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COVID-19, SAVING RATE AND THE SURGE IN INFLATION: SOME EVIDENCE ON ITALIAN HOUSEHOLD CONSUMPTION

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Abstract

Over the last three years two shocks affected households consumption: Covid-19 and the surge in inflation. During the Covid-19, in Italy, as in other advanced economies, the propensity of households to save has reached extraordinary levels. In the second half of 2021, the rise in inflation, together with a less lively wage growth compared to prices, led to a decline in the purchasing power of households, generating asymmetrical effects among different income classes. This work investigates the reasons underlying the slow recovery path shown by Italian household consumption in the post-pandemic period: together with precautionary and forced circumstances, the concentration of savings among the richest households, characterized by a lower propensity to consume and greater financial activities, is one of the main reasons. In addition, by analysing the rise in prices and its cost-push origin, we evaluate the distributional effects of inflation, measuring the inflationary differential between the 1st and 5th quintile of households. The asymmetric distribution of savings among households and the larger impact of inflation on low-income ones could contribute to moderate the households consumption, despite the various fiscal measures implemented.

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1. INTRODUCTION

Over the last three years two shocks have affected household consumption: Covid-19 and the rapid surge in inflation. During the Covid-19 crisis there has been an extraordinary increase in the saving rate, due to both precautionary reasons, linked to the uncertainty associated with the pandemic, and forced circumstances, related to the limits to mobility because of various lockdowns. In Italy, as in other advanced economies, the propensity of households to save has reached extraordinary levels. Since 2020, it has fluctuated around a much higher level than that before the outbreak of Covid-19, largely mirroring the pandemic-induced decline in consumption, especially services, and, as opposed to previous crises, the huge public intervention to support household income.

A significant part of the extra savings was accumulated in the form of bank deposits. In the second half of 2021, the rise in inflation, combined with a less lively growth of wages compared to that of prices, led to a decline in the purchasing power of households, especially the lower-income ones. Indeed, as in other countries, the increase in inflation in Italy, initially limited to energy goods, subsequently spread to other categories of goods, generating asymmetrical effects among different income classes.

In this work we investigate the reasons behind the slow recovery path showed by consumption during post-pandemic period. We analyse, therefore, the behaviour of Italian household consumption during and after the pandemic crisis and the impact of the rise of energy prices on household consumption choices. As we show, the increase in the saving ratio was largely involuntary, as the decline in consumption mainly reflected a drop in consumption of services. In particular, the accumulation of savings during the pandemic was mainly concentrated among wealthier households, characterized by a lower propensity to consume and higher financial assets. After the huge accumulation of savings, the rebound in consumption was not as fast as for other components of domestic demand (e.g., investment). In addition, by analysing the rise in inflation and its cost-push origin – mainly driven by energy and food commodities – we measure the inflation differential between the 1st and 5th quintile of households (sorted according to expenditure) and evaluate the distributional effects of inflation. These two aspects – the asymmetric distribution of saving rates among households and the larger impact of inflation on low-income ones – contributed to keep aggregate consumption below the pre-crisis levels despite the various expansionary fiscal measures that were implemented.

The paper is structured as follows: Section 1 surveys the literature on the main drivers of savings accumulated during the pandemic, on the relationship between accumulated savings and consumption and on the effects of inflation on savings; Section 2 focuses on the trend in savings, income and consumption of Italian households during and after the pandemic, highlighting the distribution of savings among households. Lastly, Section 3 analyses the asymmetrical effects of inflation on the households belonging to the different expenditure quintiles.

2. EXTRA SAVINGS, INFLATION AND AGGREGATE DEMAND: RECENT EVIDENCE

2.1 Extra Savings and future consumption: which relationship?

During Covid-19 crisis there was an extraordinary increase in the saving rate, due to both precautionary reasons, linked to the uncertainty associated with the pandemic and forced circumstances, related to restrictions to mobility caused by the lockdown (Dossche and Zlatanos, 2020). Besides, since public support schemes aimed at offsetting the impact of the crisis on households and firms by expanding the public deficit, the increase in private savings partly mirrored the unprecedented government interventions (Aggarwal et al, 2022). Due to restrictive measures and production stoppages, both aggregate supply and demand were affected by the pandemic. In particular, household consumption was the most affected aggregate demand component. Differently from the well-known stylized fact that consumption is more stable than investment along the cycle (Kydland and Prescott, 1990; Fiorito and Kollintzas, 1997), during the Covid-19 crisis private consumption exhibited greater volatility than investment because of constraints to people mobility. In perspective, the evolution of consumption is fundamental to trace the pace of aggregate demand and GDP. Hence, by examining the recovery phase after the Covid-19 crisis, now compromised by the implications of both the war and inflation, the currently debated issue is: will the extra savings accumulated during the pandemic translate into consumption by supporting the recovery of pent-up aggregate demand? If so, when and to what extent?

Several contributions in the literature, such as, among others, OECD (2021) and IMF (2021), argued that, after the easing of restrictions to mobility, the extra-savings accumulated during the pandemic would have led the recovery, supporting the increase in consumption. Indeed, the limitations imposed by the restrictive measures would have temporarily prevented household expenditure: once the restrictions were lifted, repressed consumption would have increased, largely driven by the sectors especially constrained during the lockdown, such as travel, entertainment, hotels and restaurants. The wide gap in services value added with respect to pre-crisis levels justified this view. According to this interpretation, the rise in saving rate should be seen as the result of a temporary change in households choice in response to an adverse shock. However, this view implicitly underestimated the effects exerted on the evolution of consumption by other phenomena.[1] The latter, in particular, deal with the risk that the Covid-19 pandemic produces scarring effects[2] as well as with the distribution of savings among households. The possibility that the savings accumulated during the pandemic subsequently translate into higher consumption depends on several factors including: the seasonality of the virus, the fear of

[1] The rise in individual saving, in fact, even if temporary, could trigger a drop in aggregate demand and output, according to the Paradox of thrift (Eggertsson and Krugman, 2012; Fornaro and Romei, 2019).

[2] The risk that Covid crisis could have long-term effects, causing a lasting fall in output (hysteresis effect), as well as the contraction of the pre-crisis trend, was discussed in Bodnàr and oth. (2020), Cerra and oth. (2021), Doleshel and Manu (2021) and, more recently, in Bandera and oth. (2022).

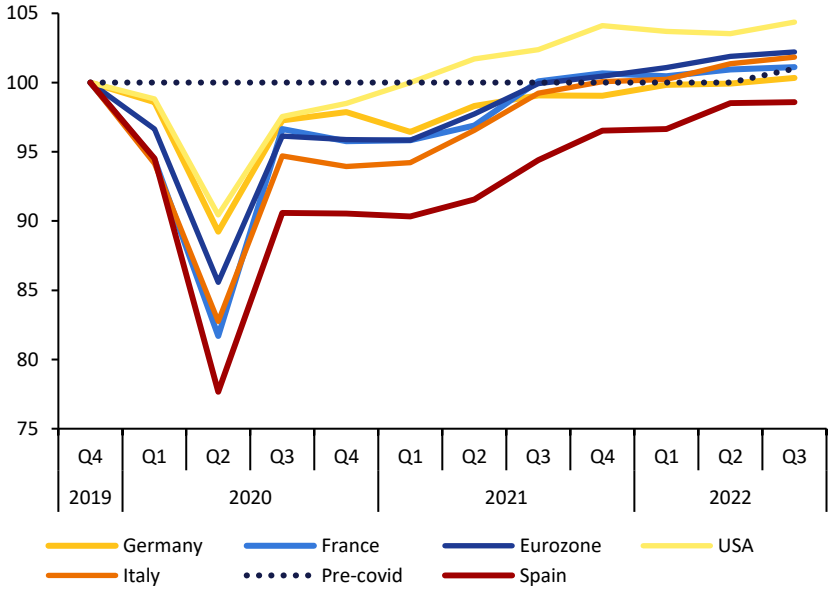
contagion, the persistence of the pandemic effects, with the fear of permanently losing the job[3], households' consumption and income distribution (Ercolani and oth., 2021). Along this line, some works have emphasized the risk that the Covid-2019 pandemic may have changed consumption and saving habits, and under this regime shift, the fact that extra savings would be quickly and fully consumed would not be guaranteed and the level of aggregate consumption may well be persistently below the pre-crisis trend (Kozlowski et al., 2020; Goy and van den End, 2020).

An alternative interpretation of the relationship between extra savings and future consumption can be found in the so-called Ricardian Equivalence view. According to some contributors (Gropp and McShane, 2021; Checherita-Westphal and Stechert, 2021), the coexistence of public deficit and private savings rise during pandemic is consistent with the predictions of Ricardian Equivalence (Barro, 1974). Following this theory, the marginal propensity to consume, after the debt-financed supportive policies, should be close to zero because a rational individual, facing the rise in public spending, decides to save, rather than to consume, the additional income, in order to accumulate enough resources to face the future declines of disposable income due to higher taxation in the future for repaying public debt. However, other authors argued that the savings increase during Covid-19 crisis cannot be justified through the Ricardian Equivalence hypothesis, because of the observed heterogeneity in saving decisions across households depending on income levels (Bilbiie and oth., 2021). More precisely, the Ricardian Equivalence seems not to hold because the marginal propensity to consume with income support policies was positive, given that a fraction - albeit modest - of government transfers was spent by low-income classes, to which the policy measures were addressed (Parker and oth., 2022; Coibion and oth., 2020). The fact that only a limited amount has been consumed is because households who saved more were those with a sort of budget buffer (Charalampakis and oth., 2022), for which an unexpected shock did not trigger a change in the consumption elasticity to income but rather an increase in precautionary savings, making it unlikely that the excess savings subsequently feed the pent-up demand (Bilbiie et al, 2021).

Consistently with this interpretation, in the most important economies, the real GDP returned to pre-crisis levels sooner than household consumption, except for Spain, where it is still below pre-crisis levels. (Figures 1 and 2).

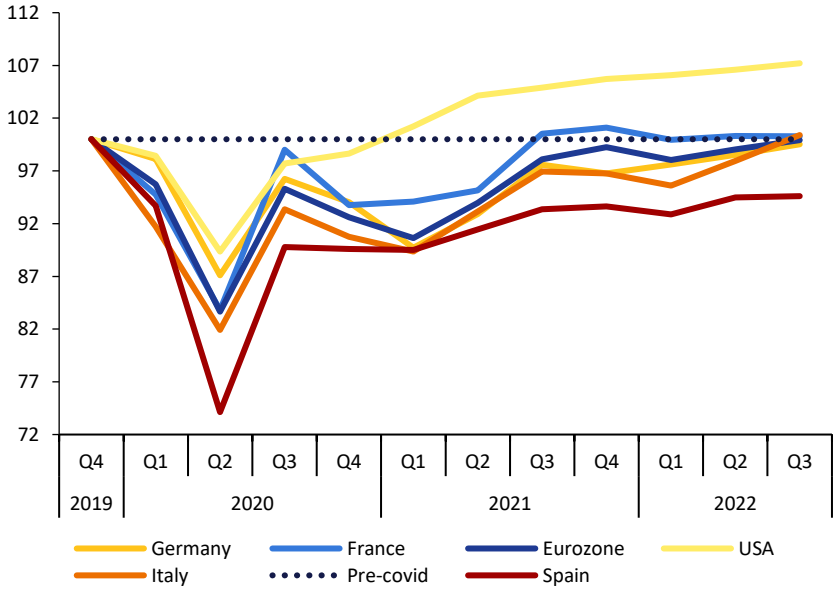
[3] Following Mody and oth. (2012), during a period of recession, the rise in unemployment risk and the perception of uncertainty about the future represent the major driver of increase in precautionary saving.

Figure 1 Real GDP level: comparison with Q4 2019=100



Source: our calculations on Eurostat data.

Figure 2 Households consumption level: comparison with Q4 2019=100



Source: our calculations on Eurostat data.

This dynamic is confirmed by the results of the *Consumer Expectation Survey,* conducted in July 2022 by the ECB (Dossche and oth., 2022). According to it, from March 2021, over 74% of the extra savings did not translate into consumption one year after the pandemic, therefore reducing expectations of a recovery in repressed demand. Parker and

oth. (2022), by using the *Consumer Expenditure Survey* on households in USA, showed that people receiving government transfers (EIPs), authorized by the CARES Act, spent only 10% of transfers in non-durable goods and services in the three months covered by the measure, with little evidence of additional spending in the subsequent three months, in line with Bilbiie et al. (2021). The survey conducted by Coibion and oth. (2020) on American households demonstrates that only 15% of government transfer recipients planned to spend most of their transfers, while most of them said they intend to save or use that money to pay off debts.

2.2 Concentration of savings among households and macroeconomic effects

Another crucial aspect of the relationship between saving and consumption concerns the fact that during the pandemic not all households saved in the same way. Both in the US and the Euro Area, data show that extra-savings were unequally distributed, being mainly concentrated among high-income households (Allen and Rebillard, 2021; Dossche and oth., 2021; Hoke et al., 2021). This evidence is crucial for interpreting the observed consumption recovery because the households that saved more during the pandemic are those characterized by a lower propensity to consume as well as lower liquidity constraints (Charalampakis and oth., 2022). Given that the economic effects of pandemic hit relatively more low-income workers (OECD, 2020; Basso and oth., 2021) - with a high propensity to consume - during the pandemic the share of national income going to richer households mechanically grew (Kharroubi et al., 2022): this income shift increased savings of richer households, that is less likely to prompt a rise of consumption in the near future.

That said, the future evolution of consumption is closely related to the distribution of saving among households.

The reason behind the rise in savings is also relevant: on the one hand, some households accumulated savings in response to both precautionary reasons and mobility restrictions; on the other hand, the evidence shows that a significant proportion of households reduced their savings during the pandemic, due to sudden and extraordinary expenses and an unexpected drop in incomes (Dossche and oth., 2022). Although these households received most of the public support to address the Covid-19 emergency, the richest benefited from the boom in share prices and experienced a reduction in consumption for travel and entertainment, which represents a significant share of their spending. Moreover, as showed by Attinasi and oth. (2021), another important element that could have contained the rise in consumption is the fact that the increase in savings during the lockdown was associated with a surge in household deposits that could be used to repay past debts or accumulate other financial assets, more than supporting aggregate demand[4].

[4] Following Coibion and oth. (2020), higher-income households tend to save money rather than pay off debts, while renters, medium-lower income households, as well as financially constrained individuals, are more likely to pay off debts rather than saving.

All these elements might moderate the share of saved income that could potentially turn into greater consumption.

2.3 Distributional effects of inflation and aggregate demand

The heterogeneity of savings across households during Covid-19 crisis was accompanied in 2021 by the rise in inflation, an element which, together with a less lively growth of wages compared to that of prices, led to a decline in the purchasing power of households. Both aspects analysed here - the unequal distribution of savings among households and the surge in prices - act in the direction of containing aggregate demand.

In most European countries, the increase in inflation, initially limited to energy goods, subsequently spread to other categories of goods (including food, transport, hospitality and catering services) generating asymmetrical effects on individuals in the different classes of income. Since the transmission of higher energy prices to other items led to a higher rise in prices of goods compared to services, significant redistributive effects were observed. The most affected households were those characterized by a lower income, for which the share of goods in total expenditure - especially food and energy - is higher than that of services (Vidal and Villani, 2022).

Under certain conditions, due to the propensity to consume of low-income households that is higher than that of wealthier households, the peculiar origin of inflation could put a brake on consumption, culminating in a weaker recovery of aggregate demand (see the box "*The effects of inflation on consumption and saving: theoretical aspects*").

Fixed-income households are the most affected by inflation: in fact, the goal of keeping purchasing power constant leads households to draw wealth, progressively reducing available savings. However, the attitude to tap into savings is not identical between the different income classes: it mainly depends on households level of income and consumption habits, as well as on the price elasticity of demand for certain goods. Following Battistini and oth. (2022), given the same increase, in absolute terms, of spending in energy, the reduction in savings for households in the lowest income quintile is more than five or six times higher than that for households in the highest quintile.

However, whether the attempt to keep consumption levels constant succeeds depends on the amount of savings that is available: if inflation is persistent, the available buffer of savings would be gradually eroded and income effects would reduce demand. This aspect mainly affects middle-low-income households and the longer inflation persists, the more it lasts. Conversely, wealthier households could benefit from inflation, because it may induce a wealth effect resulting from the rise in the price of assets, especially stocks and houses. However, the wealth effect is unlikely to compensate for the decline in aggregate demand of low-income households.

BOX. The effects of inflation on consumption and saving: theoretical aspects

1. Prices, consumption habits and basket goods

A rise in prices level normally generates two effects on consumption: a substitution effects, for which consumers tend – when possible – to substitute the good that experiences a rise in price with other goods, and an income effect, for which the cut in real income entails a fall in demand for the good. The prevalence of the substitution effect or income effect depends on several factors, among which: the composition of basket of goods, the household income levels and consumption habits. If a good that marks an increase in price has many substitute goods, there could be a prevalence of the substitution effect. Nevertheless, in a context in which the rise in inflation is mainly driven by foods and energy, the composition of the consumer basket becomes crucial.

Since the demand for basic necessities is rigid and given that some of them have only few substitute goods (Gas and electricity) or can be substituted only after a change in consumption habits (if the price of natural gas increases, the consumer can change the use of this energy source only in the long term, by changing consumption habits), an increase in inflation of such goods could determine, not an absolute reduction of demand, but a re-composition of the demand towards similar goods but with lower quality (Gicheva and oth., 2010), keeping constant the basic necessities consumption. In this case, even if there is a lower real income, incompressible consumptions might prevent income effect to be so strong to reduce demand. This is particularly true for households in the lower part of the income distribution, for which food and energy represent a relevant share of their basket consumption. This phenomenon is less evident for households in the upper part of the income distribution, for which the share of unnecessary goods and/or services on total expenditure is higher. Moreover, in spite of the higher share of financial assets in their portfolio and the fact that a rise in prices may induce a higher value of stocks, only under certain hypotheses do these positive wealth effects drive a rise in their demand for goods and services.

2. Interest rates and aggregate demand

In a static model of aggregate demand and supply (AD-AS model), the increase in prices causes a reduction in GDP, since a fall in real money balance triggers an increase in interest rate that causes a decline of the investment and GDP. This effect is higher the higher is the responsiveness of investment to change in interest rate: some literature results deemphasized this channel, due to the low elasticity of investment to interest rate (Blanchard, 1986; Blinder, 1997; Sharpe and Suarez, 2013; Garegnani, 2015). Another channel of reduction of demand is represented by the cut in consumption, through the erosion of real wages. According to neoclassical theory, the fall in real wages should trigger a rise of labor demand, but empirical evidence (De Long and Summers, 1956; Braumann, 2001) and theoretical analysis (Stirati, 2016) question the validity of this argument. In fact, a reduction in real wage, by

redistributing from debtors to creditors, might reduce demand and GDP, as shown by Fisher (1933) and Tobin (1947). Looking at supply-side, a decline in real wages normally negatively affects labor supply and potential GDP also.

Dynamic Stochastic General Equilibrium models (DSGE model) have put emphasis on the role of inflation expectations. Looking at New-Keynesian models, where expectations guide the intertemporal allocation of consumption and savings based on changes in the real interest rate, a rise in inflation expectations in a context of price rigidity would exert positive effects on aggregate demand thanks to the fall in the real interest rate, culminating in the increase of current consumption (Galì, 2008; Summers, 2015). In this theoretical framework, the expansionary effect of the increase in expected inflation on aggregate demand will be larger the greater the degree of price and wage rigidity and the more the central bank operates in a Zero Lower Bound contest (Christiano et oth., 2005; Eggertsson, 2011). However, the role that inflation could play for consumption is not forgone, depending on the prevalence of the substitution or income effect. Consistent with individual intertemporal preferences, after a cut in real interest rate current consumption is preferred to future consumption: substitution effect prevails. If income effect dominates, the role played by inflation on real interest rate can determine an increase in saving (van den End et al., 2020).

Along this line, empirical works have highlighted the low elasticity of consumption and investment to changes in prices (Sharp and Suarez, 2013; Borio and Hofmann, 2017), especially in a low interest rates environment, a phenomenon that would find a confirmation in the ascertained flattening of the IS curve (Ahmed et al., 2021). This argument is closely linked to that relating to the asymmetry of saving decisions with respect to the level of interest rate: considering a standard saving curve, a lower nominal rate normally induces a reduction in saving. However, evidence shows that, in a contest of low rates, below a critical level of interest rate, savings could grow (Felici and oth, 2022) due to the expectation of further reduction in interest rate and consequent drop in the interest margin, in line with the Keynesian liquidity trap. Accordingly, a reduction in interest rate would not be expansionary, but would trigger a rise in saving to accumulate wealth for future consumption (Fehr and Tyran, 2014), by reducing current consumption and, ultimately, aggregate demand.

3. PANDEMIC EFFECTS ON HOUSEHOLDS CONSUMPTION AND SAVINGS: EVIDENCE FROM ITALY

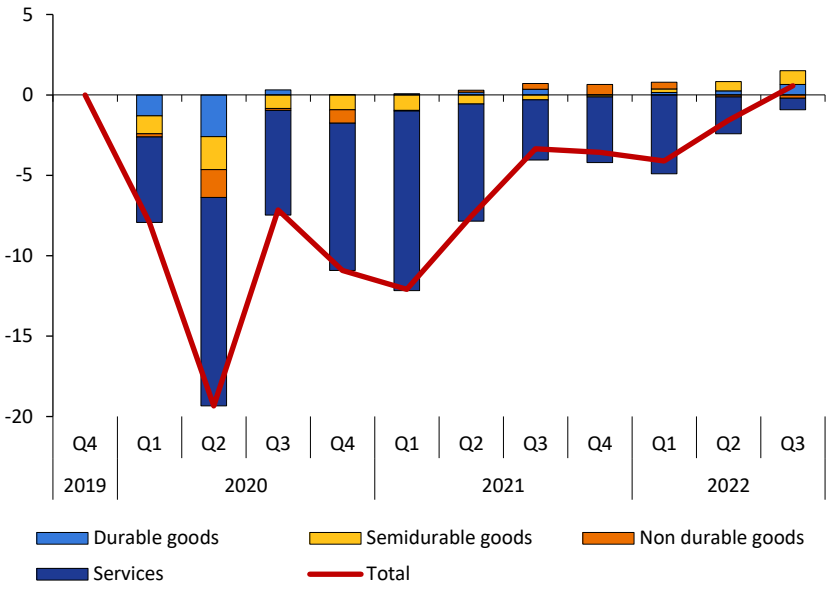
3.1 Private consumption and saving rate developments

The propensity to save of Italian households during the pandemic reached unprecedented levels, a result that is perfectly consistent with the peculiar nature of the pandemic shock. Indeed, the pandemic affected economic activity through social distancing, which effectively reduced consumption opportunities, especially contact-intensive

services. Since the first half of 2020, when the first and the most stringent impositions were enacted, the propensity of households to save increased with the parallel reduction in consumption. In 2020, households consumption reported a negative annual change of 10.4% in real terms, an historically low level.

The contraction affected all types of consumption, especially services. Following services, the most pronounced reduction affected durable goods. In 2021, household real consumption grew by 5.2% with respect to the previous year. The observed partial recovery was driven by the increase in durable and non-durable goods, which returned to 2019:Q4 levels. Services consumption benefited from the gradual easing of restrictions in the second half of 2021, thanks to the successful vaccination campaign. Even if households consumption reached pre-covid levels in 2022:Q3, services consumption still remain at a lower level than the pre-pandemic one (Figure 3).

Figure 3 Households consumption: p.p. difference with respect to Q4 2019

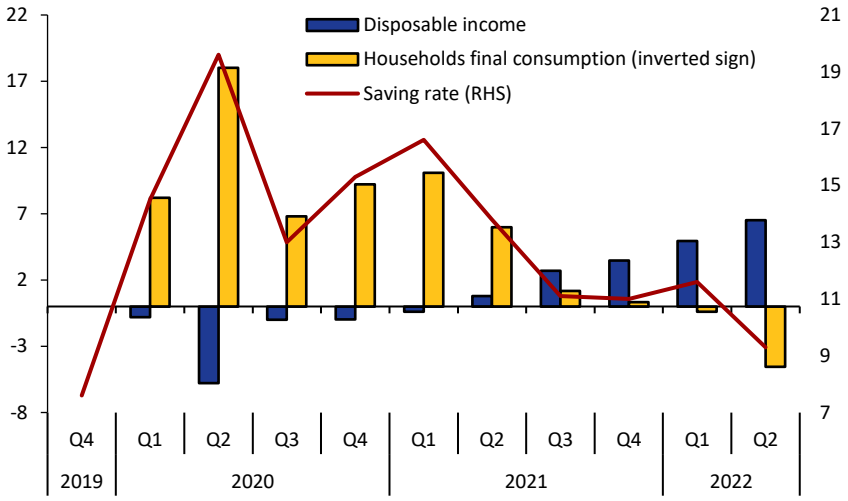


Source: our calculations on ISTAT data, National Accounts.

Reflecting the decline in consumption started in 2020:Q1, the saving rate significantly grew in the first half of the year, reaching a peak of 19.6% in 2020:Q2, when the largest cyclical decline in consumption occurred. Afterwards, it remained above its pre-pandemic level for 10 quarters (Figure 4). In 2020, savings sharply rose pushing the annual saving rate at 15.6% from 8.0% in 2019, a historical high for the last two decades. This result was possible due to the substantial resilience of household income reflecting the measures to preserve jobs and support income. After contracting in 2020:Q1, the largest reduction occurred in 2020:Q2 and was followed by a significant recover in the second half of the year. In 2021 the saving rate declined to 13.1%, consistently with the recovery, albeit partial, in consumption. Nominal gross income over the same year grew by 3.7% reaching pre-pandemic levels in 2021:Q2. In 2022, saving

rate has progressively declined, reaching 7.1% in 2022:Q3, below the pre-crisis level.

Figure 4 Disposable Income, Households final consumption and saving rate



Source: our calculations on ISTAT data, Institutional Sectors Accounts. Note: for disposable income and household consumption, p.p. difference with respect to Q4 2019; saving rate is expressed as the share of gross savings to gross households disposable income.

Together with the sharp contraction in private consumption, due to reduced spending opportunities, and the limited negative impact on disposable personal income, uncertainty certainly played a role.

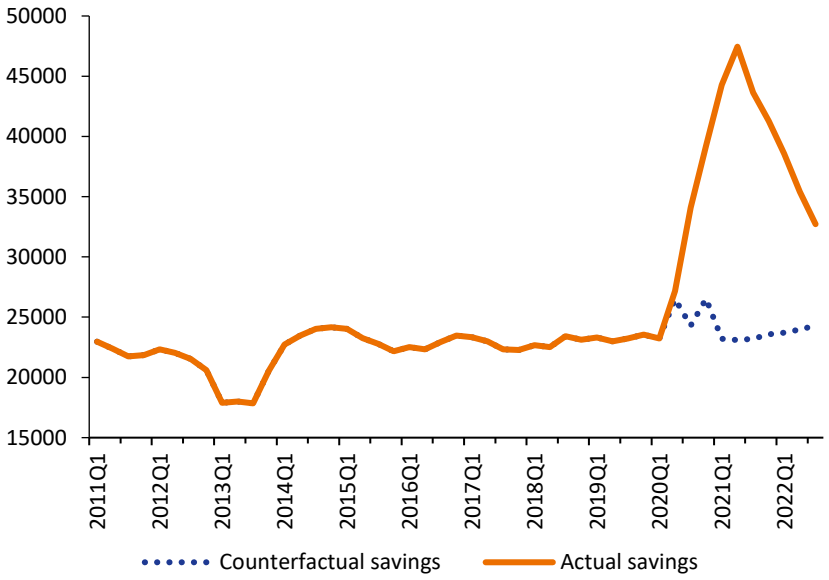
As highlighted in a survey conducted by Intesa San Paolo (2021), saving for precautionary purposes made up a large portion of total saving. In 2020, savers were the 55.1% of respondents, compared to 48.6% in 2021. In both years, savings to cope with unforeseen events was largely the first item (46.6% of respondents in 2020 and 49.1% in 2021) in the list of all ambitions and motivations to save, followed by children and inheritance, home, health and retirement purposes. In addition, savings composition changed between 2021 and 2020: in 2020 the largest share of savers was given by those with a savings plan, while in 2021 the share of involuntary savers, who were forced to delay their spending plans due to contagion containment restrictions, gained more importance.

Due to the combination of “forced saving” and “precautionary saving”, savings growth exceeded the trend that might have been recorded in the absence of pandemic. In order to calculate the amount of the extra savings, a counterfactual scenario has been defined, where the saving rate is assumed to be equal to its average over the last decade before the outbreak of the pandemic and household disposable income growth is assumed to be equal to the average growth rates over the same period.

The resulting difference between observed savings and those deriving from the counterfactual scenario, assumed not to be affected by Covid-19 outbreak, can be considered as a proxy of the extra savings: they

amount to 140.5 billion euros (equal to 7.9% of GDP) cumulatively from 2020 to the third quarter of 2022 (Figure 5). In detail, extra savings had been accumulated, almost entirely, over the two years affected by Covid-19, especially during 2020. In the second and third quarter of 2021, when restrictions were lifted pushing the recovery in contact-intensive consumption, savings accumulation moderated and then decreased gradually. In 2022:Q3, savings still remain above the pre-crisis level.

Figure 5 Actual saving and Extra Savings, millions of Euros



Source: our calculations on ISTAT data.

Such an increase in the propensity of households to save is explained by combining the decline in consumption with the resilience of incomes during the crisis period, sustained by the measures implemented by the government for this purpose.

3.2 Financial account, Deposits and concentration of savings among Households

Since the beginning of the crisis, the financial position of the private sector improved markedly. According to the latest financial accounts data[5], household financial assets in 2021 rose to 5,236 billion euros, 574 billion euros more than at the end of 2019, as total assets at market prices held by household were boosted by rising deposits and financial asset prices. On the other hand, liabilities grew by only 38 billion euros. By expanding the time horizon to include data up to 2022:Q3, household financial assets decreased with respect to the previous year, but remain about 167 billion higher if compared to 2019.

[5] Bank of Italy, 2022Q3 data release Financial Accounts – 3rd Quarter 2022 – Bank of Italy https://www.bancaditalia.it/pubblicazioni/conti-finanziari/

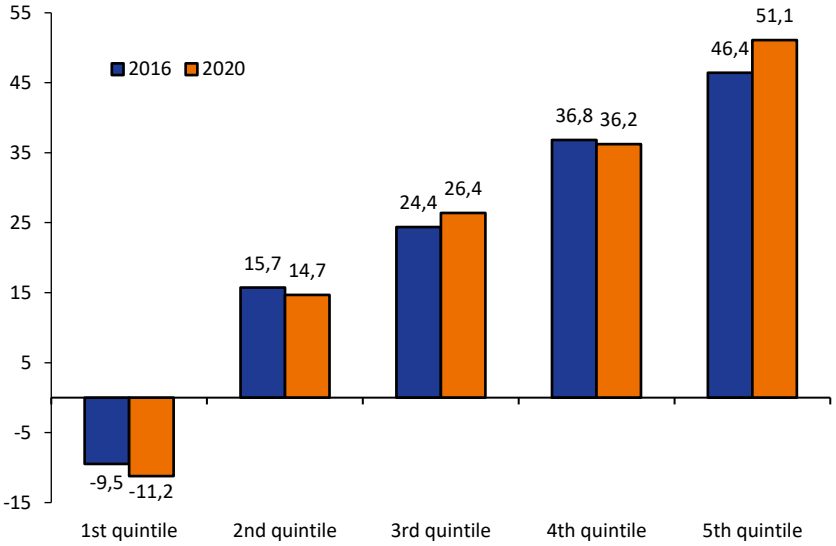
Looking at the data on deposits[6], which capture quite well the recent developments in the saving rate, it emerges that, from December 2019 to November 2022, bank deposits of households grew by about 115 billion, equal to about 6.5 GDP percentage points.

Thus, it can be stated that an important part of household savings was held in liquid form (mainly deposits) and that probably some of the accumulated savings might have contributed to keep the growth rate of loans moderate. In addition, along with deposits, equities show record increases on households' financial assets, explaining almost the 40% of the total change in the stock of household financial assets from 2019 to 2022:Q3.

However, although there exists a large amount of resources set aside by households, the degree to which they will stimulate the recovery of private consumption, by financing pent-up demand, is uncertain.

The main reason is linked to the fact that savings are unequally distributed among income classes. Intuitively, the savings rate is directly proportional to income, thus households belonging to the highest income quintiles save more than the those belonging to lower income classes. According to the Survey on Income and Wealth released by the Bank of Italy (2022), this gap has amplified after the pandemic shock. In fact, compared to the survey conducted in 2016, the 2020 data shows more divergent trends at the two extremes of the income distribution: compared to 2016 there was an increase in the savings rate in the 5th income quintile and a decrease in the savings rate in the 1st income quintile (Figure 6).

Figure 6 Saving Rate by income quintiles



Source: our calculations on Bank of Italy "Survey on Income and Wealth" data. Note: saving rate is expressed as savings on gross households income.

[6] Bank of Italy, November 2022 data release Banks and Money – Bank of Italy https://www.bancaditalia.it/pubblicazioni/moneta-banche/

In detail, during 2020 the richest households saved half of their income while the poorest ones, whose savings rate was already in negative territory, continued to decline to -11.2%.

In addition, the survey highlights that holding non-liquid financial assets is prevalent, for obvious reasons, among higher income classes. For example, in the last income quintile the percentage of households holding stocks and shares is 20.7% and this share falls as income decreases, reaching 0.7% in the first income quintile.

It seems clear, then, that those who saved during the pandemic were those who had more room to accumulate resources and those who also benefited from financial earnings. The peculiarity of the Covid-19 pandemic played a role in shaping such savings dynamics as wealthier households tend to spend a higher share of their consumption on services, whose consumption was greatly reduced during the pandemic.

As a result, the impact of the extra savings on private consumption is somewhat ambiguous because most resources are mainly concentrated among households with lower propensity to consume and more financial assets. This implies on the one hand that, although the richest households may recover some consumption in services (restaurants and travels), set aside during the pandemic, there is still a limit to the amount of extra services or goods they can consume to fill the aggregate demand gap; on the other hand, the richest households may decide to keep the accumulated savings in financial wealth.

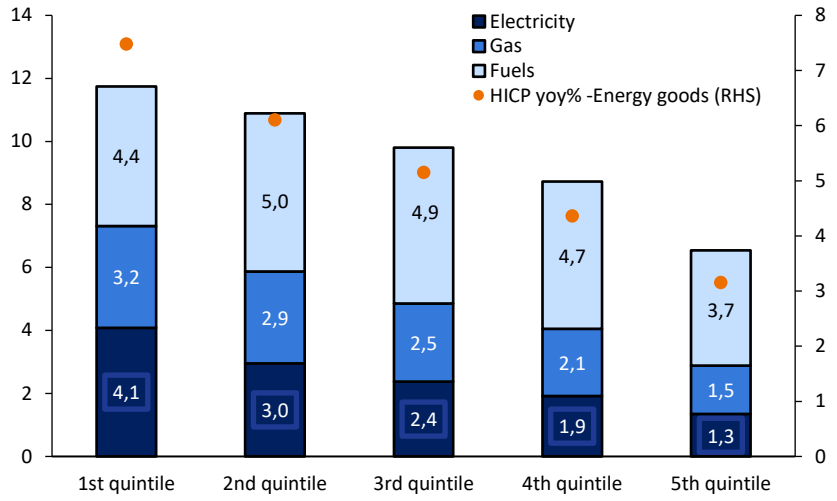
4. Distributional effects of inflation on households expenditure quintiles

The rise in inflation started in late 2021 and it was triggered by the rise in energy prices, initially due to production bottlenecks and then to geopolitical tensions.

Being energy a primary good, whose demand is essentially inelastic to price changes, a rise in the price of energy goods affects the purchasing power of households and, thus, private consumption. That impact can be transmitted directly, because of the increased cost of electricity, gas and fuels, and indirectly, through producers who may choose to pass-through the rise in production costs onto higher final prices. Therefore, households are naturally affected by fluctuations in the costs of energy goods and the effect of these fluctuations depends on the degree to which households are exposed to energy prices.

According to ISTAT data about average monthly household expenditure by equivalent expenditure quintiles, the share of consumption of energy goods decreases from the first to the last spending quintile. Households belonging to the 1st quintile are those characterized by a lower spending, and they reserve a larger share of their total spending to electricity, gas and fuels. On the contrary, higher spending households, belonging to the 5th quintile, spend relatively less on energy goods. In particular, the former allocate 11.7% of their total expenses to energy, while the latter only 6.5%. Combining these shares with the corresponding average annual HICP change, data suggests that households in the 1st quintile are exposed to a higher inflation on energy goods (Figure 7).

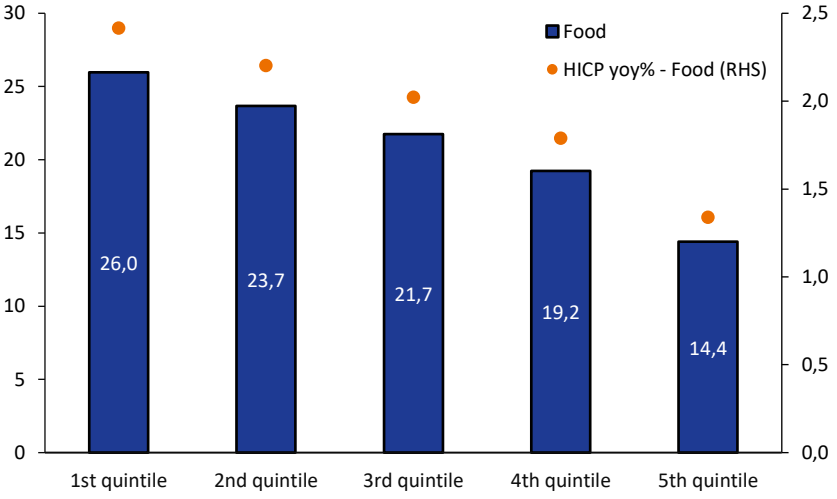
Figure 7 Equivalent expenditure share and exposition to inflation of each equivalent expenditure quintile, energy goods, y-o-y % change



Source: our calculations on Istat data. Note: equivalent expenditure quintile data refers to 2021, inflation yoy% refers to 2022. Bars show the share of spending in energy goods of each equivalent expenditure quintile, dots show energy goods' price increase experienced by each quintile.

The same reasoning applies to food and beverage, which also experienced the recent price increase. Lower-spending households carried the load of food-induced inflation by more than higher-spending ones (respectively: 2.4% versus 1.3%). This was due to the fact that 1st quintile households spend the 26% of their total expenditures on food while 5th quintile households spend only the 14.4% (Figure 8).

Figure 8 Equivalent expenditure share and exposition to inflation of each equivalent expenditure quintile, food, 2021 y-o-y % change



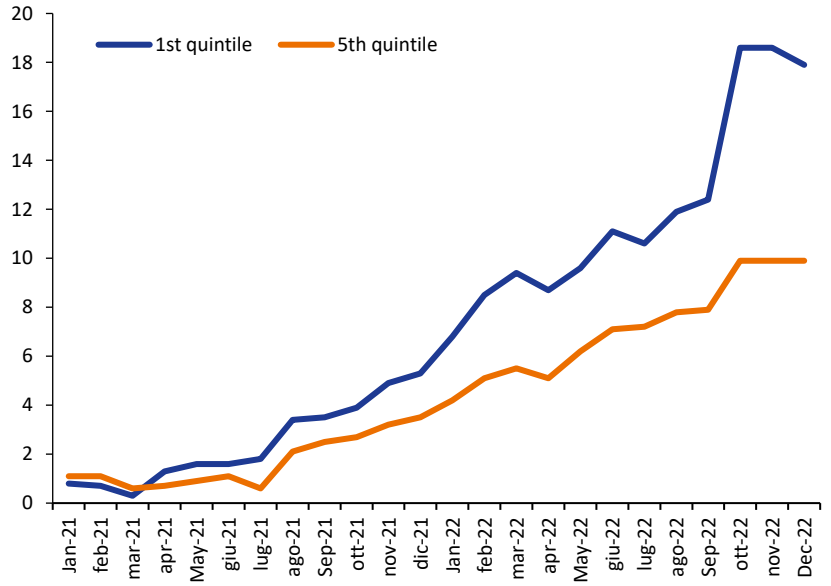
Source: our calculations on Istat data. Note: equivalent expenditure quintile data refers to 2021, inflation yoy% refers to 2022. Bars show the share of spending in food of each equivalent expenditure quintile, dots show food's price increase experienced by each quintile.

Since the transmission of the higher price of energy to other items led to a higher increase in the prices of goods compared to services, a significant redistributive effect applies. In fact, although general inflation is accelerating, its impact is different among households groups because of the different expenditure composition. ISTAT data provides evidence on the inflationary differential between the 1st and 5th equivalent expenditures quintiles. Lower spending households are burdened relatively more by inflation because they allocate a larger share of their consumption to the goods that are more affected by the price increase. According to the data, there is evidence about a widening rich-poor inflation gap that started from the second half of 2021, peaked in November and reached 8.0 percentage points in December 2022 (Figure 9).

As a result, the recent rise in energy prices represents an impediment to the recovery of consumption as it exacerbates the adverse redistributive effects of the pandemic.

Coupled with the Covid-19 shock, that produced a higher disparity in incomes and savings that penalised poorer households with a greater propensity to consume, inflation, starting from energy goods, further widened the distributional gap, reducing the scope for consumption recovery, especially among the poorer households that are more inclined to consume. It is worth mentioning that the erosion of households purchasing power has been mitigated by several measures implemented by the government, such as the social bonuses for electricity and gas utilities, the containment of energy bills and the reduction in excise duties on fuels. Among the measures aimed to safeguard the purchasing power of lower incomes, one of the most important has probably been the provision of one-off benefits to different categories of workers and retired persons.

Figure 9 Inflationary differential between 1st and 5th expenditure quintile, y-o-y % HICP change



Source: ISTAT data. Note: the 1st quintile represents households with lowest equivalent expenditure while the 5th quintile households with highest equivalent expenditure.

5. CONCLUDING REMARKS

After the Covid-19 crisis, there was a sharp increase in the savings rate, caused by the limitation of consumption induced by the government's restrictive measures to mitigate the spread of the infection and by precautionary reasons as well. During the recovery phase, with the gradual easing of restrictions, the real GDP returned to pre-crisis levels sooner than aggregate consumption. The huge amount of saving accumulated during the pandemic subsequently translated into higher consumption to a partial extent only, basically because, during the pandemic, the high saving ratio marked in the major economies was unequally distributed among households. For Italy the 2020 data show divergent trends at the two extremes of the income distribution: there was an increase in the savings rate in the last income quintile and a decrease in the savings rate in the first income quintile. Since then, the saving accumulation has been mainly concentrated among wealthier households and the expected increase in repressed demand has been limited, since the latter have a lower propensity to consume than households belonging to the bottom of income distribution. Moreover, a significant part of savings was accumulated in the form of financial wealth (deposits): although there exists large amount of resources set aside by households, the degree to which they will stimulate the recovery of private consumption, by financing pent-up demand, is uncertain. In the late 2021, the outstanding rise in energy prices triggered an increase in inflation, initially due to production bottlenecks and then to geopolitical tensions. The persistence of energy inflation gradually spread to other components, especially food. Given that the main drivers of inflation were food and energy, which represent the main expenditure component of low-income households, the inflation produced asymmetrical effects among households. By using ISTAT data on equivalent expenditure quintiles, we show that the households belonging to the 1st quintile have been burdened relatively more by inflation than those belonging to the 5th one, because they allocate a larger share of their consumption to goods that are mainly affected by the price increase. In summary, a distribution of savings concentrated among the richest households, with a lower propensity to consume, together with the widening of the inflation gap between the various income classes, could exert a drag on the future evolution of consumption. On the other hand, however, the erosion of households purchasing power has been mitigated by several measures implemented by the government since 2021.

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