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LOCKDOWN, EARNINGS LOSSES AND HOUSEHOLD ASSET BUFFERS IN EUROPE[1]

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Measures taken to contain the spread of COVID-19 affected some workers' capability to work and hence earning more than others. The initial impact may have been mitigated, for instance by relying on savings and assets, but access to these buffers likely varied within and across countries. In this article we estimate COVID-19 potential earnings losses using the Lockdown Working Ability Index and relate this to households' savings and assets observed in the Eurosystem Household Finance and Consumption Survey. We find that, without government support, households in the Euro Area could only offset on average half of their losses by relying on liquid assets and almost half would deplete their savings in doing so, although there is significant cross-country variation. When considering the effect of income support policies, liquid assets cover on average 65 percent of the remaining losses and still 20 percent would exhaust their liquid assets on average in the Euro Area.

JEL Codes: D31, E24, G51, J21, J31

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1. Introduction

With the onset of the COVID-19 pandemic in early 2020 many governments restricted social and economic activities to limit the spread of the virus, representing an unprecedented economic shock. Although initially seen as affecting everyone equally, it became very clear that the impact of this shock varies widely within and between countries (Moreira and Hick, 2021).

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The potential earnings[2] losses for workers largely depend on the extent to which the sector in which they work is closed during restrictions or regarded as essential, and on whether their work can be done remotely/from home. Given the overrepresentation of vulnerable groups in sectors which are hit hardest by restrictions (e.g. Fana *et al.*, 2020; Pouliakas and Branka, 2020), earnings losses vary widely across the distribution. Also, economies which rely more heavily on these sectors, such as in Southern European countries, are more prone to be affected than those whose productive structures are more service-oriented as is generally the case in Northern and Western European countries (Doerr and Gambacorta, 2020; Fana *et al.*, 2020). These varying effects potentially serve to increase earnings inequality and poverty within countries as well as to widen earnings gaps between countries (Palomino *et al.*, 2020).

The extent to which these potential earnings losses impact on living standards depends on the extent to which they are mitigated by: (1) the presence of other earnings and incomes in the household; (2) the state response through the tax and benefit systems; and (3) those affected having financial savings or other assets to fall back on. First, sharing of resources within the household may provide a cushion when one of its members loses (part of) their earnings. Second, automatic stabilizers build into the tax-benefit system as well as COVID-specific discretionary policy responses may ensure that earnings losses are averted or compensated so that they do not translate into increased poverty and inequality in terms of disposable incomes. Finally, where poverty and inequality in disposable income do increase, households may be able draw on their savings and assets in order to make ends meet, reducing or avoiding altogether its impact on consumption. However, just as the initial impact of the COVID-19 crisis differs across and within countries, the role of these cushioning factors may vary considerably. If those hit most severely by the crisis in terms of earnings losses are less likely to have other household earnings (i.e. because they are more often single and/or do not have capital income), are less effectively protected by the tax-benefit system and have fewer savings and assets to fall back on, then increased poverty and inequality in terms of living standards will be the result.

Research to date has mostly focused on the mitigating effect of tax-benefit systems, and occasionally the role of other household incomes. Most of this research consists of case studies of individual countries (e.g. Brewer and Tasseva, 2021, for the UK; Figari and Fiori, 2020, for Italy; Marchal *et al.*, 2021b, for Belgium; O'Donoghue *et al.*, 2020, for Ireland), while Cantó *et al.* (2021) consider four countries (Belgium, Italy, Spain and the UK). To our knowledge Almeida *et al.* (2021) and Christl *et al.* (2021) are the only two papers studying the impact of COVID-19 on market and disposable incomes in a European-wide context. Only a few studies have considered the potential cushioning role of savings and assets, either assessing whether households can cover basic expenses by relying on those assets (Demertzis *et al.*, 2020; Midões and Seré, 2022) or three weeks of disposable income (OECD WISE, 2021) or by calculating joint income-wealth

[2]Throughout the article we use the term "earnings" to refer to the sum of all remunerations received by employees and self-employed people in cash or near cash for work activities performed.

poverty measures (Kuypers and Marx, 2020). Furthermore, those studies simply assess vulnerability in those terms at the onset of the crisis, without relating that to which households are actually most likely to be affected by earnings losses in the pandemic.

This article fills that gap by combining estimates of potential earnings losses for workers, taking into account the occupation and sector in which they work, with information on the distribution of liquid assets and other wealth. This article can thus be seen as a case study of the impact of a powerful but highly asymmetric shock in the joint income-wealth sphere. This is in itself new because most studies look at either income or wealth yet both dimensions matter for worker's financial resilience.

This is done within a harmonized cross-country framework covering Euro Area countries, Croatia, Hungary and Poland; this comparative perspective significantly enhances the value of the exercise. Specifically, we apply the Lockdown Working Ability Index constructed by Palomino *et al.* (2020) to workers observed in the third wave of the Eurosystem Household Finance and Consumption Survey (HFCS), the most recent comparative source of microdata on wealth. This allows us to estimate potential earnings losses and relate those to asset "buffers" as captured in HFCS, see how both vary across the earnings distribution, and on that basis assess potential impacts on poverty and inequality. With assets observed at the household level our analysis focuses on household aggregate potential earnings losses and the extent to which liquid assets or other wealth provide a buffer against those losses. The article thus offers an innovative approach that could prove relevant for policy approaches to future crises of a similar nature.

Our results show that average potential earnings losses are often higher in Eastern and especially Southern European countries than in Western and Northern European ones, and within each country those towards the top of the household earnings distribution face smaller potential losses in percentage terms than those lower down the household earnings distribution. Across the Euro Area on average, only about half of those potential earnings losses could be buffered by drawing on liquid assets, with that figure varying considerably across countries. Those towards the top of the household earnings distribution are more able to buffer or offset their potential losses, implying a positive relationship between household earnings and liquid assets. The increase in earnings poverty and inequality is only to a limited extent attenuated by households being able to draw on liquid assets. Considering total net wealth as a buffer instead of only liquid assets would have a substantially larger mitigating effect, but with net wealth on average mainly representing the value of the main residence it is doubtful it can actually serve that purpose.

When we consider in the simulation the effect of government support policies and analyze disposable income, liquid assets on average could buffer 65 percent of the remaining potential losses and almost 20 percent of households would deplete their liquid assets on average in the Euro Area countries. This share of households exhausting their savings is higher in the lower quantiles and varies across countries.

The article is structured as follows. Section 2 describes the first step of the analysis. Using the Lockdown Working Ability Index, we calculate potential earnings losses for a specified lockdown scenario using HFCS data and assess the extent to which it potentially affects earnings poverty and inequality. We also consider the

impact of government support policies by imputing the potential losses in terms of disposable incomes based on the previous literature. Section 3 then analyses the extent to which liquid assets can serve as a buffer for the households most likely to be affected, and the extent to which the potential increases in gross earnings/disposable income poverty and inequality can be attenuated. The potential mitigating effects of considering total net wealth as buffer is also briefly discussed. Finally, Section 4 summarizes the key findings and highlights their implications.

2. Estimating Potential Earnings/Income Losses from the Pandemic

2.1. *The Lockdown Working Ability Index (LWA)*

The COVID-19 pandemic represents a severe economic shock with many different dimensions. Here we concentrate on the potential earnings losses due to "supply side" effects of measures restricting economic activity and enforcing social distancing, leaving aside the second-round impact of demand-side responses by consumers from income/job losses. The analysis is based on the *Lockdown Working Ability* (LWA) index developed by Palomino *et al.* (2020), which is a measure that summarizes the capacity of each individual worker to keep working under lockdown ranging between 0 (completely unable to work) and 1 (total ability to work). In particular, it is derived by combining three dimensions of each occupation (O_i): its teleworking capacity (T_i) which represents the share of tasks that can be performed remotely,[3] and the extent to which the occupation is considered essential for the functioning of the economy (E_i) or was completely closed during lockdown (C_i), where $T_i, E_i, C_i \in [0, 1]$.[4]

For occupations that are to some extent essential ($E_i > 0$), the LWA is equal to their essentiality index E_i plus the non-essential part of the tasks that can be teleworked, that is: $\left(1 - E_i\right) \cdot T_i$. Then, for fully essential ($E_i = 1$) occupational categories $\text{LWA}_i = E_i$. For closed occupations ($C_i > 0$), the LWA is only the non-closed share of the activity that can be teleworked: $\left(1 - C_i\right)T_i$. Note that for fully closed occupations ($C_i = 1$) the LWA will be zero. Finally, for individuals whose occupation is neither essential (e) nor closed (c), the ability to work during the lockdown will depend solely on their teleworking index, and thus $\text{LWA}_i = T_i$:

$$\text{LWA}_i = \begin{cases} E_i + \left(1 - E_i\right) T_i & O_i = \text{essential} \\ \left(1 - C_i\right) T_i & O_i = \text{closed} \\ T_i & O_i \neq \text{essential nor closed} \end{cases}, \tag{1}$$

for all combinations of occupation-industry $i \in \{1, 2, \ldots, n\}$.

[3]We use the teleworking index for each occupation provided by Palomino *et al.* (2020) using the ISCO-08 classification of occupations, which was built based on the estimations of Dingel and Neiman (2020) for the American O*NET database. We have also followed their classification to assign essentiality E_i and closure C_i indices to each combination of occupation–industry. These were obtained according to the legislation developed by Italy and Spain, two major economies affected severely and earlier than other European countries in the first wave of the pandemic.

[4]The components E_i and C_i may take in a few cases intermediate values between 0 and 1 because the occupation-industry category is composed of different sub-categories that may have different essentiality or closure binary statuses.

Palomino *et al.* (2020) apply the LWA index to workers observed in the 2018 EU-SILC in order to estimate the potential earnings losses due to the lockdown. They then analyze the impact on earnings poverty and inequality at the individual level.

We follow a similar approach but take the analysis a step further by assessing the extent to which households have the liquid assets and other wealth required to offset the potential earnings losses induced by the COVID-19 lockdowns and restrictions. To that end, we apply the LWA index to workers (employees and self-employed) observed in the third wave of the Eurosystem Household Finance and Consumption Survey (HFCS) (for most countries referring to 2017 and incomes of 2016). Unlike EU-SILC, this survey includes detailed data on savings, liquid assets and other wealth, alongside information on earnings and other income components (gross of taxes and social insurance contributions). Moreover, it is currently the most often used data in European comparative research into the distribution of wealth. It consists of a largely ex-ante harmonized survey and applies oversampling of the wealthy to get a better coverage of the top of the distribution.[5] Sample sizes vary between 1,303 households (4,188 individuals) in Cyprus to 13,685 households (32,799 individuals) in France. The quality of HFCS has been assessed by comparing wealth aggregates to national accounts while demographic information and income distributions can be compared to EU-SILC. Although there are some inconsistencies with the national accounts, there are often good reasons for that as they do not always relate to the same concepts and measures. The distribution of gross income is very similar between HFCS and EU-SILC, although incomes tend to be higher at the top in HFCS, which is likely due to the oversampling.[6]

The third HFCS wave includes information on the countries of the Euro Area, Croatia, Hungary and Poland.[7] In line with Palomino *et al.* (2020) we find that the LWA index is often higher in Central and Northern European countries than in Southern and Eastern European countries and that it is higher for female workers, workers with a permanent contract, full time workers and highly educated workers (see the Appendix for more information).[8] There will be variation across countries in the extent to which businesses are able to re-start and build back up fully, arising from the varying effectiveness of supports and a wide range of other factors, but insufficient information is available at this point to allow this to be incorporated. The focus of our study is thus on the period of the COVID-19 pandemic in which restrictions and earnings losses took place, as we describe below.

[5]There is no oversampling applied in Austria, Italy, Malta, the Netherlands and Slovenia.

[6]Chapter 9 in HFCN (2020) describes these quality checks as well as comparability issues between survey waves and between countries. For most countries, there are also national studies available with quality and consistency checks. See the Appendix for a comparison of kernels of the EU-SILC and HFCS income distributions.

[7]Malta is not included because information on the LWA index is not available (see Palomino *et al.*, 2020).

[8]They are also largely in line with the vulnerable groups identified in the literature, except perhaps for the gender results. Some studies argue that women more often than men discontinued their work or worked fewer hours, but this is for a large extent due to the increasing care burden because of school and kindergarten closures, which is an aspect not taken into account in the current analysis.

2.2. *Potential Earnings Losses*

We employ the LWA index to assess the potential earnings losses for workers. To this end the LWA needs to be combined with a lockdown scenario. Although countries differ in the stringency and precise duration of the lockdown and de-escalation periods, we use the same scenario for all the countries analyzed. This allows to concentrate on the variation in household buffers which stems from the different distributions of occupations, earnings and wealth. Specifically, we employ the following scenario: a total period of four months of full lockdown, where the industry and construction sectors are closed during the first two months of lockdown, but fully functioning in the other two and an additional eight months of partial lockdown at 40 percent of restricted sectors.

In the first wave of the pandemic in Spring 2020, most European countries shut down completely certain sectors of the economy for a period that averaged circa two months, keeping functioning only essential sectors and work in non-essential sectors that could be done remotely. Closed sectors included hospitality, leisure, but also all non-essential industries and other non-essential service and public sectors. The second wave of the pandemic, taking place in late 2020 and early 2021, led in several European countries to a second lockdown period. Yet, this second lockdown was in many cases less stringent, focusing mainly on the closure of face-to-face sectors such as retail, hospitality and leisure—which were thought to be riskier for the spread of COVID-19—while keeping manufacturing and construction sectors fully unrestricted.[9]

In addition to the lockdown periods, countries have followed a de-escalation strategy (with different tiers or alert systems) in which high-risk sectors have had limited functioning. For instance, restaurants have been restricted to outdoor dining, occupancy limits or could only perform delivery services. Cinemas, theatres, clubs, sports events or leisure venues have also endured restrictions due to social distancing. These partial activities have not only been enforced by law but have also been affected by behavioral changes of individuals to prevent contagion.

How should we treat the intensity of those restrictions in closed sectors? Real-time high-frequency data has been widely available on energy use and mobility but timely disaggregated data by sector on consumption or business activity has been scarcer in Europe. Still, there exist sources with valuable information to help us approximate the intensity of the restrictions. BBVA Research (2020) provides high-frequency data on the evolution of credit card use that specifically focuses on key closed sectors for some Latin American countries and for Spain. The data for Spain show that expenditure on the entertainment industry was -60 percent after the first lockdown ended, then recovered but has plateaued at -20 percent in

[9]The duration of both lockdown periods has been conveniently compiled and referenced at the Wikipedia page https://en.wikipedia.org/wiki/National_responses_to_the_COVID-19_pandemic (retrieved January 2, 2021). The average duration of the first wave lockdown in European countries was 55 days, with implementation in 25 European countries, while the duration for the second lockdown (corresponding to the second/third wave of the disease spread was 35.5 days, with implementation in 18 European countries. Unlike the previous one, this second lockdown generally kept the manufacturing and construction sector open. We have accordingly changed the status of these sectors in the second lockdown estimations.

the subsequent months. The hospitality industry as a whole experienced a similar pattern—although activities at bars and restaurants recovered more so than at hotels—presenting a persistent decrease in activity of more than 40 percent during the months after the first lockdown.

A second valuable source of information is the United Kingdom's Office of National Statistics "Business insights and impact on the UK economy" dataset (ONS, 2020). It publishes every two weeks real-time data on self-reported business performance in different sectors. It shows that while the secondary sector (construction and manufacturing) returned back to normal after the first lockdown, more than 40 percent of businesses in the art and entertainment industry reported a turnover decrease greater than 50 percent compared to the previous year still at the end of 2020. In the accommodation and food service sector between 20 and 40 percent of businesses reported experiencing such a decrease in turnover after the first lockdown and at the onset of the second one.

By combining the LWA index with the lockdown scenario we are able to calculate the potential earnings losses (el) that each worker is likely to experience:

$$\text{el}_{it} = e_{i(t-1)} \cdot \left[\frac{2}{12} \cdot \left(1 - \text{LWA}_i\right) + \frac{2}{12} \cdot \left(1 - \text{LWA}_i^*\right) + \frac{8}{12} \cdot 0.4 \cdot C_i \right] \tag{2}$$

where, $e_{i(t-1)}$ are the annual pre-COVID earnings as reported in the HFCS for individual i, LWA_i is the Lockdown Working Ability for the first two months lockdown period and LWA_i^* for the second two months lockdown period. Given that our main focus is on the cushioning role of liquid assets and other wealth which is collected at the household level, we focus here on the aggregate earnings losses at the household level (which is different from Palomino *et al.*, 2020). Hence, our sample analyzed consists of all individuals living in a household where there is at least one employee or self-employed.

Since the HFCS uses a multiple imputation technique to deal with item non-response[10] we apply special multiple imputations commands to calculate the potential earnings losses as well as the buffering by liquid assets and net wealth discussed in the next section following Rubin's rule (1987).[11] All 1,000 replicate weights included with the HFCS data are used to estimate bootstrapped standard errors.

Table 1 Panel A presents the average potential loss rate in household earnings, i.e. the earnings losses as a percentage of the pre-COVID earnings. Across the Euro Area, the average potential earnings loss rate is equal to almost 20 percent. Losses are smallest in Belgium, Finland, France and the Netherlands with a loss rate of about 15–16 percent, while they are largest in Greece and Hungary with loss rates of 27.7 and 25.4 percent respectively. In general, potential loss rates are often higher in Eastern and especially Southern European countries than in Western and Northern European countries. When comparing the potential earnings loss

[10]For more information on the imputation strategy, see HFCN (2020). Finland, France and Italy do not use multiple imputations.

[11]To estimate Gini coefficients we use the STATA user written command "inequaly" by Philippe Van Kerm.

TABLE 1
AVERAGE POTENTIAL LOSS RATE, OVERALL AND BY QUINTILES

	(A) Earnings						(B) Disposable Income					
Country	All	Q1	Q2	Q3	Q4	Q5	All	Q1	Q2	Q3	Q4	Q5
AT	21.1	22.2	25.2	21.0	20.4	16.6	4.5	2.2	4.9	4.9	5.0	5.2
	(0.5)	(1.5)	(1.4)	(1.0)	(1.3)	(1.1)	(0.1)	(0.1)	(0.3)	(0.2)	(0.3)	(0.3)
BE	15.8	23.7	17.9	16.7	11.5	9.5	1.9	0.3	1.1	2.1	2.2	3.3
	(0.8)	(2.2)	(1.5)	(1.8)	(1.4)	(1.5)	(0.1)	(0.0)	(0.1)	(0.2)	(0.3)	(0.5)
CY	21.1	25.3	25.5	23.3	15.8	12.0	4.8	3.2	4.9	6.7	5.1	3.7
	(1.0)	(2.4)	(2.2)	(1.8)	(2.1)	(1.7)	(0.2)	(0.3)	(0.4)	(0.6)	(0.6)	(0.6)
DE	19.0	24.3	21.6	18.0	13.5	12.8	3.2	3.4	3.0	3.2	3.1	3.7
	(0.5)	(1.5)	(1.1)	(1.0)	(0.8)	(1.3)	(0.1)	(0.2)	(0.1)	(0.2)	(0.2)	(0.4)
EE	19.1	21.8	21.3	19.2	17.5	14.0	4.8	0.6	3.4	5.4	6.3	6.6
	(0.5)	(1.1)	(1.1)	(1.1)	(1.0)	(0.9)	(0.1)	(0.0)	(0.2)	(0.3)	(0.4)	(0.4)
ES	20.4	22.2	23.6	22.5	16.2	13.5	3.2	0.8	3.1	4.3	4.2	5.3
	(0.5)	(1.3)	(1.1)	(1.1)	(0.9)	(1.2)	(0.1)	(0.0)	(0.1)	(0.2)	(0.3)	(0.6)
FI	15.6	10.4	18.5	17.8	16.6	14.7	2.5	0.0	0.0	3.4	3.9	5.4
	(0.3)	(0.7)	(0.6)	(0.5)	(0.5)	(0.5)	(0.1)	(0.0)	(0.0)	(0.1)	(0.1)	(0.2)
FR	16.1	17.4	17.9	15.9	13.7	10.9	0.9	0.0	0.0	1.6	2.3	2.8
	(0.3)	(0.7)	(0.6)	(0.5)	(0.7)	(0.7)	(0.0)	(0.0)	(0.0)	(0.1)	(0.1)	(0.2)
GR	27.7	25.7	27.7	30.6	29.2	25.4	6.6	0.2	4.6	6.3	8.0	12.0
	(1.0)	(2.3)	(2.4)	(1.8)	(2.0)	(1.9)	(0.3)	(0.0)	(0.3)	(0.4)	(0.7)	(0.9)
HR	25.4	24.3	25.0	27.7	25.1	24.4	2.9	0.0	0.0	2.0	2.9	7.0
	(1.1)	(3.2)	(2.1)	(2.5)	(2.3)	(2.2)	(0.2)	(0.0)	(0.0)	(0.2)	(0.3)	(0.5)
HU	23.0	21.1	24.5	24.0	23.7	21.3	5.9	0.0	5.2	7.2	9.4	6.2
	(0.5)	(1.2)	(1.1)	(1.1)	(1.3)	(1.0)	(0.2)	(0.0)	(0.3)	(0.3)	(0.4)	(0.3)
IE	19.2	22.3	25.0	21.1	14.4	11.5	3.4	1.4	2.1	3.5	4.6	5.1
	(0.5)	(1.3)	(1.1)	(1.9)	(1.0)	(0.6)	(0.1)	(0.1)	(0.1)	(0.2)	(0.3)	(0.3)
IT	22.7	26.8	24.7	22.7	22.1	17.4	5.4	3.4	5.1	5.4	6.1	6.8
	(0.5)	(1.4)	(1.2)	(1.0)	(0.9)	(1.1)	(0.1)	(0.2)	(0.3)	(0.2)	(0.3)	(0.4)

(continued)

TABLE 1
(CONTINUED)

Country	(A) Earnings						(B) Disposable Income					
	All	Q1	Q2	Q3	Q4	Q5	All	Q1	Q2	Q3	Q4	Q5
LT	18.3	17.9	17.0	20.6	17.2	19.1	2.0	0.0	0.0	1.2	1.2	6.9
	(1.0)	(2.2)	(2.3)	(2.2)	(2.2)	(2.8)	(0.2)	(0.0)	(0.0)	(0.2)	(0.1)	(0.7)
LU	19.7	29.8	23.5	15.6	11.3	8.4	1.3	0.2	1.9	1.3	1.6	2.1
	(0.7)	(1.9)	(1.5)	(1.6)	(1.4)	(1.1)	(0.1)	(0.0)	(0.1)	(0.1)	(0.2)	(0.3)
LV	17.8	16.2	24.2	14.6	17.9	13.0	1.8	0.7	1.8	1.1	2.5	4.6
	(1.1)	(2.1)	(2.6)	(1.8)	(1.6)	(1.7)	(0.1)	(0.1)	(0.2)	(0.1)	(0.3)	(0.6)
NL	15.3	16.7	16.4	16.7	13.4	12.6	7.8	4.4	6.1	10.9	7.1	10.1
	(0.7)	(1.9)	(1.7)	(1.7)	(1.4)	(1.3)	(0.3)	(0.6)	(0.5)	(1.0)	(0.6)	(1.0)
PL	20.2	20.9	20.8	21.9	20.7	16.8	3.7	1.2	1.6	2.3	5.3	6.3
	(0.4)	(1.2)	(1.2)	(0.9)	(0.8)	(0.6)	(0.1)	(0.1)	(0.1)	(0.1)	(0.2)	(0.2)
PT	20.8	22.8	24.6	22.3	18.1	11.9	4.4	3.4	4.4	4.7	4.9	4.7
	(0.5)	(1.3)	(1.1)	(1.0)	(1.1)	(1.1)	(0.1)	(0.2)	(0.2)	(0.2)	(0.3)	(0.4)
SI	19.1	22.0	22.0	19.1	17.0	14.9	2.7	0.0	1.4	3.1	3.8	3.9
	(0.6)	(1.7)	(1.2)	(1.2)	(1.2)	(1.2)	(0.1)	(0.0)	(0.1)	(0.2)	(0.2)	(0.2)
SK	18.5	21.1	20.0	17.8	18.1	16.5	2.7	2.1	0.5	2.8	3.1	3.6
	(0.6)	(1.9)	(1.7)	(1.4)	(1.3)	(1.4)	(0.1)	(0.2)	(0.0)	(0.2)	(0.2)	(0.3)
Euro Area	19.8	21.7	22.2	20.4	17.8	15.1	3.6	1.3	2.6	4.0	4.4	5.5

Notes: Bootstrap standard errors are in parentheses. Quintiles are calculated on the pre-COVID distribution of household earnings and disposable income respectively.

Source: Authors' calculations based on third wave HFCS data.

rate across quintiles of the pre-COVID household earnings distribution, the lowest relative earnings losses are mostly experienced by households in the top quintile. The unevenness that relative earnings losses have at different points of the distribution is exacerbated by the fact that lower income households were the ones that could reduce their consumption the least during restrictions, as found by Carvalho *et al.* (2020) analyzing high-frequency data on card spending in Spain combined with postal code information.

The impacts on the share of households with low earnings and on household-level earnings inequality are also of interest. To assess these, we first derive a low earnings threshold set at 60 percent of the median equivalized[12] pre-COVID household earnings for each country and assess the share of individuals living in a household falling below this threshold in different scenarios keeping the threshold fixed. This is analogous to, but to be clearly distinguished from, conventional household poverty measures based on 60 percent of median equivalized disposable income (discussed in Section 2.3) or individual low pay measures employing two-thirds of median earnings as threshold. Table 2 Panel A shows that for the pre-COVID household earnings distribution, on average across the countries covered 25 percent had gross earnings below 60 percent of the median in their country. This is lowest in Austria at 21 percent and highest in Ireland at 30 percent. When the potential earnings losses are taken into account the cross-country average rises by 13.3 percent points, with that increase being lowest in France (9.3 percent points) and highest in Greece (21 percent points). We often find higher increases in Southern and Eastern European countries than in Nordic and Central European countries.

The potential impact on household earnings inequality is assessed via the Gini coefficient and is shown in Table 3. On average across the Euro Area the Gini coefficient (multiplied by 100 for ease of presentation) of pre-COVID household earnings was equal to 38.5. It increases to 42.4 after potential earnings losses are taken into account. The pre-COVID household earnings distribution is most compressed in Austria, the Netherlands and Slovak Republic and least so in Germany, Ireland and Portugal. This remains the case when potential earnings losses are accounted for. The increase in earnings inequality is particularly large in Cyprus and Luxembourg and relatively modest in Finland and Lithuania.

As in Palomino *et al.* (2020) the LWA index and earnings losses are also calculated here at the individual level in the first instance, and a comparison between the potential impact at individual and household levels allows the cushioning role of other earnings in the household to be studied. The results for the individual level are presented in the Appendix and can be compared to those of Tables 1–3. In general, we find that average potential earnings losses are higher at the individual level, but the pattern of smaller losses at the top of the earnings distribution consists at both levels. The increases in the share of households with low earnings and in the earnings Gini are also larger at the individual level, reflecting the buffering impact of the presence of other earnings. Since our individual level results are consistent with those of Palomino *et al.* (2020) we can conclude that the HFCS data on incomes

[12]We use the OECD modified equivalence scale in which the first adult receives a score of 1, each additional adult a score of 0.5 and each child up to 13 years old a score of 0.3.

TABLE 2
SHARE OF HOUSEHOLDS BELOW LOW-EARNINGS/POVERTY THRESHOLD

	(A) Low Earnings			(B) Income Poverty		
Country	Baseline	After Potential Losses	Δ	Baseline	After Potential Losses	Δ
AT	20.9	37.7	16.8	8.5	9.2	0.7
	(1.2)	(1.2)		(0.8)	(0.8)	
BE	23.8	34.6	10.8	8.6	8.6	0.0
	(1.8)	(2.0)		(1.4)	(1.4)	
CY	21.8	38.5	16.7	11.3	12.5	1.2
	(2.0)	(2.4)		(1.7)	(1.7)	
DE	27.5	37.7	10.2	15.7	17.0	1.4
	(1.2)	(1.4)		(1.1)	(1.2)	
EE	27.6	38.7	11.2	14.1	15.3	1.2
	(1.2)	(1.4)		(1.0)	(1.0)	
ES	27.2	41.0	13.8	20.4	20.6	0.2
	(1.2)	(1.2)		(1.1)	(1.1)	
FI	27.8	37.5	9.6	7.5	7.5	0.0
	(0.5)	(0.6)		(0.3)	(0.3)	
FR	27.0	36.2	9.3	13.0	13.0	0.0
	(0.8)	(0.9)		(0.6)	(0.6)	
GR	24.3	45.6	21.2	18.0	20.3	2.2
	(1.7)	(2.2)		(1.7)	(1.7)	
HR	24.1	40.5	16.4	14.6	14.6	0.0
	(1.9)	(2.3)		(1.6)	(1.6)	
HU	28.6	42.6	14.0	15.4	16.3	0.9
	(1.1)	(1.1)		(0.9)	(1.1)	
IE	29.8	41.6	11.8	11.9	12.6	0.7
	(1.3)	(1.4)		(0.8)	(0.9)	
IT	25.1	39.5	14.4	21.2	23.7	2.5
	(1.1)	(1.3)		(1.0)	(1.1)	
LT	22.3	34.6	12.3	13.5	13.5	0.0
	(2.0)	(2.1)		(1.9)	(1.9)	
LU	27.3	40.7	13.4	20.6	20.7	0.1
	(1.7)	(1.7)		(1.5)	(1.6)	
LV	26.9	40.5	13.6	17.1	17.6	0.6
	(2.3)	(2.4)		(2.0)	(2.1)	
NL	24.7	35.5	10.8	14.4	16.9	2.6
	(1.5)	(1.8)		(1.3)	(1.5)	
PL	23.8	36.5	12.7	12.2	12.8	0.6
	(1.0)	(1.1)		(0.9)	(0.9)	
PT	24.8	39.0	14.2	12.1	13.2	1.1
	(1.1)	(1.3)		(1.0)	(1.0)	
SI	22.2	35.8	13.6	11.1	11.1	0.0
	(1.4)	(1.8)		(1.1)	(1.1)	
SK	21.2	33.3	12.1	9.1	9.8	0.7
	(1.7)	(2.1)		(1.3)	(1.3)	
Euro Area	25.2	38.5	13.3	13.8	14.6	0.8

Note: Bootstrap standard errors are in parentheses.
Source: Authors' calculations based on third wave HFCS data.

TABLE 3
GINI INDEX, PRE-COVID AND AFTER POTENTIAL EARNINGS/INCOME LOSSES

	(A) Earnings			(B) Disposable Income		
Country	Baseline	After Potential Losses	Δ	Baseline	After Potential Losses	Δ
AT	33.4	38.3	4.9	24.6	24.6	0.0
	(1.5)	(1.6)		(1.1)	(1.2)	
BE	34.5	38.1	3.6	25.1	24.6	−0.5
	(1.3)	(1.4)		(1.0)	(1.0)	
CY	34.6	40.5	5.9	30.3	30.7	0.4
	(1.2)	(1.2)		(1.2)	(1.3)	
DE	42.7	46.4	3.7	32.0	32.0	−0.1
	(1.0)	(1.0)		(0.7)	(0.7)	
EE	37.8	41.4	3.6	31.1	30.7	−0.4
	(0.7)	(0.7)		(0.6)	(0.6)	
ES	42.6	46.8	4.2	36.4	35.9	−0.5
	(1.0)	(1.0)		(1.0)	(1.0)	
FI	38.7	41.1	2.4	24.0	23.0	−1.0
	(0.4)	(0.4)		(0.2)	(0.2)	
FR	37.8	41.1	3.3	27.6	27.0	−0.6
	(0.5)	(0.5)		(0.4)	(0.4)	
GR	35.0	39.5	4.5	30.0	28.2	−1.7
	(1.0)	(0.8)		(0.9)	(0.8)	
HR	40.3	43.6	3.4	32.5	31.2	−1.3
	(2.0)	(1.7)		(1.6)	(1.5)	
HU	39.1	42.7	3.6	32.6	32.6	−0.1
	(0.7)	(0.7)		(0.7)	(0.7)	
IE	44.1	48.3	4.1	30.7	30.2	−0.5
	(1.4)	(1.3)		(1.0)	(0.9)	
IT	40.8	45.4	4.6	34.7	34.5	−0.1
	(0.9)	(1.0)		(0.7)	(0.7)	
LT	39.1	41.8	2.7	36.3	35.1	−1.2
	(1.5)	(1.7)		(1.3)	(1.4)	
LU	40.0	45.6	5.6	32.7	32.5	−0.2
	(1.0)	(1.0)		(1.0)	(1.0)	
LV	41.6	45.3	3.7	33.9	33.4	−0.5
	(1.3)	(1.4)		(1.0)	(1.1)	
NL	33.3	36.7	3.4	27.4	28.0	0.6
	(0.7)	(0.8)		(1.0)	(1.0)	
PL	37.5	41.1	3.6	28.9	28.2	−0.7
	(0.8)	(0.9)		(0.7)	(0.8)	
PT	43.5	47.7	4.2	33.5	33.4	−0.1
	(1.6)	(1.3)		(1.0)	(1.0)	
SI	37.7	41.3	3.7	27.9	27.6	−0.4
	(1.1)	(1.2)		(0.9)	(0.9)	
SK	34.0	37.1	3.1	27.8	27.6	−0.2
	(1.1)	(1.2)		(2.1)	(2.1)	
Euro Area	38.5	42.4	3.9	30.5	30.0	−0.4

Note: Bootstrap standard errors are in parentheses.
Source: Authors' calculations based on third wave HFCS data.

and employment characteristics are highly similar to those of EU-SILC and hence that our results are reliable.

2.3. *From Earnings to Income Losses*

The analysis so far focused on the immediate impact of the COVID-19 labor supply shock. As already mentioned in the introduction taking into account the mitigating impact of the tax-benefit system is crucial in understanding to which extent households have experienced losses in living standards in practice. Fiscal measures taken during the crisis have been labelled unprecedented. Among the countries included in this article additional spending and forgone revenues range from 4.2 percent of GDP in Luxembourg to 21.1 percent in Greece (IMF, 2021). Hence, in order to assess to which extent households have been forced to rely on their savings and assets to buffer the impact of the crisis as we will do in Section 3, it is relevant to account for these measures. Given the absence of real time data on households' incomes now-casting techniques have been used to estimate the mitigating effect of state responses. Since such simulation exercises are a cumbersome analysis in and of themselves, especially for the range of countries included here, we rely on estimations of previous studies to approximate the impact of the crisis on households' disposable incomes.

Since the HFCS only includes gross incomes we first derive pre-COVID disposable incomes by running a regression on the 2017 EU-SILC for each country with disposable income as dependent variable and gross income as well as information on household composition and the activity states of the household members as independent variables. The coefficients of these regressions are then applied to the HFCS gross incomes to simulate disposable ones. This approach is in line with the literature on estimating parametric tax functions (see e.g. Guner *et al.*, 2014 for the US and García-Miralles *et al.*, 2019 for Spain) and is reasonable in this case since the distributions of gross incomes are very similar between both datasets, as noted earlier and demonstrated in the Appendix (Figure A.2), and this is also true when we compare disposable income observed in EU-SILC with those simulated for HFCS (Figure A.3). While not all the variation across households in direct taxes paid will be captured, the regression coefficients incorporate the effect of the characteristics which typically matter most in tax calculations, i.e. the level of income, household composition (number of adults, number of kids) and the activity status of adult members.

We then impute the losses in disposable income due to COVID-19 from the literature. As mentioned before, there are two EU-wide studies currently available, namely Almeida *et al.* (2021) and Christl *et al.* (2021). We rely on the latter as it is closest to our estimation approach[13] and includes figures by quintiles for each

[13]The approach by Almeida *et al.* (2021) differs from ours because it starts from macro-economic forecasts to create counterfactual scenarios and it applies reweighting techniques to survey data which assumes that workers affected by the crisis have similar characteristics as those observed as unemployed in the pre-COVID data. The LWA index instead takes a micro approach by considering the characteristics of each workers' job to estimate the extent of essentiality and closure and the possibilities for remote work.

country. In particular, we take the ratio between the average loss rates in market and disposable incomes by quintiles from Table 2 in Christl *et al.* (2021) and apply that ratio to the losses estimated by the LWA index.[14] Since the extent to which policies buffer the COVID-19 impact mainly differ by country and earnings level, this imputation takes into account most of the heterogeneity in the policy impact.

Panels B in Tables 1–3 show the results for the average loss rate in terms of disposable income (i.e. the result of the imputation), and the related impact on poverty and inequality. First, Table 1 shows that the Euro Area average loss rate is equal to 3.6 percent, which is considerably lower than the near 20 percent loss in terms of household earnings.[15] Loss rates are lowest in France and Luxembourg at around 1 percent, while they are highest in the Netherlands (7.8 percent) and Greece (6.6 percent). In contrast to the pattern for household earnings, loss rates generally increase with income. Hence, households on low incomes have generally been better protected by the tax-benefit system than households higher up the income distribution, at least in relative terms. This contrasting pattern across the distribution of earnings compared to that of disposable income is in line with the literature.

The poverty headcount presented in Table 2 indicates that on average across the Euro Area about 13.8 percent are considered income poor before the crisis,[16] which increases by 0.8 percent points after the potential earnings losses and the mitigating impact of policies is taken into account. There is no increase in poverty headcount in six countries (Belgium, Finland, France, Croatia, Lithuania and Slovenia), while increases by more than 2 percent points are estimated for Greece, Italy and the Netherlands.

Table 3 shows that the Gini coefficient of pre-COVID disposable income is equal to 30.5 on average across the Euro Area, which decreases by 0.4 percent points. Since Table 1 showed that potential losses after state responses increase with income, we find that inequality generally decreases. This decrease is largest in Greece at 1.7 percent points. There are only two countries for which we find an increase in the Gini coefficient, namely Cyprus and the Netherlands.

Our results in terms of loss rates and impact on poverty and inequality are somewhat higher than those estimated by the literature using nowcasting techniques (see references mentioned in the introduction). This is because the latter take into account aggregate administrative data on furloughs and/or receipt of supporting benefits to impute losses, while we rely solely on individual level information of each worker's job characteristics and laws on which jobs were considered essential

[14]In the application of the ratio we considered two approaches, one where all observations are assigned the quintile average and one where five random groups are created where each is assigned 25 percent of the average/50 percent of the average/the average/150 percent of the average/175 percent of the average. Both approaches largely lead to the same results. Only results for the average imputation are reported in the paper, the other results are available from the authors upon request.

[15]Our loss rates in terms of disposable income are higher as those of Christl *et al.* (2021) because we already start from higher loss rates in terms of market incomes. Christl et al. mostly cover the first 3 quarters of 2020, but the policy impact over 2020 as a whole, in terms of the difference between market and disposable income, is likely to have been similar as most countries kept policies in place throughout the year.

[16]Remember that this figure only includes individuals living in a household with at least one worker. Poverty rates for the total population are typically higher.

or were put under obligatory lockdown. Our estimated impacts also appear somewhat higher than those reflected in the Labour Force Survey results now available for 2020, as discussed in detail in the Appendix. Crucially, however, the patterns within and across countries are very similar. As discussed in more depth below a key benefit of our approach is that it allows an early analysis of household financial vulnerability when up-to-date administrative or survey data is not yet available. It also provides a comparable framework in which the vulnerability of workers to earnings losses is homogenously measured under the same pandemic and restrictions scenario, and so is the cushioning role of savings that we analyze in the next section. Therefore, this analysis should prove very useful in potential future crises in which economic activity might be restricted, as it derives its estimates from the earnings distribution, labor market and household finance structures of the different countries.

3. Savings and Assets as Buffers for Potential Earnings/Income Losses

The benefits of owning savings and assets are manifold as wealth fulfils several functions. First, certain wealth components add to consumption possibilities by generating capital income, which is an interesting source of income as compared to labor income it hardly entails sacrificing leisure time (McDonnell, 2013). Other components such as real estate, vehicles and valuables also have use value (Killewald *et al.*, 2017; Fessler and Schürz, 2018). Second, wealth provides collateral to borrow against (Azpitarte, 2012). Furthermore, the value of the wealth components themselves can also be used to support consumption. In that way wealth provides financial stability in the short term in the form of precautionary savings (e.g. Leland, 1968; Hubbard *et al.*, 1994) and in the long term to smooth consumption over the life cycle (e.g. Ando and Modigliani, 1963; Shefrin and Thaler, 1988). Moreover, wealth also contributes to living standards above and beyond its effect on (potential) consumption. Indeed, wealth accumulation has been considered part of personal economic and social development as it opens up a wider range of free choice, implies independence and increases future prospects (Sherraden, 1991; McKernan *et al.*, 2012). High amounts of wealth also guarantee a social status (Keister, 2000; Spilerman, 2000) and potentially even political power to its owner(s) (Killewald *et al.*, 2017). Finally, all these functions can also be transmitted across generations through inheritances and inter vivos gifts. As a consequence wealth increases both objective and subjective well-being, independently from income (Headey *et al.*, 2008; Hochman and Skopek, 2013; D'Ambrosio *et al.*, 2020).

As discussed by Fessler and Schürz (2018) the higher wealth, the more functions potentially become available, with some functions acting as substitutes, while others are complimentary. Yet, the provision of financial stability in the short run—also known as the buffer function of wealth (Rodems and Pfeffer, 2021)—is considered the most basic function of wealth, which already applies to a low amount. Households save for precautionary reasons mainly to face unexpected consumption shocks such as house or car repairs and to bridge drops in income due for instance to unemployment, sickness or divorce.

In the case of the COVID-19 crisis there has been a collective income shock. Since the impact has been at such a widespread scale, it has put a firm spotlight on the role of savings and wealth to buffer the shock as for instance also noted by the OECD WISE (2021). What is different from other crises, however, is that there has also been a collective consumption shock in the opposite direction, as the closure of leisure sectors implied fewer consumption possibilities and hence higher savings. Combined with large asset price increases, particularly for real estate and publicly traded shares, overall levels of wealth increased substantially over the crisis period. Estimates by Shorrocks *et al.* (2021) suggest that total wealth in Europe increased by 4.5 percent from 2019 to 2020, with asset price appreciation likely the most important driver. It is, however, very likely that this increase in wealth is not evenly distributed, with mainly the wealthiest benefiting, while those with little or no wealth being forced to run down their assets and/or to increase borrowing to make ends meet (OECD WISE, 2021). Real time data on the distribution of wealth currently do not yet exist, and typically take even longer to become available than income data.

The main contribution of this article is therefore to propose a methodology to assess the financial resilience of European households early on in the crisis by combining an imputation of the crisis' impact on household earnings with the amounts of liquid assets and net wealth owned by those households at the onset of the crisis. Applying such methodology in future crises is likely to be highly informative to policy makers to decide upon discretionary policy measures. Yet, even now that the peak of the crisis lies behind us and discretionary policies are slowly being phased out, such analysis still provides interesting insights into the well-being of European households as long as real time data are not available.

In what follows, we combine the results from Section 2 with information on the levels of liquid assets in first instance and of total net wealth in second instance to assess to which extent European households affected by the labor supply shock were able to buffer their losses. We provide results both for the losses in terms of earnings as in terms of disposable income. While the latter is most informative of looking back at the whole period and how households have overcome it, the first provides an example of how the methodology could be applied early on in potential future crises to assess households' vulnerability and to determine which policy actions are required. Moreover, the perspective on the buffer in terms of earnings is also appropriate when discretionary policies take time to kick in and for some specific groups which are not or hardly protected by public social provisions.

We start by analyzing to which extent households have the capacity to buffer their losses through their liquid assets.[17] To facilitate the interpretation of cross-country variation in the level of buffering, we first look at the median levels of liquid assets held across countries and how this relates to both the level of earnings and total wealth. Differences across countries in the level of wealth

[17]The measure of net liquid assets employed in HFCS comprises the value of sight and savings deposits, mutual funds, bonds, non-self-employment private businesses, publicly traded shares and managed accounts minus the outstanding value of credit card debt and other non-mortgage debt (HFCN, 2020).

relative to average earnings or income, and in the composition of that wealth in terms of financial versus real assets, arise for a wide range of reasons that are not particularly well-understood, though the relevant literature has pointed to the importance of demographic profiles, social protection systems and pension levels and coverage, and the level of homeownership (see for example Mathä *et al.*, 2017; Pfeffer and Waitkus, 2021).

Table 4 shows that median liquid assets are equal to about a third of median household earnings in the Netherlands and Austria, while median liquid assets are zero in Croatia and Latvia. The first two countries, however, reflect a situation in which median total net wealth is relatively modest in cross-country comparison, but where households tend to invest a relatively high share of their wealth in liquid assets (around a quarter).

Table 5 presents the average share of potential earnings/income losses that could be buffered by the liquid assets held by households in each country, overall and by the respective quintiles. We see that across the Euro Area as a whole, by drawing on these assets households could cushion just below 50 percent of their potential earnings losses and 65 percent of the losses remaining after state responses. Again, these averages mask very substantial differences across countries. The average capacity to buffer earnings losses with liquid assets—also presented in Panel A

TABLE 4
MEDIAN ASSETS VERSUS EARNINGS

Country	Median Household Earnings (€)	Median Liquid Assets (€)	Ratio Median Liquid Assets/Median Household Earnings	Median Net Wealth (€)	Median Share of Net Wealth Owned in Liquid Assets (%)
AT	44,200	13,000	0.29	82,700	22.5
BE	50,700	12,300	0.24	212,500	14.4
CY	26,600	400	0.02	195,900	0.5
DE	41,700	7,000	0.17	70,800	18.3
EE	20,700	1,400	0.07	47,700	5.5
ES	25,000	4,700	0.19	119,100	3.9
FI	39,000	4,000	0.10	107,200	12.8
FR	30,000	5,300	0.18	117,600	8.3
GR	18,800	500	0.03	60,000	1.7
HR	11,600	0	0	61,500	0.0
HU	12,500	300	0.02	35,900	1.4
IE	49,700	3,000	0.06	185,000	2.8
IT	26,000	5,000	0.19	132,300	6.5
LT	9,100	400	0.04	45,900	1.0
LU	67,000	16,400	0.24	498,500	6.3
LV	10,900	0	0	20,500	0.6
NL	45,500	14,700	0.32	67,400	27.8
PL	14,200	1,500	0.11	60,500	3.6
PT	19,000	2,500	0.13	74,800	6.6
SI	23,300	500	0.02	91,600	1.1
SK	16,600	1,400	0.08	70,300	2.6
Euro Area	28,900	4,500	0.16	99,400	8.9

Source: Authors' calculations based on third wave HFCS data.

TABLE 5
AVERAGE SHARE OF POTENTIAL EARNINGS/INCOME LOSSES BUFFERED BY LIQUID ASSETS

	(A) Earnings						(B) Disposable Income					
Country	All	Q1	Q2	Q3	Q4	Q5	All	Q1	Q2	Q3	Q4	Q5
AT	72.6	65.7	65.9	71.6	76.8	82.5	85.1	79.3	77.7	83.1	91.2	91.2
	(1.2)	(3.9)	(3.1)	(3.1)	(2.5)	(2.2)	(1.2)	(3.3)	(3.1)	(3.0)	(2.0)	(1.6)
BE	66.4	45.7	51.9	66.7	78.1	86.5	80.2	78.8	61.4	76.9	87.5	90.6
	(2.1)	(5.8)	(5.4)	(4.7)	(4.0)	(3.7)	(2.0)	(5.6)	(6.1)	(4.3)	(3.0)	(3.4)
CY	38.8	25.0	33.1	35.8	49.3	56.3	45.8	26.5	41.8	42.1	57.9	63.1
	(2.3)	(5.0)	(5.2)	(5.0)	(5.8)	(5.9)	(2.5)	(6.9)	(5.6)	(5.5)	(5.3)	(5.3)
DE	55.5	37.0	47.5	61.0	66.4	79.0	68.0	47.1	67.1	73.5	80.7	89.2
	(1.3)	(3.1)	(2.8)	(2.9)	(2.8)	(3.0)	(1.4)	(3.4)	(2.8)	(2.6)	(3.0)	(2.6)
EE	46.4	42.0	39.0	42.8	51.3	61.0	57.9	57.3	48.2	53.2	61.7	70.7
	(1.3)	(3.3)	(3.0)	(2.9)	(3.1)	(2.9)	(1.3)	(4.8)	(3.4)	(3.1)	(2.8)	(2.7)
ES	51.3	37.9	42.1	47.0	64.6	73.5	64.5	51.4	59.7	66.8	76.6	81.0
	(1.4)	(3.0)	(3.4)	(2.8)	(3.0)	(3.3)	(1.4)	(3.3)	(2.8)	(2.8)	(2.9)	(3.6)
FI	46.7	41.6	38.8	43.2	49.1	59.0	62.0	n.a.	n.a.	56.3	62.1	69.1
	(0.8)	(2.9)	(1.7)	(1.6)	(1.6)	(1.6)	(1.0)			(1.7)	(1.6)	(1.6)
FR	58.2	45.4	50.7	60.9	71.6	81.4	79.4	n.a.	n.a.	75.6	83.5	86.6
	(0.9)	(2.0)	(1.8)	(1.7)	(1.9)	(1.6)	(1.1)			(1.6)	(1.4)	(2.6)
GR	31.2	22.7	28.1	26.6	30.4	43.6	53.0	53.7	48.9	49.0	54.2	58.0
	(2.1)	(5.7)	(4.3)	(5.2)	(4.2)	(4.2)	(2.3)	(6.0)	(4.4)	(6.0)	(4.1)	(3.8)
HR	22.2	23.5	17.3	18.0	24.2	27.9	38.5	n.a.	n.a.	33.5	34.8	45.9
	(2.2)	(6.8)	(3.6)	(4.8)	(5.2)	(4.8)	(3.1)			(6.2)	(5.3)	(4.9)
HU	42.5	45.4	35.7	38.1	43.5	51.3	54.4	n.a.	45.7	49.7	55.3	66.3
	(1.2)	(3.0)	(2.7)	(2.5)	(2.7)	(2.9)	(1.3)		(3.7)	(3.0)	(3.0)	(2.6)
IE	43.7	34.0	39.4	40.8	40.8	65.6	59.5	60.4	51.7	54.3	59.0	74.9
	(1.9)	(3.8)	(4.5)	(2.6)	(2.5)	(3.1)	(1.7)	(4.8)	(3.9)	(3.2)	(2.8)	(3.0)
IT	58.7	39.3	54.9	60.5	64.0	70.6	73.8	52.4	70.0	78.5	78.6	84.7
	(1.2)	(2.8)	(2.7)	(2.9)	(2.4)	(2.2)	(1.2)	(3.4)	(2.9)	(2.4)	(2.5)	(1.7)

(continued)

TABLE 5
(CONTINUED)

Country	(A) Earnings						(B) Disposable Income					
	All	Q1	Q2	Q3	Q4	Q5	All	Q1	Q2	Q3	Q4	Q5
LT	43.1	49.4	43.5	38.1	45.9	38.3	69.6	n.a.	n.a.	71.9	79.2	57.0
	(2.5)	(7.8)	(6.1)	(5.6)	(7.3)	(5.1)	(2.9)			(6.0)	(4.7)	(6.2)
LU	59.9	46.9	43.5	62.6	82.8	86.4	74.6	62.2	67.0	79.0	91.6	86.6
	(1.8)	(4.6)	(3.9)	(5.4)	(3.0)	(3.4	(1.9)	(4.7)	(4.4)	(4.1)	(2.2)	(3.5)
LV	22.3	20.0	19.9	14.8	28.4	39.7	41.8	45.1	32.9	38.7	50.3	53.9
	(1.9)	(4.2)	(4.1)	(3.5)	(3.9)	(4.9)	(2.7)	(7.6)	(5.2)	(5.1)	(4.9)	(5.3)
NL	74.3	62.1	67.4	76.8	80.9	83.4	81.4	69.2	78.1	83.6	86.2	86.2
	(1.6)	(4.8)	(4.0)	(3.4)	(3.1)	(2.7)	(1.5)	(6.0)	(3.5)	(3.1)	(2.5)	(2.6)
PL	58.9	54.4	57.0	54.1	57.5	69.2	75.5	70.1	72.3	74.8	73.9	81.5
	(1.1)	(3.2)	(2.6)	(3.1)	(2.4)	(1.9)	(1.1)	(3.8)	(3.5)	(2.9)	(2.3)	(1.6)
PT	55.0	48.3	43.5	53.7	61.3	79.3	69.9	62.9	62.0	68.2	75.6	85.9
	(1.4)	(3.1)	(3.0)	(2.8)	(2.9)	(2.8)	(1.5)	(3.8)	(3.5)	(2.9)	(2.5)	(2.6)
SI	37.7	33.0	29.1	32.2	44.8	49.9	58.3	n.a.	56.0	50.2	58.8	66.8
	(1.5)	(3.3)	(2.6)	(3.3)	(3.7)	(3.2)	(1.7)		(3.8)	(3.8)	(3.6)	(3.5)
SK	52.5	49.3	46.1	51.2	52.2	60.9	72.7	68.7	68.1	66.8	74.2	79.4
	(2.2)	(5.3)	(5.1)	(4.4)	(4.9)	(4.8)	(2.2)	(5.4)	(5.2)	(5.3)	(4.3)	(4.4)
Euro Area	49.4	41.4	42.6	47.5	55.4	64.1	65.0	59.0	59.3	63.1	70.1	74.7

Notes: Bootstrap standard errors are in parentheses. Quintiles are calculated on the pre-COVID distribution of household earnings and disposable income respectively.

Source: Authors' calculations based on third wave HFCS data.

of Figure 1—ranges from only 22 percent in Croatia and Latvia up to 73–74 percent in Austria and the Netherlands. In 10 out of the 21 countries the average buffer across all households is less than 50 percent. When the mitigating impact of policies is taken into account (see Panel B of Figure 1) households in Austria and the Netherlands are still most able to cover the losses by drawing on their liquid assets, closely followed by Belgium and France. Buffers are still too low to cover even half of the losses in three countries: Cyprus, Croatia and Latvia.

Table 5 also shows how this capacity to buffer varies within the national pre-COVID household earnings respectively disposable income distributions. In almost all countries (Lithuania being the exception) households in the top quintile are able to buffer a higher share of their potential losses than those lower down the distribution, both in terms of earnings as disposable income. The impact on household balances at different points of the earnings/income distribution was quite uneven, especially since consumption for lower income households did not decrease as much as for higher income earners, who spend a greater share of their income on sumptuary expenses that were shut down or restricted during the pandemic, such as restaurants and travel (Carvalho *et al.*, 2020).

The extent of variation across the bottom four quintiles is generally limited, however; in very broad terms, the capacity to buffer potential losses varies in a fashion that is quite similar to those losses. With those loses being roughly similar proportions of earnings/income in the quintile on average, this reflects the fact that liquid assets increase in line with the underlying level of earnings/income on average as one moves up the quintiles. It is also notable that in countries such as Croatia, Greece, Latvia and Lithuania, the average buffer is lower than 50 percent even in the top quintile without taking into account policy reactions and still below 60 percent when policies are considered. Hence, in terms of liquid assets—the component of net wealth on which households will be able to draw most readily—a very substantial number of households in European countries would not be able to cushion most or all of the potential losses resulting from the COVID-19 induced labor market shock, even after we also consider the mitigating impact of state policies.

Considering Table 1 and 5 it is clear that there is a quite large difference in average loss rates depending on whether the policy effect is taken into account, while the results for the average liquid assets buffer differ to a much smaller extent between the two perspectives. Hence, this implies that those households with an insufficient liquid assets buffer generally have a very small buffer which is not even sufficient to cover the relatively small losses that remain after state support. In fact, since we use the concept of *net* liquid assets in our analysis, a non-negligible share even owns a negative amount of liquid assets. If we would consider the concept of *gross* liquid assets than the average buffer slightly increases, 57.6 percent in terms of earnings and 78.6 percent in terms of disposable income (see Table A.5 in the Appendix).

Alongside the share of potential losses that could be buffered by liquid assets, it is also relevant to see what proportion of individuals is in a household that would fully exhaust those assets in doing so. Table 6 and Figure 1 show that without taking account of the policy effect, this share ranges from as low as 24.5 percent in the Netherlands up to almost 70 percent in Croatia. As expected, when the policy effect is taken into account these shares drop significantly, but still a substantial share needs to draw on all their available liquid assets to buffer their potential losses.

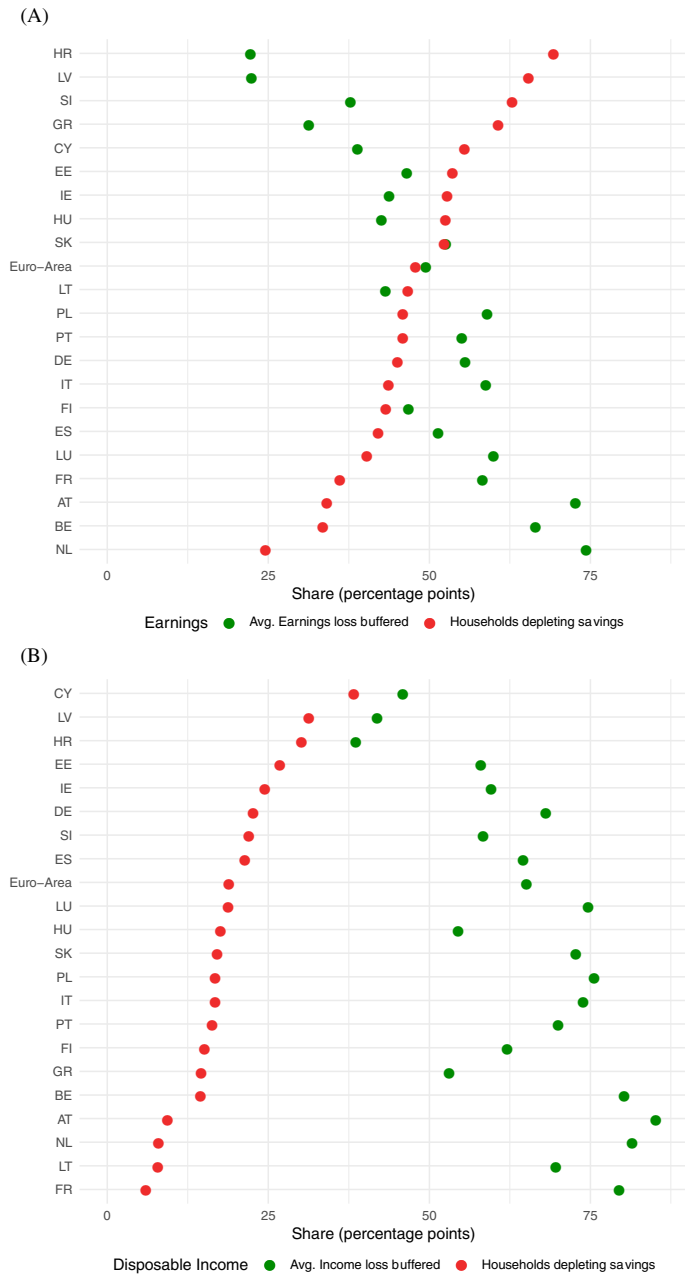

Figure 1. Average Share of Earnings/Income Losses Buffered by Liquid Assets and Share Depleting Liquid Assets. (A) Earnings. (B) Disposable Income.
Source: Authors' Calculations Based on Third Wave HFCS Data. [Colour figure can be viewed at wileyonlinelibrary.com].

On average across the Euro Area this is almost 20 percent, varying from 6 percent in France and 8 percent in the Netherlands and Lithuania to more than 30 percent in Cyprus, Croatia and Latvia. Once again the top quintile is generally distinctive with a lower proportion fully running down their liquid assets than lower down the distribution (Table 6).

The question now remains who are those households which are fully running down their assets? Table 7 provides some insights into that respect (only the perspective in terms of disposable income is included here). In particular, it presents the distribution of some socio-demographic characteristics (age, gender, education, household type and tenure status) of the individuals living in such a household ("Depleting"). To get a clear picture of potential over- or underrepresentation of certain groups we always compare with the distribution of these characteristics for the full sample considered ("Baseline"), i.e. of all individuals which are part of a household in which there is at least one employee or self-employed person. Since the depleting of liquid assets could both be due to experiencing relatively high potential losses as having few liquid assets, we also compare with the distribution of characteristics of all individuals which are part of a household with a disposable income loss that is above their country's average ("High loss").

Most noteworthy is the extent to which in almost all countries tenants are overrepresented among those exhausting all their liquid assets to buffer losses. Hence, tenants do not seem to make up the wealth they lack in real estate by owning more liquid assets. Furthermore, in several countries individuals with low education are overrepresented among those completely running down assets, most clearly so in Belgium, Germany, Italy, Luxembourg and Portugal. The same is true for young individuals in Austria, Germany and Lithuania and for couples with kids in Germany, Ireland, Latvia and Slovenia. Since these overrepresentations are generally not found for the households with above-average losses these patterns are mainly the consequence of low liquid asset buffers among those households.

Does accounting for liquid assets significantly reduce the share falling below the low-earnings threshold because of the pandemic? We evaluate this by adapting the low earnings/income poverty and inequality measures presented earlier to include only those potential losses that cannot be covered by the liquid assets available to the household. Table 8 shows that the share with earnings below the threshold would then increase on average across the Euro Area by 8.6 percent points. The corresponding average increase shown in Table 2 when liquid asset buffers were not taken into account was 13.3 percent points, so incorporating the buffers attenuates the impact but it remains substantial. For the analysis in terms of disposable income, the increase in poverty is halved after considering the liquid assets buffer (0.4 versus 0.8 percent points). Relatively large increases in the share of low earnings households are now seen in Cyprus, Greece, Croatia, Latvia and Slovenia while the smallest increases are in the Netherlands, France and Poland. This differs somewhat from the ranking observed before liquid asset buffers are incorporated, as is visualized in Figure 2. There, Austria is the second most vulnerable country in terms of low earnings share increase before liquid assets buffering is considered, but once they are, the increase would be much lower than in many other countries. In terms

TABLE 6
SHARE FOR WHOM BUFFERING POTENTIAL EARNINGS/INCOME LOSSES EXHAUSTS LIQUID ASSETS

	(A) Earnings						(B) Disposable Income					
Country	All	Q1	Q2	Q3	Q4	Q5	All	Q1	Q2	Q3	Q4	Q5
AT	34.0	30.7	43.2	38.2	32.9	24.4	9.3	12.7	13.4	12.6	5.3	4.5
	(1.4)	(3.4)	(3.5)	(4.1)	(3.0)	(2.9)	(1.0)	(2.6)	(2.7)	(2.6)	(1.6)	(1.3)
BE	33.4	51.0	42.8	34.3	23.6	15.5	14.4	16.6	26.4	17.3	9.3	6.3
	(2.0)	(5.4)	(4.9)	(4.6)	(4.1)	(3.6)	(1.6)	(4.4)	(4.9)	(3.4)	(2.4)	(2.5)
CY	55.4	58.5	60.5	65.5	46.2	39.9	38.2	51.4	43.5	36.9	29.9	27.0
	(2.4)	(5.3)	(5.1)	(5.0)	(5.3)	(5.4)	(2.3)	(6.6)	(5.6)	(5.2)	(4.6)	(4.6)
DE	45.0	52.5	54.3	44.3	36.9	24.6	22.6	36.4	24.2	18.1	14.5	6.6
	(1.2)	(3.0)	(2.8)	(3.1)	(2.9)	(2.9)	(1.2)	(3.0)	(2.6)	(2.2)	(2.6)	(2.0)
EE	53.5	51.8	57.5	59.8	52.3	44.0	26.7	28.6	33.6	28.8	24.0	18.1
	(1.3)	(3.1)	(3.1)	(3.0)	(3.2)	(3.0)	(1.2)	(3.9)	(3.0)	(2.7)	(2.4)	(2.2)
ES	42.0	38.9	50.7	49.9	36.6	24.8	21.3	25.0	25.0	21.4	15.8	9.4
	(1.3)	(2.7)	(3.3)	(2.8)	(2.8)	(3.0)	(1.1)	(2.3)	(2.4)	(2.2)	(2.3)	(2.6)
FI	43.2	22.0	50.0	53.1	50.5	41.9	15.0	n.a.	n.a.	28.8	25.1	20.9
	(0.7)	(1.5)	(1.7)	(1.6)	(1.6)	(1.6)	(0.5)			(1.4)	(1.3)	(1.3)
FR	36.0	35.6	42.7	38.9	27.6	18.5	5.9	n.a.	n.a.	17.4	10.3	7.8
	(0.9)	(1.7)	(1.7)	(1.6)	(1.8)	(1.5)	(0.4)			(1.2)	(1.0)	(1.7)
GR	60.6	51.0	60.8	66.2	67.9	57.0	14.5	18.4	18.1	14.8	11.0	11.3
	(1.9)	(4.4)	(4.4)	(4.4)	(4.0)	(3.9)	(1.5)	(3.7)	(3.4)	(4.0)	(3.0)	(2.7)
HR	69.2	48.5	72.2	76.4	73.4	74.3	30.1	n.a.	n.a.	53.0	44.2	30.9
	(2.2)	(6.5)	(4.7)	(4.9)	(5.9)	(4.9)	(2.5)			(6.2)	(5.4)	(4.6)
HU	52.4	38.6	58.0	60.1	56.7	49.1	17.5	n.a.	25.8	23.9	20.9	14.2
	(1.2)	(2.3)	(2.7)	(2.8)	(2.8)	(3.2)	(0.9)		(2.9)	(2.5)	(2.2)	(1.8)
IE	52.7	44.8	58.1	60.6	57.1	39.2	24.4	21.3	32.2	26.8	25.8	13.5
	(1.9)	(3.0)	(4.1)	(3.4)	(2.5)	(3.3)	(1.2)	(2.8)	(3.1)	(3.0)	(2.4)	(2.1)
IT	43.6	52.1	46.8	42.9	40.7	36.2	16.7	32.3	21.2	13.2	11.9	7.4
	(1.2)	(2.8)	(3.1)	(2.6)	(2.4)	(2.6)	(1.0)	(2.8)	(2.4)	(1.9)	(2.1)	(1.2)

(continued)

TABLE 6
(CONTINUED)

	(A) Earnings						(B) Disposable Income					
Country	All	Q1	Q2	Q3	Q4	Q5	All	Q1	Q2	Q3	Q4	Q5
LT	46.6	34.9	43.0	53.0	51.5	54.5	7.8	n.a.	n.a.	14.7	9.2	11.7
	(3.2)	(4.1)	(6.3)	(6.6)	(8.4)	(4.7)	(1.1)			(4.0)	(2.3)	(2.8)
LU	40.2	54.1	54.6	35.5	20.9	15.1	18.7	31.7	23.6	14.0	5.6	8.8
	(1.7)	(4.8)	(3.9)	(6.2)	(3.7)	(3.2)	(1.5)	(4.2)	(3.5)	(3.2)	(1.6)	(2.6)
LV	65.3	55.2	74.3	69.9	67.2	59.4	31.2	23.9	34.5	40.0	26.9	25.4
	(2.4)	(4.8)	(4.4)	(5.3)	(4.4)	(4.7)	(2.3)	(5.6)	(5.3)	(5.1)	(4.1)	(4.3)
NL	24.5	26.0	28.4	25.7	21.7	19.8	7.9	12.2	10.2	7.1	5.4	5.1
	(1.6)	(3.8)	(3.5)	(3.8)	(3.2)	(2.8)	(1.0)	(3.5)	(2.3)	(2.1)	(1.6)	(1.6)
PL	45.8	39.7	47.2	52.4	50.0	39.7	16.7	19.9	19.7	17.8	17.9	11.1
	(1.2)	(2.9)	(3.2)	(3.3)	(2.6)	(2.2)	(0.9)	(2.9)	(3.0)	(2.6)	(2.1)	(1.3)
PT	45.8	43.0	58.6	52.2	42.5	22.3	16.2	16.1	20.4	19.5	14.5	6.4
	(1.3)	(3.1)	(2.9)	(2.9)	(2.9)	(2.7)	(1.1)	(2.6)	(2.6)	(2.4)	(2.1)	(1.3)
SI	62.8	55.7	70.9	71.6	60.8	54.1	21.9	n.a.	27.9	32.1	24.1	17.5
	(1.6)	(3.5)	(3.3)	(3.3)	(3.5)	(3.5)	(1.4)		(3.3)	(3.6)	(3.0)	(2.6)
SK	52.2	45.8	56.8	54.9	56.7	45.7	17.0	17.2	25.8	20.9	15.4	11.0
	(2.3)	(5.0)	(5.0)	(5.0)	(5.5)	(5.2)	(1.8)	(4.3)	(4.6)	(4.0)	(3.3)	(3.7)
Euro Area	47.8	44.3	53.9	52.6	46.4	38.1	18.8	24.2	25.0	22.8	17.5	13.1

Notes: Bootstrap standard errors are in parentheses. Quintiles are calculated on the pre-COVID distribution of household earnings and disposable income respectively.

Source: Authors' calculations based on third wave HFCS data.

TABLE 7
SOCIO-DEMOGRAPHICS FOR WHOM BUFFERING POTENTIAL INCOME LOSSES EXHAUST LIQUID ASSETS

		Age				Gender		Education			Household Type					Tenure Status	
Country		0–18	19–40	41–64	65+	Male	Female	Low	Medium	High	Single	Single Parent	Couple	Couple with Kids	Other	Owner	Tenant
AT	Baseline	23.1	32.3	40.1	4.5	49.7	50.3	14.7	63.1	22.1	10.4	4.1	24.0	39.9	21.7	55.5	44.5
		(0.6)	(0.6)	(0.8)	(0.4)	(0.5)	(0.5)	(0.7)	(1.0)	(0.9)	(0.3)	(0.4)	(1.0)	(1.4)	(1.3)	(0.8)	(0.8)
	High loss	22.2	34.0	40.7	3.1	50.1	49.9	15.5	69.6	14.9	9.2	2.6	26.9	38.6	22.7	48.1	51.9
		(1.0)	(0.9)	(1.2)	(0.4)	(0.8)	(0.8)	(1.0)	(1.5)	(1.2)	(0.6)	(0.5)	(1.7)	(2.2)	(2.1)	(2.0)	(2.0)
	Depleting	30.3	42.3	26.7	0.6	55.1	44.9	19.1	63.6	17.3	10.0	5.0	16.2	45.3	23.4	37.2	62.8
		(2.1)	(2.1)	(2.5)	(0.4)	(2.0)	(2.0)	(2.6)	(3.0)	(2.6)	(1.8)	(1.6)	(2.9)	(5.3)	(5.7)	(5.9)	(5.9)
BE	Baseline	25.4	35.4	35.7	3.5	49.4	50.6	16.4	35.9	47.7	7.9	7.0	17.4	48.8	19.0	79.0	21.0
		(0.5)	(0.5)	(0.5)	(0.4)	(0.4)	(0.4)	(1.0)	(1.4)	(1.5)	(0.5)	(0.7)	(0.7)	(1.4)	(1.2)	(1.5)	(1.5)
	High loss	21.3	36.9	37.9	3.8	51.2	48.8	17.1	37.4	45.6	8.5	2.5	23.4	45.5	20.1	81.4	18.6
		(1.6)	(1.7)	(1.9)	(0.9)	(1.3)	(1.3)	(1.8)	(2.4)	(2.9)	(1.3)	(0.9)	(2.5)	(3.3)	(2.8)	(2.6)	(2.6)
	Depleting	29.1	38.9	30.3	1.7	50.3	49.7	24.8	44.8	30.5	2.8	7.2	13.1	50.8	26.2	67.9	32.1
		(2.8)	(3.0)	(2.9)	(0.8)	(1.8)	(1.8)	(3.8)	(4.1)	(3.9)	(1.2)	(2.4)	(3.2)	(5.7)	(5.5)	(5.2)	(5.2)
CY	Baseline	26.0	37.7	33.5	2.8	49.8	50.2	17.3	52.1	30.6	3.9	5.3	13.9	51.2	25.7	79.1	20.9
		(0.5)	(0.8)	(0.7)	(0.4)	(0.4)	(0.4)	(1.1)	(1.4)	(1.4)	(0.4)	(1.0)	(0.8)	(1.9)	(1.6)	(1.8)	(1.8)
	High loss	22.2	39.4	36.2	2.1	49.7	50.3	18.9	57.2	23.9	3.8	4.6	12.7	46.5	32.4	74.9	25.1
		(1.6)	(1.6)	(1.7)	(0.5)	(1.2)	(1.2)	(1.9)	(2.2)	(2.1)	(0.8)	(1.4)	(1.9)	(3.2)	(2.9)	(3.0)	(3.0)
	Depleting	23.6	39.1	35.1	2.2	49.6	50.4	19.1	56.3	24.6	2.4	3.7	11.5	43.4	38.9	78.3	21.7
		(2.8)	(1.6)	(1.8)	(0.6)	(1.2)	(1.2)	(1.8)	(2.2)	(2.1)	(0.6)	(1.4)	(1.9)	(3.7)	(3.6)	(3.2)	(3.2)
DE	Baseline	22.1	31.4	40.2	6.2	51.7	48.3	14.3	55.2	30.5	14.6	5.3	26.6	40.2	13.3	51.3	48.7
		(0.5)	(0.6)	(0.6)	(0.4)	(0.5)	(0.5)	(0.7)	(0.9)	(0.7)	(0.3)	(0.6)	(0.6)	(1.0)	(0.9)	(0.9)	(0.9)
	High loss	21.7	33.4	39.9	4.9	52.4	47.6	17.4	60.8	21.8	14.4	6.0	25.0	38.6	16.0	44.2	55.8
		(1.1)	(1.2)	(1.4)	(0.6)	(0.9)	(0.9)	(1.5)	(1.6)	(1.2)	(0.9)	(1.1)	(1.5)	(2.2)	(1.5)	(2.1)	(2.1)
	Depleting	27.6	38.4	32.2	1.8	52.5	47.5	25.3	57.8	16.9	12.8	6.3	17.9	48.6	14.5	32.0	68.0
		(1.4)	(1.8)	(1.9)	(0.4)	(1.4)	(1.4)	(2.2)	(2.3)	(1.6)	(1.3)	(1.6)	(1.8)	(2.9)	(2.2)	(2.4)	(2.4)
EE	Baseline	23.2	34.0	35.4	7.4	48.8	51.2	14.6	48.5	36.9	10.6	5.0	19.0	42.8	22.6	81.5	18.5
		(0.3)	(0.3)	(0.3)	(0.4)	(0.3)	(0.3)	(0.7)	(1.0)	(0.9)	(0.7)	(0.6)	(0.8)	(1.2)	(1.1)	(1.0)	(1.0)
	High loss	21.8	34.8	36.7	6.7	50.5	49.5	15.5	51.3	33.3	7.5	2.2	19.8	42.5	27.9	83.9	16.1
		(0.9)	(1.0)	(1.2)	(0.6)	(0.8)	(0.8)	(1.1)	(1.5)	(1.5)	(0.9)	(0.7)	(1.5)	(2.1)	(2.0)	(1.7)	(1.7)
	Depleting	24.5	39.7	32.5	3.4	50.6	49.4	20.4	56.2	23.3	10.0	5.3	16.0	44.8	23.9	76.4	23.6
		(1.1)	(1.2)	(1.4)	(0.6)	(1.0)	(1.0)	(1.6)	(1.9)	(1.6)	(1.4)	(1.2)	(1.6)	(2.6)	(2.3)	(2.3)	(2.3)

(continued)

TABLE 7
(CONTINUED)

Country		Age				Gender		Education			Household Type					Tenure Status	
		0–18	19–40	41–64	65+	Male	Female	Low	Medium	High	Single	Single Parent	Couple	Couple with Kids	Other	Owner	Tenant
ES	Baseline	23.0	31.8	39.6	5.5	50.2	49.8	42.2	22.7	35.1	4.9	4.3	15.4	47.2	28.2	75.7	24.3
		(0.2)	(0.3)	(0.3)	(0.3)	(0.2)	(0.2)	(0.9)	(0.7)	(0.8)	(0.2)	(0.4)	(0.4)	(0.8)	(0.6)	(1.0)	(1.0)
	High loss	21.5	31.7	41.4	5.4	50.7	49.3	40.7	24.4	34.9	4.1	2.7	19.1	47.3	26.7	78.4	21.6
		(0.8)	(1.0)	(1.1)	(0.5)	(0.7)	(0.7)	(1.4)	(1.3)	(1.4)	(0.5)	(0.6)	(1.2)	(2.0)	(1.8)	(1.8)	(1.8)
	Depleting	26.0	36.3	34.5	3.2	50.1	49.9	46.7	28.1	25.1	3.1	4.7	11.7	50.7	29.8	66.9	33.1
		(1.1)	(1.3)	(1.4)	(0.5)	(1.0)	(1.0)	(2.1)	(1.8)	(1.6)	(0.5)	(0.9)	(1.4)	(2.7)	(2.6)	(2.5)	(2.5)
FI	Baseline	25.0	31.7	34.2	9.1	50.6	49.4	20.6	44.0	35.3	13.1	5.2	30.0	45.7	6.0	76.2	23.8
		(0.1)	(0.2)	(0.2)	(0.2)	(0.1)	(0.1)	(0.3)	(0.4)	(0.3)	(0.3)	(0.3)	(0.4)	(0.5)	(0.3)	(0.5)	(0.5)
	High loss	21.2	32.3	43.9	2.6	52.6	47.4	17.9	48.6	33.5	9.4	1.8	35.3	45.6	8.0	84.4	15.6
		(0.6)	(0.8)	(0.8)	(0.3)	(0.5)	(0.5)	(0.7)	(0.9)	(0.9)	(0.6)	(0.4)	(1.1)	(1.2)	(0.7)	(1.0)	(1.0)
	Depleting	25.1	33.3	39.4	2.2	51.9	48.1	17.7	46.9	35.4	6.2	2.4	29.6	52.1	9.6	83.0	17.0
		(0.9)	(1.2)	(1.1)	(0.3)	(0.7)	(0.7)	(1.0)	(1.4)	(1.3)	(0.7)	(0.6)	(1.6)	(1.8)	(1.1)	(1.5)	(1.5)
FR	Baseline	28.9	30.7	36.5	4.0	49.9	50.1	23.9	43.2	32.8	9.1	7.8	18.3	51.3	13.5	62.1	37.9
		(0.4)	(0.5)	(0.5)	(0.2)	(0.4)	(0.4)	(0.6)	(0.6)	(0.6)	(0.4)	(0.4)	(0.6)	(0.9)	(0.7)	(1.1)	(1.1)
	High loss	24.1	30.1	43.0	2.9	52.0	48.0	16.4	41.9	41.8	6.8	1.3	23.5	53.8	14.6	78.2	21.8
		(0.8)	(0.9)	(1.1)	(0.4)	(0.6)	(0.6)	(0.8)	(1.1)	(1.2)	(0.6)	(0.2)	(1.2)	(1.6)	(1.2)	(1.4)	(1.4)
	Depleting	26.3	29.5	42.5	1.7	51.1	48.9	17.7	42.5	39.9	6.0	2.2	23.5	53.3	15.0	73.0	27.0
		(1.4)	(1.5)	(1.9)	(0.5)	(1.0)	(1.0)	(1.5)	(2.2)	(2.1)	(1.1)	(0.5)	(2.1)	(2.9)	(2.3)	(2.8)	(2.8)
GR	Baseline	22.7	32.9	36.8	7.6	50.2	49.8	27.2	48.2	24.7	5.4	2.2	12.9	48.8	30.7	70.9	29.1
		(0.9)	(0.8)	(0.8)	(0.5)	(0.6)	(0.6)	(1.1)	(1.3)	(1.2)	(0.4)	(0.6)	(0.6)	(1.7)	(1.5)	(1.0)	(1.0)
	High loss	22.1	32.9	38.2	6.9	50.5	49.5	22.1	52.2	25.7	6.8	1.8	14.8	48.9	27.7	71.7	28.3
		(1.4)	(1.4)	(1.4)	(0.8)	(1.1)	(1.1)	(1.4)	(1.8)	(1.8)	(0.6)	(0.6)	(1.5)	(2.5)	(2.4)	(1.9)	(1.9)
	Depleting	25.4	34.7	35.1	4.8	53.9	46.1	27.3	49.8	22.8	4.2	3.7	8.8	52.7	30.6	63.6	36.4
		(2.1)	(2.2)	(1.7)	(1.0)	(1.6)	(1.6)	(3.2)	(3.3)	(3.2)	(1.1)	(2.2)	(1.6)	(4.5)	(4.4)	(4.8)	(4.8)
HR	Baseline	22.9	34.2	35.0	8.0	49.9	50.1	20.6	63.3	16.0	3.0	2.4	10.1	37.2	47.3	84.8	15.2
		(0.6)	(0.5)	(0.6)	(0.6)	(0.4)	(0.4)	(1.2)	(1.5)	(1.2)	(0.4)	(0.6)	(1.0)	(1.9)	(2.0)	(1.9)	(1.9)
	High loss	20.7	37.2	34.9	7.2	52.6	47.4	12.9	70.5	16.6	2.9	1.6	9.2	36.1	50.2	87.6	12.4
		(1.7)	(1.6)	(1.8)	(1.0)	(1.4)	(1.4)	(1.8)	(2.4)	(1.9)	(0.8)	(0.8)	(1.8)	(3.7)	(4.0)	(3.0)	(3.0)
	Depleting	22.8	35.3	35.6	6.3	50.4	49.6	19.8	62.4	17.8	2.0	2.0	8.2	40.7	47.1	83.2	16.8
		(1.9)	(1.7)	(2.0)	(1.0)	(1.5)	(1.5)	(2.1)	(2.8)	(2.7)	(0.7)	(1.1)	(1.9)	(4.5)	(4.7)	(3.7)	(3.7)

(continued)

TABLE 7
(CONTINUED)

Country		Age				Gender		Education			Household Type					Tenure Status	
		0–18	19–40	41–64	65+	Male	Female	Low	Medium	High	Single	Single Parent	Couple	Couple with Kids	Other	Owner	Tenant
HU	Baseline	22.6	32.1	38.4	6.9	49.8	50.2	19.8	55.0	25.2	6.2	5.1	19.1	39.5	30.2	83.9	16.1
		(0.2)	(0.4)	(0.4)	(0.3)	(0.2)	(0.2)	(0.4)	(0.4)	(0.3)	(0.3)	(0.4)	(0.7)	(0.9)	(1.0)	(0.8)	(0.8)
	High loss	21.3	33.8	38.5	6.4	50.5	49.5	16.2	64.0	19.8	4.7	2.8	18.5	38.7	35.3	83.1	16.9
		(0.8)	(0.8)	(0.9)	(0.5)	(0.6)	(0.6)	(0.8)	(1.0)	(0.9)	(0.5)	(0.6)	(1.1)	(2.0)	(1.7)	(1.3)	(1.3)
	Depleting	22.8	34.7	36.5	6.0	49.9	50.1	21.9	60.9	17.3	4.4	4.5	19.2	38.1	33.9	78.3	21.7
		(1.4)	(1.3)	(1.4)	(0.7)	(0.9)	(0.9)	(1.5)	(1.7)	(1.3)	(0.7)	(1.1)	(1.8)	(2.6)	(2.7)	(2.2)	(2.2)
IE	Baseline	29.9	29.3	35.2	5.6	50.3	49.7	20.8	36.9	42.3	5.7	5.7	16.3	50.5	21.7	70.6	29.4
		(0.3)	(0.4)	(0.3)	(0.3)	(0.2)	(0.2)	(0.6)	(0.8)	(0.8)	(0.3)	(0.4)	(0.3)	(0.9)	(0.8)	(0.7)	(0.7)
	High loss	24.2	35.8	37.1	3.0	51.7	48.3	17.3	38.5	44.3	4.2	3.3	20.7	41.3	30.4	71.4	28.6
		(0.8)	(0.9)	(0.9)	(0.3)	(0.8)	(0.8)	(1.1)	(1.7)	(1.5)	(0.4)	(0.6)	(1.1)	(1.8)	(1.7)	(1.8)	(1.8)
	Depleting	36.5	29.7	31.6	2.2	50.4	49.6	23.0	40.5	36.5	4.0	5.6	8.4	58.4	23.6	71.7	28.3
		(1.2)	(1.5)	(1.5)	(0.6)	(0.9)	(0.9)	(1.4)	(2.3)	(2.5)	(1.4)	(1.0)	(1.0)	(3.1)	(2.9)	(2.2)	(2.2)
IT	Baseline	21.3	30.0	41.6	7.1	50.7	49.3	39.1	45.0	15.9	8.8	3.6	12.8	43.9	30.9	70.1	29.9
		(0.3)	(0.3)	(0.4)	(0.3)	(0.3)	(0.3)	(0.9)	(0.8)	(0.5)	(0.4)	(0.5)	(0.5)	(1.0)	(1.1)	(1.2)	(1.2)
	High loss	19.5	32.3	41.1	7.1	51.0	49.0	41.3	47.1	11.6	9.9	3.6	14.5	40.3	31.7	69.7	30.3
		(0.9)	(0.8)	(0.8)	(0.5)	(0.6)	(0.6)	(1.4)	(1.3)	(0.9)	(0.7)	(0.7)	(1.0)	(1.8)	(1.8)	(1.8)	(1.8)
	Depleting	23.3	33.2	38.9	4.6	49.4	50.6	50.9	41.3	7.8	7.7	3.4	11.0	45.3	32.6	59.7	40.3
		(1.4)	(1.6)	(1.5)	(0.7)	(1.2)	(1.2)	(2.3)	(2.1)	(1.1)	(1.1)	(0.9)	(1.6)	(3.1)	(2.4)	(2.9)	(2.9)
LT	Baseline	26.6	29.8	37.4	6.2	44.6	55.4	6.5	43.5	50.1	12.3	16.2	17.5	36.2	17.8	94.7	5.3
		(0.7)	(1.1)	(0.9)	(0.6)	(1.2)	(1.2)	(1.1)	(2.0)	(2.2)	(1.1)	(1.9)	(1.3)	(2.9)	(2.9)	(0.8)	(0.8)
	High loss	23.8	33.4	37.4	5.4	42.7	57.3	2.2	41.8	56.0	13.1	12.1	19.0	37.1	18.7	96.3	3.7
		(2.2)	(2.3)	(2.9)	(1.1)	(2.8)	(2.8)	(1.0)	(3.5)	(3.6)	(2.8)	(3.5)	(3.0)	(5.2)	(5.1)	(1.2)	(1.2)
	Depleting	22.0	42.9	32.2	2.9	41.6	58.4	3.5	46.6	49.9	13.2	8.6	16.4	39.1	22.6	92.2	7.8
		(4.6)	(3.7)	(6.7)	(1.2)	(4.1)	(4.1)	(1.9)	(6.8)	(7.2)	(5.5)	(4.2)	(4.9)	(9.8)	(7.1)	(2.6)	(2.6)
LU	Baseline	26.7	34.8	34.4	4.1	51.5	48.5	27.3	36.9	35.8	9.7	5.5	13.5	50.6	20.7	71.4	28.6
		(0.4)	(0.6)	(0.6)	(0.4)	(0.3)	(0.3)	(0.5)	(1.3)	(1.1)	(0.4)	(0.6)	(0.6)	(1.4)	(0.6)	(1.5)	(1.5)
	High loss	24.1	34.3	37.6	4.0	53.4	46.6	33.2	38.7	28.1	7.0	2.4	15.8	47.0	27.9	77.4	22.6
		(1.4)	(1.7)	(1.6)	(0.9)	(1.2)	(1.2)	(2.1)	(2.3)	(2.0)	(1.1)	(0.8)	(1.9)	(3.0)	(2.7)	(2.8)	(2.8)
	Depleting	28.8	40.0	28.9	2.2	51.0	49.0	36.9	43.5	19.6	7.1	2.7	10.5	55.7	24.0	61.6	38.4
		(2.0)	(2.4)	(2.1)	(0.9)	(1.9)	(1.9)	(3.5)	(3.8)	(2.8)	(1.5)	(1.0)	(2.4)	(4.7)	(4.0)	(4.7)	(4.7)

(continued)

TABLE 7
(CONTINUED)

Country		Age				Gender		Education			Household Type					Tenure Status	
		0–18	19–40	41–64	65+	Male	Female	Low	Medium	High	Single	Single Parent	Couple	Couple with Kids	Other	Owner	Tenant
LV	Baseline	24.4	28.6	36.9	10.1	47.8	52.2	19.6	50.5	29.9	7.8	6.9	20.9	39.4	25.0	76.1	23.9
		(0.7)	(1.0)	(0.8)	(0.6)	(0.3)	(0.3)	(1.4)	(1.7)	(1.5)	(0.5)	(1.1)	(1.4)	(2.1)	(2.0)	(2.2)	(2.2)
	High loss	23.0	33.4	36.9	6.6	47.6	52.4	15.9	53.9	30.1	7.1	3.7	22.3	37.2	29.7	78.4	21.6
		(1.9)	(2.2)	(2.3)	(1.0)	(1.4)	(1.4)	(2.0)	(2.9)	(2.8)	(1.2)	(1.6)	(2.9)	(4.1)	(3.8)	(3.3)	(3.3)
	Depleting	26.4	35.0	34.8	3.8	48.9	51.1	18.5	52.6	28.9	4.3	4.2	15.2	49.9	26.5	70.5	29.5
		(2.0)	(2.3)	(2.7)	(0.8)	(1.6)	(1.6)	(2.6)	(3.1)	(2.5)	(1.0)	(1.8)	(2.6)	(4.7)	(4.1)	(4.6)	(4.6)
NL	Baseline	24.6	33.6	36.8	4.9	51.9	48.1	21.7	42.4	35.9	12.1	7.1	22.3	44.2	14.4	71.7	28.3
		(0.4)	(0.5)	(0.4)	(0.3)	(0.6)	(0.6)	(0.4)	(0.4)	(0.4)	(0.3)	(0.8)	(0.7)	(1.1)	(0.8)	(1.0)	(1.0)
	High loss	25.6	35.1	37.0	2.2	53.0	47.0	21.8	44.7	33.5	10.8	5.1	21.2	47.0	15.8	73.1	26.9
		(1.4)	(1.6)	(1.4)	(0.4)	(1.1)	(1.1)	(1.4)	(1.6)	(1.6)	(0.9)	(1.3)	(1.8)	(2.5)	(1.9)	(2.4)	(2.4)
	Depleting	31.6	36.3	30.1	2.1	56.9	43.1	23.8	47.4	28.8	9.0	8.2	20.7	53.0	9.2	56.4	43.6
		(3.6)	(3.6)	(3.4)	(0.8)	(2.5)	(2.5)	(3.4)	(4.2)	(3.8)	(2.1)	(3.1)	(4.1)	(6.4)	(3.5)	(6.6)	(6.6)
PL	Baseline	21.7	37.0	33.4	7.9	49.7	50.3	14.7	59.5	25.8	3.5	1.5	13.0	33.4	48.5	84.4	15.6
		(0.1)	(0.2)	(0.2)	(0.2)	(0.1)	(0.1)	(0.4)	(0.7)	(0.6)	(0.1)	(0.2)	(0.2)	(0.6)	(0.6)	(0.7)	(0.7)
	High loss	18.3	39.5	33.8	8.4	51.2	48.8	10.3	65.3	24.4	3.2	1.1	14.4	28.9	52.4	83.6	16.4
		(0.7)	(0.7)	(0.8)	(0.5)	(0.6)	(0.6)	(0.8)	(1.2)	(1.2)	(0.3)	(0.2)	(0.9)	(1.6)	(1.8)	(1.4)	(1.4)
	Depleting	19.4	37.4	35.8	7.3	50.6	49.4	17.1	67.8	15.1	3.4	1.8	15.6	32.3	46.9	76.3	23.7
		(1.0)	(1.1)	(1.1)	(0.8)	(0.9)	(0.9)	(1.3)	(1.6)	(1.3)	(0.5)	(0.4)	(1.4)	(2.3)	(2.8)	(2.2)	(2.2)
PT	Baseline	22.2	31.7	38.6	7.5	48.7	51.3	53.5	25.7	20.8	4.1	5.8	15.4	43.5	31.2	77.3	22.7
		(0.2)	(0.3)	(0.3)	(0.3)	(0.2)	(0.2)	(0.9)	(0.7)	(0.7)	(0.2)	(0.5)	(0.5)	(0.9)	(0.8)	(1.2)	(1.2)
	High loss	22.4	33.0	37.9	6.7	47.8	52.2	60.4	27.4	12.2	3.1	4.7	15.1	44.9	32.2	73.8	26.2
		(0.7)	(0.7)	(0.9)	(0.5)	(0.7)	(0.7)	(1.3)	(1.1)	(0.9)	(0.4)	(0.8)	(1.0)	(1.9)	(1.8)	(1.9)	(1.9)
	Depleting	25.7	36.2	34.2	4.0	50.1	49.9	60.2	28.3	11.5	3.5	7.3	10.9	48.7	29.6	65.2	34.8
		(1.3)	(1.5)	(1.7)	(0.8)	(1.3)	(1.3)	(2.3)	(2.0)	(1.4)	(0.7)	(1.7)	(1.7)	(3.5)	(3.2)	(3.5)	(3.5)
SI	Baseline	23.9	29.8	39.4	6.8	51.8	48.2	17.7	57.3	25.0	5.6	2.7	11.4	42.6	37.7	76.5	23.5
		(0.4)	(0.6)	(0.6)	(0.3)	(0.3)	(0.3)	(0.8)	(1.0)	(1.0)	(0.4)	(0.4)	(0.4)	(1.2)	(1.1)	(1.4)	(1.4)
	High loss	17.3	31.0	45.3	6.4	53.0	47.0	16.4	64.6	19.0	5.4	1.3	12.7	32.8	47.8	81.8	18.2
		(1.1)	(1.0)	(1.3)	(0.7)	(0.9)	(0.9)	(1.2)	(1.7)	(1.6)	(0.9)	(0.5)	(1.1)	(2.4)	(2.5)	(2.0)	(2.0)
	Depleting	28.8	31.5	36.2	3.5	51.0	49.0	17.3	65.0	17.7	3.9	2.1	10.0	51.3	32.7	68.2	31.8
		(1.6)	(1.2)	(1.9)	(0.6)	(1.2)	(1.2)	(1.6)	(2.0)	(1.6)	(0.8)	(0.8)	(1.2)	(3.6)	(3.4)	(3.1)	(3.1)

(continued)

TABLE 7
(CONTINUED)

Country		Age				Gender		Education			Household Type					Tenure Status	
		0–18	19–40	41–64	65+	Male	Female	Low	Medium	High	Single	Single Parent	Couple	Couple with Kids	Other	Owner	Tenant
SK	Baseline	21.6	35.7	36.6	6.1	50.1	49.9	11.2	65.8	23.1	2.8	2.3	13.4	39.2	42.4	91.1	8.9
		(0.5)	(0.7)	(0.6)	(0.4)	(0.2)	(0.2)	(0.8)	(1.3)	(1.2)	(0.3)	(0.3)	(0.4)	(1.4)	(1.3)	(1.0)	(1.0)
	High loss	19.5	36.2	38.4	5.9	49.5	50.5	9.2	74.8	15.9	2.8	1.8	12.8	35.9	46.7	92.7	7.3
		(1.2)	(1.1)	(1.4)	(0.9)	(1.0)	(1.0)	(1.2)	(2.2)	(1.7)	(0.6)	(0.5)	(1.0)	(3.2)	(3.2)	(1.6)	(1.6)
	Depleting	25.1	37.1	33.4	4.5	52.2	47.8	14.0	71.7	14.3	1.8	3.6	8.5	41.0	45.1	86.9	13.1
		(2.1)	(2.2)	(2.2)	(1.4)	(1.7)	(1.7)	(2.7)	(3.2)	(2.7)	(0.8)	(0.9)	(1.5)	(4.8)	(5.2)	(2.7)	(2.7)
Euro area	Baseline	23.5	32.1	38.3	6.1	50.4	49.6	25.2	46.1	28.7	8.8	4.9	18.4	43.6	24.3	68.4	31.6
	High loss	21.3	33.6	39.6	5.5	51.3	48.7	24.9	50.4	24.7	8.6	3.5	19.8	41.5	26.6	68.1	31.9
	Depleting	25.4	36.2	34.9	3.5	51.1	48.9	31.3	49.3	19.4	7.2	4.6	15.0	46.8	26.4	57.7	42.3

Note: Bootstrap standard errors are in parentheses. "Baseline" refers to all individuals who are part of a household in which there is at least one employee or self-employed person. "High loss" refers to all individuals which are part of a household with a disposable income loss that is above their country's average. "Depleting" refers to all individuals who are part of a household that exhausts all liquid assets to cover disposable income losses.

Source: Authors' calculations based on third wave HFCS data.

TABLE 8
SHARE OF HOUSEHOLDS BELOW LOW-EARNINGS/POVERTY THRESHOLD AFTER BUFFERING BY LIQUID ASSETS

	(A) Low Earnings			(B) Income Poverty		
Country	Baseline	After Buffering	Δ	Baseline	After Buffering	Δ
AT	20.9	27.9	7.0	8.5	8.6	0.1
	(1.2)	(1.3)		(0.8)	(0.8)	
BE	23.8	29.7	5.9	8.6	8.6	0.0
	(1.8)	(1.9)		(1.4)	(1.4)	
CY	21.8	34.2	12.5	11.3	12.2	0.9
	(2.0)	(2.3)		(1.7)	(1.7)	
DE	27.5	34.1	6.5	15.7	16.7	1.0
	(1.2)	(1.3)		(1.1)	(1.2)	
EE	27.6	34.7	7.1	14.1	14.8	0.7
	(1.2)	(1.3)		(1.0)	(1.0)	
ES	27.2	36.0	8.9	20.4	20.5	0.1
	(1.2)	(1.2)		(1.1)	(1.1)	
FI	27.8	34.4	6.5	7.5	7.5	0.0
	(0.5)	(0.6)		(0.3)	(0.3)	
FR	27.0	32.3	5.4	13.0	13.0	0.0
	(0.8)	(0.9)		(0.6)	(0.6)	
GR	24.3	40.7	16.4	18.0	19.0	1.0
	(1.7)	(2.3)		(1.7)	(1.7)	
HR	24.1	38.0	13.9	14.6	14.6	0.0
	(1.9)	(2.2)		(1.6)	(1.6)	
HU	28.6	38.4	9.9	15.4	15.8	0.4
	(1.1)	(1.1)		(0.9)	(1.0)	
IE	29.8	37.3	7.5	11.9	12.3	0.3
	(1.3)	(1.2)		(0.8)	(0.8)	
IT	25.1	33.3	8.1	21.2	22.1	0.9
	(1.1)	(1.1)		(1.0)	(1.0)	
LT	22.3	31.2	8.9	13.5	13.5	0.0
	(2.0)	(2.2)		(1.9)	(1.9)	
LU	27.3	36.3	8.9	20.6	20.6	0.0
	(1.7)	(1.7)		(1.5)	(1.5)	
LV	26.9	38.7	11.8	17.1	17.6	0.5
	(2.3)	(2.4)		(2.0)	(2.1)	
NL	24.7	29.4	4.7	14.4	15.0	0.6
	(1.5)	(1.6)		(1.3)	(1.5)	
PL	23.8	30.2	6.4	12.2	12.4	0.1
	(1.0)	(1.1)		(0.9)	(0.9)	
PT	24.8	33.2	8.4	12.1	12.4	0.3
	(1.1)	(1.3)		(1.0)	(1.0)	
SI	22.2	32.2	10.0	11.1	11.1	0.0
	(1.4)	(1.7)		(1.1)	(1.1)	
SK	21.2	28.2	7.0	9.1	9.6	0.5
	(1.7)	(2.0)		(1.3)	(1.3)	
Euro Area	25.2	33.8	8.6	13.8	14.2	0.4

Note: Bootstrap standard errors are in parentheses.
Source: Authors' calculations based on third wave HFCS data.

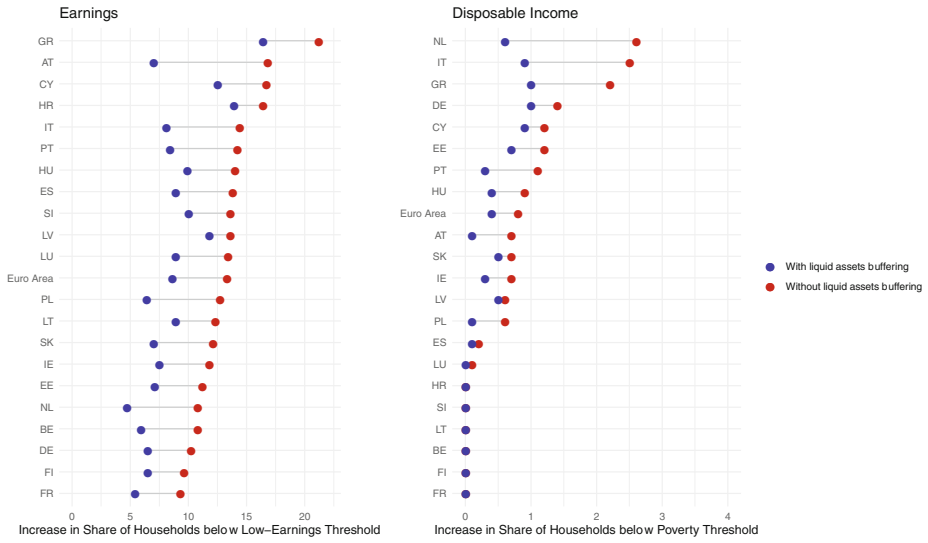

Figure 2. Percentage Point Increase in Share Below Low-Earnings/Poverty Threshold (Before and After Liquid Assets Buffering).
Source: Authors' Calculations Based on Third Wave HFCS Data. [Colour figure can be viewed at wileyonlinelibrary.com].

of income poverty there are only slight increases of about 1 percent point in Cyprus, Germany, Greece and Italy.

A similar picture is seen when we look at the Gini coefficient in Table 9. The average Gini coefficient of household earnings across countries increases by 3 percent points compared to 3.9 percent points without buffering. Hence, taking liquid asset buffers into account reduces the estimated impact by about one-quarter. In terms of disposable income there is no impact on the Gini coefficient anymore when liquid buffers are considered. In terms of household earnings a relatively large increase in inequality is seen in Cyprus while the smallest increases are seen in the Netherlands and Lithuania. In terms of disposable income inequality we still find a decrease in the Gini coefficient for Greece, Croatia and Lithuania, while only in Cyprus and the Netherlands there is a very slight increase (although likely not statistically significant).

It is worth also considering more briefly the buffer that could potentially be provided by the total net wealth of the household. Property and other forms of illiquid wealth cannot generally be drawn on directly in the short term to fill the gap left by a negative income shock, but they can in some circumstances serve as security against borrowing. While poorer households in particular may face many obstacles to such borrowing, it is nonetheless worth presenting the results of an analysis illustrating the extent to which potential losses could be buffered if total net wealth of the household could in fact be deployed for that purpose. The concept of net wealth in HFCS, which we adopt here, covers besides the net liquid assets also the value of the main residence and other real estate, valuables, vehicles, self-employment businesses, money owed to the household, private pensions and life insurances and any other assets net of the value of both mortgage and non-mortgage debt.

TABLE 9
Gini Index After Liquid Assets Buffering

	(A) Earnings			(B) Disposable Income		
Country	Baseline	After Buffering	Δ	Baseline	After Buffering	Δ
AT	33.4	35.9	2.5	24.6	24.8	0.1
	(1.5)	(1.5)		(1.1)	(1.1)	
BE	34.5	36.9	2.4	25.1	25.1	0.0
	(1.3)	(1.3)		(1.0)	(1.0)	
CY	34.6	39.4	4.8	30.3	30.7	0.4
	(1.2)	(1.2)		(1.2)	(1.3)	
DE	42.7	45.3	2.6	32.0	32.2	0.1
	(1.0)	(1.0)		(0.7)	(0.7)	
EE	37.8	40.7	2.9	31.1	31.1	0.0
	(0.7)	(0.7)		(0.6)	(0.6)	
ES	42.6	46.0	3.4	36.4	36.4	0.0
	(1.0)	(1.0)		(1.0)	(1.0)	
FI	38.7	40.7	2.0	24.0	23.7	−0.3
	(0.4)	(0.4)		(0.2)	(0.2)	
FR	37.8	40.2	2.4	27.6	27.5	−0.1
	(0.5)	(0.5)		(0.4)	(0.4)	
GR	35.0	39.2	4.2	30.0	29.3	−0.7
	(1.0)	(0.9)		(0.9)	(0.8)	
HR	40.3	43.4	3.2	32.5	31.7	−0.8
	(2.0)	(1.6)		(1.6)	(1.5)	
HU	39.1	42.3	3.2	32.6	32.9	0.2
	(0.7)	(0.7)		(0.7)	(0.7)	
IE	44.1	47.6	3.5	30.7	30.7	0.0
	(1.4)	(1.4)		(1.0)	(1.0)	
IT	40.8	43.8	3.0	34.7	34.7	0.1
	(0.9)	(0.9)		(0.7)	(0.7)	
LT	39.1	40.8	1.6	36.3	35.6	−0.7
	(1.5)	(1.5)		(1.3)	(1.3)	
LU	40.0	44.0	4.0	32.7	32.7	0.0
	(1.0)	(1.0)		(1.0)	(1.0)	
LV	41.6	45.2	3.6	33.9	33.6	−0.3
	(1.3)	(1.4)		(1.0)	(1.1)	
NL	33.3	35.2	1.8	27.4	27.8	0.4
	(0.7)	(0.8)		(1.0)	(1.0)	
PL	37.5	40.0	2.5	28.9	28.8	−0.1
	(0.8)	(0.8)		(0.7)	(0.7)	
PT	43.5	46.5	2.9	33.5	33.6	0.2
	(1.6)	(1.3)		(1.0)	(1.0)	
SI	37.7	40.9	3.3	27.9	27.8	−0.1
	(1.1)	(1.1)		(0.9)	(0.9)	
SK	34.0	36.3	2.3	27.8	27.8	0.0
	(1.1)	(1.1)		(2.1)	(2.1)	
Euro Area	38.5	41.4	3.0	30.5	30.4	−0.1

Note: Bootstrap standard errors are in parentheses.
Source: Authors' calculations based on third wave HFCS data.

Table 10 shows that the average buffer would be much higher than it was with liquid assets alone (in Table 5), reaching almost 91 percent on average across the Euro Area without policies taken into account and 94.5 percent when the impact of policies is accounted for. The variation across and within countries remains substantial but is less than was seen for liquid assets, reflecting the fact that those are more unequally distributed than non-liquid and thus total assets. The average share of potential losses that could be buffered by net wealth is lowest in Germany and the Netherlands, while it is highest in France, Lithuania, Poland and Slovak Republic. This reflects the fact that median net wealth levels are low compared to median household earnings in the former and relatively high in the latter (see Table 4).[18] Comparison across pre-COVID quintiles shows that average compensation shares are again highest in the top quintile, as with liquid assets, but are now also high at the bottom of the distribution. This picture is very similar whether or not the impact of policies is considered.

We can again look at low earnings/income poverty and inequality when potential buffering by total net wealth is taken into account. Table 11 shows that the share with low earnings described earlier would then increase on average across the Euro Area by 1.8 percent points, while disposable income poverty would not change.

The corresponding results for the Gini coefficient are in Table 12. In this case, the Gini of household earnings increases by 0.8 compared to the pre-COVID baseline. Again, there is no effect in terms of disposable income. This brings out the extent to which being able to draw fully on net wealth, however unrealistic that might be in the short term in particular, would attenuate the impact of the potential losses of households most likely to be impacted by the pandemic.

Finally, it is relevant to note that besides running down their assets households could also use other coping mechanisms to bridge the impact of the COVID-crisis. One way would be to decrease consumption. However, this tends to be more difficult for households near the bottom of the income distribution as most of their expenses go to necessities. In contrast, towards the top of the distribution potential losses may not need to be fully cushioned if household disposable incomes exceed consumption levels. In case decreasing consumption is not an option, own savings are not a sufficient buffer and borrowing against non-liquid wealth is not possible, low-income households could try to get help from family and friends. In that context the HFCS asks respondents "In an emergency, could (you/your household) get financial assistance of say EUR 5,000 from friends or relatives who do not live with you?" Table 13 shows the percentage answering this question in the affirmative in each country, overall and across quintiles. Across the Euro Area on average only about 56 percent believe they would be able to get such (significant) financial assistance from family or friends in times of need. Overall, Eastern European households are least confident in that respect, whereas more than 70 percent believe they could rely on help from friends and family in Belgium, Luxembourg, the

[18] At the extreme, the Netherlands was the best performing country in terms of buffering by liquid assets but is the worst in terms of net wealth, because the ratio between median net wealth and median household earnings is very low and net wealth is very unequally distributed, while Dutch households have the highest median share of their wealth invested in liquid assets across the Euro Area (Table 4). This reflects *inter alia* that the Dutch pension system is heavily reliant on private pension contributions, while home ownership there is relatively low.

TABLE 10
AVERAGE SHARE OF POTENTIAL EARNINGS/INCOME LOSSES BUFFERED BY NET WEALTH

	(A) Earnings						(B) Disposable Income					
Country	All	Q1	Q2	Q3	Q4	Q5	All	Q1	Q2	Q3	Q4	Q5
AT	89.7	83.1	85.8	90.3	93.4	95.1	95.1	89.3	91.8	96.9	97.9	97.4
	(0.7)	(2.1)	(2.5)	(1.5)	(1.3)	(0.9)	(0.6)	(2.5)	(2.1)	(0.9)	(0.8)	(0.9)
BE	93.4	76.4	94.8	96.2	99.5	98.3	96.8	91.9	92.9	97.5	99.6	99.4
	(1.3)	(5.3)	(2.2)	(1.8)	(0.4)	(1.0)	(0.8)	(3.8)	(2.6)	(1.6)	(0.4)	(0.7)
CY	92.1	91.3	91.0	90.2	93.7	95.6	93.8	92.1	90.5	94.4	96.4	96.7
	(1.5)	(3.4)	(3.6)	(3.6)	(2.8)	(2.1)	(1.4)	(4.1)	(3.9)	(2.4)	(1.8)	(1.7)
DE	83.6	67.0	80.4	88.5	93.6	97.6	89.8	78.7	89.5	94.9	95.2	99.0
	(1.1)	(3.3)	(2.5)	(2.1)	(1.7)	(1.0)	(1.0)	(2.6)	(2.2)	(1.5)	(1.7)	(0.5)
EE	92.6	88.0	93.2	90.6	96.1	96.4	94.9	92.6	91.1	94.4	97.5	98.1
	(0.8)	(2.4)	(1.6)	(1.9)	(1.0)	(1.0)	(0.7)	(2.7)	(2.1)	(1.4)	(0.9)	(0.8)
ES	87.6	77.7	83.3	85.6	97.0	97.4	90.4	79.0	87.8	94.8	98.2	98.0
	(1.0)	(2.8)	(2.5)	(2.5)	(1.1)	(1.4)	(1.0)	(3.0)	(2.0)	(1.7)	(1.1)	(2.0)
FI	88.4	75.8	83.6	88.1	91.8	96.4	95.6	n.a.	n.a.	93.3	95.7	98.3
	(0.5)	(2.5)	(1.5)	(1.1)	(0.9)	(0.6)	(0.4)			(0.8)	(0.7)	(0.5)
FR	92.8	84.4	90.9	96.2	98.4	98.7	98.7	n.a.	n.a.	98.2	99.2	100.0
	(0.6)	(1.7)	(1.1)	(0.5)	(0.4)	(0.6)	(0.2)			(0.4)	(0.3)	(0.0)
GR	85.6	79.6	81.6	87.3	85.0	91.9	92.4	83.1	92.6	93.9	95.0	95.0
	(1.5)	(5.4)	(3.0)	(2.5)	(3.1)	(2.2)	(1.2)	(5.4)	(1.9)	(1.8)	(1.5)	(1.9)
HR	92.2	93.6	87.4	89.3	95.1	95.0	95.7	n.a.	n.a.	94.8	94.6	97.3
	(1.5)	(3.7)	(3.8)	(3.9)	(2.6)	(2.0)	(1.3)			(2.7)	(2.4)	(1.8)
HU	91.0	90.3	87.6	89.3	94.0	93.8	94.1	n.a.	89.8	94.2	95.3	96.2
	(0.7)	(2.0)	(1.9)	(1.8)	(1.3)	(1.6)	(0.7)		(1.9)	(1.3)	(1.1)	(1.1)
IE	89.9	78.1	84.7	91.7	95.2	97.8	94.8	90.0	91.0	95.6	97.7	98.7
	(0.8)	(3.0)	(2.4)	(1.3)	(1.2)	(0.7)	(0.6)	(2.2)	(2.3)	(1.2)	(1.0)	(0.6)
IT	92.6	84.2	91.8	91.2	95.7	98.4	96.8	90.3	96.0	97.6	99.0	99.4
	(0.6)	(2.6)	(1.1)	(1.7)	(0.7)	(0.5)	(0.5)	(2.4)	(0.9)	(0.9)	(0.5)	(0.3)

(continued)

TABLE 10
(CONTINUED)

Country	(A) Earnings						(B) Disposable Income					
	All	Q1	Q2	Q3	Q4	Q5	All	Q1	Q2	Q3	Q4	Q5
LT	97.6	97.5	98.5	97.0	97.0	97.8	98.1	n.a.	n.a.	97.8	98.1	98.4
	(0.6)	(2.0)	(1.3)	(1.4)	(1.6)	(1.1)	(0.6)			(1.2)	(1.1)	(1.0)
LU	92.7	88.1	89.8	93.3	98.9	99.3	97.4	95.1	96.5	98.7	99.6	98.8
	(1.0)	(2.7)	(2.1)	(2.2)	(1.1)	(0.4)	(0.7)	(1.8)	(1.5)	(0.9)	(0.6)	(0.8)
LV	88.6	80.1	89.7	90.8	93.2	93.9	92.2	80.3	97.1	93.0	94.9	97.1
	(1.7)	(5.3)	(3.6)	(2.9)	(2.9)	(2.1)	(1.6)	(5.8)	(1.6)	(2.7)	(2.3)	(1.4)
NL	83.2	79.0	75.7	84.0	87.6	89.5	85.7	83.0	79.1	87.8	88.2	89.8
	(1.5)	(4.2)	(4.8)	(4.4)	(3.5)	(2.9)	(1.4)	(4.4)	(4.4)	(3.3)	(3.3)	(2.7)
PL	95.3	93.6	95.6	94.9	94.0	97.9	97.4	96.2	98.2	97.7	95.7	98.7
	(0.4)	(1.2)	(0.9)	(1.0)	(1.2)	(0.6)	(0.4)	(1.1)	(0.5)	(0.7)	(1.1)	(0.5)
PT	90.8	87.1	86.9	91.0	94.1	97.8	94.1	88.5	91.8	95.0	96.9	99.0
	(0.9)	(2.4)	(2.3)	(1.6)	(1.7)	(1.2)	(0.7)	(2.7)	(2.0)	(1.3)	(1.2)	(0.6)
SI	91.2	86.7	89.2	88.3	97.2	94.6	95.0	n.a.	93.4	91.3	98.4	96.5
	(1.1)	(3.3)	(2.2)	(2.5)	(0.8)	(1.6)	(0.9)		(2.9)	(2.4)	(0.7)	(1.2)
SK	96.7	94.9	96.2	97.4	97.1	97.3	97.6	94.8	95.3	99.3	98.8	97.6
	(0.6)	(1.9)	(1.4)	(1.4)	(1.1)	(1.7)	(0.6)	(2.9)	(2.2)	(0.3)	(0.8)	(1.5)
Euro Area	90.8	84.6	88.5	91.0	94.7	96.2	94.6	88.3	92.0	95.3	96.8	97.6

Notes: Bootstrap standard errors are in parentheses. Quintiles are calculated on the pre-COVID distribution of household earnings and disposable income respectively.

Source: Authors' calculations based on third wave HFCS data.

TABLE 11
SHARE OF INDIVIDUALS BELOW LOW-EARNINGS/POVERTY THRESHOLD AFTER NET WEALTH BUFFERING

	(A) Low Earnings			(B) Income Poverty		
Country	Baseline	After Buffering	Δ	Baseline	After Buffering	Δ
AT	20.9	23.9	2.9	8.5	8.6	0.0
	(1.2)	(1.2)		(0.8)	(0.8)	
BE	23.8	24.8	0.9	8.6	8.6	0.0
	(1.8)	(1.8)		(1.4)	(1.4)	
CY	21.8	22.8	1.1	11.3	11.3	0.1
	(2.0)	(2.1)		(1.7)	(1.7)	
DE	27.5	29.6	2.1	15.7	16.1	0.4
	(1.2)	(1.2)		(1.1)	(1.1)	
EE	27.6	28.6	1.0	14.1	14.2	0.0
	(1.2)	(1.2)		(1.0)	(1.0)	
ES	27.2	29.3	2.2	20.4	20.4	0.1
	(1.2)	(1.2)		(1.1)	(1.1)	
FI	27.8	29.7	1.8	7.5	7.5	0.0
	(0.5)	(0.6)		(0.3)	(0.3)	
FR	27.0	28.3	1.3	13.0	13.0	0.0
	(0.8)	(0.8)		(0.6)	(0.6)	
GR	24.3	27.7	3.4	18.0	18.3	0.2
	(1.7)	(2.0)		(1.7)	(1.7)	
HR	24.1	25.7	1.6	14.6	14.6	0.0
	(1.9)	(2.0)		(1.6)	(1.6)	
HU	28.6	30.5	1.9	15.4	15.4	0.0
	(1.1)	(1.1)		(0.9)	(0.9)	
IE	29.8	31.5	1.7	11.9	12.0	0.1
	(1.3)	(1.3)		(0.8)	(0.8)	
IT	25.1	27.0	1.9	21.2	21.3	0.1
	(1.1)	(1.1)		(1.0)	(1.0)	
LT	22.3	22.5	0.2	13.5	13.5	0.0
	(2.0)	(2.0)		(1.9)	(1.9)	
LU	27.3	29.5	2.2	20.6	20.6	0.0
	(1.7)	(1.7)		(1.5)	(1.5)	
LV	26.9	28.9	2.0	17.1	17.1	0.0
	(2.3)	(2.3)		(2.0)	(2.0)	
NL	24.7	27.8	3.2	14.4	14.8	0.4
	(1.5)	(1.6)		(1.3)	(1.4)	
PL	23.8	24.5	0.7	12.2	12.3	0.0
	(1.0)	(1.0)		(0.9)	(0.9)	
PT	24.8	27.0	2.2	12.1	12.3	0.1
	(1.1)	(1.2)		(1.0)	(1.0)	
SI	22.2	24.3	2.0	11.1	11.1	0.0
	(1.4)	(1.6)		(1.1)	(1.1)	
SK	21.2	21.7	0.5	9.1	9.1	0.0
	(1.7)	(1.7)		(1.3)	(1.3)	
Euro Area	25.2	26.9	1.8	13.8	13.9	0.1

Note: Bootstrap standard errors are in parentheses.
Source: Authors' calculations based on third wave HFCS data.

TABLE 12
GINI INDEX AFTER NET WEALTH BUFFERING

	(A) Earnings			(B) Disposable Income		
Country	Baseline	After Buffering	Δ	Baseline	After Buffering	Δ
AT	33.4	34.6	1.2	24.6	24.7	0.1
	(1.5)	(1.5)		(1.1)	(1.1)	
BE	34.5	35.1	0.6	25.1	25.1	0.0
	(1.3)	(1.4)		(1.0)	(1.0)	
CY	34.6	35.2	0.6	30.3	30.4	0.1
	(1.2)	(1.2)		(1.2)	(1.2)	
DE	42.7	44.1	1.4	32.0	32.2	0.1
	(1.0)	(0.9)		(0.7)	(0.7)	
EE	37.8	38.4	0.6	31.1	31.2	0.1
	(0.7)	(0.7)		(0.6)	(0.6)	
ES	42.6	43.8	1.1	36.4	36.4	0.1
	(1.0)	(1.0)		(1.0)	(1.0)	
FI	38.7	39.5	0.9	24.0	24.0	0.0
	(0.4)	(0.4)		(0.2)	(0.2)	
FR	37.8	38.4	0.7	27.6	27.6	0.0
	(0.5)	(0.5)		(0.4)	(0.4)	
GR	35.0	36.6	1.5	30.0	29.9	0.0
	(1.0)	(1.1)		(0.9)	(0.9)	
HR	40.3	40.7	0.4	32.5	32.5	0.0
	(2.0)	(1.6)		(1.6)	(1.6)	
HU	39.1	39.8	0.7	32.6	32.7	0.1
	(0.7)	(0.7)		(0.7)	(0.7)	
IE	44.1	45.1	1.0	30.7	30.8	0.0
	(1.4)	(1.3)		(1.0)	(1.0)	
IT	40.8	41.7	0.9	34.7	34.7	0.1
	(0.9)	(0.9)		(0.7)	(0.7)	
LT	39.1	39.2	0.1	36.3	36.2	0.0
	(1.5)	(1.4)		(1.3)	(1.3)	
LU	40.0	41.0	1.0	32.7	32.7	0.0
	(1.0)	(1.0)		(1.0)	(1.0)	
LV	41.6	42.5	0.8	33.9	33.9	0.0
	(1.3)	(1.3)		(1.0)	(1.0)	
NL	33.3	34.7	1.4	27.4	27.8	0.4
	(0.7)	(0.7)		(1.0)	(1.0)	
PL	37.5	37.9	0.4	28.9	28.9	0.0
	(0.8)	(0.8)		(0.7)	(0.7)	
PT	43.5	44.2	0.6	33.5	33.5	0.1
	(1.6)	(1.3)		(1.0)	(1.0)	
SI	37.7	38.3	0.7	27.9	28.0	0.0
	(1.1)	(1.1)		(0.9)	(0.9)	
SK	34.0	34.2	0.2	27.8	27.8	0.0
	(1.1)	(1.1)		(2.1)	(2.1)	
Euro Area	38.5	39.3	0.8	30.5	30.5	0.0

Note: Bootstrap standard errors are in parentheses.
Source: Authors' calculations based on third wave.

TABLE 13
PROPORTION ABLE TO RECEIVE FINANCIAL ASSISTANCE FROM FAMILY/FRIENDS

		(A) Earnings					(B) Disposable Income				
Country	All	Q1	Q2	Q3	Q4	Q5	Q1	Q2	Q3	Q4	Q5
AT	67.7	54.9	63.5	67.1	72.1	81.2	58.1	65.4	74.0	82.2	47.5
	(1.3)	(3.3)	(3.3)	(2.8)	(3.1)	(2.4)	(3.1)	(3.3)	(2.8)	(2.2)	(3.5)
BE	71.4	46.2	65.3	77.7	78.7	88.7	66.8	73.2	79.1	88.1	62.8
	(1.9)	(5.6)	(4.6)	(3.8)	(3.6)	(2.9)	(4.5)	(4.0)	(3.9)	(3.0)	(6.3)
CY	51.6	25.5	47.8	53.2	64.6	76.7	43.7	48.5	65.5	79.2	71.9
	(2.4)	(4.7)	(5.3)	(5.2)	(4.9)	(4.4)	(5.2)	(5.4)	(4.8)	(4.5)	(5.5)
DE	62.0	50.6	60.0	64.1	68.2	76.1	62.0	65.8	66.0	76.5	49.9
	(1.3)	(3.0)	(2.9)	(3.0)	(2.9)	(2.7)	(2.9)	(2.9)	(3.2)	(2.8)	(3.0)
EE	37.7	21.0	31.8	33.5	46.8	64.2	21.3	32.0	44.8	65.9	78.1
	(1.3)	(2.4)	(2.9)	(2.8)	(3.1)	(2.9)	(2.4)	(2.7)	(2.9)	(2.7)	(3.5)
ES	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
FI	61.6	49.5	57.7	62.1	68.6	73.9	53.1	55.0	63.0	64.7	74.5
	(0.7)	(1.6)	(1.7)	(1.6)	(1.5)	(1.4)	(2.0)	(1.6)	(1.5)	(1.4)	(1.3)
FR	52.0	32.9	48.4	61.7	67.3	75.4	33.9	50.8	59.2	70.2	71.2
	(0.9)	(1.6)	(1.6)	(1.6)	(1.9)	(1.6)	(1.6)	(1.5)	(1.7)	(1.6)	(2.0)
GR	53.7	32.9	48.2	54.9	62.2	67.7	38.7	48.4	52.3	55.8	68.1
	(2.0)	(3.9)	(5.3)	(5.2)	(3.9)	(4.2)	(4.8)	(4.5)	(4.3)	(3.8)	(3.5)
HR	32.6	31.7	19.6	26.5	27.7	58.1	27.8	23.8	22.8	28.5	52.8
	(2.0)	(5.8)	(4.4)	(4.7)	(4.6)	(5.3)	(7.3)	(5.2)	(4.8)	(4.2)	(4.9)
HU	56.2	41.5	51.9	55.1	64.8	71.7	37.3	46.7	57.3	62.8	73.2
	(1.2)	(2.6)	(3.3)	(3.6)	(3.4)	(2.8)	(3.3)	(3.0)	(3.2)	(2.8)	(2.5)
IE	68.3	43.4	60.4	74.0	82.2	84.1	43.7	56.4	71.8	81.1	86.1
	(1.3)	(3.1)	(3.5)	(2.2)	(1.9)	(3.0)	(4.4)	(2.9)	(2.3)	(1.7)	(2.8)
IT	57.4	33.4	49.3	56.2	71.3	74.5	31.5	48.1	58.4	67.9	76.2
	(1.3)	(2.9)	(3.2)	(2.6)	(2.2)	(2.5)	(3.1)	(2.8)	(2.9)	(2.3)	(2.1)

(continued)

TABLE 13
(CONTINUED)

		(A) Earnings					(B) Disposable Income				
Country	All	Q1	Q2	Q3	Q4	Q5	Q1	Q2	Q3	Q4	Q5
LT	38.1	27.0	34.6	39.6	42.9	51.0	24.6	33.5	35.8	43.5	49.4
	(2.7)	(5.0)	(5.7)	(7.8)	(6.0)	(5.9)	(6.5)	(5.1)	(7.0)	(5.9)	(6.0)
LU	71.4	54.0	64.8	78.1	88.2	88.4	51.1	65.9	81.8	85.6	87.3
	(1.6)	(4.2)	(3.7)	(3.5)	(2.8)	(2.7)	(4.1)	(4.2)	(3.6)	(2.9)	(2.5)
LV	32.9	20.0	26.6	38.5	43.1	59.8	18.9	29.3	32.4	39.3	64.1
	(2.3)	(4.4)	(4.7)	(5.7)	(5.2)	(5.4)	(5.2)	(5.1)	(4.5)	(4.7)	(4.9)
NL	71.6	58.9	67.8	75.0	77.2	81.5	58.4	70.1	72.3	76.7	79.3
	(1.5)	(4.1)	(4.0)	(3.4)	(4.0)	(3.0)	(4.8)	(4.0)	(3.7)	(2.9)	(2.8)
PL	55.1	40.6	49.7	54.6	62.5	65.3	42.8	50.6	50.0	59.3	64.3
	(1.3)	(3.3)	(3.6)	(3.2)	(2.7)	(2.2)	(3.5)	(3.5)	(3.1)	(2.7)	(2.2)
PT	75.6	65.4	73.4	80.1	81.0	82.2	68.8	73.4	75.7	80.2	81.0
	(1.2)	(2.7)	(2.4)	(2.3)	(2.4)	(2.3)	(3.0)	(2.4)	(2.4)	(2.3)	(2.5)
SI	53.0	39.9	41.8	51.3	61.2	73.4	36.2	42.6	46.9	57.3	72.5
	(1.8)	(3.9)	(3.3)	(4.0)	(3.5)	(3.1)	(4.8)	(3.9)	(3.7)	(3.7)	(2.8)
SK	47.1	32.3	34.6	44.8	53.9	63.8	34.4	30.7	38.1	54.2	60.6
	(2.2)	(4.7)	(4.7)	(5.5)	(4.7)	(4.6)	(8.1)	(6.4)	(5.0)	(4.3)	(4.3)
Euro Area	55.8	40.1	49.9	57.4	64.2	72.9	42.7	50.5	57.4	65.9	68.5

Note: Bootstrap standard errors are in parentheses.
Source: Authors' calculations based on third wave HFCS data.

Netherlands and Portugal. Across the household earnings/disposable income distribution those in the bottom quintile are almost always the least confident of getting such financial assistance, while those in the top quintile are most confident.

4. Conclusions and Policy Implications

The rapid spread of the COVID-19 virus around the world has resulted in an unprecedented global economic and social shock. While many studies have looked at the initial (differential) impact of the COVID-19 crisis on work and incomes, few have looked at the extent to which households possess the necessary means and skills to mitigate these initial effects. This article has estimated the potential losses in gross household earnings and disposable incomes arising from the pandemic-related labor supply shock and assessed the extent to which households in the Euro Area are likely to have liquid assets to draw on to buffer or cushion those losses, both before (earnings) and after (disposable income) governments' compensating measures. For this purpose it has exploited the rich data on household wealth in the Household Finance and Consumption Survey coordinated by the ECB.

We find that across the Euro Area on average only about half of the potential gross earnings losses could be buffered by the affected households drawing on their liquid assets in absence of government intervention, with that figure being as low as one-quarter in some countries (such as Croatia and Latvia) and as high as four-fifths in others (such as Austria and the Netherlands). Broadly speaking, average potential earnings losses are higher in Eastern and especially Southern European countries than in Western and Northern European ones.

Within each country those lower down the household earnings distribution face larger relative potential losses. At the same time they tend to have much lower liquid assets. Both the share of households on "low earnings" and inequality in the household earnings distribution increase when potential earnings losses "hit". This is attenuated by the capacity to draw on liquid assets, but only to a quite limited extent, especially for those hit most severely. Those towards the bottom are also the least confident about relying on financial assistance from family or friends. If total net wealth can be seen as a buffer it would represent a substantially higher proportion of potential losses than liquid assets alone, but it is doubtful that illiquid forms of wealth, such as the main residence often making up the bulk of that wealth, can generally serve that purpose, certainly in the shorter term.

The extent to which the estimated potential earnings losses actually occurred will have depended on the effectiveness and comprehensiveness of compensation measures undertaken by employers and governments. Automatic stabilizers will have operated and many governments also undertook specific support and compensatory measures. To take this into account we imputed the losses in disposable income due to COVID-19 that would be associated with the gross earnings losses we estimated, drawing in particular on the relationship between the impact of the crisis on market versus disposable income estimated by Christl *et al.* (2021) for the different European countries analyzed. On this basis the average potential loss in disposable income terms across Euro area countries is much smaller than that for gross earnings, at about 4 percent, and households on low incomes are

generally better protected by the tax-benefit system in relative terms. However, many of the households affected still have such a limited or negative liquid asset buffer that it is not even sufficient to cover the much smaller losses that remain after state support. As a consequence, about 20 percent of households on average would completely exhaust those buffers in cushioning income losses, though the combination of state support and running down assets is enough to avoid an increase in disposable income inequality in terms of the Gini coefficient.

The insights gleaned here into the savings buffers available to the types of households most likely to be affected are important for both micro-economic and macro-economic policy purposes. This is the case first in seeking to understand the role of tax-benefit systems in crisis periods. In responding to an earnings shock many of the automatic stabilizers in tax-benefit systems rely on information on other household incomes and on wealth. Indeed, many "safety net" social benefits are both income- and asset-tested (see e.g. Marchal *et al.*, 2021a for an overview of asset-testing in European minimum income protection schemes). Moreover, our findings should be helpful to governments in considering what kind of discretionary policies they may need to introduce in future crises and at whom these should be targeted. Many European countries for example introduced temporary suspension of mortgage repayments for workers hit by the crisis, but only a few introduced similar policies for renters. Since renters typically have lower incomes and assets the latter may prove a valuable policy to protect vulnerable households.

In-depth information on the savings and assets of the households most affected in the pandemic is also important from a macroeconomic perspective. The extent to which economies revive after the COVID-19 crisis crucially depends on how household consumption levels recover, on which both their income and savings are central influences. Our findings that many of the affected households do not have sufficient liquid assets to cover their potential losses suggests their consumption may well be constrained, increasing the need for fiscal and monetary policies to boost demand in Euro Area economies. Our results also highlight the significance of implemented government intervention to compensate earnings losses, as well as its limitations, since even in disposable income we find a significant share of households still unable to buffer the income loss through liquid savings. In-depth knowledge of the limited extent of asset buffers available to households most likely to be affected is crucial to assessing how well they could cope during the crisis, and thus the social and fiscal policies required to adequately protect them, as well as how economies will be able to exit from the crisis.

Finally, post-crisis policies could seek to increase the wealth buffers of households in the longer terms, and hence their financial resilience in potential future crises. Governments have a range of policy levers at their disposal to improve households' financial resilience by supporting poorer households to build up wealth, as discussed for example in OECD WISE (2021). These include encouraging savings schemes for small savers via preferential tax treatment; reviewing the design of asset tests in social insurance programs to avoid discouraging low-income households from accumulating wealth; designing equitable homeownership support programs for younger and lower-income households. More ambitiously, schemes to provide capital endowments ("minimum inheritance") for young adults could be put in place (on which see for example Morelli *et al.*, 2021).

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Supporting Information

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Appendix S1. Supporting Information