

# The Health Crisis and the Financial Situation of Households in France – A Study on Monthly Bank Data

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**Abstract** – In view of the magnitude and the sudden nature of the health crisis in 2020, economists and statisticians have explored new sources of data to describe the development of the financial situation of households. The bank data used in this study, an anonymised panel of La Banque Postale customers, offer the twofold advantage of being able to be used practically in real time and of recording monthly (or even daily) changes in income, spending and wealth. First, we show that while the crisis affected incomes in a limited and temporary way in 2020 for most households (regardless of income level), populations on the margins of the labour market suffered more. We then specifically study the situation of recipients of the revenu de solidarité active (RSA), the French guaranteed minimum income. Although their social security benefits did not decrease in 2020, their incomes increased less than in a normal year because more of them did not return to employment. The exceptional government support paid out in May and November 2020 only partially counterbalanced these lower employment opportunities.

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This article presents a study of the impact of the health crisis on household income, spending, wealth and the risk of being overdrawn using the data of a large French bank, La Banque Postale (referred to hereinafter as LBP), which had approximately 11 million individual customers in 2020.<sup>1</sup> First, the effect of the health crisis on customers, based on their income levels, is analysed. Then, we take advantage of the characteristics of LBP's customers, who are less affluent on average than the general population, in order to study the situation of a particularly precarious population, the recipients of the *Revenu de solidarité active* (RSA, the guaranteed minimum income). The article focuses on the short-term impact, at the time when the crisis was in full swing.

The health crisis related to COVID-19 abruptly slowed economic activity in 2020: in France, GDP fell by 7.9% and household consumption decreased by 7.1% (Amoureux *et al.*, 2021). In order to avoid too great an impact on household incomes, the State put in place exceptional measures to support employees (in particular a system for short-time working) and households (direct payment of financial support to the most precarious). Finally, despite a sharp drop in production and consumption, household gross disposable income increased by 1.0% and purchasing power per consumption unit remained stable (Amoureux *et al.*, 2021).

However, these average developments do not necessarily represent the diversity of individual situations in the light of the health crisis. Some populations have barely been affected or not affected at all in terms of income, such as retirees or most civil servants. Other populations, such as short-time workers, have been more impacted, while others, such as some self-employed or people in precarious employment, have been impacted particularly badly. Indeed, as a result of the crisis, the self-employed have experienced a downturn in their activities, some employees have been laid off or have been unable to renew their contracts and some unemployed or inactive people have been unable to find new jobs. Thus, in France, the volumes of food aid distributed by charities increased markedly in 2020 (INSEE and DREES, 2021): 57% of food aid distribution centres report an increase in the volumes distributed, in comparison with a situation in which there is no health crisis. In addition, the number of households in receipt of the RSA<sup>2</sup> rose by 7.4% between the end of December 2019 and the end of December 2020 (DREES, 2021).

In view of the magnitude and the sudden nature of the crisis, national statistical institutes and researchers in many countries have explored new sources of high-frequency data to describe the development of the situation of households practically in real time. Banking data are particularly relevant in this context: they have the twofold advantage of being available earlier than tax data and of recording monthly (or even daily) changes in income, spending and wealth. Furthermore, they contain specific information on banking difficulties encountered, such as the use of overdrafts.

This article provides two contributions. One is to provide an overview of the impact of the health crisis on the financial situation of households in 2020. However, its primary contribution is to study a population on the margins of the labour market and, therefore, impacted particularly badly by the crisis. This precarious population, namely single people in receipt of the RSA in January 2019, is overdrawn for an average of 7.3 days for the month in our sample, which is a quarter of the time. During the 2020 crisis, they saw their prospects of returning to employment decrease and, consequently, their chances of escaping poverty. The large size of our sample (300,000 customers) allows us to study specific situations and isolate groups particularly affected by the crisis. Our data thus make it possible to shed new light on precarious situations and how they developed during the crisis. Regardless of whether the customers belong to affluent groups or not, we see that the crisis has a limited and temporary impact on incomes. Spending was more impacted and savings were built up, thereby reducing the number of days they were overdrawn.

The rest of the article is organised as follows: Section 1 presents a brief review of the empirical work to which the study relates, Section 2 describes the data used, Section 3 explains the estimation method and, lastly, Section 4 presents the results.

## 1. Brief Review of Related Empirical Work

This article belongs to two distinct strands of empirical literature, one on the effects of the crisis related to COVID-19 using banking

1. The initial results were presented in Bonnet *et al.* 2021b.  
2. The Revenu de solidarité active (RSA) ensures a minimum level of income for people without financial resources, the amount of which varies according to the composition of the household. The RSA is available, under certain conditions, for people aged 25 or over and to active young people aged 18 to 24 if they are single parents or can provide evidence of a certain period of employment. (<https://www.service-public.fr/particuliers/vosdroits/N19775>).

data in particular and the other on financial precariousness.

### 1.1. Assessments of the Impact of the Health Crisis Related to COVID-19 Using Bank Data

High-frequency data are a valuable source of information for studying behaviour during the health crisis. In particular, many authors base their analysis on bank data, which are available at a transactional level. In the United States, Baker *et al.* (2020) show an increase in consumption levels before the lockdown, followed by a decrease during said lockdown. They detail the heterogeneity of this decrease on the basis of expenditure items and the level of liquidity. Cox *et al.* (2020), focusing on the cash savings of households, especially the poorest ones, highlight the significant impact of US public policies implemented to limit the effects of the crisis. Similar work has been carried out, in particular by Andersen *et al.* (2020) in Denmark and Sweden. In the United Kingdom, Chronopoulos *et al.* (2021) show a decrease in consumption, heterogeneous according to gender, income and age, for spending both in supermarkets and in restaurants. In Spain, Aspachs *et al.* (2020) document the increase in income inequality caused by the health crisis using CaixaBank data. In France, Bounie *et al.* (2020), Fize *et al.* (2021) and Bonnet *et al.* (2021a) describe the decline in consumption and the creation of savings as a result of COVID-19 restrictions, according to household income, age and socio-professional category, based on bank data from Crédit Mutuel Alliance Fédérale. Our article stands out from the initial French contributions using bank data by the focus on individuals in precarious situations. It details and confirms the results obtained through microsimulation approaches (Buresi *et al.*, 2021; Institut des politiques publiques, 2021<sup>3</sup>).

### 1.2. Approaches to Financial Precariousness

Financial precariousness is traditionally documented using tax data and survey data. Based on these data, national statistical institutes measure changes in the poverty rate each year, i.e. the proportion of people living below the poverty line (set, in the EU, at 60% of the median standard of living). In France, in 2018, 9.3 million people were poor based on this definition, which is 14.8% of the population. However, the poverty rate only partially reflects precarious situations, which is why surveys also provide information on other aspects of financial difficulties, such

as over-indebtedness<sup>4</sup> and being overdrawn, together with more subjective elements such as households' perceptions of their own situation. According to INSEE's *Statistiques sur les ressources et les conditions de vie* surveys (SRCV, the French version of EU-SILC), which focus on statistics on income and living conditions, the proportion of households that were overdrawn at least once a year was 39% in 2019 and the proportion of households that considered their financial situation to be difficult was 17%.

Various indicators have been developed in the economic literature to describe wealth poverty, i.e. the situation of people without a financial "cushion" who consume almost all of their income immediately and have minimal savings. Haveman & Wolff (2004) set the wealth poverty threshold by comparing it to the income poverty threshold: a person is considered to be precarious if their wealth is less than three times the monthly income poverty threshold, or if liquidating their wealth cannot provide for their basic needs for three months. They apply these definitions to the Surveys of Consumer Finances<sup>5</sup> and find a wealth precariousness rate of 24.5% in 2001 in the United-States, for example. Aguiar *et al.* (2020) propose two possible definitions to describe so-called hand-to-mouth (HTM) situations, i.e. the situations of people who immediately consume the majority of their income. The first definition is based on all wealth: a person is living HTM if their wealth is less than two months' wages. The second definition focuses on cash wealth: a person is living HTM if the cash they own is less than one week's income. Lastly, Kaplan *et al.* (2014) use a notion of "rich HTMs", meaning people whose cash wealth is low in relation to their total wealth.

## 2. Data and Concepts Used

Based on the approaches to financial precariousness and taking into account the data we use, we will use three indicators of monetary precariousness. The first is similar to the poverty rate and is therefore based on income: a customer is precarious if the inflow into their accounts is less than €1,000 per month.<sup>6</sup> The second indicator is based on wealth: a customer is precarious if they

3. According to the IPP, the exceptional solidarity support represented more than 5% of pre-crisis income for the poorest twentieth of the population (Institut des Politiques Publiques, 2021).

4. Studied in particular by the Observatoire de l'Inclusion Bancaire (OIB).

5. These surveys conducted by the FED (Federal Reserve) provide information on the incomes, savings, pensions and general state of finances of the US population every three years.

6. This threshold of €1,000 was chosen rather than the poverty line because the income concepts used to calculate the latter do not correspond to those used in our study (for the record, the poverty line was €1,063 per month in France in 2018).

have less than €3,000 in their accounts. Finally, the third indicator corresponds to the average number of days for which the customer is overdrawn. We compute these indicators for different populations and measure monthly changes over the period.

Before analysing the impact of the crisis on different customer groups, we describe the strengths and weaknesses of the data used, then we define the concepts of spending, income and wealth used and we compare their changes with those published by INSEE and the Banque de France. Lastly, we describe the changes in the main precariousness indicators over the period from January 2019 to June 2021.

## 2.1. Description of the Data

The sample provided by LBP is an anonymised panel of 300,000 customers for whom LBP is the main bank for at least one month between January 2019 and December 2020.<sup>7</sup>

The data contain month-end account balances (individual or joint current accounts, savings accounts and securities accounts), all transactions made (amounts and dates of transactions by bank card, cheques, transfers, direct debits, withdrawals and deposits) and various socio-demographic data (age, gender, French department, marital status, urban unit segment where they live and socio-professional category). These data are available for each customer in the sample and over the entire period under consideration. The sampling carried out by LBP is stratified by age brackets (in multiples of five), and by department.

## 2.2. Methodological Challenges and Construction of the Final Sample

Banking data are a new, rich source of information for social science research. However, such data have a number of limitations, some of which are specific to the bank being studied. The methodological challenges posed by the use of such data are of various kinds:

- *Non-representativeness*: people without a bank account or those with accounts in alternative banking services, like tobacconists' shops, are excluded. Surveys that include populations without bank accounts (migrants and undocumented people, for example) are thus a crucial additional source of information to provide a more complete overview of precarious situations. In addition, LBP customers include lower proportions of executives and higher proportions of employees; the sample contains

almost no customers under 20 years of age and the customers are on average more fragile than customers of other banks. This limits the way in which the results can be extrapolated to all people with bank accounts in France. On the other hand, this customer structure is an asset for studying people in precarious situations and in particular recipients of statutory minimum social security benefits.

- *People holding accounts with multiple banks*: LBP customers may have bank accounts with other institutions, even if the bank has taken care to select the sample from among its customers that it identifies as banking primarily at LBP.

- *A partial view of wealth*: by definition, property wealth and movable wealth held outside of banks are absent from this type of data.

- *Difficulty in reconstructing households*: banking information is provided by LBP at individual level, not at household level. An analysis in terms of consumption units is therefore impossible. Any bank accounts of any other members of the household are not observed, even if their accounts are also held with LBP. If the customer has a joint account (37% of the sample), all transactions and amounts relating to that account are divided by the total number of account holders. Furthermore, even if LBP were to gather all the information it has about a household, the fact that some household members hold accounts with other financial institutions would prevent full knowledge of the financial assets held by households.

- *Inactive accounts*: in the data provided by LBP, some accounts seem to be little used or not used at all (virtually no spending or income); the number of inactive accounts increases over the period under study.

- *The identification of income*: only a date and an amount are provided but the nature of transfers is unknown. Thus, a transfer can correspond equally to a transfer between accounts and to the payment of a wage. Accordingly, these data are less rich than those used in other countries where transactions are labelled by banks. The absence of labels therefore makes it difficult to identify income. Adding together all inflows into an account in order to determine income could lead to both overestimating or underestimating customers' actual incomes. Indeed, the inclusion of inter-household and inter-account transfers

<sup>7</sup> We were able to access the data through the Secure Data Access Centre (CASD). All the processing operations to create the sample were carried out by the bank using its secure information systems, thus guaranteeing the protection of the digital privacy of their customers.

would lead to overestimating incomes, while the failure to take into account informal incomes that would not be deposited in bank accounts would lead to underestimating them.

In order to avoid changes being distorted by the increase in the number of inactive accounts over the period, only customers with outflows (cards, cheques, withdrawals and direct debits) and inflows of more than €150 over three consecutive months are included in the final sample. The self-employed are also excluded because their income is more difficult to identify.<sup>8</sup> Of the 300,000 LBP customers considered, only the 218,811 who are present continuously from January 2019 to June 2021 are retained. The sample is weighted based on the census by age (in multiples of five), and by department in order to match the sample to the general structure of the French population and to correct biases related to the stratification of the initial sampling.

### 2.3. The Concepts Used and their Measure

Due to the specific nature of these banking data, the income, spending and wealth studied here do not correspond to the concepts usually defined. Incomes are measured based on the sum of incoming transfers and cheques in amounts of less than €40,000.<sup>9</sup> Round amounts (expressed as integer numbers) are not taken into account, as they are more likely to correspond to transfers between individual accounts than to income; thus, for example, an amount of €500.00 is not taken into consideration, while an amount of €500.13 is. This restriction has the perverse effect of eliminating certain income from liberal professions.<sup>10</sup> In 2019, the average income calculated (without round amounts) in our sample is €1,710 (Table 1) and the median is €1,510. To refer to an order of magnitude, the average standard of living, i.e. gross disposable income divided by the number of consumption units of the household, was €2,054 in France in 2018 and the median level was €1,770 (INSEE, 2021a). In principle, the difference can be explained, aside from the difference in concept (we cannot calculate standard of living), by the fact that the customer base is less affluent than the general population and by people holding accounts with multiple banks. However, the main explanation for the difference seems to be the specific characteristics of the customer base. Indeed, for a given socio-professional category, the income levels of the LBP sample are close to those of the general population calculated using INSEE's *Enquêtes Revenus Fiscaux et Sociaux* (Tax and social incomes surveys) (see Online Appendix S1; link at the end of the article), except for

self-employed people for whom it is difficult to identify income. We conclude from this that our measurement of incomes is not systematically biased compared with incomes actually received and that the lower levels observed in our sample are mainly due to the composition of LBP's customer base.

Gross financial wealth is the sum of all the assets in accounts, excluding debts and loans: current (individual and joint) accounts, savings accounts, life insurance and securities accounts. The average wealth is €24,500 and the median wealth is €4,150. For the purpose of comparison, the gross financial wealth of individuals is slightly higher in the INSEE *Histoire de vie et Patrimoine* survey on life history and wealth: €32,430 on average, with the median being €7,550.<sup>11</sup> Once again, this particularly reflects the specific nature of LBP's customer base.

Monthly spending is the sum of card spending, withdrawals (at ATMs or over-the-counter), outgoing cheques and direct debits. In 2019, average monthly spending was €1,850 and the median was €1,540. According to the *Budget de Famille* survey on family budgets, average consumption was €1,450 and the median was €1,260. The amounts are slightly lower because some of the amounts we include in spending do not correspond to consumption.<sup>12</sup>

### 2.4. Comparison of Changes Using Aggregated Data

The observed changes in LBP data differ from those observed overall in France over the period. Indeed, aside from the economic conditions which are not different on average, the specific nature of LBP's customer base and the absence of incomings and outgoings in the sample contribute to differences. As the panel is composed of the same customers from the beginning to the end of the period, the observations of June 2021 correspond, by design, to individuals who are older than those of January 2019. Also by design, customers have a higher average length of time with the bank at the end of the

8. They can receive a greater number of incoming transfers and it is more difficult to distinguish between income and simple transfers between accounts.

9. Transfers over €40,000 are more likely to be transfers between households or the result, for example, of property sales.

10. The results without restrictions on income are presented in Online Appendix S2 and are not qualitatively different.

11. Calculation by the authors at individual level on the basis of the *Histoire de vie et Patrimoine* 2017-2018 survey.

12. Some of the cheques correspond to transfers between households. In addition, some of the direct debits correspond to taxation (property tax, housing tax and income tax catch-ups).

Table 1 – Monthly financial statistics of the sample

	2019	2020
Number of observations	218,811	218,811
Total spending (cards, cheques and direct debits) (€)		
average	1,850	1,770
median	1,540	1,490
Card spending (€)		
average	980	940
median	880	840
Income (excluding round amounts) (€)		
average	1,710	1,740
median	1,510	1,540
Total income (including round amounts) (€)		
average	2,470	2,520
median	1,890	1,940
Financial wealth (€)		
average	24,500	26,350
median	4,150	5,160
Illiquid financial wealth (€)		
average	13,460	13,890
median	0	0
Liquid financial wealth (€)		
average	11,040	12,450
median	3,010	3,800
Average authorised overdraft amount	810	830
Average number of days within authorised overdraft	3	3
Average number of days outside authorised overdraft	1	1
Average number of days overdrawn	4	4
Proportion in wealth insecurity (%)	46	43
Proportion in income insecurity (%)	30	28
Recipient of the May 2020 support (%)	8	8
Recipient of the November 2020 support (%)	9	9
Average age	51	52
Women (%)	55	55
Craftspeople, traders and company managers (%)	1	1
Managers and senior intellectual workers (%)	7	7
Middle-management professions (%)	6	6
Employees (%)	29	29
Blue-collar workers (%)	10	10
Retirees (%)	25	25
Other people without professional activity (%)	20	20

Notes: Observations are weighted using a marginal calibration on age and department based on the census.

Sources and coverage: La Banque Postale. France, sample of LBP main bank account customers present over the entire period of January 2019-June 2021 after filtering out inactive accounts. Authors' calculations.

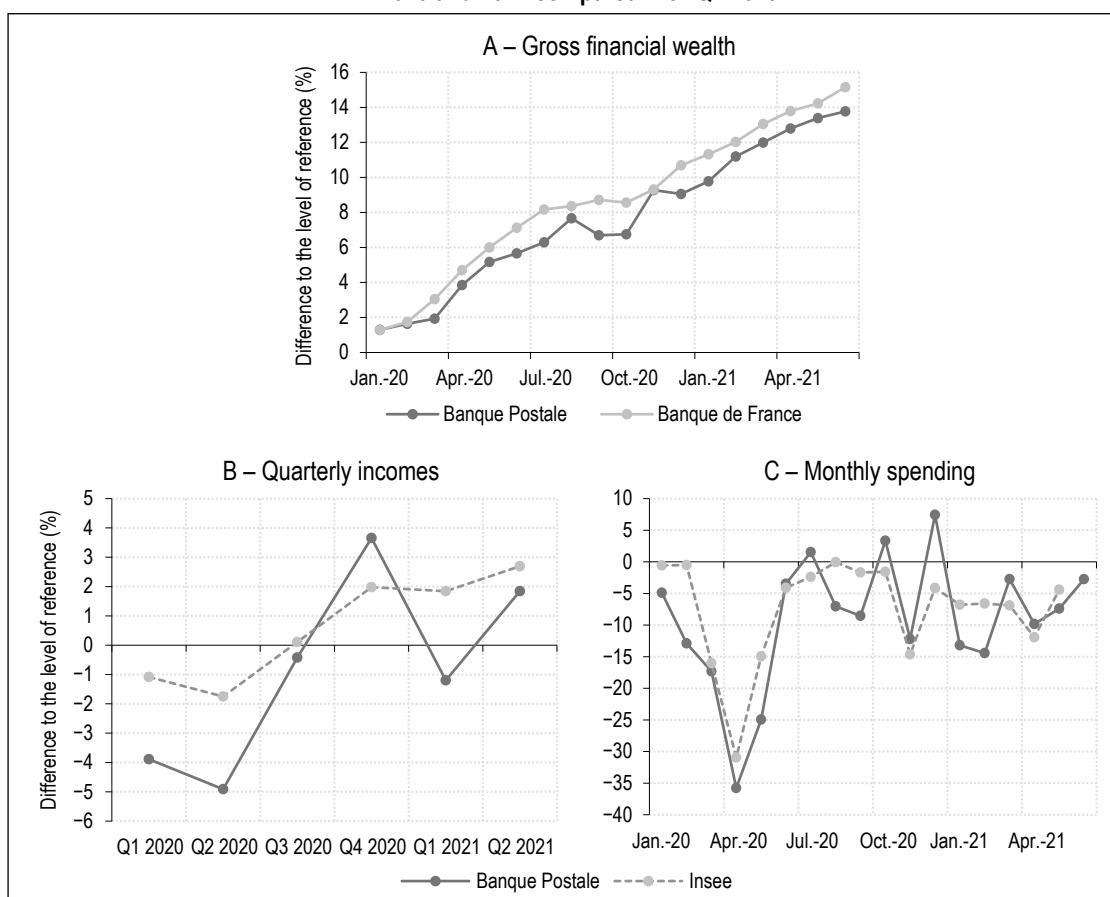
period than at the beginning. In particular, this can affect the balances in the accounts.

Changes in spending measured on the basis of LBP accounts are similar to the changes in consumption published by INSEE (Figure I). Changes in income differ more: for example, growth in income was 1.5% between 2019 and 2020 in our sample, compared with 1.0% in the national accounts. This higher growth can be explained in part by the ageing of the sample. Moreover, in banking data, it is difficult to

identify income perfectly on the basis of unlabelled inflows alone and the observed volatility is therefore more pronounced. In contrast, the change in gross financial wealth is almost identical to the change in total outstanding bank deposits of resident households and ISBLSMs<sup>13</sup> produced by the Banque de France. In this case, the concepts compared are much more similar.

13. *Non-profit institutions serving households* (Institutions sans but lucratif au service des ménages).

Figure I – Changes in consumption, income and gross financial wealth in 2020 and 2021 compared with Q4 2019



Notes: Observations are weighted using a marginal calibration on age and department based on the census. Changes in deviation from the last quarter of 2019.

Reading Note: according to INSEE data, consumption in April 2020 was 30% lower than over the last quarter in 2019.

Sources and Coverage: La Banque Postale; France, sample of LBP main bank account customers present over the entire period of January 2019-June 2021 after filtering out inactive accounts.  $N=218,811$ . INSEE, for quarterly incomes and consumption (INSEE, 2021b). Banque de France for gross financial wealth. Authors' calculations.

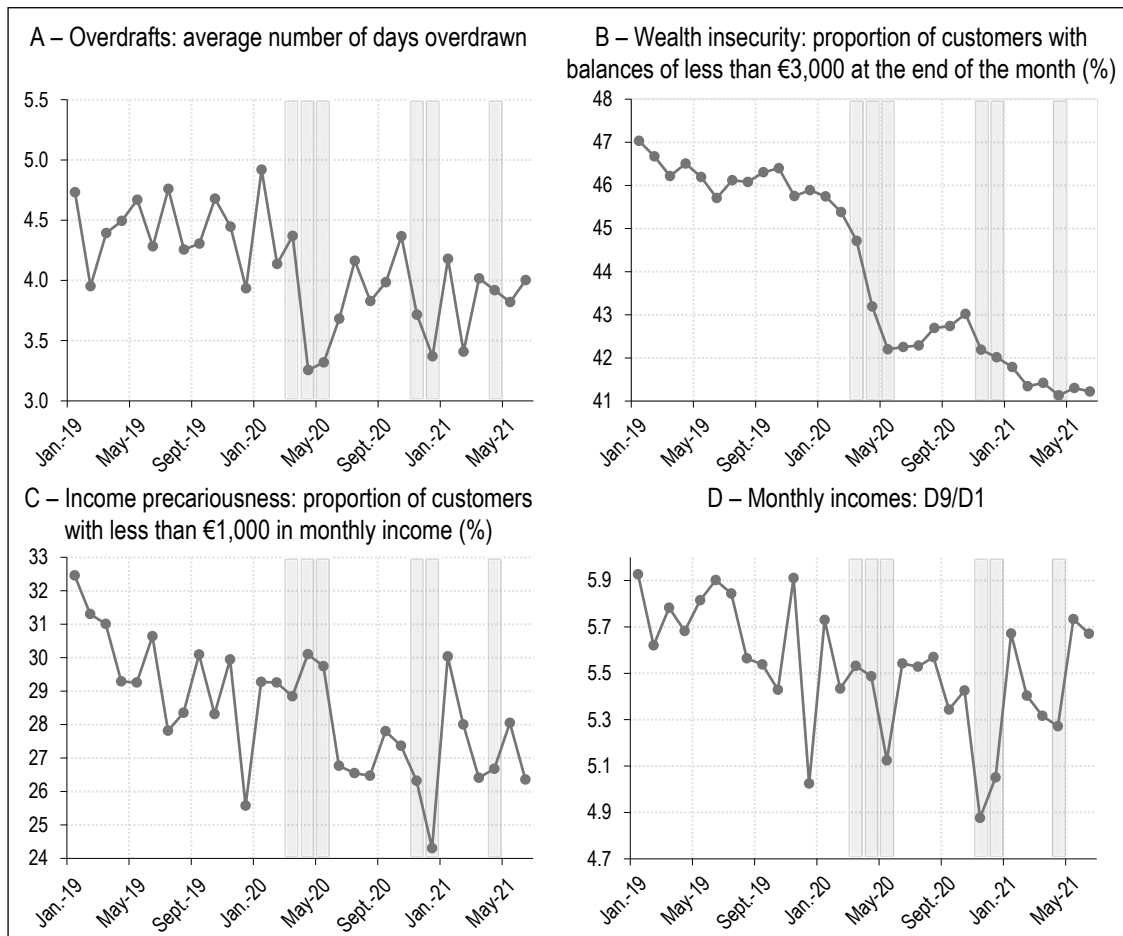
## 2.5. Changes in Indicators of Wealth Precariousness and Impact of the First Lockdown

Before studying the impact of the crisis on different populations, we measure changes in precariousness in our sample between January 2019 and June 2021. The three indicators used indicate a decrease in our sample (Figure II). However, again due in particular to the specific nature of LBP's customer base and the ageing of the sample this does not mean, *ipso facto*, that precariousness is falling in France over the period.

The changes in the precariousness indicators nevertheless provide information on how the health crisis played out. During the first lockdown, from 17 March to 10 May 2020, health restrictions caused a decrease in spending greater than the decrease in income, allowing supplementary savings to be accumulated. In this particular LBP sample, the proportion of

customers with less than €3,000 in their accounts falls from 44% to 42%, marking a break, between March and May 2020. It then rises again slightly once the lockdown is lifted, but remains significantly lower than the pre-crisis level. Additional assets in the accounts reduce the number of overdrawn customers. The less stringent lockdowns in November 2020 and then in April 2021 have more moderate effects than the first: savings, wealth precariousness and the number of overdrawn customers per month are stable over the period. In addition, lockdowns affect incomes less than savings. Thus, the proportion of customers with an income of less than €1,000 per month increases, temporarily, by 1 percentage point during the first lockdown, while the trend across this sample was decreasing in 2019. Finally, we see that the decrease in the D9/D1 income ratio slows down in 2020. While the decrease observed in 2019 can be attributed in part to the ageing of the sample, this slowdown is due to the impact

Figure II – Changes in precariousness and inequality indicators across a panel of LBP customers between 2019 and 2021



Notes: Observations are weighted using a marginal calibration on age and department based on the census.  
 Reading Note: In March 2020, 29% of customers in the sample had an income of less than €1,000  
 Sources and Coverage: La Banque Postale; France, sample of LBP main bank account customers present over the entire period of January 2019-June 2021 after filtering out inactive accounts. N=218,811. Authors' calculations.

of the crisis, which was slightly higher for low incomes than for high incomes (see Aspachs *et al.* in Spain and our results below).

### 3. Empirical Analysis

#### 3.1. Empirical Analysis Method

The next part of the study focuses on distinguishing between the impact of the health crisis itself and the trend observed in the data. To do this, we carry out an event study analysis.<sup>14</sup>

We estimate the impact of the health crisis on spending, incomes, wealth and overdrawn customers by measuring the difference between the values observed in 2020 and the expected or predicted values, had the pre-crisis trend measured between January 2019 and January 2020 continued. The identification of the effect is based on a comparison between a control group (customers in 2019) and a treatment group (customers in 2020). The model is written as follows:

$$Y_{i,p,A} = \alpha_i + \beta 1_{A=2020} + \gamma 1_{p=feb.-dec.} + \delta 1_{p=feb.-dec.} 1_{A=2020} + \varepsilon_{i,p,A} \quad (1)$$

where the terms  $1_{j=j'}$  are binary operators equal to 1 if  $j = j'$ .  $p$  can have two values (*Jan.* or *Feb.-Dec.*),  $Y_{i,p,A}$  represents the average of the variable studied over period  $p$  for an individual  $i$ , in the year  $A$ . The dependent variable ( $Y$ ) alternately represents spending, income, gross financial wealth or number of days overdrawn.  $\beta$  is a fixed effect and reflects the trend.<sup>15</sup>  $\alpha_i$  corresponds to the individual fixed effect. The coefficient of interest  $\delta$  is interpreted as the average difference between the observed value of  $Y$  (over the period February-December 2020)

14. MacKinley (1997) provides a theoretical and practical presentation of this type of econometric model.

15. This coefficient  $\beta$  is estimated only if the individual is present in both years. Although there are no incomings or outgoings in our sample, not all individuals are necessarily present each year in each regression due to the formation of sub-samples (by income group and specifically for RSA recipients) defined separately for each year.



and the expected value had the pre-crisis trend continued. This coefficient corresponds to the estimator of difference-in-differences (Lechner, 2011): the effect of the crisis on  $Y$  corresponds to the difference observed between its average value between February and December 2020 and its average value over the same period in 2019, from which the difference observed between January 2020 and January 2019 is subtracted. Formally:

$$\delta = \left\{ \begin{array}{l} E(Y_{p,A} | A = 2020, p = feb. - dec.) - \\ E(Y_{p,A} | A = 2019, p = feb. - dec.) \end{array} \right\} - \left\{ \begin{array}{l} E(Y_{p,A} | A = 2020, p = jan.) - \\ E(Y_{p,A} | A = 2019, p = jan.) \end{array} \right\} \quad (2)$$

The effect of the crisis is decomposed month by month using the following model:

$$Y_{i,m,A} = \alpha_i + \beta 1_{A=2020} + \sum_{t=2}^{12} \gamma_t 1_{m=t} + \sum_{t=2}^{12} \delta_t 1_{m=t} 1_{A=2020} + \varepsilon_{i,m,A} \quad (3)$$

where  $\gamma_t$  represents the fixed effect of the month  $t$  (the reference being January),  $\alpha_i$  corresponds to the individual fixed effect, and  $\delta_t$  corresponds to the effect of the month  $t$  specific to 2020 by controlling the pre-crisis trend. This coefficient therefore corresponds to the estimator of the difference-in-differences. Formally, for each month:

$$\delta_t = \left\{ \begin{array}{l} E(Y_{m,A} | A = 2020, m = t) - \\ E(Y_{m,A} | A = 2019, m = t) \end{array} \right\} - \left\{ \begin{array}{l} E(Y_{m,A} | A = 2020, m = 1) - \\ E(Y_{m,A} | A = 2019, m = 1) \end{array} \right\} \quad (4)$$

The effect of the crisis is thus measured month by month by the coefficients. For example, if  $Y$  represents wealth and  $\delta_t$  equals 100, this means that on average, for month  $t$ , wealth is €100 higher than expected by extrapolating the pre-crisis trend.

In order to interpret the coefficients as semi-elasticities, the income and spending variables are studied in log (after the zeros are replaced by half the smallest positive value).<sup>16</sup> This transformation allows us to interpret the coefficients as percentages after the  $100 * (\exp(\delta) - 1)$  transformation. Other concepts, such as overdrawn customers and wealth, are studied based on their level.

Regardless of the estimated model, the reported coefficients correspond to the within estimators and the standard errors are clustered at the individual level.

The method is therefore based on a comparison between 2019 and 2020, by controlling the pre-crisis trend, which is assessed between January 2019 and January 2020. The underlying identification hypothesis of the model is that in the absence of a crisis, the monthly changes to variable  $Y$  would be identical in 2019 and 2020. By definition, the counterfactual levels, i.e. which would have prevailed in 2020 in the absence of a crisis, are unknown and this hypothesis can be tested only in February 2020. Indeed, as of that date, the economic crisis had not yet broken out: if the hypothesis is valid, the differences between the observed values and the predicted values should not be significant for that month. In the majority of estimates, we cannot reject the null hypothesis of a common trend in February at a 5% level. We reject it for some of them (such as for the estimate relating to the overdrafts of customers in receipt of the RSA), however, the difference observed in February remains minor compared with the differences estimated for the following months. This gives us greater confidence in the idea that the common trend hypothesis is respected. In any event, the significant differences observed in 2020 due to the crisis economically dominate the possible different trends.<sup>17</sup>

Moreover, to interpret the observed differences as differences from a normal situation, it is still necessary to view 2019, which acts as the reference year, as a normal year. This seems to be the case, in the sense that the change in the growth of household consumption and gross disposable income in 2019 compared with previous years is negligible compared with the decrease observed in 2020. Indeed, according to INSEE's National accounts, there was an increase in actual household consumption of 2.1% in 2018 and 2.3% in 2019 (compared with the previous year), which contrasts with the decrease of 4.2% in 2020.

16. We can also use the reciprocal function of the hyperbolic sine (rather than the classical logarithmic transformation):  $\operatorname{arcsinh}(x) = \ln(x + \sqrt{1 + x^2})$ , which is defined in particular at zero. Zero values have very little presence in our observations (1.2% for income and none for spending). Thus, the results obtained are identical if the reciprocal function of the hyperbolic sine is used rather than the logarithmic function (see Online Appendix S3).

17. To test the sensitivity of our results to the pre-crisis trend estimation period, we replicate part of the analysis using January-February as the reference period (see Online Appendix S4). Including February in the reference period allows us to more precisely estimate the pre-crisis trend (the estimate is not based on January alone), but it deprives us of the possibility to test the common trend hypothesis (because the health crisis begins in March 2020). The results are qualitatively similar.

Similarly, gross disposable income increased by 2.6% in 2017, 3.1% in 2018 and 3.4% in 2019, compared with only 1.0% in 2020. These results support the assumption of normality for 2019: the differences between 2017, 2018 and 2019 are negligible compared with the differences between 2019 and 2020.

### 3.2. Construction of Income Groups and the Group of RSA Recipients

Whether to assess the impact of the crisis on different income groups or on the group of customers in receipt of the RSA, we chose not to construct the groups in 2019 and then follow their development in 2020. Indeed, the difference seen in 2020 would then be the sum of the effects of the health crisis, the ageing of the population and a natural effect of return to the mean. This would lead to underestimating the impact of the crisis for the less affluent and overestimating it for the more affluent. Indeed, each year, some of the individuals move from the poorest group to the richest group and *vice versa*. Even in a society with stable inequalities, the group of the least affluent people in a given year still sees its income increase more the following year than that of the most affluent, as long as there is upward and downward mobility. To avoid the latter two effects (ageing of the sample and return to the mean), we construct the income groups and the group of RSA recipients at the beginning of each year. We thus define four income groups based on income in January 2019 and four other groups based on income from January 2020 (see Appendix, Table A-1). For example, some individuals may be classified in the poorest group in 2019, but in a wealthier group in 2020, as the poorest customers in 2019 are not exactly the same as in 2020. The advantage of this procedure is that it provides income groups for 2020 that are comparable to their counterparts in 2019, in order to isolate the effect of the crisis.<sup>18</sup>

Measuring the standard of living using a single month of income introduces measurement errors: wealthy customers may be mistakenly classified in the low-income group if their incomes are exceptionally low in that month and *vice versa* (especially for self-employed workers). To correct this misclassification of customers on the basis of their income, we apply two restrictions: first, observations for which income is strictly below the maximum lump sum amount of the RSA in January are excluded; then, those for which spending in January is more than two standard errors from a group average are

removed. With these restrictions applied, the groups are ultimately not all of the same size.

Before presenting our results, we introduce the concept of pay day. It may differ for each customer. In the pay day analyses in this article, the income groups and the group of RSA recipients were constructed by retaining only individuals whose monthly income is paid on a given day in the month and is not subject to several substantial payments spread over the entire month. Specifically, only customers whose two highest incoming transfers into their accounts are at least 25 days apart and do not differ by more than 10%. This filter excludes 34% of individuals in Group 1, 36% of individuals in Group 2, 37% of individuals in Group 3, 50% of individuals in Group 4 and 24% of RSA recipients. These individuals are excluded only for analyses relating to pay day but are retained in the rest of the study.

## 4. Results

We first analyse the effect of the crisis by income group and then focus on the case of RSA recipients.

### 4.1. Analysis by Income Group

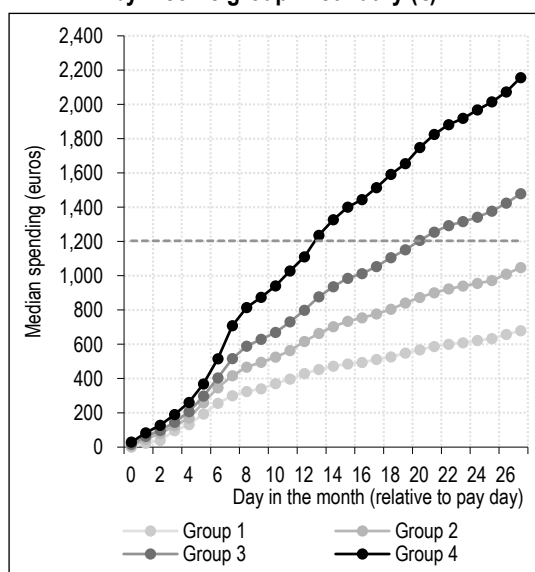
The four groups formed on the basis of income levels show significant differences in levels of spending, wealth and precariousness (see Appendix, Table A-2). Spending during the month reflects differences in the budget constraints that customers experience depending on their level of income. In accordance with the sample construction described in Section 3.2, the median amount of cumulative spending based on the number of days since pay day was calculated for a sub-sample of each group (Figure III).<sup>19</sup> The higher the group's incomes in January, the higher the median amount of cumulative spending, regardless of the time passed since pay day. In addition, the lower the group's incomes, the more concave the curve. Our interpretation is that while high-income groups manage to spread out their spending over the month, the lowest income groups consume more in the days following pay day and must limit their spending afterwards.<sup>20</sup>

18. The advantage of the method is that it neutralises the effects of a reversion to the mean and ageing by assuming that these two factors act in the same way in 2019 and 2020.

19. Online Appendix S5 presents complementary analyses of monthly spending by income group and for RSA recipients.

20. An alternative explanation might be that there is an alignment between the dates of pay day and the main direct debits (energy, rents, etc.), but this explanation would not be sufficient given that when limiting the analysis to spending by card and withdrawals, the curves are similar.

Figure III – Changes in spending based on number of days passed since pay day by income group in January (€)



Notes: Observations are weighted using a marginal calibration on age and department based on the census. The dotted line corresponds to the net monthly SMIC (French minimum wage) amount (€1,204) for a full-time employee as of 1 January 2019.

Reading Note: 12 days after their January 2019 pay day, 50% of individuals in the first income quartile in January 2019 had spent more than €400.

Sources and Coverage: La Banque Postale; France, sample of LBP main bank account customers present over the entire period of January 2019-June 2021 with regular incomes over the period January 2019-February 2019, after filtering out inactive accounts.

#### 4.1.1 Effect of the Crisis on Incomes and Spending

During the first lockdown from March to May 2020, spending and incomes were far below their expected level, i.e. as can be determined by extrapolation based on the pre-crisis trend (Figure IV). In April, incomes were 12.0% lower than expected for the less affluent and

11.0% lower for the more affluent. Spending, in turn, was 33.8% lower for the less affluent and 38.7% lower for the more affluent. Outside this period, spending and incomes in 2020 were close to expected levels. The November lockdown had a much lower impact. We even see a slight recovery in incomes, which is more marked for the less affluent due to the exceptional support related to COVID-19 (€150, plus €100 per dependent child under 20 years of age), granted in particular to recipients of the RSA and the *Allocation de Solidarité Spécifique* (ASS, an unemployment benefit for those no longer entitled to standard unemployment benefits).

Over the year as a whole, the income deficit was significantly greater for the group with the lowest incomes than for the other groups, contributing to driving inequalities (this results in a slowdown of the decrease in the D9/D1 ratio in our ageing sample): the incomes of the lowest income group are 2.7% lower than expected, compared with 1.9% for the second group, 1.2% for the third group and 1.6% for the fourth group (Table 2). The impact on spending is similar across the groups (the differences are not significant).

#### 4.1.2. Effects on Savings and Overdraft Use

In all income groups, the decrease in spending has bolstered savings: wealth precariousness and the frequency of overdraft use have decreased. In value, people with high incomes saved most and built up their financial wealth: in December 2020, the gross financial wealth of the group of customers with the highest incomes at the beginning of the year was €1,190 higher than expected, compared with €380 for the group of customers with the lowest incomes (Figure V).

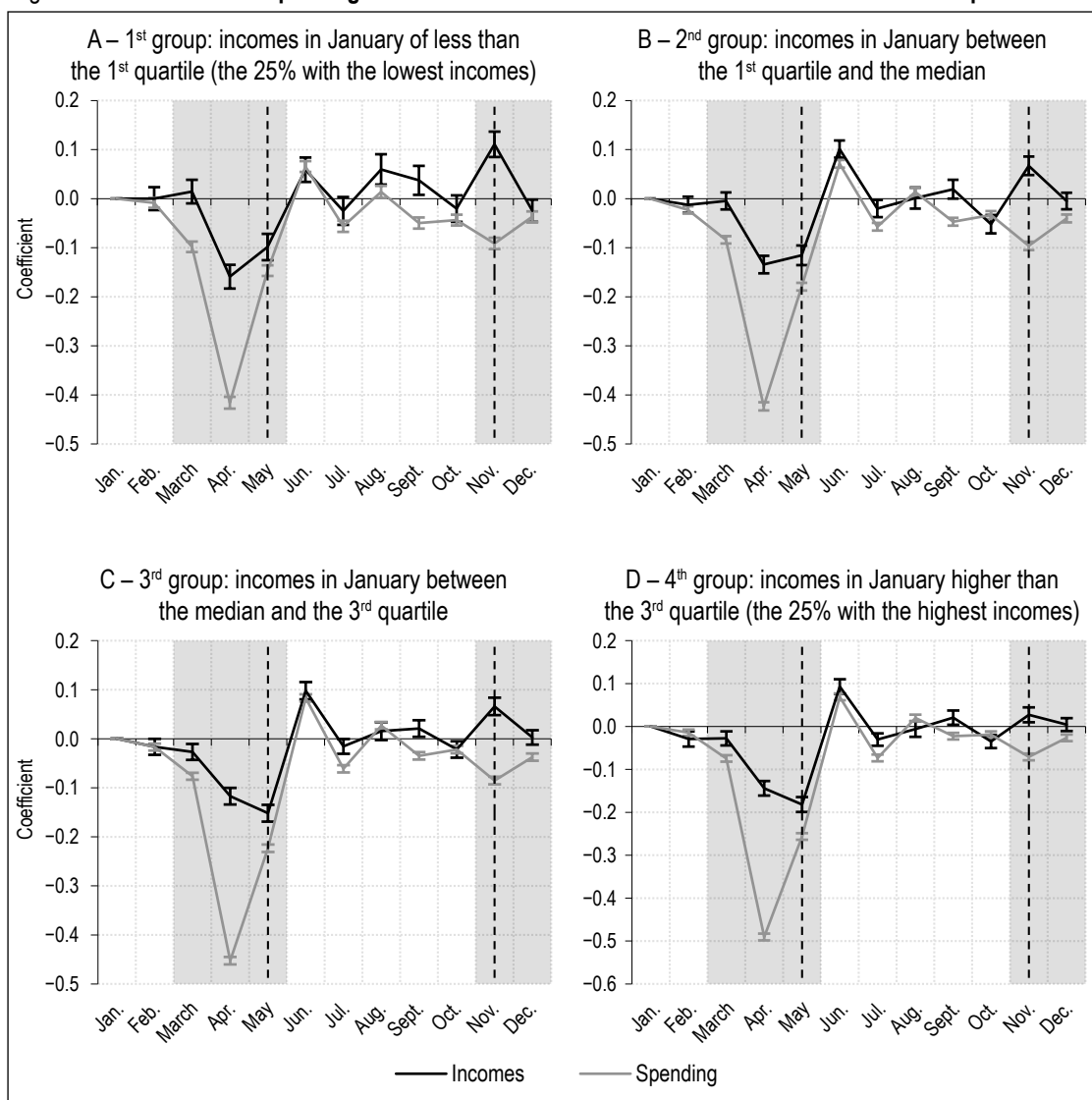
Table 2 – Average annual difference in incomes, spending and overdrafts compared with the level expected from extrapolating the pre-crisis trend

Income group		Dependent variable		
		Log Incomes	Log Spending	Overdrafts
1 <sup>st</sup> group: incomes in January of less than the 1 <sup>st</sup> quartile	Coefficient (std. error)	-0.027 (0.003)	-0.074 (0.004)	-0.863 (0.046)
	R <sup>2</sup>	0.217	0.065	0.030
2 <sup>nd</sup> group: incomes in January between the 1 <sup>st</sup> quartile and the median	Coefficient (std. error)	-0.019 (0.002)	-0.077 (0.003)	-0.671 (0.033)
	R <sup>2</sup>	0.086	0.036	0.021
3 <sup>rd</sup> group: incomes in January between the median and the 3 <sup>rd</sup> quartile	Coefficient (std. error)	-0.012 (0.002)	-0.075 (0.003)	-0.973 (0.032)
	R <sup>2</sup>	0.026	0.028	0.019
4 <sup>th</sup> group: incomes in January higher than the 3 <sup>rd</sup> quartile	Coefficient (std. error)	-0.016 (0.003)	-0.078 (0.003)	-0.792 (0.030)
	R <sup>2</sup>	0.064	0.011	0.014

Notes: The coefficients correspond to the within estimation of parameter  $\delta$  in equation (1). A different regression is therefore estimated for each income group and each variable. For incomes and spending, the interpretation of a difference of  $100 \cdot X$  in % is an approximation of  $100 \cdot (\exp(X) - 1)$ . Standard errors (shown in brackets) are clustered at the individual level. The number of observations in each group is detailed in Table A-2. For example, in the first income group,  $N=31,189$  individuals in 2019 and  $N=35,162$  in 2020.

Sources and coverage: La Banque Postale. France, sample of LBP main bank account customers present over the entire period of January 2019-June 2021 after filtering out inactive accounts. Authors' calculations.

Figure IV – Differences in spending and incomes between the levels observed in 2020 and the expected levels



Notes: Observations are weighted using a marginal calibration on age and department based on the census. The lockdown periods are represented by grey bands. The values displayed are the estimates of the coefficients  $\delta_i$  of the equation (3) where the dependent variable is  $\log(Y)$ , with  $Y$  representing spending and incomes. A different regression is therefore estimated for each income group and each variable. The interpretation of a difference of  $100 \times X$  in % is an approximation of the actual difference equal to  $100 \times (\exp(X) - 1)$ . For April, when spending fell sharply, the approximation is less accurate. The intervals provided are 95% confidence intervals. The standard errors are clustered at the individual level. The number of observations in each group is detailed in Table A-2. For example, in the first income group,  $N=31,189$  individuals in 2019 and  $N=35,162$  in 2020. The dates of payment of the exceptional government support taken into account in the study are shown in dotted lines.

Reading Note: In April 2020, the quarter of customers with the lowest incomes in January had spending 16% below the level expected had the pre-crisis trend continued (the figure corresponds to the logarithmic approximation, but the exact effect is reported in the text).

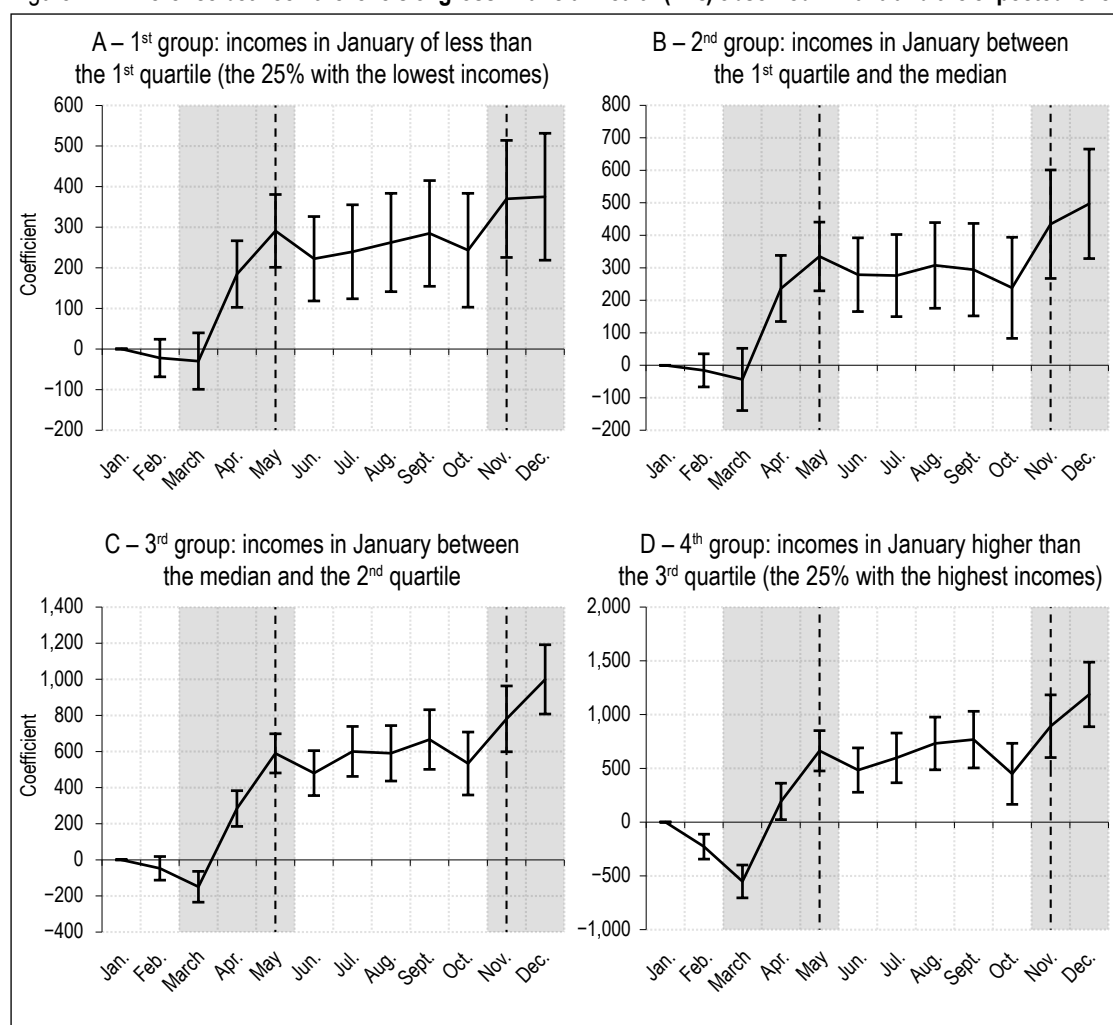
Sources and Coverage: La Banque Postale; France, sample of LBP main bank account customers present over the entire period of January 2019-June 2021 after filtering out inactive accounts. Authors' calculations.

The average number of days overdrawn is lower than expected over the entire crisis period (each month, starting in March), particularly for the group with the lowest incomes (Figure VI).

These results, which show a decrease in the number of days overdrawn and an increase in savings, may seem contradictory to the results obtained from surveys. Thus, a quarter of the respondents to the EpiCov survey on epidemiology and living conditions linked to COVID-19 report a deterioration in their financial situation on average and the lower the initial standard

of living, the higher this proportion becomes (Givord & Silhol, 2020). However, the perception of a deteriorated financial situation does not necessarily translate into a fall in the balances of bank accounts. If their income from work falls and the economic outlook darkens, households may see their financial situation as deteriorating even if their ability to save improves temporarily. The CAMME survey on monthly household consumer confidence thus shows that the proportion of households reporting an accumulation of debts or needing to dip into their savings decreased in 2020 (Clerc *et al.*, 2021). Similarly,

Figure V – Difference between the levels of gross financial wealth (in €) observed in 2020 and the expected levels



Notes: Observations are weighted using a marginal calibration on age and department based on the census. The lockdown periods are represented by grey bands. The values are the estimates of the coefficients  $\delta_i$  of the equation (3). The intervals provided are 95% confidence intervals. The standard errors are clustered at the individual level. The number of observations in each group are detailed in Table A-2 in the Appendix. For example, in the first income group,  $N=31,189$  individuals in 2019 and  $N=35,162$  in 2020. The dates of payment of the exceptional government support taken into account in the study are shown in dotted lines.

Reading Note: In April 2020, the quarter of customers with the lowest incomes in January had an average gross wealth of €180 higher than the level expected had the pre-crisis trend continued.

Sources and Coverage: La Banque Postale; France, sample of LBP main bank account customers present over the entire period of January 2019–June 2021 after filtering out inactive accounts. Authors' calculations.

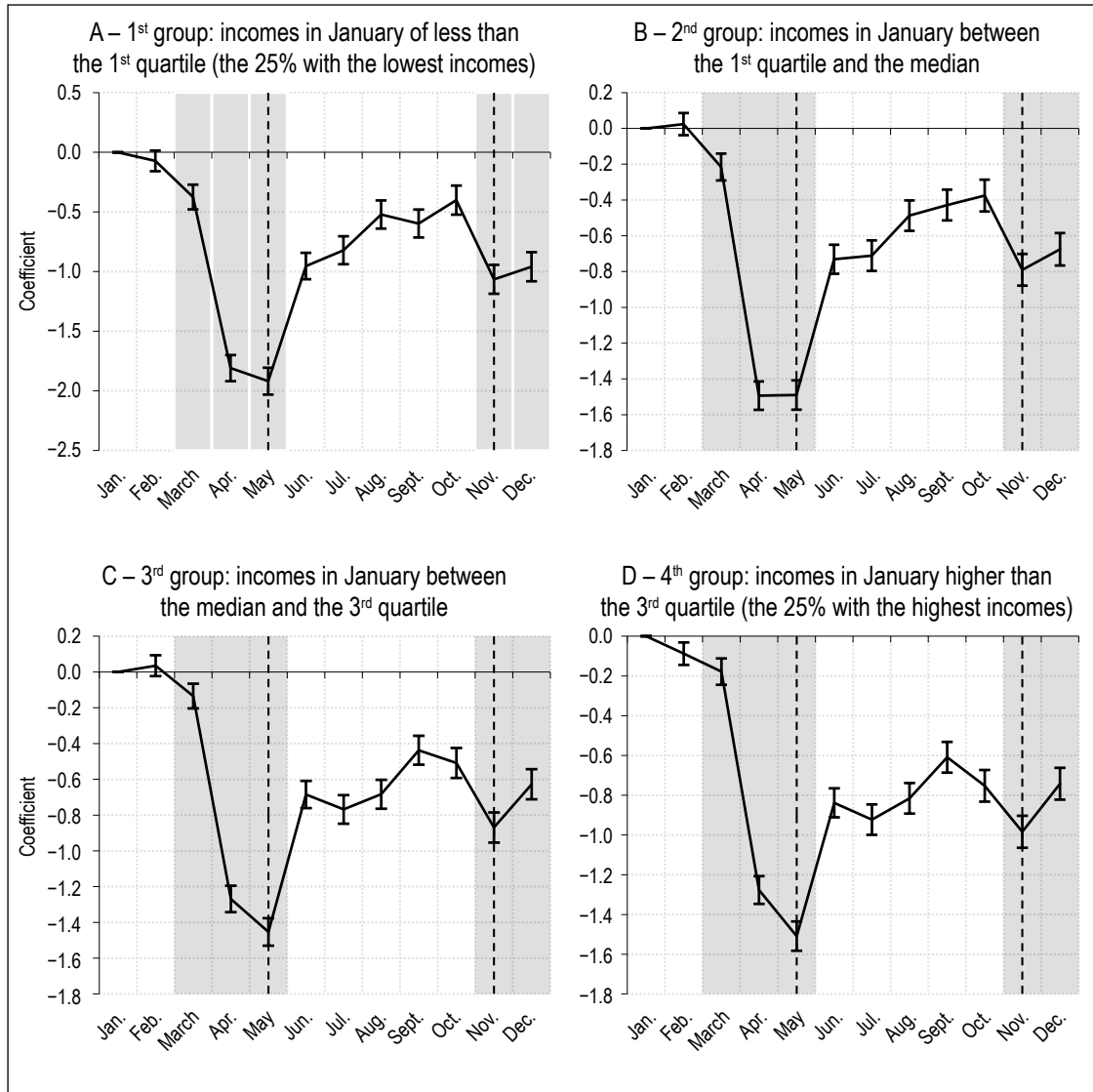
the Observatoire de l'Inclusion Bancaire indicates that the number of excessive debt management proceedings initiated decreased in 2020.

#### 4.2. The Situation of RSA Recipients in 2020

In 2020, fixed-term employment and part-time employment fell: the most precarious jobs and the least skilled jobs suffered more from the crisis than others (INSEE, 2021). In order to compensate for the increase in precariousness due to this fall in employment, the State paid exceptional support to certain recipients of social security benefits, in May and November in particular. The LBP banking data make it possible to measure the capacity of such support to prevent the deterioration of the situation of certain specific populations, such

as RSA recipients. At the end of 2019, there were 1,916,100 RSA recipients, 55% of whom were single people without dependants (DREES, 2021). Since the latter represent the majority of RSA recipients and are easy to identify in our data when they receive the maximum amount of the benefit (with or without housing benefit), we can specifically study this population. In our filtered sample, there were 4,160 of these recipients in 2019 and 3,830 in 2020. The recipients are identified in the data if they receive a transfer in January or February corresponding to the maximum lump sum of the RSA for a single person without dependants (with or without housing benefit) to the nearest cent (€550.93 or €484.82 in January and February 2019, €559.74 or €492.57 in January and February 2020).

Figure VI – Difference between the number of days overdrawn observed in 2020 and expected



Notes: Cf. Figure V.

Reading Note: In April 2020, the quarter of customers with the lowest incomes in January were overdrawn for an average of 1.8 days less than expected had the pre-crisis trend continued.

Sources and Coverage: La Banque Postale; France, sample of LBP main bank account customers present over the entire period of January 2019-June 2021 after filtering out inactive accounts. Authors' calculations.

#### 4.2.1. RSA Recipients at the Beginning of 2019

This population is characterised by a very marked precariousness, regardless of the indicator used. In January 2019, their average gross financial wealth was €3,020, their median wealth was €70 and it is negative<sup>21</sup> (–€30) in the first quartile (see Appendix, Table A-3). The average wealth of these recipients is €7,240 lower than that of the customers in the sample in the group with the lowest incomes. For RSA recipients, spending constraints are significant: the average amount of their spending is €860 and the median amount is €560. They are overdrawn for 7.3 days in the month, i.e. a quarter of the time (compared to 5.8 days for the group with the lowest incomes), and the proportion of those who are precarious

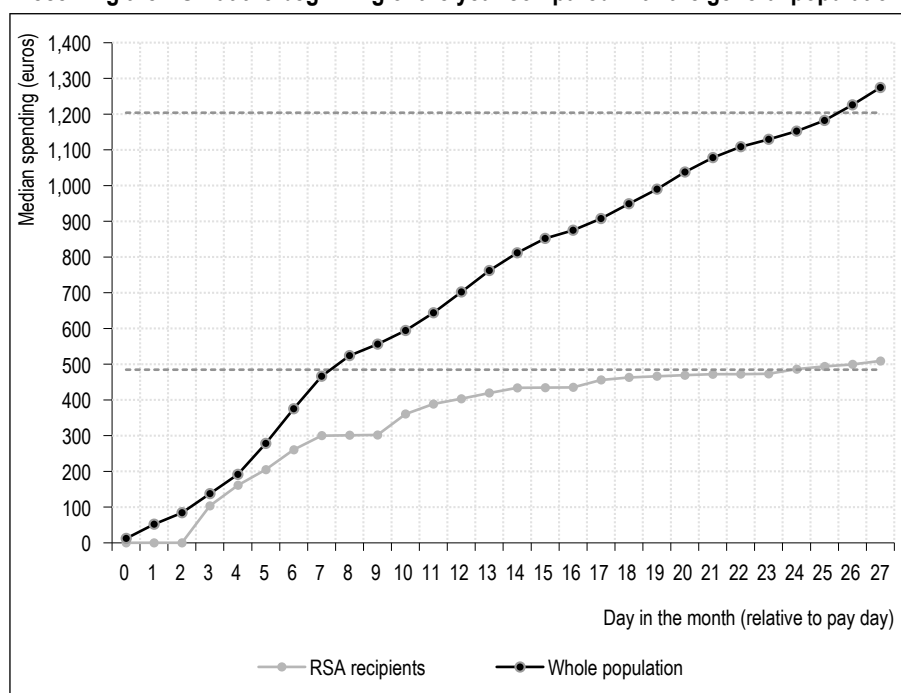
in terms of income (inflows of less than €1,000) or wealth (balance less than €3,000) is around 90%.<sup>22</sup>

The profile of the changes in their spending appears to be particular: the curve representing the median level of spending, in accordance with the number of days elapsed since pay day, is highly concave (Figure VII). This means that

21. This negative wealth corresponds to a negative amount in current accounts (debts and loans are not taken into account for the calculation of the financial wealth)

22. The proportion of customers who are precarious in terms of income in January in this group is not 100%, even if the amount of the benefit is well below the threshold of €1,000, for two reasons. The first is that the group includes customers who are RSA recipients in February but not in January. The second is that some customers have just returned to work and still receive the benefit.

Figure VII – Changes in spending (in €) based on the number of days passed since pay day for people receiving the RSA at the beginning of the year compared with the general population



Notes: Observations are weighted using a marginal calibration on age and department based on the census. The dotted lines correspond to the net monthly SMIC (French minimum wage) amounts for a full-time employee as of 1 January 2019 (€1,204) and the maximum RSA amount for a single person with no dependent children and without the housing benefit as of 1 January 2019 (€484.82). The curve of RSA recipients plateaus on days 1, 2, 8 and 9: the RSA was paid on Friday 4 January in 2019 and the days in question correspond to weekends.

Reading Note: 10 days after their January 2019 pay day, 50% of individuals who were full-rate RSA recipients in January or February had spent more than €350.

Sources and Coverage: La Banque Postale; France, sample of LBP main bank account customers with regular incomes over the period January 2019-February 2019, after filtering out inactive accounts. Authors' calculations.

spending is concentrated in the first few days after pay day. This high level of concavity can be a sign of the use of food support at the end of the month, when the balance of bank accounts is zero or almost zero. Ten days after payment, 50% of the RSA recipients studied have already spent more than two thirds of the maximum amount of the RSA (without housing benefit).<sup>23</sup>

The *Budget de Famille* survey on family budgets helps to shed light on the budgetary constraints faced by RSA recipients on two levels. First of all, the recipients live on tight cashflows and do not save (spending accounts for 100% of the total monthly income, compared with 78% on average). Second, basic necessities account for a major part of their spending: housing and food represent more than half of their spending, compared with an average of one third for the rest of the population.

#### 4.2.2. Fewer Returns to Work, More Social Transfers

For these RSA recipients, the impact of the health crisis on spending is lower at the beginning of the year than for the rest of the population. In 2020, their annual spending was only 5.1%

lower than expected. This is due to the specific nature of the structure of their consumption, which is mainly focused on basic necessities. As with the rest of the sample, this negative spending gap is accompanied by a reduction in the number of days overdrawn, throughout the year (Figure VIII). Over the whole of 2020, the level of the number of overdraft days is 1.5 days below the expected level (Table 3).

In contrast, the impact of the crisis on their incomes is greater than for the rest of the sample. For 2020 as a whole, the incomes of RSA recipients are 3.5% lower than expected (Table 3). Without the exceptional support in May and November, it would have been 7.0%. In addition, incomes are below the expected level in every month of the year, with the exception of May and November, when exceptional support was paid out (Figure IX). As we will see, this difference is likely due to less frequent returns to employment.

In order to estimate the proportion of returns to work, we calculate the proportion of RSA

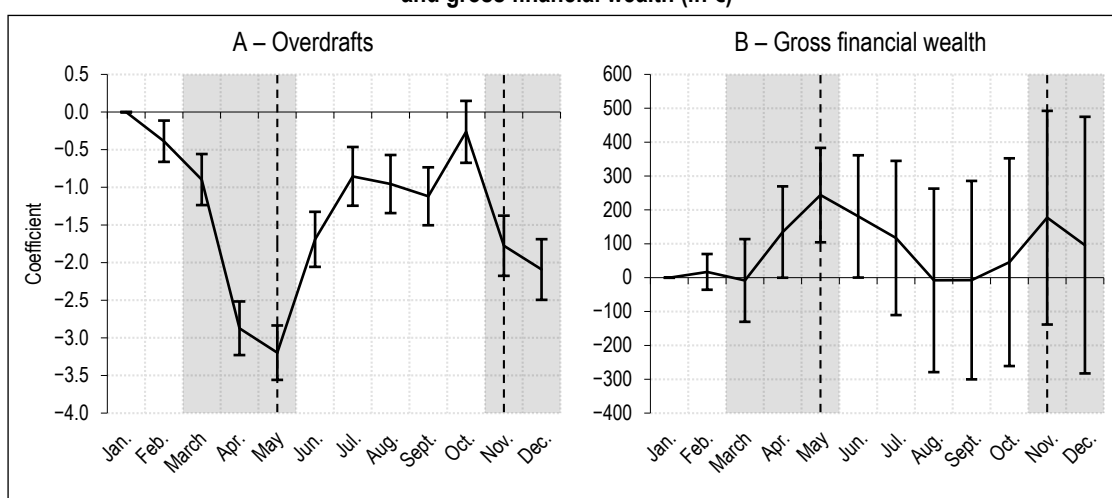
<sup>23</sup> However, the benefit does not necessarily correspond to all of the income received in a given month.

**Table 3 – Average annual difference in incomes, spending and overdrafts compared with the level expected from extrapolating the pre-crisis trend, for full-rate RSA recipients at the beginning of the year**

	Dependent variable			
	Log Incomes	Log Incomes excluding support	Log Spending	Overdrafts
Coefficient (std. error)	-0.036 (0.019)	-0.073 (0.019)	-0.052 (0.016)	-1.464 (0.178)
$R^2$	0.590	0.589	0.695	0.816

Notes: Observations are weighted using a marginal calibration on age and department based on the census. The coefficients correspond to the within estimation of parameter  $\delta$  in equation (1). The interpretation of a difference of  $100 \times X$  in % is an approximation of  $100 \times (\exp(X) - 1)$ . Standard errors are shown in brackets and clustered at the individual level.  $N=4,284$  individuals in 2019 and  $N=3,958$  in 2020. Sources and coverage: La Banque Postale, France. Sample of LBP main bank account customers present over the entire period of January 2019-June 2021 after filtering out inactive accounts. Single customers with no dependants in receipt of the full-rate RSA at the beginning of the year. Authors' calculations.

**Figure VIII – Difference for full-rate RSA recipients at the beginning of the year, between the levels observed in 2020 and those expected based on the pre-crisis trend, in number of days overdrawn and gross financial wealth (in €)**



Notes: Observations are weighted using a marginal calibration on age and department based on the census. The lockdown periods are represented by grey bands. The values displayed are the estimates of the coefficients  $\delta_t$  of the equation (3). The intervals provided are 95% confidence intervals. The standard errors are clustered at the individual level.  $N=4,284$  individuals in 2019 and  $N=3,958$  in 2020. The dates of payment of the exceptional government support taken into account in the study are shown in dotted lines.

Reading Note: In April 2020, single people without dependent children and in receipt of RSA at the beginning of the year were overdrawn for 2.9 days less than expected had the pre-crisis trend continued.

Sources and Coverage: La Banque Postale; France, sample of LBP main bank account customers present over the entire period of January 2019-June 2021 after filtering out inactive accounts. Single customers with no dependants in receipt of the full-rate RSA at the beginning of the year. Authors' calculations.

recipients at the beginning of the year whose main source of income is not the family benefit payments (from the *Caisse d'allocations familiales*, CAF). Specifically, this corresponds to the proportion of observations that do not receive the majority of their income on the day on which RSA payments are made (usually the 5<sup>th</sup> of each month). In both 2019 and 2020, this proportion increased as people returned to work throughout the year (Figure X). However, from the first lockdown in 2020, this increase slowed down. At the end of 2020, this proportion was 4 percentage points lower than in 2019.

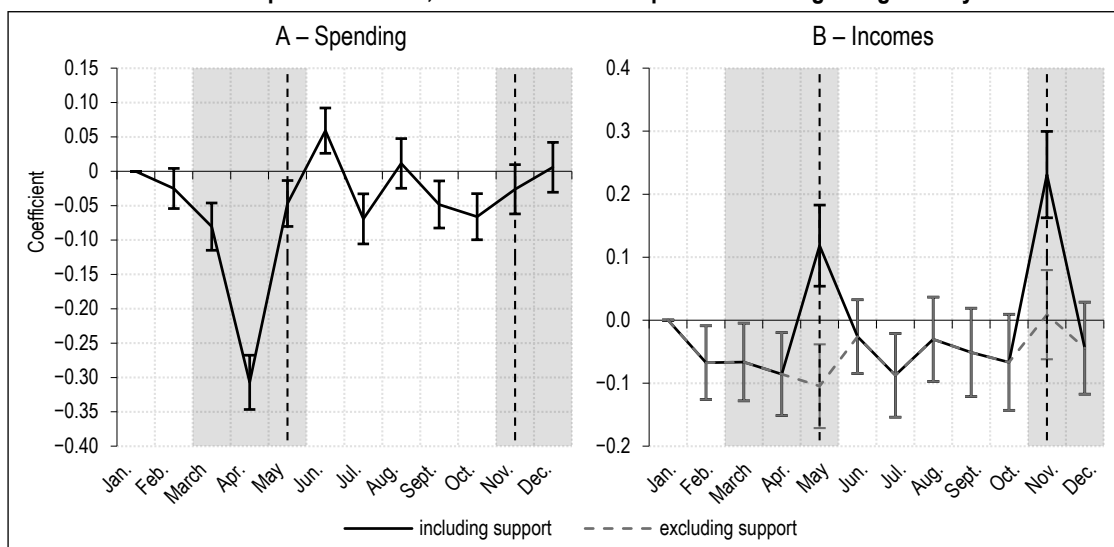
The payment agency points out that the number of people becoming RSA recipients remained stable at around 100,000 per month over the period from January to August 2020, while the number of people ending their receipt of the

RSA fell to around 60,000 between March and May of the same year (CNAF, 2020).

While average income in 2020 was below the expected level, the median income was the same, except in May and November, when it was higher. The majority of the RSA recipients studied therefore did not experience a drop in income. Indeed, whatever the year under consideration, the majority of recipients at the beginning of the year do not find employment in that year: only 24% of RSA recipients at the end of 2019 had been recipients for less than a year (DREES, 2021). The income of recipients at the beginning of the year therefore depends exclusively on social transfers (and possibly family transfers); however, social transfers did not decrease in 2020, they even increased thanks to exceptional assistance. In order to study the



Figure IX – Difference in spending and incomes between the levels observed in 2020 and those expected based on the pre-crisis trend, for full-rate RSA recipients at the beginning of the year

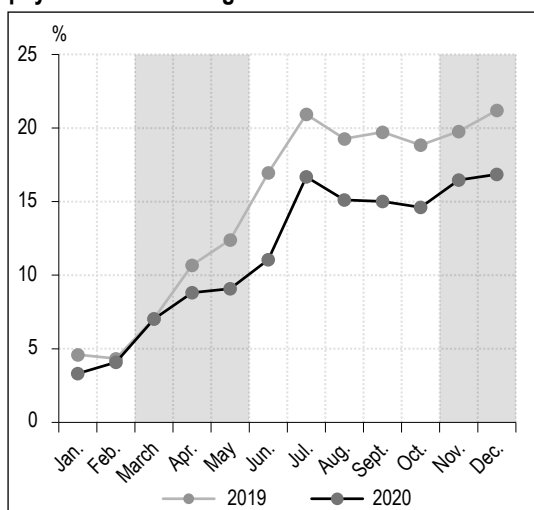


Note: Cf. Figure VIII.

Reading Note: In April 2020, full-rate RSA recipients in January and/or February 2019 had incomes 9% lower than the level expected had the pre-crisis trend continued (the figure corresponds to the logarithmic approximation, but the exact effect is reported in the text).

Sources and Coverage: La Banque Postale. France, sample of LBP main bank account customers present over the entire period of January 2019-June 2021 after filtering out inactive accounts. Single customers with no dependent children in receipt of the full-rate RSA at the beginning of the year. Authors' calculations.

Figure X – Proportion of RSA recipients at the beginning of the year for whom CAF benefit payments are no longer the main source of income



Notes: Observations are weighted using a marginal calibration on age and department based on the census. The fact that this proportion is not 0 in January and February is due to customers who received the RSA for only one of the two months.  $N=4,284$  individuals in 2019 and  $N=3,958$  in 2020.

Reading Note: In April 2019, the proportion of single customers with no dependants and in receipt of the full-rate RSA at the beginning of the year whose main source of income was no longer CAF benefit payments was 11%.

Sources and Coverage: La Banque Postale; France, sample of LBP main bank account customers present over the entire period of January 2019-June 2021 after filtering out inactive accounts. Authors' calculations.

case of long-term recipients, we restricted our sample to RSA recipients at the beginning of 2020 who were still recipients in December. For this population, the impact of the health

crisis on spending is zero for the whole year, despite the decrease during the first lockdown (see Online Appendix, S6). Incomes are at the expected level except for the months in which exceptional support is received, when they were higher. Thus, their financial situation improved in 2020 with the crisis and the support. The negative impact on the incomes of RSA recipients at the beginning of the year was therefore focused on the minority of recipients who would have been able to find work without the crisis.

\* \*  
\*

Banking data allow monthly, and even sub-monthly, monitoring of the financial situation of households. They have the dual advantage over surveys of being available practically in real time and, given the size of the sample, of making it possible to study very specific situations, such as that of RSA recipients. Our work thus highlights the importance of exceptional support measures for this specific population. We highlight the entry of a section of the population into precariousness, which was also seen both through the increase in the number of RSA recipients and increases in demand for food aid.

The speed of access, frequency and size of the sample of banking data are all assets that

statisticians can use to assess the impacts of a sudden crisis and the effects of support measures in detail. Compared with administrative and especially tax data, these data are among the few sources (together with the *Budget de Famille* survey) to provide information on income, wealth and consumption, which is crucial for measuring household financial fragility. However, the *Budget de Famille* survey, which is a cross section survey conducted every five years, does not make it possible to assess the impact of shocks such as those of the health crisis, due to a lack of longitudinal household monitoring.

Nevertheless, several limitations affecting this study need to be highlighted. Representativeness is imperfect, individuals without bank accounts (migrants or undocumented people, for example) or those with accounts in alternative banking services, such as tobacconists' shops, are completely absent from traditional bank data. Surveys must therefore be conducted to study

these populations. Furthermore, the lack of differentiation of incoming transfers between income, social transfers and family transfers prevents a granular description of the trajectories of precariousness. In-depth partnerships between researchers, statistical institutes and banking networks should ultimately allow for a better differentiation of income and thus a better understanding of the trajectories of financial precariousness.

Lastly, our study focuses solely on the impact of the crisis in the short term, i.e. when it was in full swing in 2020. Further studies will need to be carried out to investigate its long-term effects once the support measures have been suspended. Similarly, our study focuses on monetary precariousness and other data should be used to study the other aspects of precariousness: food insecurity, poor housing, energy insecurity or other more psychological forms of insecurity related to technology or social isolation. □

#### **Link to the Online Appendix:**

[www.insee.fr/en/statistiques/fichier/6530558/ES534-35\\_Bonnet-et-al\\_Online-Appendix.pdf](http://www.insee.fr/en/statistiques/fichier/6530558/ES534-35_Bonnet-et-al_Online-Appendix.pdf)

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## ADDITIONAL FINANCIAL STATISTICS ON LBP CUSTOMER GROUPS

Table A-1 – Income quartiles (in €) in January used to form the income groups.

	January 2019	January 2020
1 <sup>st</sup> quartile	850	910
Median	1,370	1,430
3 <sup>rd</sup> quartile	1,980	2,040

Notes: Observations are weighted using a marginal calibration on age and department based on the census.

Sources and coverage: La Banque Postale. France, sample of LBP main bank account customers present over the entire period of January 2019-June 2021 after filtering out inactive accounts. Authors' calculations.

Table A-2 – Monthly financial statistics in January by income group

	Group 1		Group 2		Group 3		Group 4	
	2019	2020	2019	2020	2019	2020	2019	2020
Number of people	31,189	35,162	53,129	52,893	53,060	52,614	54,392	53,750
Total spending (cards, cheques and direct debits) (€)								
average	930	980	1,320	1,370	1,790	1,820	2,850	2,850
median	760	800	1,130	1,190	1,560	1,610	2,290	2,310
Card spending (€)								
average	540	570	690	730	860	890	1,180	1,210
median	490	500	640	670	790	830	1,070	1,100
Income (excluding round amounts) (€)								
average	660	710	1,110	1,170	1,650	1,710	3,260	3,340
median	670	720	1,100	1,170	1,630	1,690	2,560	2,630
Total income (including round amounts) (€)								
average	1,000	1,080	1,520	1,630	2,260	2,360	4,570	4,740
median	770	830	1,230	1,310	1,820	1,900	3,130	3,250
Financial wealth (€)								
average	9,920	11,260	16,530	18,000	26,050	27,390	41,950	44,330
median	590	700	1,820	2,130	5,530	6,090	14,200	15,170
Illiquid financial wealth (€)								
average	5,220	5,860	8,930	9,650	14,540	15,010	23,920	25,070
median	0	0	0	0	0	0	100	80
Liquid financial wealth (€)								
average	4,710	5,400	7,590	8,350	11,510	12,380	18,030	19,260
median	500	600	1,420	1,630	3,620	4,010	8,360	8,860
Authorised overdraft amount (€)	360	380	550	570	850	860	1,460	1,430
Average number of days within authorised overdraft	4	4	4	4	4	4	3	3
Average number of days outside authorised overdraft	2	2	1	1	1	1	1	1
Average number of days overdrawn	6	6	5	5	4	4	4	4
Proportion in wealth insecurity (%)	69	66	56	54	41	40	24	24
Proportion in income insecurity (%)	100	100	30	17	0	0	0	0
Recipient of the May 2020 support (%)	22	22	8	7	4	4	2	2
Recipient of the November 2020 support (%)	24	24	10	10	5	5	3	3
Average age	51	53	53	54	53	53	51	52
Women (%)	57	57	58	57	57	56	53	53
Craftspeople, traders and company managers (%)	2	2	1	1	1	1	1	1
Managers and senior intellectual workers (%)	2	2	2	2	4	4	19	19
Middle-management professions (%)	3	3	3	3	6	6	11	11
Employees (%)	21	20	26	26	35	36	32	32
Blue-collar workers (%)	9	9	11	11	11	11	7	7
Retirees (%)	24	25	32	31	3	29	22	22
Other people without professional activity (%)	37	36	24	24	12	13	7	7

Notes: Observations are weighted using a marginal calibration on age and department based on the census.

Sources and coverage: La Banque Postale. France, sample of LBP main bank account customers present over the entire period of January 2019-June 2021 after filtering out inactive accounts. Authors' calculations.

Table A-3 – Monthly financial statistics in January for RSA recipient groups

	RSA 2019	RSA 2020
Number of observations	4,284	3,958
Total spending (cards, cheques and direct debits) (€)		
average	860	840
median	560	590
Card spending (€)		
average	640	650
median	470	480
Income (excluding round amounts) (€)		
average	690	720
median	480	490
Total income (including round amounts) (€)		
average	970	950
median	510	530
Financial wealth (€)		
average	2,970	2,760
median	60	60
Illiquid financial wealth (€)		
average	1,050	960
median	0	0
Liquid financial wealth (€)		
average	1,920	1,800
median	50	50
Average age	44	45
Women (%)	36	36
Craftspeople, traders and company managers (%)	3	3
Managers and senior intellectual workers (%)	1	1
Middle-management professions (%)	1	1
Employees (%)	15	14
Blue-collar workers (%)	8	8
Retirees (%)	4	3
Other people without professional activity	64	66
Authorised overdraft amount	170	170
Average number of days within authorised overdraft	5	5
Average number of days outside authorised overdraft	2	3
Average number of days overdrawn	7	9
Proportion in wealth insecurity (%)	87	86
Proportion in income insecurity (%)	87	87
Recipient of the May 2020 support (%)	72	84
Recipient of the November 2020 support (%)	73	84

Notes: Observations are weighted using a marginal calibration on age and department based on the census. The statistics correspond to the January amounts for those single customers with no dependants who received the full-rate RSA in January or February. Sources and coverage: La Banque Postale. France, sample of LBP main bank account customers present over the entire period of January 2019-June 2021 after filtering out inactive accounts. Authors' calculations.

