# Box III.1: Evolution of household income, support measures and implications for consumption

The Covid-19 pandemic has had very significant adverse effects on household income. Policymakers have deployed various support measures to cushion these effects and improve the households' consumption possibilities. Among them, fiscal aid programs and the withdrawal of pension savings. This box quantifies the drop in household income in Chile and evaluates the effect of these support policies on different income brackets. It also presents estimates on the propensity of households to consume by income quintiles[1,2]/. Both results are an important input for evaluating the perspectives for household consumption and savings.

## Impact of the sanitary crisis on the autonomous income of households

Based on the information at hand, it is projected that the autonomous income of households -income from work and other sources, not including transfers or other liquidity measures- will fall by 5.7% in 2020. The greatest contraction seems to have occurred during the second and third quarters, with a smaller reduction in the fourth (figure III.11, Panel a). By quintile, the lowest income groups have been the most affected (figure III.11, panel b).

## Effects of liquidity support measures

From March to date, various measures to support household income have been implemented. For the purposes of this analysis, these are grouped as follows: (i) fiscal transfers, including all government subsidies, whether monetary or in kind; (ii) mandatory use of savings, i.e., self-financing of individuals through unemployment insurance or pension funds[3]/; (iii) spending and credit facilities, grouping measures such as extensions of consumer and mortgage loans provided by the private sector, as well as government loans with favorable conditions. It is worth stressing that, although conceptually the fiscal transfers —which constitute income for the receiving households—are very different from withdrawing pension funds and the use of self-owned

unemployment funds—which are tantamount to dissaving and therefore a net decrease in wealth—, both types of measures have contributed to increase liquidity and mitigate the fall in autonomous income, so both are included in the analysis.

**Figure III.11**

Household income forecast, 2020
(annual change, percent)

**(a) By quarters**



**(b) By quintiles**
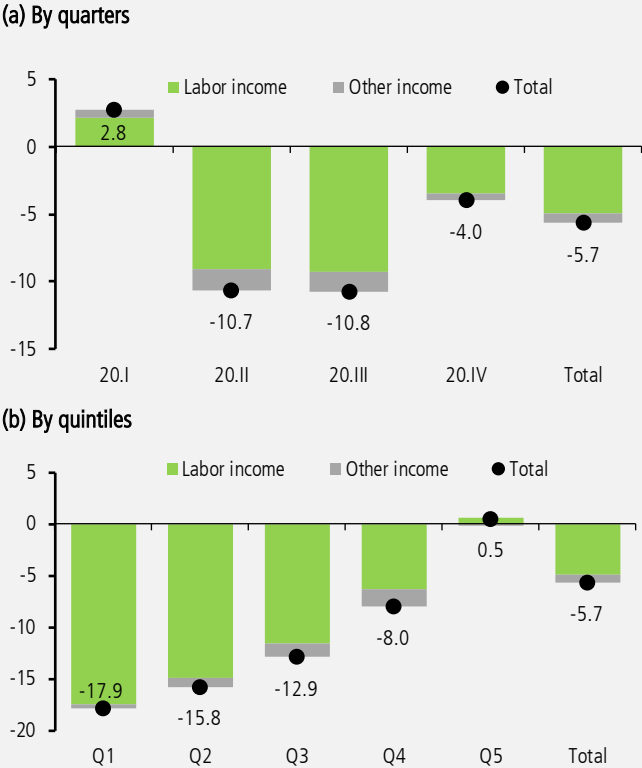


The time evolution of the measures shows that their effect concentrated in the second half of 2020. The injection of liquidity has been dominated by the use of mandatory savings, mainly through withdrawals of pension funds. Credit facilities have had a lesser effect. Fiscal transfers and payment facilities have been important from a historical perspective but have only partially compensated for the drop

---

[1]/For details on estimations and forecasts, see Barrero *et al.* (2020).

[2]/Each quintile represents 20% of national households, in ascending order, according to their autonomous per capita income. Thus, the first quintile represents the 20% with the lowest income, while the fifth quintile corresponds to the 20% with the highest income.

[3]/The unemployment insurance includes the Employment Protection Act and its additional use, which considers both the use of the Individual Accounts and the use of the Solidarity Fund as legally requested.

in revenue. For the year, the set of measures would more than offset the falls in revenues, with liquidity projected to grow 17.7% annually on a net basis (figure III.12, Panel a). By quintiles, estimates suggest that the package compensated for income declines across all groups, especially for quintiles 1st and 5th (figure III.12, Panel b). The former has benefited greatly from the transfers, which alone would compensate for the fall in their income. In turn, the liquidity of the 5th quintile, whose income was not affected on aggregate, has risen significantly due to self-financing measures, especially the use of pension savings.

Figure III.12

Effect of support measures on household income, 2020
(annual change, percentage)

(a) By quarters



Source: Barrero *et al.* (2020).

(b) By quintiles
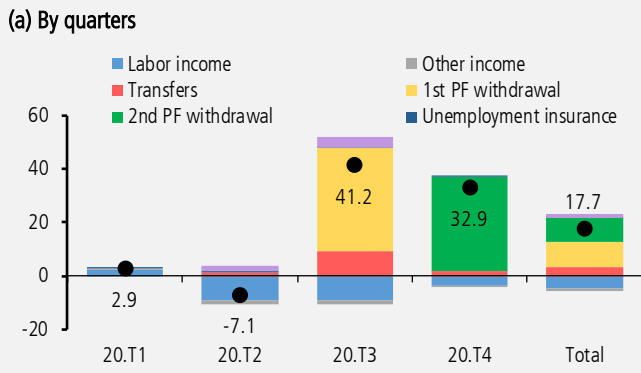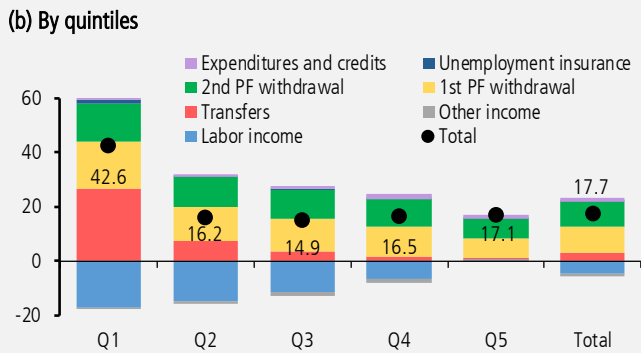


Source: Barrero *et al.* (2020).

In short, considering the evolution of autonomous income and the various support measures, it can be seen that the higher-income groups received a proportionally greater total injection of liquidity, especially because of the smaller effect on their income (figure III.13).

Figure III.13

Change in income and additional liquidity, 2020
(billions of dollars)
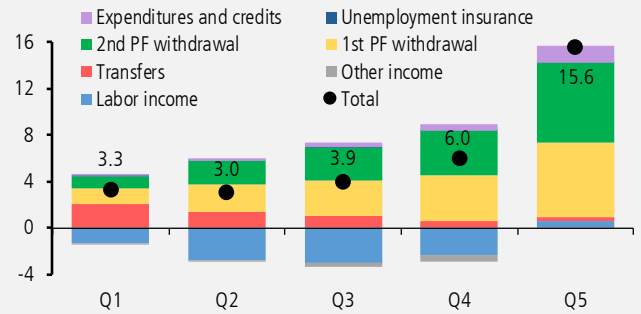


Source: Barrero *et al.* (2020).

## Future evolution of consumption and propensity to consume by quintiles

Given the differences in the behavior of autonomous income and liquidity by quintile, forecasting the evolution of consumption requires examining the different consumption patterns of each group, for which the analysis of the mean and marginal propensity to consume is relevant. Consistent with the level of resources received by each group, the data show that the fraction of permanent income that is destined to consumption—mean propensity—is very high in the lower quintiles and decreases as resources increase (figure III.14). Furthermore, the reaction of consumption to a shock on resources —marginal propensity— is higher in the lower quintiles of the distribution, but consistent with economic theory, its effect is smaller than it would be if faced with a permanent change in income.

Figure III.14

Mean and marginal propensities to consume by quintiles
(percentage of the available resources)
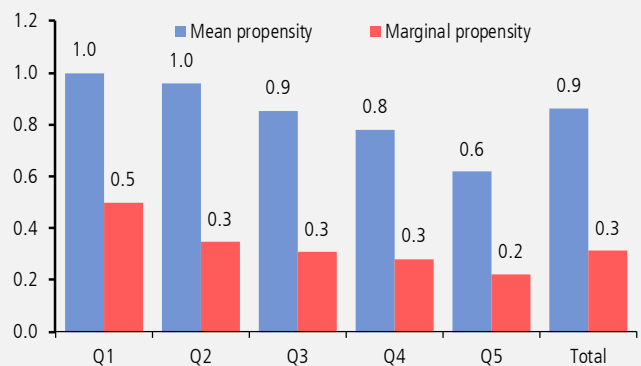


Source: Barrero *et al.* (2020).

Although the income support measures constitute a transitory increase in the households' disposable resources, it is possible that at the current juncture the marginal propensity of the lowest quintiles has matched the mean propensity. This is because the sharp drop in their income has meant that they have been able to cover a large proportion of their consumption with these transitory resources. For the highest quintile, however, this change in marginal propensity is unlikely to have occurred, because their earnings on average have not been affected as strongly. It is precisely the latter group that has seen its liquidity grow the most in 2020, and the second withdrawal of pension funds is especially relevant in their case (figure III.13), it is possible that the remainder of the liquidity generated will be allocated primarily to savings.

Considering the estimated propensities to consume and the differences in liquidity across quintiles, the impact of the two pension fund withdrawals on aggregate consumption is estimated. For the first withdrawal, it is assumed that households managed to cover their income losses in 2020, and going forward, the remaining liquidity will be spent based on three scenarios. In the first (scenario 1), the remaining funds are consumed in a proportion consistent with the marginal propensity of each group (figure III.14). The second scenario (scenario 2) considers that the first three quintiles spend on average between their mean and marginal propensities, while the fourth consumes according to its marginal propensity and the fifth does not spend on consumption. In scenario 3, an alternative estimate is used based on the crossing of data between unemployment insurance and pension fund withdrawals. For this scenario, it is assumed that employed persons will consume according to their marginal propensity, while the unemployed will make full use of their available surplus. The total resources of the second withdrawal are analyzed on the basis of these three scenarios.

Our projections suggest that the sum of the fiscal transfers and part of the first withdrawal were sufficient to compensate for the loss of household income. Up to the end of November, the first withdrawal amounted to US$17 billion, of which US$4.5 billion is estimated to compensate for income losses and thus will have an effect close to unity on consumption. Of the remaining US$12.5 billion, its effect on consumption will depend on the assumption chosen regarding the marginal propensity to consume, implying an additional impact in the range of US$3.1 to 4.4 billion (table III.1). The second withdrawal (potentially US$17 billion) is expected to have a smaller effect on consumption, as it corresponds entirely to remaining liquidity. In this case, the increase in consumption could be between US$4.1 and 5.8 billion depending on the

assumption about its use. Measured by its effect on activity, the first withdrawal would have implied a positive impact in the order of 1.8 percentage points of GDP accumulated in 2020 and 2021, while the effect of the second would be rather smaller, around 1.0 percentage points.

Table III.1

Consumption projection scenarios (1) (1)
(billions of dollars)

| | | Transf. | 1st PF withdrawal | 2nd PF withdrawal |
|---|---|---|---|---|
| Use of liquidity to cover income losses in 2020 | | 4,6 | 4,5 | |
| Use of remaining liquidity (2) | Scenario 1 | | 3,1 | 4,1 |
| | Scenario 2 | | 3,0 | 4,6 |
| | Scenario 3 | | 4,4 | 5,8 |
| Total projected liquidity use | | 4,6 | [ 7,5 – 8,9 ] | [ 4,1 – 5,8 ] |

(1) Figures show amount of liquidity injected by fiscal transfers and the two pension savings withdrawals, which would be allocated to private consumption during the years 2020-2022. (2) Scenario 1: The remainder is consumed according to marginal propensity. Scenario 2: The first three quintiles spend as a function of the average between their mean and marginal propensities; the fourth quintile consumes according to marginal propensity; the fifth quintile does not use it for consumption. Scenario 3: Employed persons will consume according to their marginal propensity, while the unemployed will make full use of the remaining funds available.
Source: Barrero *et al.* (2020).

## Conclusions

Consumption behavior will depend on several factors, including the pace of employment recovery, the response of households to the evolution of the pandemic, social distancing measures, and the impact of income support measures. Among the latter, the withdrawal of pension funds has dominated, injecting a significant quantity of liquidity that more than compensates for the projected falls in autonomous income by 2020. While a substantial proportion of this liquidity would be allocated to consumption, this effect is diminishing as the additional liquidity is mostly directed to higher income quintiles, who have been less affected and have a lower propensity to consume. Therefore, it can be anticipated that the second withdrawal of funds will have a more moderate impact on consumption than the first, because a greater share of the resources will be allocated to savings and/or investment.