



Survey on Italian Household Income and Wealth

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Main findings

The Survey on Household Income and Wealth has undergone significant methodological changes to improve the statistical coverage of indebted households and of high-income households. These changes have brought the estimates obtained through the survey considerably closer to the corresponding figures in the national accounts. Consistent with the improved ability to identify the population segments that hold proportionally higher shares of the variables of interest, the average values and the inequality indices of income and wealth based on the new sample design are significantly higher, though the incidence of the most common financial difficulties is largely unchanged.

Using appropriate statistical techniques which enable comparison with the previous editions of the survey, in 2020 the average income of Italian households, at constant prices and adjusted for household composition, was 3.7 per cent higher than in 2016, the last year for which the figure is available, but still almost 8 percentage points lower compared with the peak recorded in 2006, before the last three recessions that hit the Italian economy. Between 2016 and 2020 the Gini index of equivalent income, a composite indicator of the degree of inequality, remained practically unchanged, while there was a decrease in the share of low-income individuals, i.e. those whose share of equivalent income is below 60 per cent of the median value.

Average net wealth, valued at constant prices, rose by 1.7 per cent between 2016 and 2020, mainly thanks to the financial component, which was driven both by the growth in savings and the increased value of assets. The gap widened between the mean and the median values for net wealth, an indicator of the degree of inequality in its distribution. The Gini index of net household wealth rose by 3 percentage points.

The share of indebted households started increasing again, interrupting the decline underway since 2008. Among these households, there was a 4 percentage point decrease compared with 2016 in the share of financially vulnerable households (i.e. those with an equivalent income below the median level and a yearly debt service expenditure exceeding 30 per cent of their income). The broadening of the range of cases in which it was possible to obtain a debt moratorium in 2020 contributed to the decrease.

Italian household income and wealth in 2020¹

The new survey

Last December the Bank of Italy completed the 38th edition of the Survey on Household Income and Wealth (SHIW) for the year 2020. The survey was initially supposed to be carried out in 2020 in reference to 2019 but was postponed to 2021 due to the COVID-19 pandemic.

Compared with the previous survey, referring to 2016, significant methodological changes were introduced with this edition based on international best practices.² Specifically, the sample of households to be interviewed was selected based not only on traditional demographic variables but also on data regarding households' income and indebtedness that were previously unavailable.³ On the one hand, this improved the ability to identify segments of the population (e.g. those with higher income or most heavily indebted) that usually, due to their limited size, are not captured by surveys using samples based solely on demographic variables such as age and place of residence. On the other hand, the methodological changes allowed greater accuracy in the estimate of population weights – i.e. the number of households in the population that are comparable to the surveyed household – by taking into account income and indebtedness classes in addition to the traditional socio-demographic characteristics⁴ (see the Appendix: 'Weighting scheme for the Survey on Household Income and Wealth for 2020'). Overall, these changes improved the survey's ability to observe segments of the population, which, despite being rather small, hold proportionally higher shares of the core variables, thus painting a more accurate picture of the aggregate values and their distribution across the population.

However, the remarkable improvement in the representativeness of the SHIW caused breaks in the time series. It is only possible to compare previous survey findings by applying statistical methods that completely neutralize the effects of the changes introduced in 2020.⁵ More specifically, a data re-weighting scheme was implemented – using the available data on the income and indebtedness of the households interviewed for the 2016 and 2020 surveys – thanks to which it is now possible to approximate the composition of the sample that would have been obtained without the changes made to the sampling methodology⁶ (see the Appendix: 'Weighting scheme for the Survey on

¹ The report was prepared by David Loschiavo, Eleonora Porreca, Antonietta di Salvatore, Federico Tullio and Francesca Zanichelli. We would like to thank the households that agreed to take part in the survey, providing the information requested in sometimes lengthy and demanding interviews without any compensation. <https://www.bancaditalia.it/statistiche/tematiche/indagini-famiglie-imprese/bilanci-famiglie/index.html?com.dotmarketing.htmlpage.language=1>.

² See 'The Household Finance and Consumption Survey: Methodological report for the 2017 wave', ECB, Statistics Paper Series, 35, 2020, pp. 30-34.

³ Households' stratification based on income and indebtedness was added at a second stage of survey design. For more information see G. Barcaroli, G. Ilardi, A. Neri, and T. Tuoto, 'Optimal sampling design for household finance surveys using administrative income data', Istituto Nazionale di Statistica, *Rivista di statistica ufficiale*, 2, 2021 and A. di Salvatore, G. Ilardi G. and A. Neri, 'L'uso della Centrale dei rischi per migliorare la qualità delle stime del debito basate sull'Indagine sui bilanci delle famiglie italiane', Banca d'Italia, mimeo, 2020 (only in Italian).

⁴ For instance, high-income households are notoriously more difficult to survey because they are busier or less willing to share information (see C. Sanchez Munoz, 'Survey Mode, Oversampling Wealthy Households and Other Methods to Reduce Non-Response Bias', UNECE Conference of European Statisticians, 2011). When using traditional sample size determination, which only takes into account age group and place of residence as socio-demographic characteristics, high-income households refusing to take part in the survey are replaced by other households living in the same area and belonging to the same age group but not necessarily to the same income bracket, unless the required information is available. The higher the income of the replaced household, the more probable it is that the new respondent household is worse-off, with a consequent underestimation of the average income for the socio-demographic category to which the two households belong. Similarly, since indebtedness is much less common in Italy than in other countries, unless additional information is available, an indebted household refusing to participate in the survey is most likely to be replaced by another household with similar characteristics but which is not indebted, leading to an underestimation of the average debt for the category.

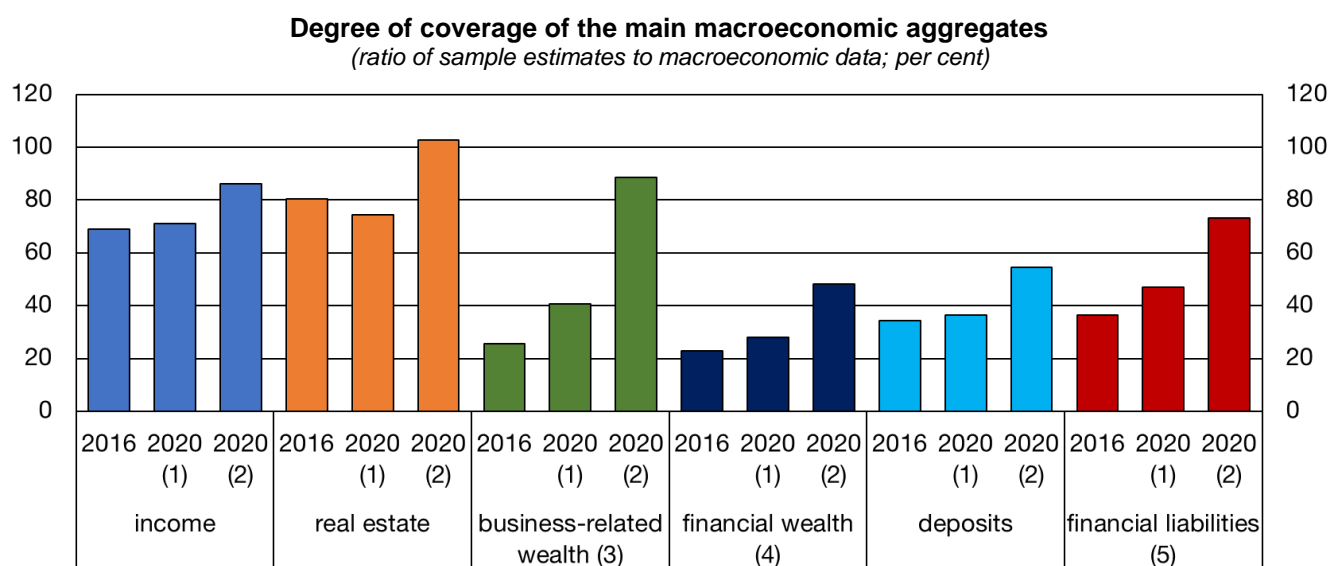
⁵ These changes also make it possible to adjust any distortions deriving from the pandemic, which not only slowed down data collection activities but also discouraged households from taking part in the survey, thus affecting the size and composition of the final sample.

⁶ Re-weighting reduces sample distribution differences between the latest and the previous edition of the survey with regard to the new stratification variables and their aggregates. For more details on how to choose the re-weighting method used for comparison with previous survey editions, see R. Gambacorta and E. Porreca, 'Bridging techniques in the redesign of the Italian survey on household income and wealth', Banca d'Italia, Questioni di Economia e Finanza (Occasional Papers), forthcoming.

Household Income and Wealth for 2020').

In addition, the new re-weighting scheme permits accurate historical comparisons, highlighting the importance and significance of the methodological innovation. In line with the survey's improved ability to identify the segments of the population that hold proportionally higher shares of the core variables, the estimates for 2020 of the main balance sheet items of Italian households based on the survey were significantly closer to their corresponding aggregates in the national accounts.⁷ Without those changes, the survey's ability to capture those aggregates would have been the same as in 2016 (Figure 1).

Figure 1



Sources: Based on annual data from the Survey on Household Income and Wealth for 2020 and 2016; Istat, national accounts; Bank of Italy, financial accounts. Data referring to consumer and producer households, based on the definitions of the individual balance sheet items not harmonized between the survey and the national accounts. (1) Values obtained with the re-weighting scheme that neutralizes the effects of the design change – (2) Values obtained with the new re-weighting scheme. – (3) Non-residential buildings and land, equity and other participating interests. – (4) The data do not include pension funds, insurance reserves and trade credits. – (5) It includes only loans from banks and other financial institutions.

Average income, average net wealth and household indebtedness values obtained with the new survey design are higher than those resulting from the approximation of the sample composition prior to the design changes for all the main socio-demographic categories (Table 1). This confirms the improved ability of the new design to identify, within these categories, also higher-income and indebted segments of the population, which, because of their very nature and limited size, are otherwise rarely captured by surveys in which sample size determination does not take into account any additional information on income and wealth conditions. Despite the revised average values of these balance sheet items being uneven across categories, the new survey design has not introduced any substantial changes in the relative positions of the various socio-demographic groups.

⁷ The differences between the survey-based estimates and their corresponding aggregate values derived from the national accounts can also be attributed to the not identical definition of the phenomena analysed and to the differences in the sample. For example, the market values of the wealth components in the survey are obtained through respondents' self-assessment, whereas national accounts use mostly nominal values to which prices recorded on the market are applied or, occasionally, rely directly on market prices. Moreover, the sample does not include private non-profit institutions serving households (i.e. cultural and sports associations, foundations, political parties, trade unions and religious organizations), in contrast with the national accounts where they are included in the household sector. For more information, see G. D'Alessio and A. Neri, 'Income and wealth sample estimates consistent with macro aggregates: some experiments', Banca d'Italia, Questioni di Economia e Finanza, 272, 2015 and 'Understanding household wealth: linking macro and micro data to produce distributional financial accounts', European Central Bank, Statistics Paper Series, 37, 2020.

The effect of the new survey design on income, net wealth and indebtedness in 2020 (1)
(per cent; euros)

	Household mean disposable income		Household mean net wealth		Household mean indebtedness to financial intermediaries (2)	
	New design weights (3)	Weights for historical comparison (4)	New design weights (3)	Weights for historical comparison (4)	New design weights (3)	Weights for historical comparison (4)
Age group (years)						
34 and under	32,279	29,760	210,101	151,700	99,087	81,090
35-44	40,589	34,256	237,429	152,757	107,896	85,124
45-54	46,500	35,343	385,938	222,895	86,285	60,122
55-64	48,587	37,682	502,590	273,674	59,202	41,107
Over 64	31,479	27,657	294,439	214,385	41,435	26,583
Educational attainment						
Middle school certificate or lower	26,494	25,095	194,759	145,732	47,372	34,535
High school diploma	41,426	36,037	354,291	234,415	77,971	61,147
University degree or higher	79,044	52,601	810,322	436,957	138,191	103,273
Work status						
Payroll employee	41,279	35,757	237,971	170,803	78,274	60,494
Self-employed worker	70,963	49,950	933,061	618,590	118,956	96,243
Pensioner	28,961	27,447	236,649	198,711	29,763	23,528
Not working (5)	12,301	11,907	110,580	72,023	::	::
Country of birth						
Italy	39,943	32,982	350,852	224,183	81,271	59,880
Other	28,026	24,641	155,965	97,127	82,182	59,189
Geographical area						
Centre-North	45,418	36,516	419,292	257,091	93,725	68,415
South and Islands	27,448	24,075	187,812	130,576	42,378	31,156
Total	39,343	32,383	341,044	215,066	81,321	59,831
<i>Memorandum item: median values</i>	<i>28,005</i>	<i>26,031</i>	<i>150,750</i>	<i>115,700</i>	<i>41,140</i>	<i>17,500</i>

Sources: Based on annual data from the Survey on Household Income and Wealth 2020, and the historical database of the Survey on Household Income and Wealth, version 11.1. (1) The characteristics in the table refer to the household head, identified as the primary income earner. – (2) Indebted households only. – (3) Values obtained with the new re-weighting scheme. – (4) Values obtained with the re-weighting scheme which neutralizes the effects of the design change – (5) The number of indebted households in which the household head is not employed is insufficient to produce statistically significant estimates.

Owing to a more effective coverage of the high-income segments of the population, the methodological revision of the survey shows a higher concentration of income and wealth. In particular, the Gini index of household disposable income is higher by 7 percentage points, the one of equivalized income⁸ by 6.2 points, and the one of net wealth by 3.5 points (Table 2). In comparison with the traditional sampling methodology, the new design better captures the higher end of income distribution, without significantly modifying the description of the remainder, the low-income segments in particular. On the one hand, the share of low-income individuals obtained with the new design is broadly in line with the figure one would obtain approximating the composition of the traditional sample, regardless of the income threshold used to define such condition. On the other hand, other common indicators of possible financial weakness, such as the share of indebted low-income households and of financially vulnerable households, have remained virtually unchanged between the two sampling designs.

⁸ Equivalized income is the income required by a member of a household to attain the same level of well-being that they would have living alone. It is calculated by assigning to each member of the household a weight based on their age. The sum of these weights yields the number of equivalized adults in the household. Equivalized income is equal to the ratio of total household income to the number of equivalized adults. We adopt the OECD-modified equivalence scale, which assigns a value of 1 to the household head, 0.5 to each member aged 14 or over, and 0.3 to each member under age 14.

The effect of the new survey design on financial fragility and inequality measures (2020)

(per cent)

	New design weights (1)	Weights for historical comparison (2)
Gini index (3)		
Household income	42.8	35.8
Equivalentized income	39.5	33.3
Household net wealth	68.2	64.7
Low-income individuals (4)		
40% of median equivalentized income using OECD-modified scale	9.3	8.9
50% of median equivalentized income using OECD-modified scale	15.2	14.8
60% of median equivalentized income using OECD-modified scale	21.6	21.4
50% of median equivalentized income using square root scale	14.4	14.0
Indebted households (5)		
Share of total households	21.3	18.9
<i>Share of households in the 1st quartile of equivalentized income</i>	12.4	11.1
Share of financially vulnerable households (6)	1.8	1.2

Sources: Based on annual data from the Survey on Household Income and Wealth 2020, and the historical database of the Survey on Household Income and Wealth, version 11.1. (1) Values obtained using the new design weights. – (2) Values obtained using weights for historical comparison. – (3) The Gini concentration index, expressed in percentage values, ranges from 0 (perfect equality) to 100 (maximum inequality). – (4) Low-income individuals are defined as those with an equivalentized income below the threshold specified in the table. – (5) Only includes debt for property purchases or renovations and for purchases of consumer goods. – (6) Share of indebted households over total households with an equivalentized income below the median and annual debt service payments equal to more than 30 per cent of their income.

With the new information, the degree of inequality in household income distribution in Italy entered the high end of the spectrum for the main world economies, whereas the degree of inequality in net wealth distribution is in line with the main advanced economies. Furthermore, it is worth underlining that this comparison yields little information, since none of those surveys has yet adopted a sampling plan based on income and indebtedness data. The few surveys that rely on additional information to also capture smaller population segments use either administrative data on wealth or indirect indicators of the likelihood of the respondent household having a particularly high income.⁹

⁹ By way of example, in the United States the sampling plan adopted by the Federal Reserve Board for the Survey on Consumer Finance uses personal income data to deduce information on wealth in view of the oversampling of households that are estimated to have a higher net worth. Among the national surveys conducted by the European countries that took part in the latest edition of the Household Finance and Consumption Survey in 2017, in which the data for Italy were collected through the SHIW post harmonization, only Latvia had access to income tax returns for sample selection. France and Spain used personal information on wealth, with different degrees of precision. In Germany, higher-income households were oversampled using indirect information and selecting households that live in areas where property values are particularly high. In 2017, the Gini index of net wealth was 69.5 for the euro-area average, 73.9 in Germany, 67.4 in France, and 67.7 in Spain, whereas it was significantly lower in Italy (60.6). With the new survey design, in 2020 the index for Italy was 68.2. This is in line with the estimates for Italy of the European System of Central Banks Expert Group on Linking Macro and Micro Data for the household sector, coordinated by the ECB and the Bank of Italy, which has developed a methodology to correct errors caused by the under-representation of higher-income households and by the respondents' unwillingness to report their wealth (see [Understanding household wealth: linking macro and micro data to produce distributional financial accounts](#), European Central Bank, Statistics Paper Series, 37, 2020).

Evolution of households' income and wealth from 2016 to 2020

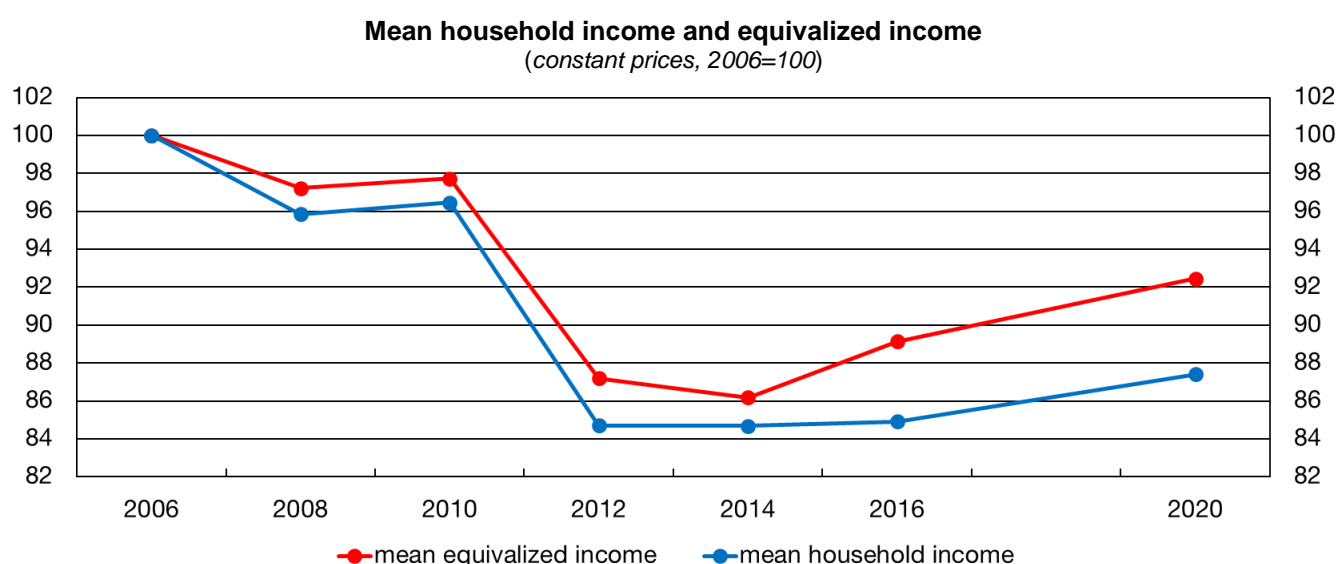
In order to analyze the evolution of the main balance sheet items in the four-year period between the two editions of the survey, this section presents comparable data which, for the year 2020, are based on the re-weighting scheme designed to neutralize the effects of the design change (weights for historical comparison). Cross-sectional analyses referring to 2020 are, instead, based on the new weighting scheme (new design weights). While this makes it possible to take full advantage of the improved accuracy of the new sampling design, the data cannot be compared directly with past results; where necessary, both values will be reported, properly specifying the weighting scheme used.¹⁰

Households' income and wealth have been significantly influenced by the COVID-19 pandemic and by the support measures adopted by the Italian government. However, the comparisons shown below refer to the 2016-2020 four-year period, which, before the outbreak of the pandemic, had been characterized by an upward trend that started in 2014. An analysis of the financial effects of the pandemic on Italian households, albeit mainly qualitative, is provided in the box 'The pandemic and the economic conditions of Italian households between 2019 and 2020'.

Income and income distribution

According to the data provided by the more than 6,000 households interviewed, in 2020 annual household income in real terms and net of tax and social contributions was about 3 per cent higher than the level recorded in 2016, but 12 per cent lower than in 2006, before the global financial crisis (Figure 2).¹¹

Figure 2



Source: Based on data from the historical database of the Survey on Household Income and Wealth, version 11.1.

Between 2016 and 2020, mean household income was driven by payroll earnings – which benefited from the increase in the number of earners and in average annual per capita income – and by transfer payments, which included the new income support measures introduced between 2016 and 2019 and the extraordinary measures taken in 2020 to counter the financial effects of the pandemic. By contrast, investment and self-employment income decreased, albeit modestly; in the latter case, the drop was the result of the reduction in the number of recipient households against a moderate increase in their mean value.

Mean equivalized income – a measure that better approximates individual financial well-being by taking account of household size and resulting economies of scale – was 3.7 per cent higher than four years earlier (in real terms and

¹⁰ When using microdata (available at the link <https://www.bancaditalia.it/statistiche/tematiche/indagini-famiglie-imprese/bilanci-famiglie/distribuzione-microdati/index.html?com.dotmarketing.htmlpage.language=1&dotcache=refresh>), the weights to be used for the purposes of historical comparison are the PESO (sampling weight) and PESOPOP (population weight) variables contained in the PESO dataset of the historical database; the weights referring to the new design (not to be used for comparisons with previous years) are the PESOFIT (sampling weight) and PESOFIT2 (population weight) variables contained in the CARCOMP dataset of the annual database.

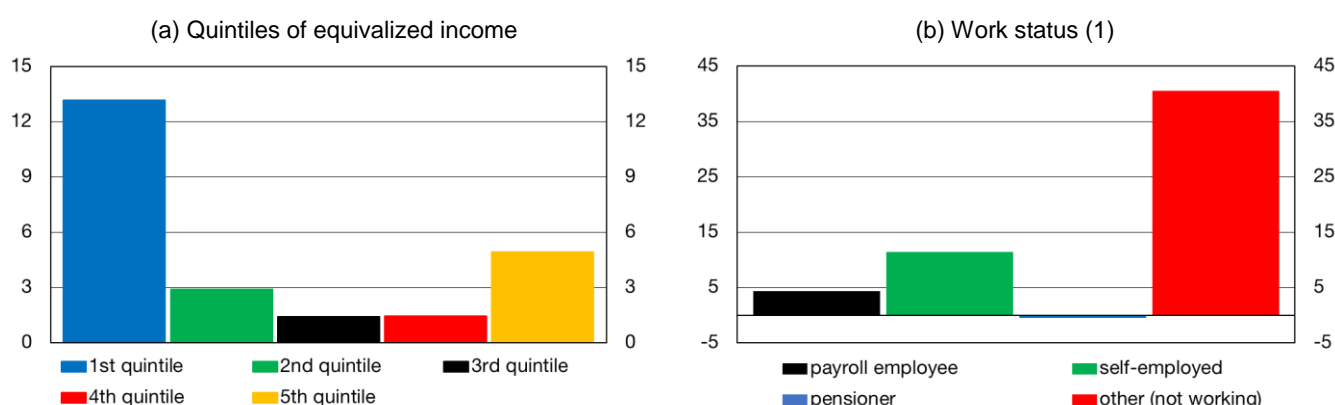
¹¹ Nominal variables (i.e., income and wealth) are deflated by the ratio of households' consumption expenditure at current prices to the same variable at chain-linked prices as taken from the national accounts published by Italy's National Institute of Statistics (Istat).

net of the new sampling design), thus confirming the recovery shown since 2014 after a long downward trend that had begun in 2006 (Figure 2).

The intensity of the increase in real equivalized income was not uniform across income and socio-demographic groups. In the four years observed, the mean value of the first and last quintile of equivalized income distribution grew more than the central quintiles (Figure 3a). The particularly marked increase in the mean value of the first income quintile is attributable to social transfers (see the box: 'The role of transfers in income evolution between 2016 and 2020'). Despite the contraction in self-employment income, the increase in the mean equivalized income of households whose primary earner is a self-employed worker (Figure 3b) was supported, among other factors, by higher net investment income (which includes lower interest expenses in connection with the debt moratorium) and by a larger number of household members with payroll employment income.¹²

Figure 3

Change in mean equivalized income by household type from 2016
(percentage points; changes at constant prices)



Source: Based on data from the historical database of the Survey on Household Income and Wealth, version 11.1. (1) Work status refers to the household's primary income earner.

THE ROLE OF TRANSFERS IN INCOME EVOLUTION BETWEEN 2016 AND 2020

Income distribution was influenced by the income support measures introduced between 2016 and 2019, especially the new minimum income scheme (*Reddito di cittadinanza* or RdC) and the new minimum pension scheme (*Pensione di cittadinanza* or PdC), and by the temporary measures adopted in 2020 to cope with the effects of the pandemic, such as extraordinary wage supplementation (*CIG straordinaria*), emergency income (*Reddito di emergenza*) and COVID payments for certain categories of workers and other transfers specifically associated with the health emergency.¹³

Total transfers in 2020 amounted to 2.3 per cent of the monetary income¹⁴ of respondent households (nearly double the share recorded in the survey for 2016) and were used by nearly one in four households, who received on average €3,133 (see Table). The measures with the greatest impact on household income were the new minimum income and pension schemes (RdC and PdC) received in 2020 by just under 4 per cent of households (which collected on average €6,135), making up approximately 65 per cent of their annual household monetary income (74 per cent for lower-income households). The RdC and PdC are commensurate with households' economic conditions: the share of recipients is higher in the first quintile of the mean household income distribution, in the South of Italy and in households where the primary income earner is not employed, less educated, under 35 years of age, or foreign born. Total RdC and PdC transfers to households in 2020 accounted for approximately 0.7 per cent of their total monetary income, 9.6 per cent for households in the poorest quintile.

The different picture emerging from the analysis of the distribution of total transfers broken down by recipients' socio-demographic characteristics, instead, mainly mirrors the employment situation, as the other main measures

¹² See 'I bilanci delle famiglie italiane: un confronto tra il 2016 e il 2020', in *Annual Report for 2021*, Banca d'Italia (only in Italian).

¹³ Other COVID payments include vouchers for baby-sitting, summer camp, shopping and holidays. The survey does not distinguish between ordinary and extraordinary wage supplementation, which are therefore analyzed jointly.

¹⁴ Monetary income is defined as household income net of imputed rents but including financial costs.

were adopted to counter the financial effects of the pandemic. Some 21.2 per cent of households received at least one transfer other than RdC or PdC; however, the mean income support amount obtained was markedly lower (€2,365). The share of recipients is higher among households in which the primary income earner belongs to the central age group (36 per cent), is self-employed (33.7 per cent) or not working (34.6 per cent), and in the two highest quintiles of equivalized income distribution (around 24.5 per cent). With regard to the mean of all recipients (12.6 per cent), the ratio of those transfers to income was modest (around 6 per cent) in high-income households and households where the household head is a self-employed worker. Conversely, the ratio to income was above average in southern households (20.8 per cent), in the first quintile of income distribution (28.1 per cent) and in households in which the household head is not working (37.5 per cent). Among the various types of transfers, wage supplementation to households accounted for around 0.5 per cent of their total monetary income, COVID payments for 0.4 per cent, and the sum of all other measures (including unemployment benefits) for 0.6 per cent.

Table

Incidence of income support recipient households and mean amount received in 2020 (1)

(per cent; euros)

	Share of recipient households	Total transfers (2)			of which: RdC and PdC		
		Mean amount in 2020	Incidence on income	Share of recipient households	Mean amount in 2020	Incidence on income	
Age group (years)							
34 and under	37.1	3,377	14.0	8.9	7,123	65.1	
35-44	38.2	2,798	16.4	4.7	6,783	60.0	
45-54	37.7	3,106	17.5	4.9	6,196	75.3	
55-64	24.9	3,377	19.7	4.7	5,413	68.6	
Over 64	6.3	3,183	14.4	1.1	5,078	38.9	
Educational attainment							
Middle school certificate or lower	21.1	3,687	23.5	5.1	6,308	67.6	
High school diploma	27.7	2,814	13.4	2.9	5,668	55.2	
University degree or higher	22.7	2,050	6.3	0.3	3,357	57.0	
Work status							
Payroll employee	29.6	2,575	11.7	1.6	3,496	22.7	
Self-employed worker	33.9	2,141	6.5	0.7	7,027	32.1	
Pensioner	7.0	2,829	11.5	1.0	3,957	30.3	
Not working	55.0	6,555	72.4	38.2	7,087	81.8	
Country of birth							
Italy	22.2	3,171	16.3	3.4	6,308	65.4	
Other	42.7	2,757	23.4	8.3	4,790	59.9	
Geographical area							
Centre-North	22.9	2,557	11.6	1.8	4,686	57.0	
South and Islands	23.9	4,213	29.0	7.4	6,813	68.3	
Quintiles of income							
1 st quintile	29.0	3,818	45.1	13.7	5,642	73.9	
2 nd quintile	17.3	3,530	20.1	2.8	7,682	42.9	
3 rd quintile	20.8	3,052	13.3	1.4	6,808	31.3	
4 th quintile	24.9	2,319	6.7	0.3	8,376	44.6	
5 th quintile	24.0	2,934	5.0	0.3	9,600	18.4	
Quintiles of income net of RdC and PdC							
1 st quintile	31.1	4,443	47.0	16.0	6,132	70.5	
2 nd quintile	16.2	2,956	18.3	1.7	5,604	26.4	
3 rd quintile	20.0	2,609	11.0	0.4	6,280	32.6	
4 th quintile	24.8	2,285	6.5	0.3	8,905	17.4	
5 th quintile	23.9	2,861	4.9	0.0			
Total	23.2	3,133	17.0	3.7	6,135	64.8	

Source: Based on data from the historical database of the Survey on Household Income and Wealth for 2020. (1) The characteristics in the table refer to the household head, identified as the primary income earner. – (2) These include the new minimum income scheme (*Reddito di cittadinanza* or RdC), the new minimum pension scheme (*Pensione di cittadinanza* or PdC), the wage supplementation scheme, mobility and unemployment benefits, other forms of financial support from the central government and from local public bodies or administrations, as well as transfers in connection with the health emergency (COVID payments to specific categories of workers and vouchers for baby-sitting, summer camp, shopping and holidays).

Among respondents, 54 per cent of households declared, at the time of the interview, that they struggled to make ends meet. In comparison with 2016, based on a weighting scheme that guarantees survey comparability, this share diminished by 6 percentage points. The decline was steeper among households in the central part of the household income distribution, in the North, and in sectors that were less impacted by the pandemic crisis.¹⁵

The Gini index of equivalized income, net of the new sample design, remained broadly in line with the value observed in 2016 (33.5). Based on the comparison with the previous edition of the survey, the pandemic had a limited impact on inequalities, also thanks to the various income support measures introduced over the four-year period. The share of low-income individuals, down from 2016 but still up from 2006, was just above 21 per cent with both weighting schemes, in line with the improved ability of the new methodology to identify the higher end of income distribution without significantly altering the remainder¹⁶ (Table 3). The share of low-income individuals is higher for households whose primary income earners are blue-collar workers or others not working, younger, less educated, or foreign born, and for households residing in the South.

Table 3

Incidence of low-income individuals broken down by household's primary income-earner's profile				
	<i>(per cent)</i>			
	2006	2016	2020 (1)	2020 (2)
Age group (years)				
34 and under	22.6	29.7	27.1	26.4
35-44	18.9	30.3	27.5	26.6
45-54	20.2	24.1	23.3	22.8
55-64	16.6	20.9	21.1	19.8
Over 64	20.2	15.7	14.4	17.4
Educational attainment				
Middle school certificate or lower	27.4	31.9	28.9	31.6
High school diploma	9.2	14.0	17.1	15.6
University degree or higher	2.3	4.3	4.2	4.0
Work status				
Payroll employee	18.4	21.1	19.4	20.4
<i>of which: blue-collar worker</i>	30.1	34.8	30.7	33.9
Self-employed worker	14.6	19.5	17.0	13.1
Pensioner	19.0	16.6	15.6	18.9
Not working	75.9	83.1	76.7	74.5
Country of birth				
Italy	18.8	19.5	19.4	20.3
Other	33.9	55.0	41.9	42.6
Geographical area				
Centre-North	8.7	14.2	12.1	11.2
South and Islands	39.5	39.4	38.9	41.3
Total	19.6	23.0	21.4	21.6

Sources: Based on annual data from the Survey on Household Income and Wealth 2020, and the historical database of the Survey on Household Income and Wealth, version 11.1. (1) Estimates weighted with sample weights. – (2) Estimates weighted with new design weights.

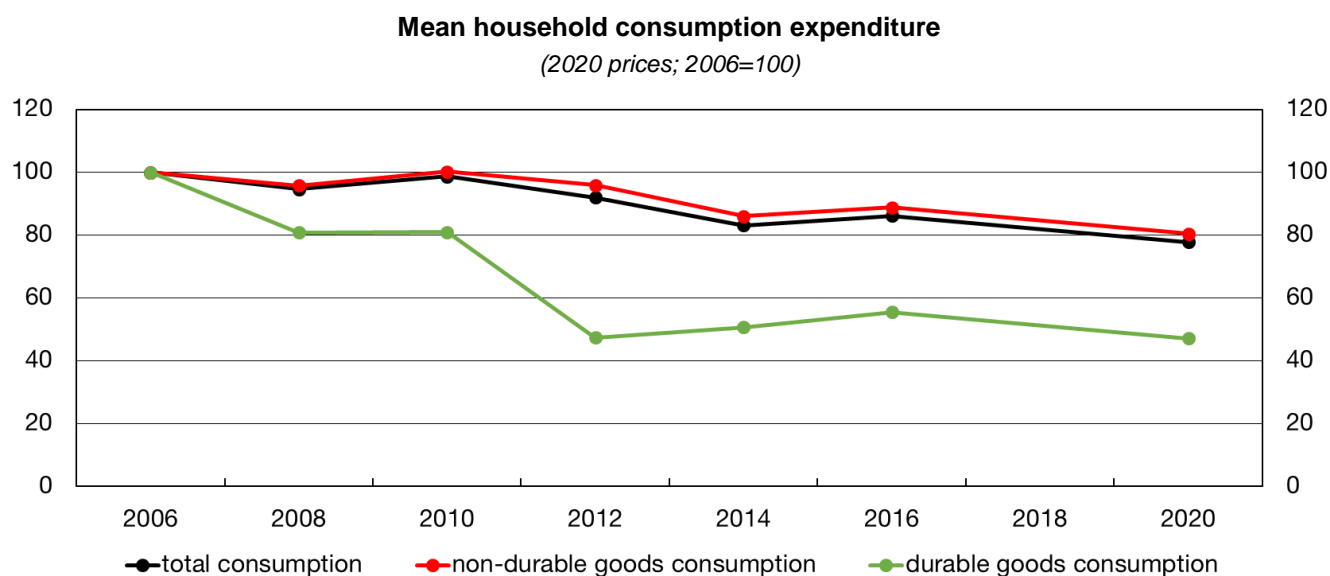
¹⁵ The households exposed to the pandemic crisis are those where at least one member works in one of the sectors that in 2020 recorded a drop in value added equal to or above the average, as taken from the national accounts published by Italy's National Institute of Statistics (Istat). In the survey classification, which only identifies NACE groups, these sectors are 2, 3, 5, 7, 8, 9, 13, 14, 18, and 19. However, this is an approximate classification since the level of disaggregation of NACE groups is not sufficiently detailed.

¹⁶ Low-income individuals are defined as those who live on an equivalized income that is less than 60 per cent of the median. In 2020, that was about €950 per month.

Consumption and savings

In 2020, mean household expenditure decreased by 9.7 per cent in real terms compared with 2016, thus confirming the downtrend that started in 2006 (Figure 4), albeit at a different pace, and reaching a historical low since 1980 when the survey first started measuring this variable. Households' consumption was affected by the measures adopted to contain the virus and the fears of contagion, in addition to greater uncertainty about the future and, for certain durable goods, about restrictions on the supply side. Durable and non-durable goods and services were both contributory factors to the contraction in consumption.

Figure 4



Source: Based on data from the historical database of the Survey on Household Income and Wealth, version 11.1.

The reduction in household spending intensified as equivalized income increased. Lower-income households typically spend a significant portion of their income on essential expenses, whereas higher-income households have a greater propensity to purchase goods and services for which consumption has been held back by the pandemic (see the box: 'The pandemic and the economic conditions of Italian households between 2019 and 2020'). The equivalized expenditure of households in the first quintile of equivalized income was around one third that of households in the last quintile, thus narrowing the gap between the two groups compared with 2016. The decline in consumption was more pronounced (-13 per cent) among individuals over 65 years of age, whose spending was affected by greater vulnerability to the severe effects of coronavirus infection, as well as among those living in households in which the primary income earner is a payroll employee or inactive (-10.6 per cent and -10.2 per cent respectively). The steep contraction in expenditure between 2016 and 2020 was accompanied by a marked surge in mean household savings, which grew by more than 40 per cent. The increase in terms of absolute value was highest for the top quintile of income (Table 4).

Table 4

Mean household saving				
<i>(2020 prices in euros and percentage changes on the four-year period)</i>				
	2016	2020 (1)	2020 (2)	2016-2020 (1)
For quintiles of equivalized income				
1 st quintile	-1,765	-737	-914	58.2
2 nd quintile	3,016	4,528	4,984	50.1
3 rd quintile	5,684	8,033	8,467	41.3
4 th quintile	9,083	13,688	14,541	50.7
5 th quintile	21,734	28,547	46,348	31.3
Total	7,548	10,804	14,666	43.1

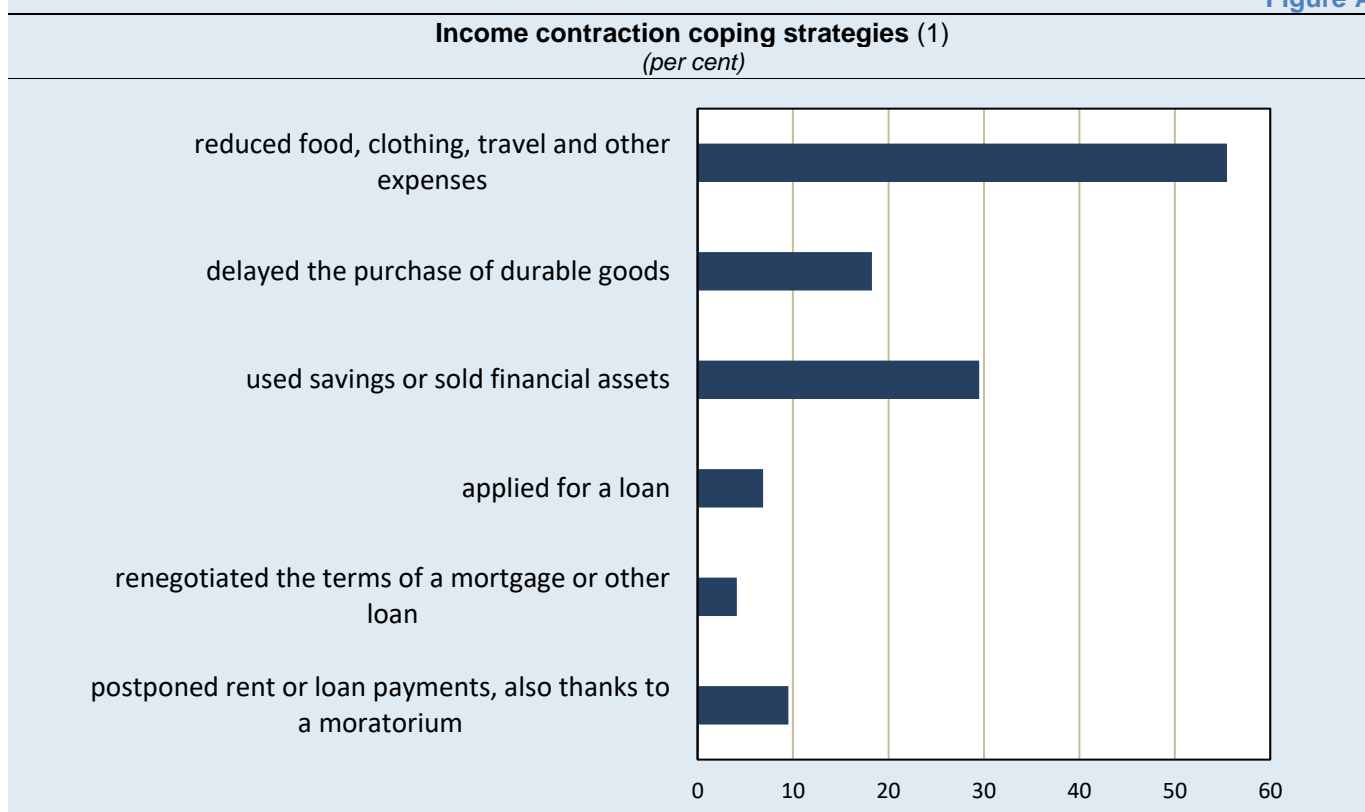
Sources: Based on annual data from the Survey on Household Income and Wealth 2020, and the historical database of the Survey on Household Income and Wealth, version 11.1. (1) Values obtained using weights for historical comparison. – (2) Values obtained using the new design weights.

THE PANDEMIC AND THE ECONOMIC CONDITIONS OF ITALIAN HOUSEHOLDS BETWEEN 2019 AND 2020

Despite the overall growth registered in comparison with 2016, household income in 2020 was affected by the economic fallout of the pandemic.¹⁷ Among respondents, 17 per cent of households (5 percentage points more than in the survey for 2016) declared that the income earned in 2020 was unusually lower than in a normal year.¹⁸ The increase was concentrated mostly among households whose primary income earner is under 35 years of age. A sizeable share of the households interviewed stated that at least one member temporarily earned less or nothing while still working (11 per cent and 5 per cent of households respectively), whereas only 3 per cent of respondents declared that at least one person in the household became unemployed, presumably due to the freeze on layoffs, which has been into effect since March 2020.

As a way of dealing with the fall in income, households cut or delayed some expenses and liquidated their financial assets (Figure A); only 10 per cent of households postponed the payment of rent or loans.

Figure A



Sources: Based on annual data from the Survey on Household Income and Wealth 2020, and the historical database of the Survey on Household Income and Wealth, version 11.1. (1) Estimates calculated on the 17 per cent of households that declared having earned unusually less than in a normal year and using the new design weights.

Overall, 83 per cent of households expected their earnings for 2021 to be in line with a normal year; however, a significant share expected to earn unusually less, i.e. 11 per cent of households (2 percentage points higher than what was observed in the survey for 2014 after the 2012-2013 recession). A pessimistic outlook on the economy was particularly common among the households most exposed to the economic shock brought about by the pandemic, among those that earned less in 2020, and those in which no member was able to work remotely, not even partially.

Consumption and saving behaviour were influenced by containment measures and fear of infection, as well as by greater uncertainty around the outlook for income. Around one tenth of households reported their consumption expenditure in 2020 to be unusually lower than in a normal year, nearly double compared with 2016. The balance between the responses that indicate unusually low consumption and those that report unusually high expenditures

¹⁷Earnings in 2020 were in line with a normal year for 79 per cent of respondents and higher for 1 per cent. The remainder of households interviewed did not know or did not want to answer.

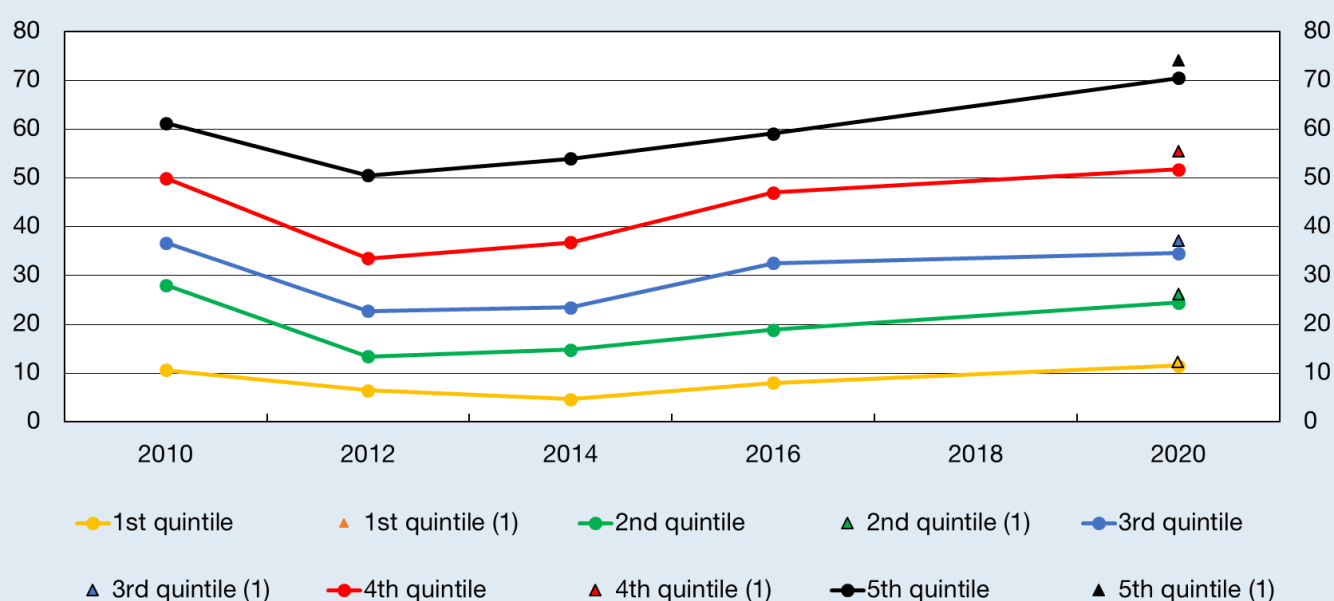
¹⁸According to national accounts data, disposable income dropped by 2.7 per cent in 2020 compared with the previous year.

(3.7 percentage points on average) is positive for all levels of income but wider for higher-income households (over 11 percentage points in the last quintile); this is in line with a larger share of essential expenses out of total expenditure in low-income households and with a greater propensity among high-income households to purchase goods and services for which consumption was held back by the containment measures.

A considerable portion of households (18 per cent) declared having saved more in 2020 than in a normal year; the share of households that managed to save part of their earnings during the year amounts to 41 per cent. This share, weighted using the weighting scheme for historical comparison, accounts for 39 per cent of households, 5 percentage points more than in 2016; the proportion of households that reported having spent more than what they earned remained unchanged from 2016 at 9 per cent (with both weighting schemes). The share of households with positive savings increased for all levels of equivalized income, even though the greatest intensity was recorded in the highest quintile (nearly 11 percentage points, Figure B).

Figure B

Share of households that saved part of their earnings by quintiles of equivalized income
(per cent)



Source: Based on data from the historical database of the Survey on Household Income and Wealth, version 11.1. (1) Values obtained using the new design weights.

Wealth

At the end of 2020, based on our survey, the average net wealth of Italian households, calculated as the sum of real and financial assets net of financial liabilities, was around €341,000. The median value, which separates the poorest half of households from the wealthiest half, was significantly lower (just under €151,000).¹⁹ The average wealth was up by 1.7 per cent in real terms from 2016. The gap widened further between the mean and the median values for net wealth, an indicator of the degree of inequality in its distribution (Figure 5). According to the survey, the bottom 50 per cent of households owned just 8 per cent of total net wealth, while half of the total net wealth was held by the wealthiest 7 per cent.

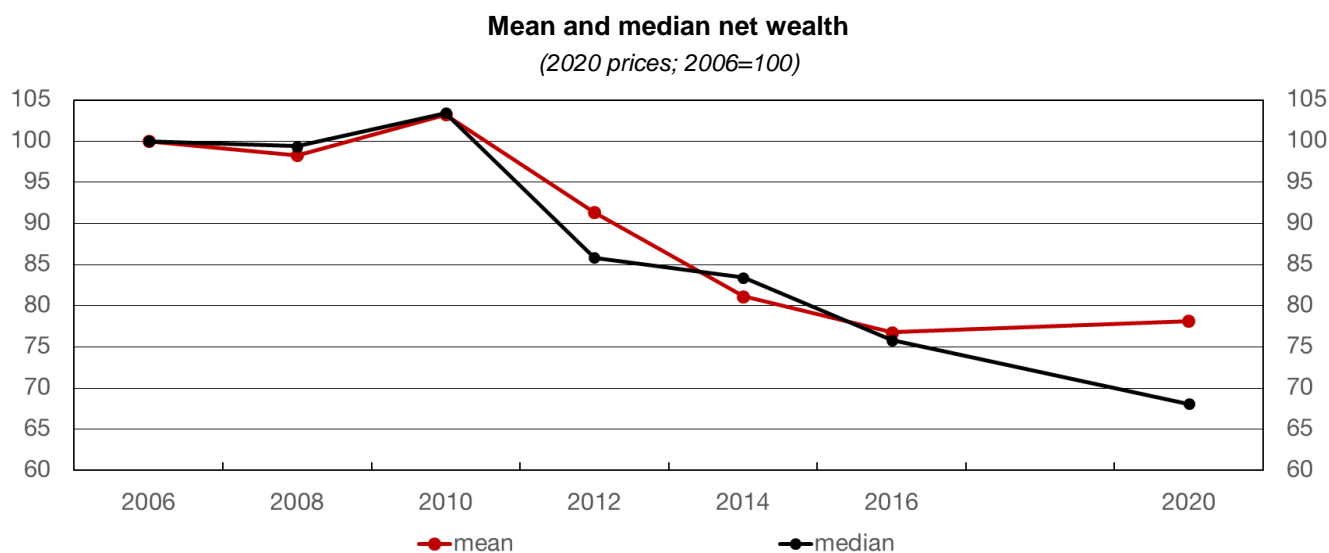
Based on the survey findings, as of the end of 2020, 82 per cent of Italian households' gross assets consisted of real assets (real estate, business-related assets, valuables), and the remaining 18 per cent of financial assets. Compared to 2016, the weight of the financial component has increased by over 3 percentage points, reflecting the simultaneous

¹⁹ Wealth estimates may be biased by the reticence of respondents and the difficulty they encounter in making evaluations. For these reasons, beyond the differences in definition and methodology, the values of household wealth and its components reported in the survey may differ from the corresponding national aggregate figure. For more details, see G. D'Alessio and A. Neri, 'Income and wealth sample estimates consistent with macro aggregates: some experiments', Banca d'Italia, Questioni di Economia e Finanza (Occasional Papers), 272, 2015.

fall in real wealth and rise in financial assets held by households.

The average value of real assets as of the end of 2020 was slightly lower than in 2016 (-0.8 per cent at constant prices), mainly driven by lower property values (-6.9 per cent), which account for the largest share of real assets. On the other hand, financial assets held on average by households were up significantly (+30.8 per cent); the increase involved households across the entire wealth distribution, partly as a result of the widespread boost in savings throughout the pandemic.

Figure 5



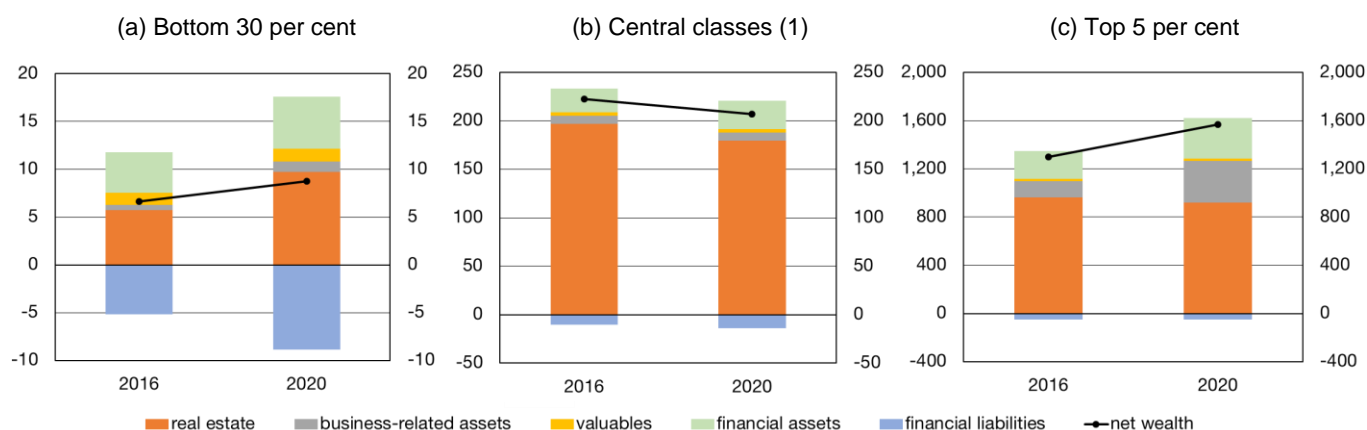
Source: Based on data from the historical database of the Survey on Household Income and Wealth, version 11.1.

Financial liabilities were just over 6 per cent of gross wealth for Italian households as a whole, and 16 per cent for indebted households only. The average value of liabilities is up by over 30 per cent at constant prices from 2016, with an increase across the entire wealth distribution.

The average wealth of the richest 5 per cent of households is up by over 20 per cent from 2016, driven by higher financial assets, savings growth, and an increase in business-related assets (Figure 6). Likewise, the average net wealth of the poorest 30 per cent of households has risen from 2016, while still accounting for less than 2 per cent of total assets. On the other hand, the average wealth of households in the distribution's central classes is down as a result of lower house prices, real estate making up the lion's share of their assets.

Therefore, net wealth inequality has increased overall. In 2020, the Gini index rose to 64.7, from 61.6 in 2016, net of the changes in the survey method.

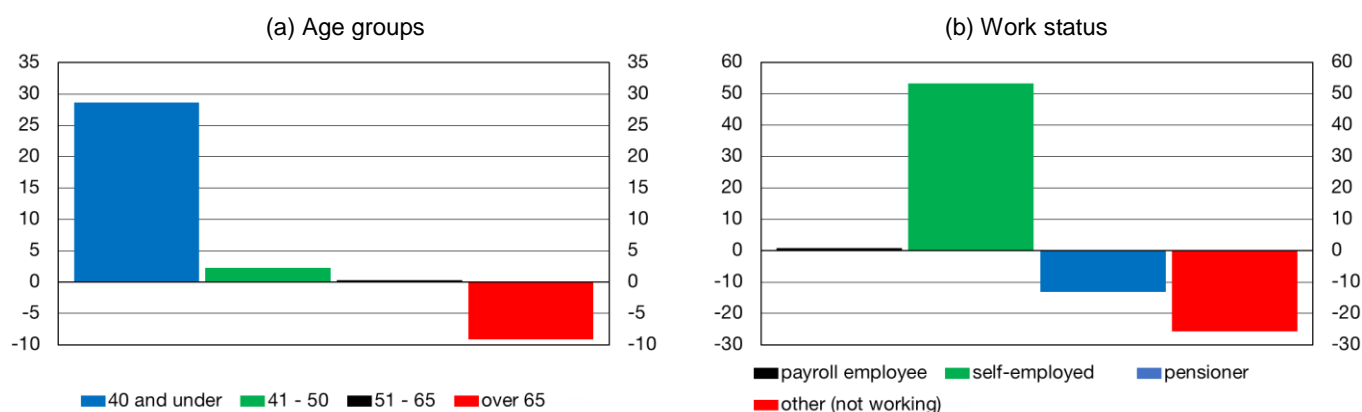
**Average value of household net wealth and its components
across wealth distribution**
(thousands of euros; 2020 prices)



Source: Based on data from the historical database of the Survey on Household Income and Wealth, version 11.1. (1) Interval between the 30th and the 95th percentiles of net household wealth distribution.

Wealth dynamics are inconsistent across socio-demographic groups: over the last four years, the gap between age groups narrowed as a result of wealth growth in younger households (Figure 7), and average net wealth returned to growth for households with a self-employed worker as the primary income earner, after declining from 2012 to 2016.

Change in average net wealth from 2016, by household type (1)
(percentage points; changes at constant prices)



Source: Based on data from the historical database of the Survey on Household Income and Wealth, version 11.1. (1) Primary income earner's profile.

Financial assets

The share of households holding financial assets as of the end of 2020 was 91 per cent, up by approximately 7 percentage points from 2016.²⁰ Growth was driven by an increase in the number of households holding at least one deposit account,²¹ partly in connection with a broader use of cashless payment systems (see the section 'Payment instruments').

²⁰ Excluding households who held only accounts with non-sufficient funds.

²¹ Including bank and post office current accounts and savings accounts, as well as minor items such as certificates of deposit and interest bearing postal bonds.

For households owning financial assets, their average value was €69,000. Only 23 per cent of households had at least one financial asset other than a bank deposit or post office savings account, mostly in the form of managed investments (investment funds and managed assets). The mean financial wealth of these households was around €219,000.

Financial asset distribution is more concentrated than net wealth distribution: the bottom half of households in terms of net wealth held only 7 per cent of total gross financial wealth, while almost 50 per cent of financial assets were owned by the wealthiest 3 per cent of households. Moreover, asset concentration increased from 2016, reflecting both higher savings in absolute terms for the most affluent households and a higher weight in their portfolios of those financial assets that benefited from the overall positive market momentum over the four-year period.

The divergence in the share of financial wealth owned is attributable to the very different portfolio compositions. Households belonging to the poorest quintile primarily have deposit accounts; the share of Italian government securities, private-sector bonds and managed investments rises gradually across the central net wealth classes; the wealthiest 20 per cent of households are the ones most likely to directly own equity shares and to entrust the management of a significant portion of their financial assets to investment professionals (Table 5).

Table 5

Breakdown of financial assets by net wealth distribution quintile
(per cent)

	Share of financial assets	Per cent							Total financial wealth
		Deposits (1)	Managed investment schemes (2)	Equity shares and participating interests	Private-sector bonds (3)	Government securities (4)	Securities issued abroad (5)	Other (6)	
Quintile of net wealth									
1st quintile	1.4	92.5	2.7	0.4	2.0	1.3	1.2	0.0	100.0
2nd quintile	3.1	82.1	12.0	1.6	1.6	2.6	0.0	0.1	100.0
3rd quintile	5.3	78.9	10.0	1.7	2.1	5.4	1.3	0.5	100.0
4th quintile	11.9	64.3	14.5	4.3	7.4	7.9	0.4	1.2	100.0
5th quintile	78.2	38.3	39.1	7.7	6.5	4.9	2.1	1.4	100.0
Total	100.0	45.6	33.3	6.7	6.1	5.2	1.8	1.3	100.0

Source: Based on data from the Survey on Household Income and Wealth for 2020. (1) Bank and post office current and deposit accounts, certificates of deposit, repos and interest bearing postal bonds. – (2) Managed assets and investment fund/ETF shares. – (3) Italian bank or corporate bonds. – (4) Italian government securities. – (5) Deposits held abroad and other foreign securities (government securities, bonds, shares, etc.). – (6) Social loans and other financial assets (derivatives, hedge funds, private equity funds, etc.).

Overall, the share of households holding liquid or diversified assets grew from 2016 to 2020: deposit holdings were up by approximately 7 percentage points, and investment funds or managed assets by almost 4 points. On the contrary, the share of households holding government securities continued to trend down to a new historic low (less than 6 per cent of households in 2020).

The definition of financial wealth used up to this point does not include accrued severance pay, sums invested in supplementary pension schemes, personal pension plans and life insurance policies since they are not fully accessible to the household.²² Based on the survey findings, in around 19 per cent of households at least one member was paying into a pension fund or a life insurance policy in addition to the state pension scheme. This figure was up by more than 2 percentage points from 2016, after adjusting for the change in the survey method. The share was highest in the Centre and North (23 per cent; 10 per cent in the South) and among the most affluent population groups, ranging from 4 per cent in the bottom income quintile to 40 per cent in the top quintile.

For payroll employees, these types of supplementary pension scheme are more common among managers (49 per cent; around 28 and 15 per cent for white- and blue-collar workers, respectively), while the gap between age groups is narrower (around 21 per cent for those aged 20 to 45, almost 29 per cent for those 46 to 55, almost 25 per cent for those 56 to 65); 21 per cent of self-employed persons participate, with a slightly lower rate among younger people (around 16 per cent for the age group to 45 years, 26 per cent for the remaining groups).

²² According to the financial accounts, these items are about 24 per cent of total household gross financial wealth (up by more than 2 percentage points from 2016).

Payment instruments

The use of electronic payment instruments has accelerated. Around 41 per cent of households own at least one credit card, 86 per cent at least one debit card and 30 per cent at least one prepaid card. Net of the effects of the revised sampling design, the use of debit cards, credit cards and prepaid cards increased to 85.3, 36.1 and 30.4 per cent, respectively, from 75.8, 30 and 24.7 per cent in 2016. Overall growth for payment instruments is the fastest since 2004.²³ There are likely to be multiple drivers behind this, including regulatory constraints on cash transactions, e-payment incentive schemes (a.k.a. 'cashback') and, lastly, pandemic-related social distancing.

Over 70 per cent of households reported they had purchased, ordered or booked goods or services online, including a significant share (around 4 per cent) of households who said they had made at least one of these transactions for the first time in 2020.

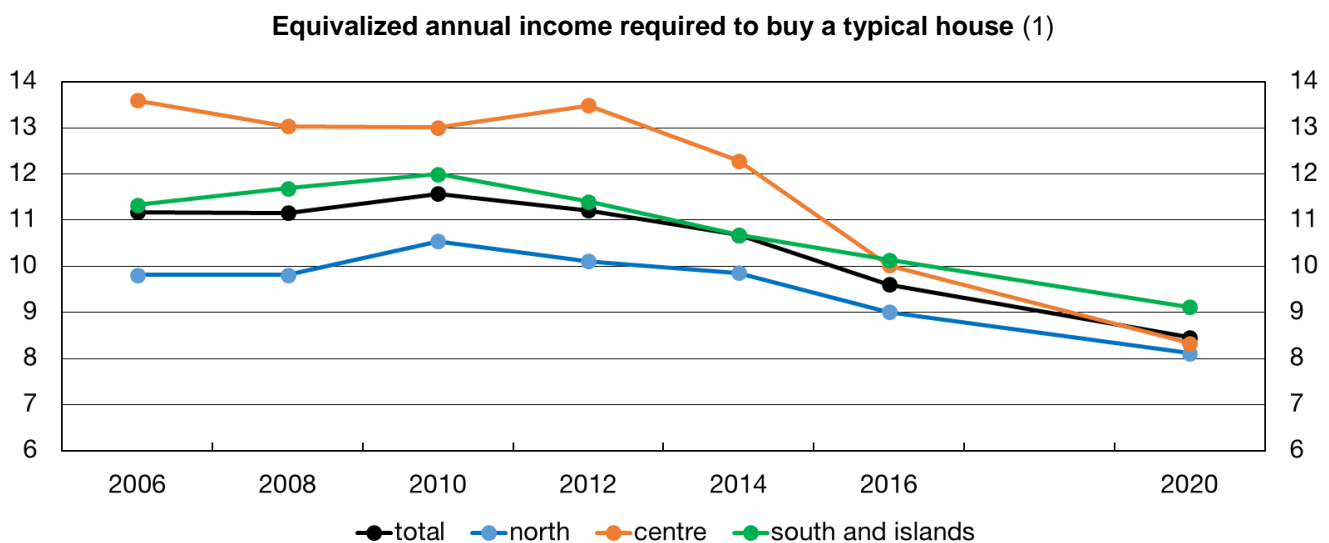
As the use of electronic instruments was rapidly spreading, fewer transactions were being settled in cash: the share of cash spending on overall household consumption (net of imputed rents) fell from 66 per cent in 2016 to 51 per cent in 2020, down by 15 percentage points.

Real estate and housing

At the end of 2020, 77 per cent of Italian households owned their main residence and one third also owned other property; only 3 per cent of households owned property that did not include their main residence. The share of younger households (i.e. with the primary income earner aged 45 or under) owning their main residence rose to 55.7 per cent (67 per cent using the new design's weighting scheme), from 52.6 in 2016, narrowing the gap with the rest of the population.

Based on the households' assessments, their main residence, whether owned or rented, is worth around €1,800 per square metre; values are higher in large municipalities, especially in the Centre and North of Italy, where they exceed €3,000. In the households' perception, house values per square metre, at constant prices and net of the change in the survey method, dropped 8.7 per cent from 2016 and more than 30 per cent over a ten-year horizon.²⁴

Figure 8



Source: Based on data from the historical database of the Survey on Household Income and Wealth, version 11.1. (1) Ratio of the average value of a 100 square-metre house to equivalized annual income.

The decline in house values made them more affordable: using the number of equivalized average annual incomes required to buy an average 100 square-metre house²⁵ as an indicator, it dropped across all geographic areas (Figure 8).

At the end of 2020, 15 per cent of Italian households lived in rented houses and paid an average monthly rent of

²³ First year of surveying prepaid card ownership.

²⁴ The households' subjective assessments reflect a more marked decline than Istat's Italian house price index (IPAB), which shed about 22 percentage points over the 2010-2020 decade for existing houses.

²⁵ By using an equivalized income metric, we can take into account the different housing needs of households with different structures and compositions, allowing for indicator comparisons over time and between population subgroups.

around €370, i.e. just over a fifth of their average monetary income. Over a third of tenant households paid rent exceeding 30 per cent of their disposable income and only 13 per cent reported they had been in arrears with payments for over 90 days.

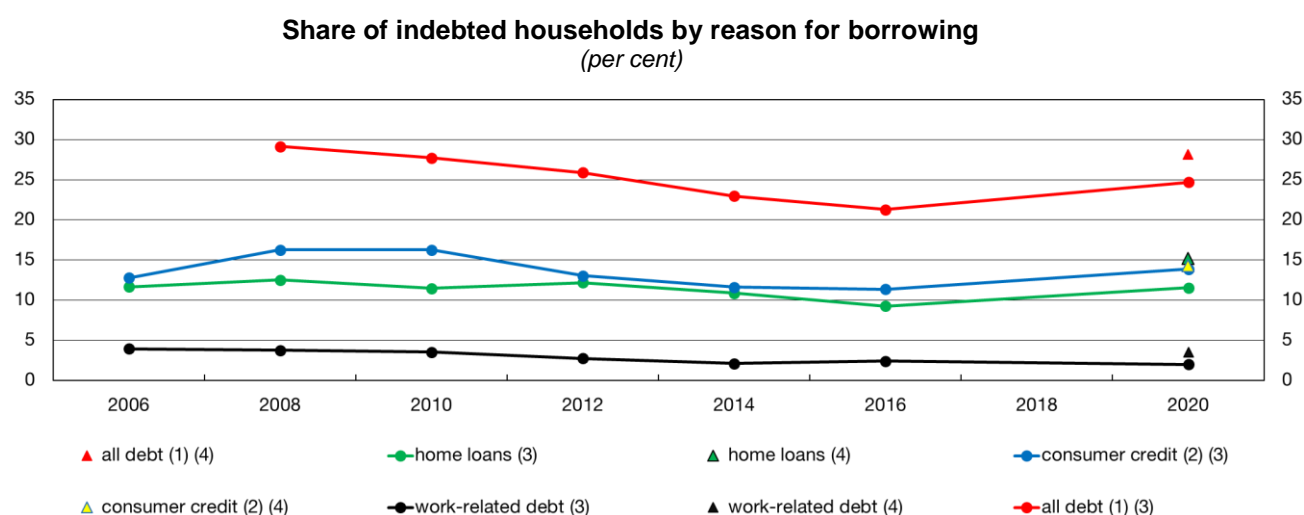
Among home owners, just over 3 per cent paid mortgage instalments exceeding 30 per cent of their monetary income in 2020. Overall, less than one household in ten allocated more than 30 per cent of their income to rent or mortgage payments for their main residence in 2020, essentially in line with 2016 findings.

Indebtedness

In 2020, 28.1 per cent of Italian households had debt. Net of the changes to our sampling design, their share went to 24.7 per cent, from 21.3 in 2016. While the share of households with work-related debts or loans from friends or relatives remained essentially stable, there was an increase in the percentage of households with property-related or consumer debt (Figure 9).

Debt increased across all age groups, and more strongly so for households with a primary income earner aged 45 or under (this age group saw a 10 percentage point rise in the share of indebted households from 2016). The latter actually resorted more to consumer credit (+7 percentage points) and home purchase or renovation loans (+5 percentage points).

Figure 9



Sources: Based on the Survey on Household Income and Wealth for 2020, and the historical database of the Survey on Household Income and Wealth, version 11.1. (1) Includes consumer credit, home purchase or renovation loans, work-related debts, loans from friends or relatives, current account overdrafts and debt on revolving credit cards (the latter two items have only been included in the survey since 2008). – (2) Includes loans for the purchase of means of transport, other durable goods (e.g. furniture and household appliances) and non-durable goods. – (3) Values obtained using historical comparison weights. – (4) Values obtained using the new design's weights.

In 2020, around 7 per cent of households with home purchase or renovation loans or consumer credit resorted to debt moratoriums,²⁶ which allowed them to suspend payments for a few months without incurring higher interest fees (Table 6). A larger number of applications were submitted by the poorest households, those living in the Centre and North, and those with a self-employed worker as the primary income earner. The median moratorium-debt amount was €80,000, significantly (almost 3 times) higher than the median value of overall debt. This difference reflects a larger use of debt moratoriums for mortgages, where the average amount is higher than for other types of debt.

Around 4 per cent of indebted households (i.e. a slightly larger share than in 2016) reported they had been late with instalment payments for over 90 days. Two thirds of these households had not received any debt moratoriums.

²⁶ To deal with the difficulties that households may have in repaying mortgage loan instalments due to the pandemic, in March 2020 the Government bolstered the Solidarity Fund for loans for the purchase of a primary residence (Gasparrini Fund). Moreover, at the end of April the same year, the Italian Banking Association (ABI) and consumer associations reached an agreement to suspend instalment payments for up to 12 months on loans other than those eligible for Gasparrini Fund benefits.

Applications for moratoriums by primary income earner's profile

(per cent)

	Share of households
Work status	
Payroll employee	5.6
Self-employed worker	13.6
Not in employment	6.1
Geographical area	
North	8.3
Centre	8.1
South and Islands	4.5
Quartiles of equivalized income	
1st quartile	14.5
2nd quartile	7.3
3rd quartile	7.9
4th quartile	4.3
Total	7.4

Source: Based on the Survey on Household Income and Wealth for 2020.

The debt burden, i.e. the instalment amount including interest, has increased for all households except those in the first quartile of the equivalized income distribution, where applications for moratoriums were more frequent (Table 7). Yet, the ratio of full instalment to monetary income grows as income decreases. In 2020, almost 30 per cent of households in the top quartile were indebted to finance the purchase or renovation of property or consumer spending; for these households, the mean annual instalment payment was €11,000, or 15 per cent of their income. Conversely, just over 12 per cent of households in the first quartile were indebted, but their mean instalment payment amounted to €3,700, or 27 per cent of their income.

Financially vulnerable households²⁷ accounted for approximately 2 per cent of total households and just under 9 per cent of those with debt. Net of the effects of the revised sampling design, these shares fell from 1.6 to 1.2 per cent and from 10 to 6.2 per cent, respectively, over the four-year period. The decline was especially felt by households in the first quartile of income distribution, narrowing the huge gap with those in the second quartile, most likely because the former resorted more to debt moratoriums.

Piled-up financial resources can underpin the households' ability to service their debt in the face of an income shock. Among indebted households, 38 per cent were 'liquidity poor'.²⁸ These accounted for 34 per cent of overall household debt.²⁹ Despite increased inequalities in the distribution of financial assets, in 2020 the share of 'liquidity-poor' indebted households shrank further, partly because savings were higher also in lower-income households (see the section 'Consumption and savings'). The risk of illiquidity was particularly widespread among financially vulnerable households (almost two in three), though with a significant improvement from 2016, when this share was almost 8 percentage points higher.

²⁷ Financially vulnerable households are defined as those whose equivalized income is below the median income and whose annual debt-service ratio is more than 30 per cent of their monetary income.

²⁸ Liquidity-poor households are defined as those whose wealth in the form of liquid financial assets (bank and post office deposits), adjusted for household structure, is less than one fourth of the at-risk-of-poverty threshold (60 per cent of median equivalized income). In other words, a household is financial-wealth poor if it would not have sufficient resources to avoid the risk of poverty for at least three months even if it liquidated all its readily accessible financial assets. For more details, see D. Loschiavo and M. Graziano, 'Liquidity-poor households in the midst of the Covid-19 pandemic', *Review of Income and Wealth*, 68(2), 2022, 541-562, also published in [Banca d'Italia, Questioni di Economia e Finanza \(Occasional Papers\)](#), 642, 2021.

²⁹ Only includes debt for property purchases or renovations and for purchases of consumer goods.

Table 7

Household financial vulnerability
(per cent; euros) (1)

Quartiles of equivalized income	Share of indebted households	Indebted households only					Share of vulnerable households on total population
		Median value of instalment	Median ratio of instalment to (monetary) income	Mean annual instalment	Ratio of mean instalment to mean (monetary) income	Share of vulnerable households	
1st quartile	12.4	2,800	19.6	3,688	26.9	28.1	3.5
2nd quartile	16.2	4,800	20.0	5,601	23.4	24.6	4.0
3rd quartile	26.3	6,000	17.8	6,420	19.7	-	-
4th quartile	29.5	8,500	14.8	10,859	14.7	-	-
Total	21.3	6,000	17.6	7,412	17.4	8.6	1.8
<i>Memorandum item</i>							
2020 (2)	18.9	4,800	16.0	5,878	17.1	6.2	1.2
2016	15.4	4,500	15.6	5,500	16.1	10.0	1.6

Sources: Based on the Surveys on Italian Household Income and Wealth for 2020 and 2016, and the historical database of the Survey on Household Income and Wealth, version 11.1. (1) Only includes debt for property purchases or renovations and for purchases of consumer goods. – (2) Data weighted using the weighting scheme for historical comparison.

Appendix

*Weighting scheme for the Survey on Household Income and Wealth for 2020*³⁰

The data collected using sample surveys can be used to estimate aggregates of interest for the entire reference population. For this purpose, sample household units are assigned a weight reflecting the number of units in the population they represent. The weight construction process is usually complex and includes at least three steps. First we calculate the weights as the inverse of the probability of including those units in the theoretical sample (design weight). As some households do not participate in the survey (because they could not be found at their home address or refused to respond), we must adjust this initial weight to ensure a proper representation of the population segments (adjustment for total non-response). In the last step we adjust the weights to meet the condition of equivalence between the known totals of some socio-demographic variables and the corresponding sample estimates (weight calibration).

Our survey's sample design includes a two-stage selection process. First-stage units are municipalities, second-stage units are households. Before drawing first-stage units, we divide them into H strata based on their region and population size class (first-stage unit stratification).³¹ In the second stage, up to the survey for 2016, the households to be interviewed were drawn randomly from the records of previously selected municipalities.³²

Starting from the survey for 2020, second-stage units were drawn after being grouped into K strata based on household income and debt (second-stage unit stratification). More specifically, to make the sample more representative across income distribution,³³ households were stratified in ten household income groups per geographical macro-area (North-East, North-West, Centre, South and Islands).³⁴ Moreover, in order to improve the usability of the survey for studying financial vulnerability, a sample of indebted households was added to the selected sample and was stratified according to five debt size groups for non-performing loans and five debt size groups for performing loans³⁵. As a result, in the survey for 2020, the new sample design weights were calculated as follows:

- a) The design weight $w_{hik}^{(0)}$ is calculated by multiplying the inverse of the probability of selecting municipality i of stratum h (i.e. the weight of first-stage units) and the inverse of the probability of selecting a stratum k household (second-stage stratification)³⁶ residing in municipality i of stratum h (i.e. the weight of second-stage units).

³⁰ For more details, see Banca d'Italia, Survey on Household Income and Wealth, Methods and sources: methodological notes, 2022.

³¹ Within each stratum, the municipalities where the survey should be conducted were selected by including all those with over 40,000 inhabitants (*self-representative* municipalities); the remaining municipalities were drawn by assigning larger municipalities a higher probability of being included in the sample (probability proportional to size - PPS).

³² As of the survey for 1989, for the purposes of analysing trend developments, we introduced a scheme that requires the sample to include a share of units interviewed in previous waves (panel households). In recent surveys, this share accounted for about 50 per cent of the sample. The panel component of the sample is made up by those households who have been participating for at least two waves as well as a randomly-drawn portion of those interviewed only in the previous survey. Therefore, in the second stage of sampling, the household drawing process involves only the non-panel component.

³³ As is known, non-response from selected households (because they refused to respond or could not be found at their home address) is associated with their financial condition and is higher among more affluent households (See G. D'Alessio, and I. Faiella, 'Non-response behaviour in the Bank of Italy's Survey of Household Income and Wealth', Banca d'Italia, Temi di Discussione (Working Papers), 462, 2007; G. Ranalli and A. Neri, 'To misreport or not to report? The case of the Italian survey on household income and wealth', Statistics in Transition new series, vol. 12(2), 281-300, 2011). The availability of ex ante information on the household's income stratum allows us to offset this and make the sample more representative in two ways. First, it allows us to replace the households who refuse to respond (or who cannot be found at their home address) with others in the same stratum, thus obtaining a sufficient number of respondents for each income class. In the traditional design these households were instead replaced with others who had been randomly selected from the records of their municipality of residence. Moreover, income stratum information allows us to calculate sampling weights more accurately and to adjust unit non-response ex post more effectively within each stratum.

³⁴ Household income thresholds were identified using an optimization algorithm, which takes account of the approximation of available administrative data to the variable being surveyed. For more details, see G. Barcaroli, G. Ilardi, A. Neri, and T. Tuoto, 'Optimal sampling design for household finance surveys using administrative income data', Istituto Nazionale di Statistica, *Rivista di statistica ufficiale*, 2, 2021.

³⁵ See A. Di Salvatore, G. Ilardi and A. Neri, 'L'uso della Centrale dei rischi per migliorare la qualità delle stime del debito basate sull'indagine sui bilanci delle famiglie italiane', Banca d'Italia, mimeo, 2020.

³⁶ The strata used for building the weights were collapsed compared with those used for sample selection, in order to reduce final

$$w_{hik}^{(0)} = \left(\frac{1}{m_h} \frac{P_h}{P_{hi}} \right) \frac{N_{hik}}{n'_{hik}} \quad h = 1, \dots, H; k = 1, \dots, K$$

where P_h and m_h are the resident population and the number of sample municipalities in stratum h (first stage), respectively, P_{hi} is the resident population in municipality i of stratum h , N_{hik} and n'_{hik} are the number of resident households and the number of selected households (theoretical sample), respectively, in municipality i of first-stage stratum h belonging to second-stage stratum k .

- b) The adjustment for total non-response $w_k^{(1)}$ is obtained by multiplying $w_{hik}^{(0)}$ by the inverse of the response rate of stratum k to which each household belongs

$$w_k^{(1)} = w_{hik}^{(0)} \frac{n'_k}{n_k}$$

where n'_k and n_k are total selected households (theoretical sample) and total respondents (actual sample) in second-stage stratum k .

- c) The weight $w_k^{(1)}$ is adjusted for panel attrition (i.e. non-response from household units who participated in previous surveys) and to replicate the panel's optimal share, estimated at approximately 50 per cent of the sample, resulting in the weight $w^{(2)}$.³⁷
- d) Lastly, $w^{(2)}$ is adjusted based on additional information (calibration), using external data that are correlated to key economic variables in order to improve estimator accuracy. More specifically, weights are adjusted to replicate the same demographics in terms of gender, age (seven classes), geographical area (three classes), municipality size (four classes), level of education (two classes) and household composition (five classes), resulting in the final weight $w_j^{(3)}$

$$w_j^{(3)} = w^{(2)} \gamma_j$$

where γ_j is the adjustment factor for class j of the stratification variable γ .

For the purposes of data comparison with the previous waves of the survey, a historical comparison weight was built. In terms of new weight creation, a further step has been added before calibration at stage d), where weights are adjusted to reduce the difference in household selection probability in the new sample design as opposed to in the previous one and to make the 2020 sample distribution as similar as possible to the distribution that would have been obtained before revising the sample design in terms of income and debt distribution (to that end, the 2016 survey data were also incorporated into the same administrative records used for 2020). To achieve this result, we used an iterative weight rebalancing technique (raking).³⁸

weight variance. More specifically, households were grouped into six strata based on income and three strata based on their level of indebtedness.

³⁷ For a detailed description of the calibration of the panel component, see I. Faiella and R. Gambacorta, 'The weighting process in the SHIW', Banca d'Italia, Temi di Discussione (Working Papers), 636, 2007.

³⁸ For more details on the variables and re-weighting method used for comparison with previous survey editions, see R. Gambacorta and E. Porreca, 'Bridging techniques in the redesign of the Italian survey on household income and wealth', Banca d'Italia, Questioni di Economia e Finanza (Occasional Papers), forthcoming.