

Inflation and Financial Savings in Italy

1. The high level of inflationary tensions which have been present in the Italian economy for some years has made the real yields of financial assets conspicuously negative. While voices have been raised in various quarters in favour of the creation of instruments for the protection of the individual saver, there has been a relative neglect of the efforts designed to quantify the extent of the intersectoral transfers of wealth operated by inflation. The few ventures in this field cover a limited period.¹

In Italy the role of Households in the formation of the national net savings is considerable and is characterized by a high propensity to accumulate financial assets in proportion to the available income. In recent years, it is the only sector to show positive financial balances on a scale and of a dynamism which are not to be found in any other European country. The present study proposes to provide an estimate of the yield, both in monetary and real terms, of the financial savings of Households from 1964 to 1976 and of the loss of wealth suffered by it as a result of inflation.

2. If we follow the layout of financial accounts,² the gross domestic assets of Households can be grouped into eight main categories: notes and coins, demand deposits, bank time and savings deposits, interest-bearing certificates issued by special credit institutions, Post Office deposits, bonds, shares and mathematical reserves of insurance institutions. If we deduct the liabilities formed by short-term bank loans and by medium and long-term loans, we obtain the net assets. The annual statistical series for the size of the

¹ See P. BAFFI, "Savings in Italy Today", in this *Review*, June 1974; B. BIANCHI, "L'andamento del valore e dei rendimenti reali del risparmio finanziario nei principali paesi industriali nel biennio 1973-74", in *Bancaria*, June 1975.

² See M. ERCOLANI and F. COTULA, *I conti finanziari della Banca d'Italia*, Ente Einaudi, Quaderno n. 4.

financial savings of Households and of other sectors are available from 1964 on.³

However, only the first six categories of assets are formed of financial instruments in the narrow sense of the word with a certain monetary content, which are such as to be precisely assessed and are directly exposed to the effects of inflation. We have therefore confined our analysis to those assets, and have excluded both shares and mathematical reserves.

Share investment, at least in theory, is formed of securities which represent real goods, and their assessment offers some difficulties. If we take the stock exchange quotations, we would, at least in the short run, be accepting margins of error (not always insignificant) resulting from typically cyclical or speculative situations. In addition, even if the gross yield is known in terms of distributed profits, there is a lack of data needed to estimate another important component of profitability, i.e., the balance of gains and losses on capital account through buying and selling operations during the period under consideration by households as a whole in relation to the other sectors (credit institutions and firms). This component is less important for other financial assets — such as bonds —, but may, in the case of shares, because of their greater volatility, assume not inconsiderable values. The mathematical reserves, formed of credits to insurance and welfare institutions, have also been excluded from our research since they represent real future benefits and do not explicitly produce interest.

In Table 1, we show the series of the volume of the domestic financial assets and liabilities of Households for the period which we are examining. It will be noted that the six assets considered which, at the beginning of 1964, constituted 66.5 per cent of the gross total, accounted for 90.5 per cent after 13 years. This increase can be attributed to the drastic decline in the share component which fell from 25.4 per cent to barely 2 per cent. Vice versa, the proportion of savings absorbed by the financial intermediaries rose from 40.2 to 68.5 per cent.

3. In general, the amount of a category of financial assets A_{t+1} at the beginning of year $t+1$ is equal to the volume A_t existing at the beginning of the previous year, plus the net flows F_t created

³ See F. COTULA and N. CARON, "I conti finanziari dell'Italia", in *Bollettino della Banca d'Italia*, No. 6, 1971; BANK OF ITALY, *Annual Report* for 1971-1976.

TABLE 1
HOUSEHOLDS' FINANCIAL ASSETS AND LIABILITIES: VOLUME AT THE BEGINNING OF THE YEAR
(in billions of lire)

	1964	1967	1970	1973	1974	1975	1976	1977
<i>Assets</i>								
Notes and coins	2,641	3,458	4,669	6,934	7,767	8,725	10,137	11,501
Bank demand deposits	1,947	3,059	5,976	15,980	20,285	24,872	25,979	32,106
Bank time and savings deposits	5,953	8,663	11,980	15,373	18,810	26,185	38,084	47,059
Special credit institutions deposits	529	819	1,407	2,498	2,885	3,146	3,727	3,669
Post Office deposits	2,681	3,641	4,578	6,992	8,478	9,042	11,849	14,087
Bonds (1)	4,613	6,987	10,588	15,520	17,574	14,557	17,294	19,349
Total (a)	18,364	26,627	39,198	63,297	75,800	86,527	107,070	127,771
Shares	7,021	6,572	7,036	5,032	6,950	3,767	2,393	2,793
Mathematical reserves and other assets	2,245	3,310	4,752	6,676	7,235	8,261	9,513	10,921
Total assets (b)	27,630	36,509	50,986	75,005	89,785	98,555	118,976	141,485
$\frac{a}{b} \cdot 100$	66.5	72.9	76.9	84.4	84.2	87.8	90.0	90.5
<i>Liabilities</i>								
Short-term bank loans	805	932	1,331	2,104	2,488	2,553	2,862	3,219
Medium- and long-term loans	1,316	1,972	3,017	4,846	7,064	7,222	9,267	9,905
Total liabilities (c)	2,121	2,904	4,348	6,950	9,552	9,825	12,129	13,124
Net assets (a - c)	16,243	23,723	34,850	56,347	66,048	76,702	94,941	114,647
Total net assets (b - c)	25,509	33,605	46,638	68,055	80,233	88,730	106,847	128,561

(1) Nominal values.

during the year, plus the interest accruing I_t . If we accept the hypothesis that the new flows are uniformly distributed over the year and that the system of capitalization is that of simple interest, with the earnings accredited in a single solution at the end of the period which is being considered,⁴ we have:

$$A_{t+1} = A_t(1+i_t) + F(1+i_t/2) = A_t + F_t + I_t \quad [1]$$

where i_t obviously indicates the average unit rate of interest in year t . If the values of A_{t+1} and A_t are known, resolving in equation [1] the unknown formed by i_t or by I_t , the value of F_t is necessarily determined.

Bank demand and savings deposits and those with special credit institutions. For each year, the rates of interest drawn by the Households sector on bank deposits has been put equal to the average rates actually paid by the group of credit firms covered by the Bank of Italy survey (representing about 97 per cent of total deposits). They have been obtained by substituting in equation [1] the quantities A_t , A_{t+1} and I_t deduced from the statement of accounts and from the consolidated business accounts of the credit system, separately, for demand and savings deposits of the usual clientele.

The yield of deposits with the special credit institutions has also been determined by an analogous procedure. We have, that is, worked on the item of the profit and loss accounts of the institutes which collect all the financial savings of Households as regards the interest paid on deposits and interest-bearing certificates and on the corresponding items in the statement of accounts.

Post Office deposits. From the available statistics⁵ on the volume of total Post Office savings, on the movement of deposits and on the interest accruing, we have been able to obtain the precise average annual yield of the financial assets of Households in the form of postal savings.

Bonds. The estimate of the yield of fixed income securities has involved simulation of a portfolio tending to reproduce the one held by Households.

⁴ The latter condition is met, in the Italian credit system, for most of the deposits.

⁵ AMMINISTRAZIONE DELLE POSTE E TELEGRAFI, *Relazioni sul servizio delle Casse di Risparmio Postale*, various years, Rome.

We have supposed, for the sake of simplification, that:

- 1) all the securities were purchased by Households on the primary market following a policy of buy-and-hold until these securities matured;
- 2) the dividends, due every six months, were paid at mid-year and at the end of the year;
- 3) the securities extracted for amortization were reimbursed at mid-year, and, at that date, the premia drawn by lot were awarded;
- 4) the sums which had been made available as a result of redemptions and the payment of the interest and the premia were immediately and entirely used to subscribe new securities; and
- 5) the net purchases of new securities were made at mid-year.

The simulated bond portfolio respects the constraint of equality with the volume of the securities, at their nominal value, at the beginning of each year, which is shown in Table 1. The bonds included in the portfolio — about 160 — are all those with official quotations, issued for amounts of over 20 billion lire and offered to the public in a single issue (we have thus excluded the open series). The portfolio for the base year 1964 has thus been composed of securities with the above characteristics and in percentages proportionate to the amounts still in circulation at the beginning of that year.

In two years, 1964 and 1970, Households did not entirely re-employ the interest of the bond portfolio to buy newly issued securities. For 1974, a particularly critical year for the bond market, the hypothesis at 1) could not be accepted, since there had been a net switch of securities to other sectors of about 2,800 billion nominal lire. We have, therefore, supposed that the Households sold on the market, at the average quotations of the second quarter, maintaining unchanged the overall structure of the portfolio. The losses caused by the difference between subscription and sales prices have been deducted from the interest accruing in that year.

Short-term bank loans. The cost of short-term bank loans has been put equal to the average rate of interest on overdrafts granted

by the banking institutions covered by the Bank of Italy survey, following the procedure used for interest paid on demand deposits.

Medium- and long-term loans. This category of financial liabilities of Households includes both debts to banking institutions and those (which are much more substantial) to special credit institutions formed almost entirely of real estate mortgages, whether on special terms or not. The rate of interest on medium- and long-term debts, therefore, has been equal to that on the loans of the real estate credit institutions.

4. The results of the elaborations, as set out in Table 2, might at first sight give rise to a certain surprise, especially on account of the modest level of the interest rates on the gross financial assets, which is partly explained by the inclusion of currency.

The weighted average rate of interest on financial assets of Households has shown a constantly growing trend for the whole of the period observed, rising from 3.24 per cent in 1964 to 7.30 per cent in 1975. The asset with the highest and most stable yield is that of bonds. In 1974, the losses suffered from the conspicuous sales, at quotations far lower than those at which they were purchased, had a marked impact on the yield. On an average, the highest rate between 1964 and 1976 was that of bonds (6.63 per cent), deposits with special credit institutions (4.66 per cent), and Post Office deposits (4.36 per cent).

If we turn to the financial liabilities, we may see that the cost of short-term bank loans range from a minimum of 8.2% to a maximum of over 19% while, on the other hand, the low level in the last period of the rate on medium- and long-term loans is due both to the presence of real estate mortgages on special terms, and above all to the high proportion of those contracted in the previous 10 to 15 years which were on more favourable conditions for the mortgagers.

5. The difference between the interest obtained by Households and the sums which should have been received had the rate of yield been equal to the rate of inflation, measured in terms of the change in the retail price index, indicates the amount of real interest paid.

In only four years, from 1965 to 1968, was the average real interest rate on gross assets positive. Except for this period, House-

TABLE 2

HOUSEHOLDS' FINANCIAL ASSETS AND LIABILITIES: AVERAGE ANNUAL RATES OF INTEREST (1)

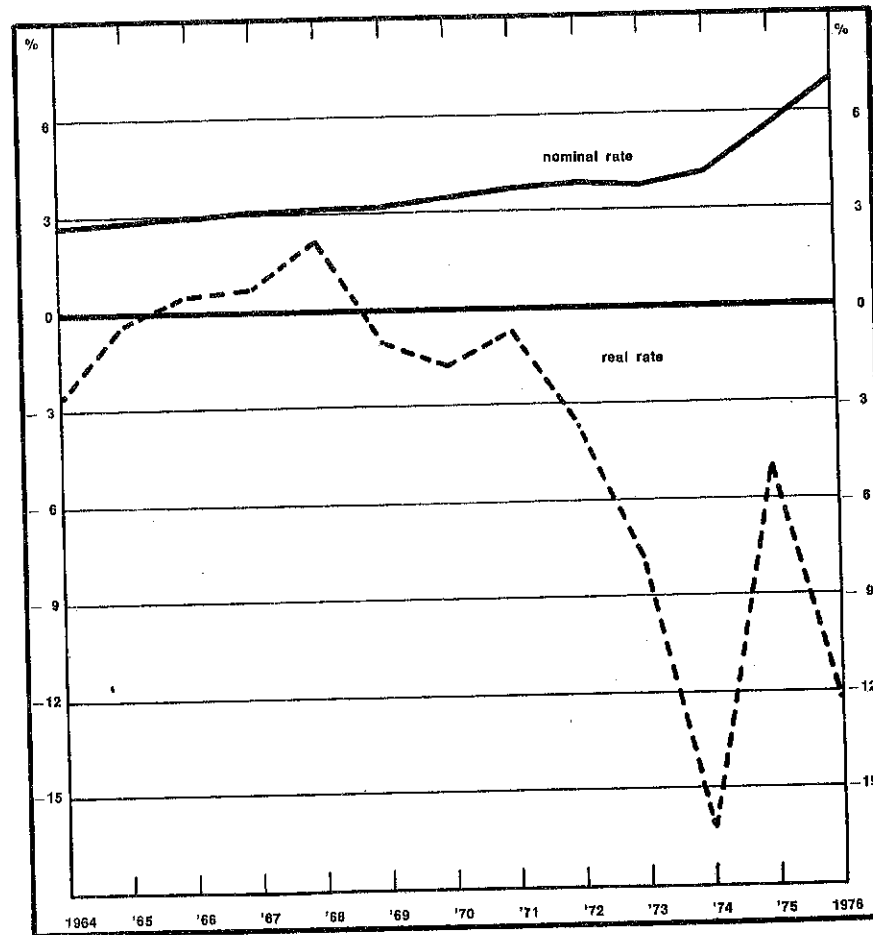
	1964	1967	1970	1973	1974	1975	1976
<i>Assets</i>							
Bank demand deposits	2.40	2.88	4.40	3.85	6.27	5.96	7.97
Bank time and savings deposits	2.72	2.89	3.21	3.51	5.31	6.68	7.83
Special credit institutions deposits	2.41	2.42	3.38	6.26	5.42	9.06	9.14
Post Office deposits	3.72	3.66	3.87	4.49	4.35	6.28*	7.20*
Bonds	6.15	6.38	6.46	7.06	4.09	7.69	9.28
Total assets (2)	3.24	3.50	3.95	4.25	4.69	6.02	7.30
<i>Liabilities</i>							
Short-term bank loans	8.81	8.27	10.75	10.25	15.73	16.50	19.31
Medium- and long-term loans	6.24	6.28	6.26	6.51	7.01	7.22	7.96
Total liabilities	7.14	6.89	7.56	7.51	9.15	9.29	10.50

(1) Net of fiscal deductions at source.

(2) Including notes and coins.

* Estimate based on provisional data.

FIGURE 1

WEIGHTED AVERAGE RATE OF INTEREST ON HOUSEHOLDS'
NET FINANCIAL ASSETS

The main reason for the real negative profitability of financial assets has been sought in the accentuated dynamics of labour incomes which has been characteristic of the recent evolution of the Italian economy.⁷ At the same time the increase in the volume of activity carried out by the financial intermediaries — which was stimulated

⁷ See P. SAVONA, "Inflazione, moneta e bilancia dei pagamenti", in *Rivista di Politica Economica*, May 1975.

by the presence of a strongly discriminatory fiscal legislation affecting the direct raising of funds by the companies — allowed the heavier real burdens to be transferred by and large from the firms, through the credit system, to those forms of income which could more easily be compressed.

For some time, therefore, Italian firms are benefiting from huge hidden subsidies at the expense of households' savings. Nor could it have been otherwise. In an excessively indexed economy, which had been hit by a deterioration of the terms of trade with the rest of the world, the burden of readjustment had to be shouldered by financial savings. The proposals to create financial instruments which would protect the saver from inflation have of necessity remained unimplemented. A non-negative rate of interest in real terms would have been possible without affecting the overall capacity of accumulation only by means of a modification of the proportion of income allocated by the firms to the remuneration of other factors, which are in a much better position to exercise social and political pressure. For the part which was not consumed, individual incomes have not had the benefit of those protective mechanisms (indexation and so on) which have operated effectively at the moment of their formation; thus the workers have obtained wage increases all the more illusory, the greater their propensity to make financial savings. An indication of the perverse equilibrium on which the system has been functioning is the fact that the degree of remunerativeness obtained by the individual operator on alternative forms of saving (which is greatest for the funds illegally built up abroad and for the hedging goods such as gold, precious stones and even postage stamps, and highly negative for share investments) has often been inversely proportionate to their economic and social utility. The tendency which emerged at the end of the sixties for financial savers to convert (quite legally) their domestic assets into foreign ones was slowed down by the introduction in July 1973 of the tied non-interest bearing deposit of 50 per cent on the purchase of securities denominated in foreign currencies. The volume in lire of foreign bonds or shares held by Households, which had increased by 205.4 per cent between 1969 and 1972, fell in the subsequent four years, despite the depreciation of the rate of exchange, by 28.9 per cent.

It seems improbable that the process of spoliation of savings can continue with the same intensity without leading in the medium

to long-range period to more and more serious distortions in the financial structures of the economy (such as those deriving from an excessive preference for liquid assets) and without stimulating a dangerous overall increase in the propensity to consume. In addition, the arbitrary redistribution of wealth effected by inflation, on whose equalizing results we may well harbour serious doubts,⁸ might turn out to be a disturbing element of social destabilization.

Rome

GIORGIO TROI

⁸ See P. BAFFI, *op. cit.*