is higher and the share of persons active in less sensitive sectors is significantly lower compared to households with no easing.

Chart 4 Income distribution before the crisis and income change

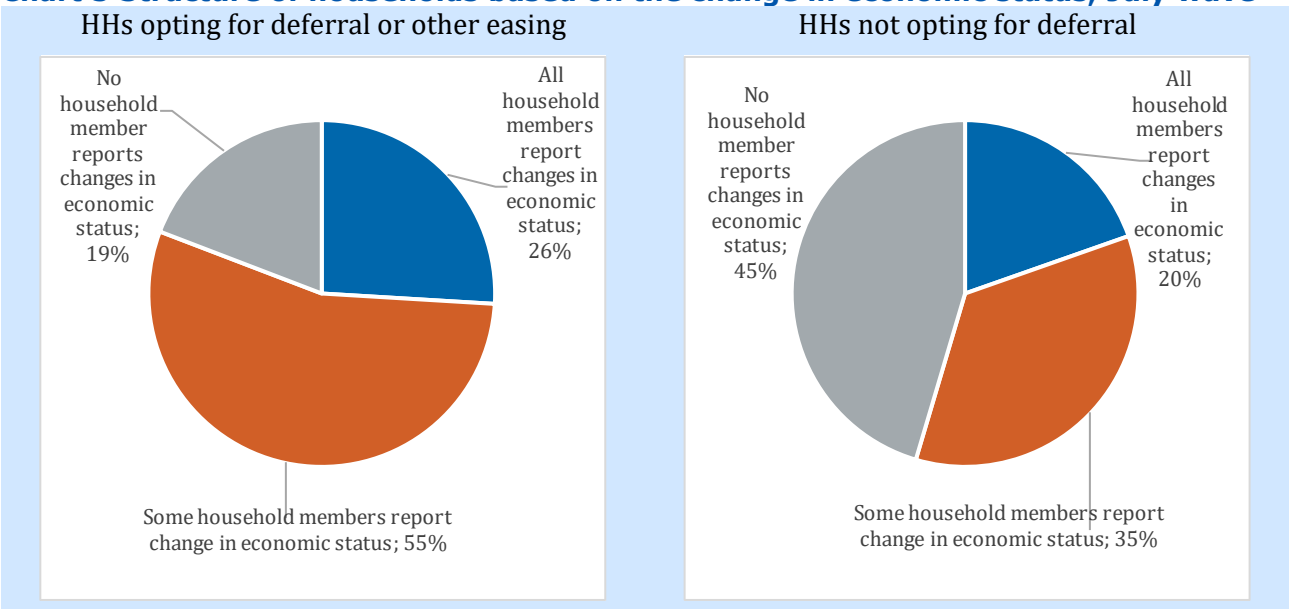


Source: Survey of indebted households, National Bank of Slovakia.

In case of employed debtors, losing their job or losing a significant part of income is twice as frequent among households utilizing the moratorium or other type of easing. About half of employed debtors reported some decrease of income. In case of self-employed, 90% of households asking for easing and 80% without easing suffered an income decline. The number of households that asked for easing and

reported a significant drop of income, due to, e.g., temporary or permanent closure of business, is almost three times higher than similar households without easing.

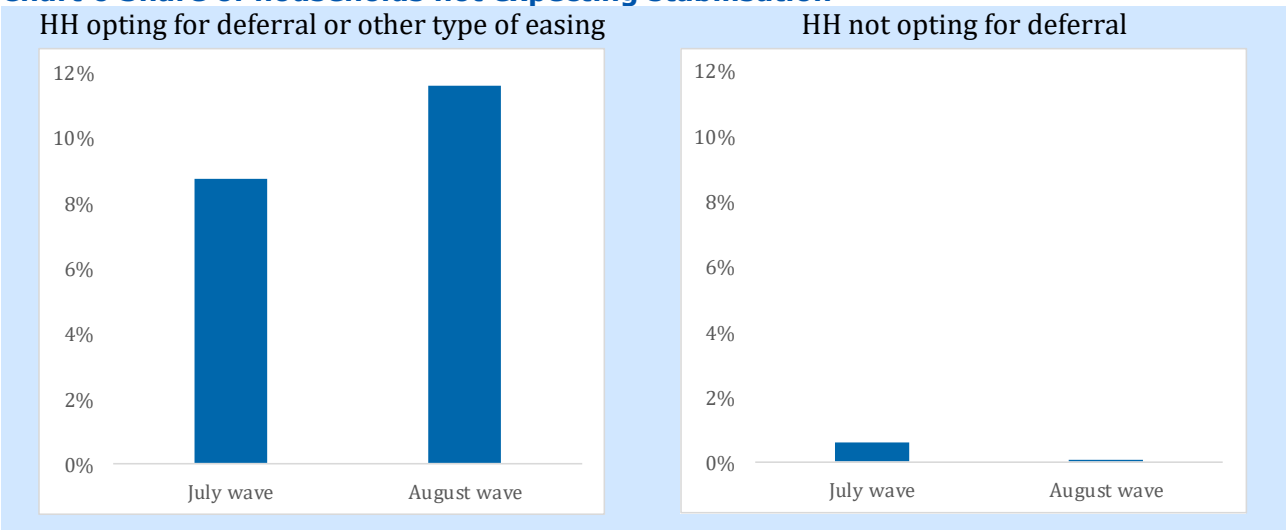
Chart 5 Structure of households based on the change in economic status, July wave



Source: Survey of indebted households, National Bank of Slovakia.

Despite households have reported loss of income and somewhat worse economic situation in the first wave of the survey, they still largely expected they will be able to repay their debt after the moratorium expires. Just a negligible share of households without easing expected serious difficulties in repaying their obligations. Among the households participating in the moratorium or other easing, 9%, expected serious difficulties in July and, 12% in the August wave of the survey. Most of the households thus still had optimistic expectations.

Chart 6 Share of households not expecting stabilisation

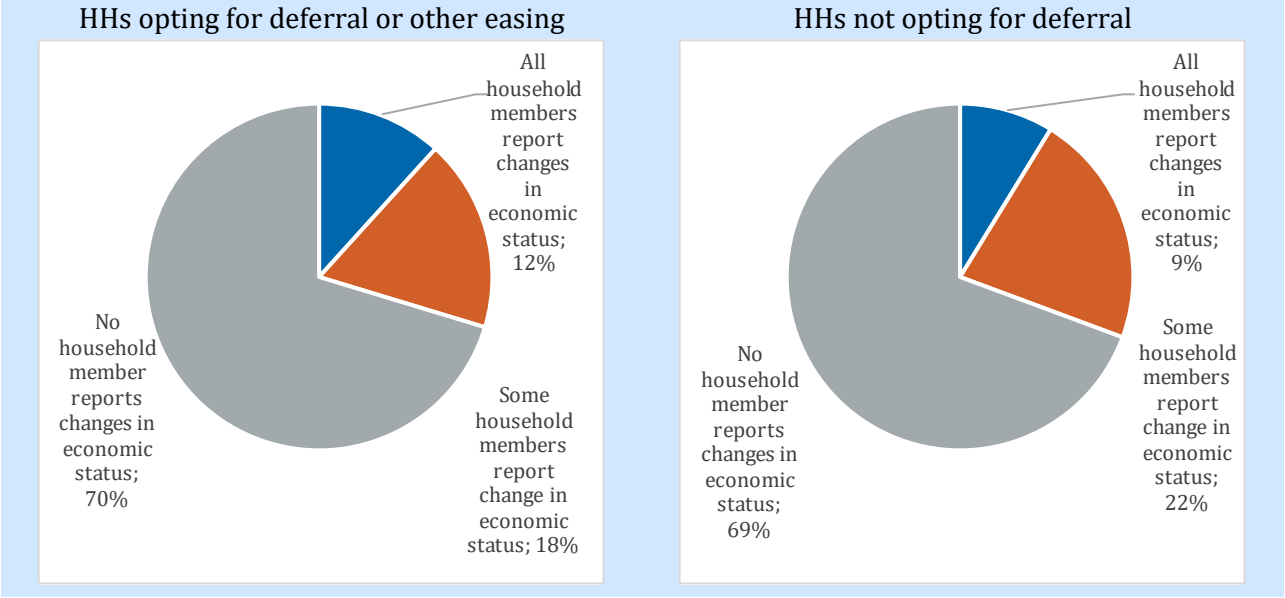


Note: Left part of the chart shows distributions based on the first wave, right part based on the second wave.
Expect stabilisation: households without any change of income, households expecting unchanged income after the crisis, households not expecting their income increase to pre-crisis levels but able to repay their debt or households not expecting their income increase to pre-crisis levels but able to repay their debt with the help of family or friends, **Does not expect stabilisation**: households not expecting their income to increase to pre-crisis levels and expect serious difficulties in repaying their debt.
Source: Survey of indebted households, National Bank of Slovakia.

On the other hand, a significant positive change revealed by the second wave of the survey is that a large share of households reported unchanged economic situation compared to the pre-crisis period, meaning

that a large part of surveyed households' employment or business has recovered. This was reflected also in income, that has also improved for most of the households compared to the first wave. However, among households utilizing the moratorium or other easing, there is still a significant fraction with no improvement.

Chart 7 Structure of households based on the change in economic status, August wave



Source: Survey of indebted households, National Bank of Slovakia.

3. Factors explaining the use of the deferral and expectations

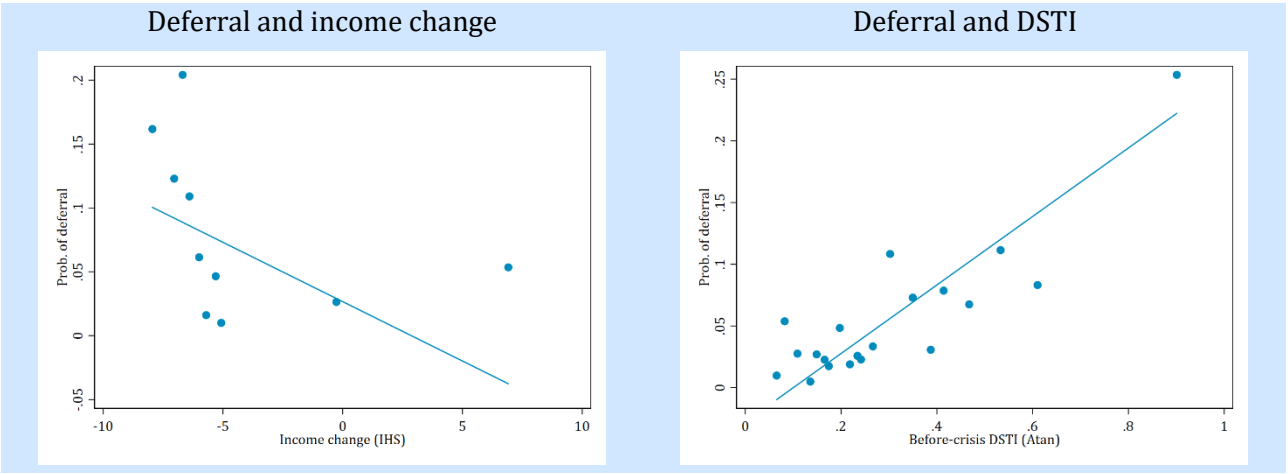
In this section, we provide empirical analysis of the factors explaining the use of loan deferrals as well as expectations of households with deferral. In the first step, we estimate a probit model of determinants of opting for a loan payment deferral. The estimation equation takes the following form:

$$Pr(Y = 1) = F(\beta_0 + \beta_1 X_1' + \beta_2 X_2'), \quad (1)$$

where Y is a binary outcome variable taking a value of 1 if the household opted for a deferral, and 0 otherwise. X_1' is a set of explanatory variables including the change in income levels after the crisis, any change in income conditions of economically active household members – either employed or self-employed (no change, one partner lost his/her job or has reduced working hours, or all partners lost their jobs or reduced working hours), before-crisis Debt-Service-To-Income (DSTI) ratio or the change in the DSTI since the onset of the crisis. F(•) is the cumulative normal distribution. We also control for a large set of control variables captured by X_2' such as education, age, gender, as well as regional and bank fixed effects.

Based on the results presented in section 2, we expect a strong relationship between the decision to opt for a deferral or other type of easing and the change in income as well as the level of DSTI before the crisis. This is also confirmed by a simple univariate linear regression presented in the below chart.

Chart 8 Impact of income change and DSTI before the crisis on the decision to opt for a deferral



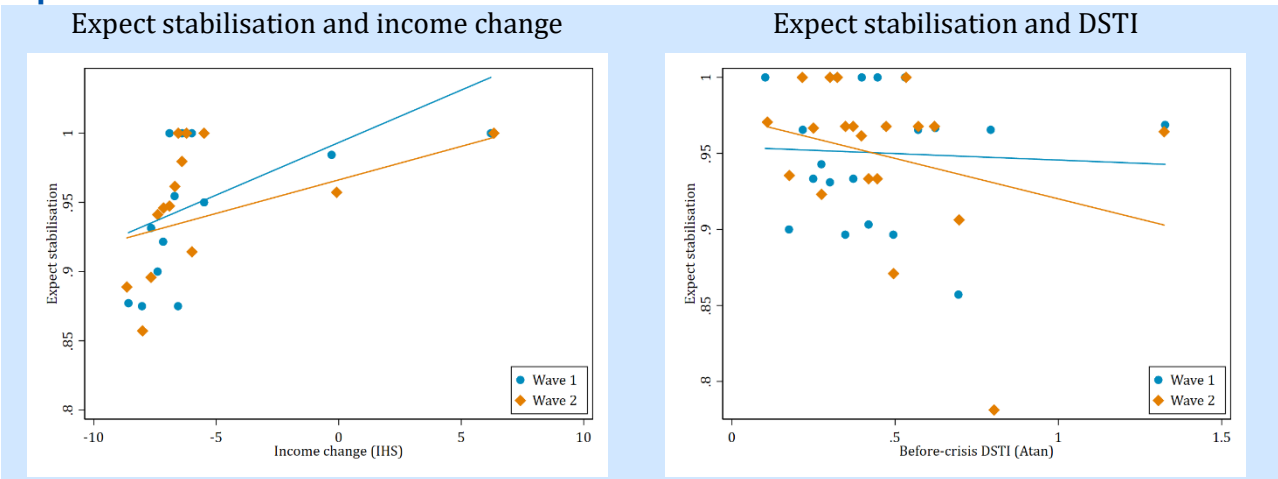
Note: binned scatter plots are presented.
Source: Survey of indebted households, National Bank of Slovakia.

Second, we study what factors explain the expectations of households that opted for a loan deferral – whether they can restart paying their debts after the end of the moratorium. To do so, we estimate the following probit model:

$$Pr(Y = 1|Deferred\ HHs) = F(\beta_0 + \beta_1 X_1' + \beta_2 X_2'), \qquad (2)$$

where the notation remains the same as in Equation 1, except Y being a dummy variable taking values of 1 if the household expects that it will be able to pay back its liabilities, and 0 otherwise. In this case, again, income change and pre-crisis DSTI is a strong candidate for driving the expectations.

Chart 9 Impact of the income change and DSTI before crisis on households' expectations



Note: binned scatter plots are presented.
Source: Survey of indebted households, National Bank of Slovakia.

Note that there is some controversy in the literature on when weights should be used in regression analysis (see e.g. Deaton, 1997, Chapter 2; or Cameron and Trivedi, 2005, Chapter 24). Despite this fact, we account for weights in the first set of Probit regressions, since the information about opting for a loan deferral was used for the weight's calibration due to substantial oversampling of those households.

Estimation results of equation (1) show indeed a significant impact of changes in income/economic status on the decision to opt for a deferral (Table 2).[5] Income change enters the regression with

[5] Alternative regressions were estimated with the dependent variable being any kind of easing due to pandemic, including deferral, but the results are very similar. Therefore, in this paper we provide only results for the deferral.

a negative sign, i.e. the higher the decrease in income due to the crisis, the higher the probability a household utilizes the deferral. Change in the economic status has the expected sign as well, if one or both household members' job was negatively affected, they opted for a deferral with a higher probability. As the impact of the crisis and the lockdown on the economic status and on the income change is highly correlated, either one or the other indicator enters the equation with a significant impact. Expenditure changes affects negatively the probability of requesting a deferral. Therefore, the higher the decrease of expenditures the higher is the probability of opting for deferral.

This also relates to factors in the pre-crisis period. As expected, the higher is the pre-crisis DSTI, the higher is the probability of opting for deferral. It means that households operating more on the margin in terms of their monthly cash-flows had a higher probability to be negatively affected by the crisis, as even a smaller decrease in their income could complicate their payment obligations. Another interesting result is that households with higher education have lower probability of utilizing the deferral. This result is in line with Jurča et al. (2020), who claim that one of the main drivers of the probability of becoming unemployed is the level of education. Working in a sensitive sector before the pandemic made the household members also more vulnerable.

Overall, the results point to a significant impact of the crisis on opting for deferral, but many households entered the pandemic in an already risky position. Low pseudo R^2 may also point to the necessity of analysing the effects of the pandemic on households based on survey or other microdata, as macro variables can mask relatively high heterogeneity among households.

Table 2 Probit estimates of determinants of deferral (first wave)

	(1)	(2)	(3)	(4)	(5)	(6)
University education	-0.037***	-0.038***	-0.029**	-0.031***	-0.023**	-0.024**
	(0.012)	(0.012)	(0.012)	(0.011)	(0.011)	(0.010)
Age	-0.001**	-0.002***	-0.001**	-0.001***	-0.001**	-0.001***
	(0.001)	(0.001)	(0.001)	(0.000)	(0.000)	(0.000)
Sex	-0.019	-0.021*	-0.019*	-0.017*	-0.015	-0.013
	(0.012)	(0.012)	(0.011)	(0.010)	(0.010)	(0.008)
Some household members report changes in economic status	0.030**					
	(0.012)					
All household members report changes in economic status	0.039***					
	(0.015)					
Work in a sensitive sector		0.032**	0.025*	0.022*	0.019	0.016
		(0.015)	(0.014)	(0.012)	(0.013)	(0.011)
Income change (IHS transformed)			-0.006***	-0.004***	-0.006***	-0.004***
			(0.001)	(0.001)	(0.001)	(0.001)
Expenditure change (IHS transformed)				-0.005***		-0.005***
				(0.001)		(0.001)
Before-crisis DSTI (Arctangent)	0.125***	0.127***	0.108***	0.103***	0.099***	0.091***
	(0.023)	(0.023)	(0.021)	(0.020)	(0.019)	(0.018)
Region and Bank FE	No	No	No	No	Yes	Yes
Pseudo R^2	0.17	0.16	0.19	0.22	0.21	0.24
N obs.	974	974	973	973	973	973

Note: Marginal effects presented are evaluated at the mean of variables. Regressions are estimated using survey weights. Dummy variable for "None of household members reported change in economic status" is the reference category of the respective dummy variable sets. IHS denotes the inverse hyperbolic sine transformation. We transform DSTI by and arctangent function to scale down some very large values and stack originally negative values next. The transformed values are bounded on (0, π) and the most frequent DSTI values up to 60% are mapped almost linearly.

* p < 0.10, ** p < 0.05, *** p < 0.01.

Source: Survey of indebted households, National Bank of Slovakia.

As it seems economic status and income situation reverted largely back to normal between the first and second wave for many households, estimating the probability of asking for deferral based on the second wave could lead to biased results. On the other hand, expectations of households can evolve over time and therefore are interesting to examine through respective survey waves. Regression results for households' expectations are summarized for the first wave in Table 3 and for the second wave in Table 4.

The results based on the first wave for the income change are in line with the previous results. The higher the decrease in income compared to the pre-crisis levels, the higher the probability the household does not expect the situation to stabilize.

An interesting result is that on average, debtors, who were self-employed before the crisis, have significantly more pessimistic expectations about their future financial situation than debtors that were employed.

Change in the DSTI due to the pandemics affects expectations as well. The larger the increase in this indicator, the higher the probability the household does not expect repaying their debt. On the other hand, pre-crisis DSTI does not enter the regression with a significant impact.

There are several changes in the results based on the second wave. There are no more significant differences between the expectations of employed and self-employed respondents. This can point to the fact that while during the first wave expectations were driven by self-employed participants' unclear economic prospects, in the meantime a recovery of income/business for many households could have led to more realistic expectations based more on fundamentals.

Change in the economic status is significantly explaining the expectations, with households having at least one household member negatively affected being more pessimistic about their ability to repay their debt.

Finally, changes in the DSTI do not explain the expectations, but pre-crisis DSTI is a significant explanatory variable meaning the more vulnerable was the household before the crisis the worse is its expectation about the future payment of debt. This can point to households in the second wave having more realistic expectations, based more on fundamentals such as income change, changes in the economic status of the household members and their debt burden.

Table 3 Probit estimates of determinants of stabilization expectations (first wave)

	(1)	(2)	(3)	(4)	(5)
University education				0.114	0.136
				(0.197)	(0.195)
Age				0.003	0.001
				(0.010)	(0.009)
Sex				0.086	0.099
				(0.191)	(0.192)
Income change (IHS transformed)	0.204**	0.163**	0.168**	0.169**	0.155**
	(0.091)	(0.065)	(0.070)	(0.071)	(0.063)
Self-employed (reference person)		-0.546***	-0.546***	-0.567***	-0.554***
		(0.199)	(0.200)	(0.200)	(0.195)
Self-employed (spouse/partner)			0.336	0.338	0.322
			(0.306)	(0.310)	(0.305)
Some household members report changes in economic status	0.208	0.349	0.329	0.329	0.361
	(0.276)	(0.292)	(0.293)	(0.302)	(0.303)
All household members report changes in economic status	0.241	0.453	0.387	0.377	0.406
	(0.276)	(0.303)	(0.300)	(0.306)	(0.306)
DSTI change	-0.034*	-0.041**	-0.042**	-0.042**	-0.044**
	(0.020)	(0.021)	(0.021)	(0.021)	(0.021)
Before-crisis DSTI (Arctangent)	-0.381	-0.393	-0.414	-0.404	
	(0.333)	(0.317)	(0.313)	(0.305)	
Pseudo R^2	0.077	0.108	0.114	0.116	0.110
N obs.	602	602	602	602	602

Note: Marginal effects presented are evaluated at the mean of variables. Regressions are estimated using survey weights. Dummy variable for "None of household members reported change in economic status" is the reference category of the respective dummy variable sets. IHS denotes the inverse hyperbolic sine transformation. * p < 0.10, ** p < 0.05, *** p < 0.01.
Source: Survey of indebted households, National Bank of Slovakia.

Table 4 Probit estimates of determinants of stabilization expectations (second wave)

	(1)	(2)	(3)	(4)	(5)
University education				0.197	0.198
				(0.199)	(0.199)
Age				-0.019**	-0.019**
				(0.009)	(0.009)
Sex				-0.058	-0.060
				(0.180)	(0.179)
Income change (IHS transformed)	0.045*	0.045*	0.048**	0.050**	0.050**
	(0.024)	(0.024)	(0.024)	(0.025)	(0.025)
Self-employed (reference person)		0.009	-0.025	0.033	0.034
		(0.185)	(0.189)	(0.180)	(0.181)
Self-employed (spouse/partner)			0.486	0.460	0.456
			(0.308)	(0.312)	(0.312)
Some household members report changes in economic status	-0.381*	-0.380*	-0.359*	-0.413**	-0.413**
	(0.210)	(0.211)	(0.211)	(0.210)	(0.210)
All household members report changes in economic status	-0.410*	-0.410*	-0.409*	-0.450*	-0.446*
	(0.232)	(0.232)	(0.234)	(0.236)	(0.238)
DSTI change	-0.002	-0.002	-0.004	-0.003	
	(0.008)	(0.008)	(0.008)	(0.009)	
Before-crisis DSTI (Arctangent)	-0.494**	-0.493**	-0.483**	-0.438*	-0.443*
	(0.221)	(0.224)	(0.225)	(0.236)	(0.233)
Pseudo R^2	0.054	0.054	0.065	0.086	0.086
N obs.	610	610	610	610	610

Note: Marginal effects presented are evaluated at the mean of variables. Regressions are estimated using survey weights. Dummy variable for "None of household members reported change in economic status" is the reference category of the respective dummy variable sets. IHS denotes the inverse hyperbolic sine transformation. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.
Source: Survey of indebted households, National Bank of Slovakia.

Conclusions

We have presented the results of a survey focusing on the financial situation and expectations of indebted households, with a special focus on households utilizing the debt payment moratorium.

A large share of households has been affected by the Covid-19 crisis, as many surveyed households reported a loss of income or worsening of the financial situation at the peak of the crisis. Also, it turns out that a high share of households using deferral or other type of credit conditions easing was more vulnerable even before the crisis. They either had higher DSTI, were likely to work in sectors more affected by the crisis or had a higher share of self-employed family members. Regression results confirmed that the change in income, change in the economic status and the level of pre-crisis DSTI are indeed important factors explaining the decision to use the moratorium.

On the other hand, expectations regarding the future development of the financial situation and the ability of repaying debt were relatively optimistic. Only 9%-12% of households asking for any type of easing expected not being able to repay their debts after the moratorium.

Based on regression results, households in the second survey wave had more realistic expectations, based more on fundamentals such as income change, changes in the economic status of the household members and their debt burden.

The second wave brought a positive shift in households predominantly reporting recovery of their economic and financial situation to pre-crisis levels. In the future, it will be important to monitor the development of the financial situation of these households as well as households using the moratorium, together with their expectations.

Our results have strong policy implications. The survey confirmed that a significant share of households was strongly hit by the crisis and the lockdown. The situation of most of those households has normalized over the summer and the losses currently foreseen by the survey are manageable for the banking sector. Mere 1% of indebted households does not expect an orderly repayment of their debt, representing also 1% of the retail loan portfolio. However, the second wave of the pandemic and the government's response may again complicate the situation of households and have severe implications for them. We suggest closely following the situation of those vulnerable households by collecting survey data on a frequent basis, respectively, over a longer time period. Based on the upcoming development of the pandemic, policymakers might consider further extensions of the loan moratorium, as yet one of the most effective policy tools, which helped to maintain the household welfare during this turbulent time period.

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Appendix A

According to the policy tracker provided by the IMF, around two thirds of countries has implemented some form of loan instalments deferral as of September 2020.[6] In 44% of countries the deferral is implemented in national legislation. In additional 24% of countries, the measures are less comprehensive. Countries where the moratorium applies under some condition, such as only for affected or eligible borrowers, on a case-by-case basis or up to a given limit e.g. are included here. Further, countries with implicit moratorium (recommendation, but not legally binding) are classified here together with those where the moratorium is valid just for some selected sectors or just for SMEs. For example, in USA, government-sponsored mortgage companies provide mortgage forbearance for 12 months. The rest of the world, around one third of countries has not implemented such a deferral. The share of such countries is the lowest in South America. In Europe, Scandinavian and the Baltic countries, France, Switzerland, North-Macedonia and Moldova are included here.

Table 5 Loan instalment deferral – continental breakdown

	Introduction of debt repayment moratorium					
	Yes		Partially		No	
Europe	23	*53%*	8	*19%*	12	*28%*
Asia	25	*51%*	13	*27%*	11	*22%*
Africa	15	*28%*	10	*19%*	28	*53%*
North America	1	*33%*	2	*67%*	0	*0%*
South America	14	*54%*	8	*31%*	4	*15%*
Australia and Oceania	4	*29%*	3	*21%*	7	*50%*

Note: Number of countries and their share in the respective continent is provided in each row.
Source: IMF.

More than a half of high-income countries[7] has implemented the deferral and an additional 20% has introduced it with some restrictions. The most of upper- and lower-middle-income countries has implemented the moratorium as well, although with a higher share of less comprehensive measures. Almost two thirds of low-income countries have not adopted the deferral yet.

Table 6 Loan instalment deferral – country income classification breakdown

	Introduction of debt repayment moratorium					
	Yes		Partially		No	
High-income countries	34	*56%*	12	*20%*	15	*25%*
Upper-middle-income countries	19	*40%*	18	*38%*	11	*23%*
Lower-middle-income countries	21	*43%*	11	*22%*	17	*35%*
Low-income countries	7	*27%*	3	*12%*	16	*62%*

Note: Number of countries and their share in the respective income category is provided in each row.
Source: IMF, World Bank.

[6] https://www.imf.org/en/Topics/imf-and-covid19/Policy-Responses-to-COVID-19.
[7] Country groups based on the World Bank definition: https://datahelpdesk.worldbank.org/knowledgebase/articles/906519-world-bank-country-and-lending-groups.