

Banknote Remittances: Italy's Recent Experience (*)

Since the end of 1958, when the principal European countries returned to external convertibility, policy-makers have once again had to face the problems raised by the international movement of funds (1). In the case of Italy, one of the most striking consequences of the new international monetary situation has been the rapid increase of banknote remittances, which, though almost inexistent in 1958, reached 919 billion lire (1,470 million dollars) in 1963 and 349 billion lire (559 million dollars) in 1966.

The purpose of this study is to single out and appraise quantitatively the factors that have given rise to the volume of banknote remittances from 1962 to the beginning of 1967. To this end an attempt has been made, by using multiple linear regressions, to verify the validity of the assumptions put forward by the monetary authorities, while appropriately integrating them.

1. Definition of the Problem

By the term remittances is meant those dispatches of Italian banknotes made by foreign banks to Italian banks for conversion into foreign exchange or for crediting to a non-resident's capital account. In actual fact, such remittances represent the counterpart

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(1) For different analyses of the consequences of the return to convertibility, see: ERREZZERO, "Dal bilateralismo alla convertibilità nei paesi O.C.S.E.", in *Moneta e Credito*, vol. XII, No. 46, June 1959; FRANCESCO MASERA, "Sviluppo economico e liberalizzazione dei movimenti di capitali in Italia", in *Moneta e Credito*, vol. XII, No. 45, March 1959; ROBERT TRIFIN, "Il ritorno alla convertibilità: 1926-1931 and 1928-????", in *Moneta e Credito*, vol. XII, No. 45, March 1959, and "La convertibilità di domani. Fini e mezzi della politica monetaria internazionale", in *Moneta e Credito*, vol. XII, No. 47, September 1959.

of banknote exports which, a priori, can be regarded as due to travels of both foreigners in Italy and nationals abroad, clandestine imports of goods, and illegal exports of capital with the object of subsequently investing it in Italy or abroad.

The general opinion, adopted in this study too, is that the last mentioned factor is the chief cause of the flowback of notes from abroad. The fact that more than 90 per cent of them comes from Switzerland is particularly significant and indicates that the other two factors, i.e. tourist expenditures and goods smuggling, especially of gold, are negligible. It should be noted, too, that remittances made for these latter reasons ought to appear relatively stable over time, apart from a rising trend; the fact that banknote remittances are marked by considerable variations would seem to confirm that they reflect the trend of illegal exports of capital. Finally, it must be remembered that Italy enjoys a very favourable tourism balance, that official dispatches of Italian banknotes abroad are limited in amount and affected by pronounced seasonal variations, and that illegal gold purchases made abroad for industrial purposes, estimated on the basis of goldsmiths' production, amount to relatively little. In the present study the terms "banknote remittances" and "illegal exports of capital for investment" are accordingly used as synonyms; the reader is in any case forewarned that also the other two components, though usually of little importance, can come into the picture.

As to the causes that lead to the illegal outflow of banknotes, economic analysis suggests that fundamentally there are four: (a) differences in interest rates, both actual and expected, as between internal and foreign markets; (b) the difference, due to taxation, in the actual yield of domestic capital assets as compared with foreign ones; (c) expectations regarding maintenance of the exchange parity; (d) fears of a change in the country's economico-political structure or in the Government's economic policy lines.

Moreover, illegally exported capital can re-enter Italy to be invested in the national market or else be used in some other way abroad. In the first case, it is clear that no negative consequences result for the balance of payments. It therefore becomes important to identify the specific factors which, on the one hand, prompt Italian residents to invest in Italy by means of capital accounts in the name of non-residents and, on the other, explain why funds are kept abroad, thus causing a true and proper export of capital.

2. The Current Interpretation

According to one authoritative opinion (2), the causes that led to banknote remittances during the period 1962-1966 were mainly fiscal in character. The same source points out that in 1962 a measure (Law No. 1745) was approved which introduced a withholding dividend tax of 15 per cent that was deductible from the personal progressive income tax (i.e. "on account") for residents and an equal flat rate for non-residents. This measure, as well as the controversy that preceded its approval, were undoubtedly an incentive to holders of Italian capital to transfer it illegally abroad and subsequently have it returned to Italy and registered in the name of non-residents; this movement took place largely through Swiss banks. The trend of banknote remittances and of portfolio investment during the first half of 1963 clearly illustrates this development.

The Decree-law No. 27 of February 23, 1964 giving residents the option of paying either a dividend withholding tax "on account" of 5 per cent or a flat rate of 30 per cent, and non-residents a flat rate of 30 per cent, in fact eliminated the domestic fiscal reasons for exporting capital. This incentive reappeared, however, with the approval of the Decree-law No. 22 of 1967, which has made compulsory the 5 per cent withholding tax "on account" for residents, while confirming the 30 per cent flat rate for non-residents. The current incentive is at any rate not as powerful as the one offered by the December 1962 Law since, besides a reduction in the rate payable on account by residents — from 15 to 5 per cent — the flat rate for non-residents has doubled, rising from 15 to 30 per cent.

In the last two years banknote remittances have fallen considerably, but, according to the Bank of Italy, the percentage of capital returning in the form of foreign investment in Italy has also diminished. The decisive factor in this change is said to be the higher interest rates current abroad (3). In other words, the growing gap that has appeared since the third quarter of 1964 between yield rates

(2) See, for example, the Annual Report of the Bank of Italy for the years under review (1962-1966), especially the chapters relating to capital movements. See also PAOLO BARRY, "L'alternativa vicenda del quinquennio 1961-65", in *Studi sulla moneta*, Giuffrè, Milan, 1965, pp. 347-371.

(3) See Bank of Italy, *Annual Report 1965*, Rome, 1966, pp. 196-197, and *Annual Report 1966*, Rome, 1967, pp. 167-170, 343.

from long-dated securities ruling on the Italian market and those existing in the chief European countries (especially France, West Germany and the United Kingdom) seems to have determined the shift of Italian capital in search of higher income. It would therefore seem that in addition to the fiscal reasons previously mentioned, the differential in interest rates has played a part in stimulating banknote movements.

As a matter of fact, careful analysis shows that this second reason has little foundation. If, as the opinion quoted maintains, the rise in foreign as compared with Italian rates had been the attraction for national capital, banknote remittances ought also to have increased in keeping with the growth of the gap between rates; similarly, they should have diminished when the gap between the rates narrowed. Actually, just the opposite happened: during the period April 1964-August 1966 there was, in contrast with a sustained rise in long-dated bond rates in the chief foreign markets, a fall in banknote remittances, while from September 1966 the increase of remittances was accompanied by a marked decrease in the gap between foreign and Italian rates (see Table 1).

TABLE I
YIELDS OF PUBLIC AND PRIVATE SECURITIES IN SOME EUROPEAN MARKETS
(in percentages)
(the figures in italics indicate the maximum level reached in the period)

	West Germany		United Kingdom		The Netherlands		France		Italy	
	public	priv.	public	priv.	public	priv.	public	priv.	public	priv.
1964 January	5.90	5.90	5.57	6.12	4.80	5.30	5.45	7.14	5.56	6.77
June	6.30	6.40	5.82	6.40	5.00	5.40	5.47	7.18	5.92	8.57
1965 January	6.40	6.30	6.17	6.86	5.20	5.60	5.44	7.08	5.28	7.45
June	7.10	7.00	6.78	7.25	5.50	6.10	5.47	7.24	5.43	7.25
1966 January	7.60	7.50	6.52	7.27	6.10	6.50	5.57	7.25	5.25	6.63
June	8.40	8.20	7.03	7.63	6.70	7.10	6.00	7.71	5.56	6.60
July	8.60	8.30	7.29	8.16	6.60	7.10	5.99	7.63	5.51	6.60
August	8.60	8.20	7.41	8.39	6.80	7.30	5.98	7.52	5.55	6.60
November	8.20	8.10	6.97	7.55	6.70	7.20	6.16	7.66	5.64	6.63
1967 January	7.50	7.60	6.58	7.43	6.20	6.70	6.15	7.58	5.58	6.60
February	7.40	7.50	6.49	7.30	6.10	6.60	6.02	7.59	5.53	6.56
March	7.20	7.40	6.50	7.28	6.00	6.50	6.08	7.47	5.57	6.66

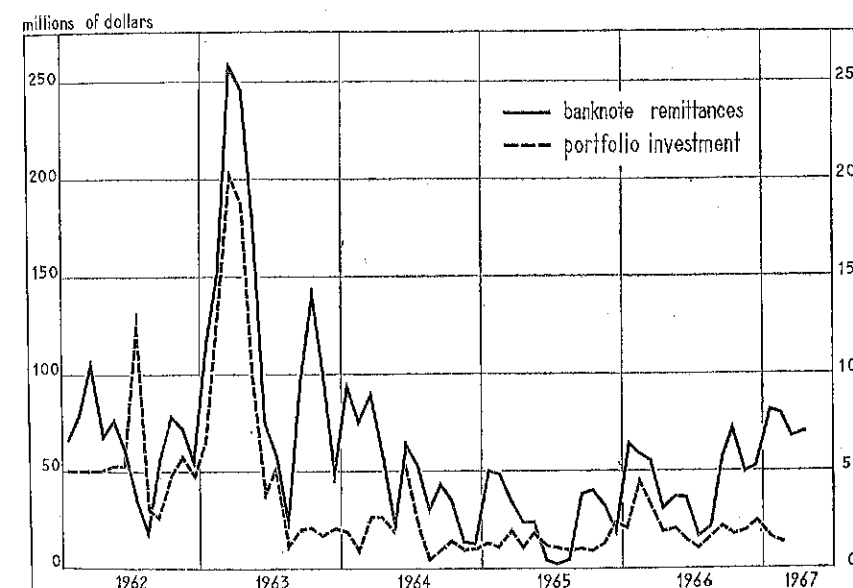
Source: Various, mainly bulletins of central banks.

This seems to confirm the assumption that potential investors in foreign securities take into consideration not only the difference between absolute rate levels but primarily the expectations of the different markets over a certain period. In other words, investors of capital are motivated not only by gain in the form of interest but especially by the probability of gains or losses on capital account.

3. The Qualitative Analysis

In the light of what has been said above, and before presenting an econometric model capable of explaining the flowback of Italian notes, it seems desirable to examine straightaway, with the aid of Chart 1, the trend of banknote remittances between 1962 and 1967.

CHART 1



To this end the six years in question have been subdivided into four periods, even if somewhat arbitrarily: in each of these an attempt will be made to indicate which of the reasons illustrated in section 1 have presumably influenced the outflow of banknotes to other countries.

In the first period, covering April 1962 to August 1963 the average monthly remittances of banknotes moved around 90 million dollars; since the return of capital in the form of portfolio investment remained also very high (4), it is probable that internal fiscal reasons prevailed over those of a politico-psychological character in determining the flight of banknotes. The first resulted from the coming into force of Law No. 1745 of December 29, 1962 relating to the withholding tax on account and the second from the formation of a centre-left Government and the nationalization of the electricity industry. Moreover, in these sixteen months, added to a difference between Italian and foreign interest rates of about 1.3 points there were market expectations of a decline, so that part of the capital exports was probably due to the higher yield actually available abroad.

The second phase, lasting from September 1963 to March 1964, coincided with the credit squeeze. This period, owing to Italy's balance-of-payments difficulties, was marked by heavy attacks on the lira which died away when the March 1964 agreements between the Italian and American monetary authorities were reached. During these seven months the average monthly figure of banknotes repatriated reached about 90 million dollars, while the percentage of foreign investment in Italy was very low, which is a clear indication that the flight of capital was a gamble on exchange rates.

The third period from April 1964 to August 1966 was marked by a low level of banknote remittances, about 33 million dollars a month. In two quarters only were figures notably above the average: the second quarter of 1964 (140 millions), when there was a ministerial reshuffle, and the first quarter of 1966 (180 millions). Fiscal reasons do not appear to have played a significant role during this phase; on the other hand, there was a disincentive to invest abroad due to the rapid upswing of rates which offset prospects of gain from interest.

The fourth period began in September 1966 and is still proceeding. The monthly average of banknote remittances between September 1966 and April 1967 was around 70 million dollars. It is precisely during this last phase that speculation on interest rates has

(4) It is estimated that in 1962 almost 75 per cent of the banknote remittances were the counterpart of Italian investments under foreign names. This percentage fell to 65 per cent in 1963. See Bank of Italy, *Annual Report 1962*, Rome, 1963, p. 163, and *Annual Report 1963*, Rome, 1964, p. 193.

most probably become the deciding factor, exceeding all the others in importance (5). Chart 1 shows that banknote remittances began their rising tendency in September 1966, that is, just at the time when interest rates abroad were starting to fall, after reaching a peak in August 1966; this falling tendency was strengthened by the decisions taken at the meeting of Finance Ministers in January 1967 and by the resultant monetary policies, the first consequence of which was the reduction in official discount rates at the beginning of the year (6). Parallel with these events, banknote remittances experienced a sharp upsurge, for in the first four months of the year they fell short by only 19 million dollars of the figure for the corresponding period of 1964 (300 million dollars as against 319 millions).

4. Specification of the Model

The four reasons (mentioned in section 1) which economic theory indicates as the decisive factors in the international movement of capital can now be defined more precisely and in a way which, with the available data, enables an empirical verification of the model to be made.

Since official dispatches abroad of Italian banknotes are made to meet the needs of foreign visitors' and emigrants' travels to Italy, it follows that banknote remittances are all illegal in origin, except for that part of the notes spent abroad by Italians. Such notes, to the extent that they are not bought by foreign tourists, flow back through banking channels; in symbols, therefore, we have the definitional equation

$$[4.1] \quad \text{UIB}_{t-1} + \text{BTI}_{t-1} \equiv \text{RB}$$

in which UIB is the illegal outflow of banknotes from the country, BTI are the Italian banknotes that have left through travels of nationals abroad and have not re-entered through foreign tourism in

(5) Nevertheless the offer of some bond issues carrying special tax concessions on the Luxembourg market may have contributed to some extent to the outflow of capital in the form of banknotes.

(6) At the Chequers meeting of January 1967 the Finance Ministers of France, West Germany, Italy, the United Kingdom and the United States agreed to co-operate to reduce interest rates in their respective countries.

Italy both in the time span $t-1$, and RB are the remittances of banknotes made by foreign banks to their own correspondents in Italy. The variable UIB , in its turn, can be divided into two components (UIB^{BC} and UIB^{MC}), according to whether it is connected with a change in the trade balance (smuggling of industrial gold, tobacco, coffee, etc.) or in capital movement. The definitional equation can be re-written as

$$[4.2] \quad RB \equiv UIB_{t-1}^{MC} + UIB_{t-1}^{BC} + BTI_{t-1}$$

Since the average interval between the export of banknotes and their re-entry is only a few days (three-four), it is possible in the case of monthly flows — like those used in this paper — to write the definitional equation without lagging the variables

$$[4.2'] \quad RB = UIB^{MC} + UIB^{BC} + BTI$$

While it is difficult to find empirical data for analysing the two components UIB^{BC} and BTI , which, on the other hand, must for the stated reason presumably be of little quantitative importance, the component UIB^{MC} can be regarded as moving in accordance with the following factors (7):

(a) capital movements occasioned by the wish to "shelter" oneself from the Italian taxation authorities. The 1962 Law on the withholding tax on dividends favoured the non-resident investor in comparison with the resident investor and so it introduced a strong incentive to export capital and have it re-enter under a foreign name. But even when the flat rate was in force, it may have been found profitable to exchange Italian assets with assets that formally were foreign, to the extent that the investor, as a taxpayer, considered he was "more protected" in relation to the Italian taxation authorities. Such movements can be regarded as more or less equal to the series of foreign portfolio investments in Italy (IP);

(b) capital movements reflecting the feeling of investors that the regulations on compulsory registration of shares had been tight-

(7) An attempt to establish the incidence of capital movements due to expectations of exchange devaluation was made by using data relating to forward quotations of the lira on the London market. The unsatisfactory results, however, made it advisable to exclude them from the final equations. In order to take into account the speculative and politico-psychological reasons, resort could have been had to dummy variables; since, however, excessive use of the latter would have weakened the validity of the results, we thought it inadvisable.

ened up. Clearly, this reason must have operated solely during the period when the 1962 Law was in force, leading to capital exports that remained stably invested abroad. Since it is impossible to gauge the intensity of this development for calculation purposes, we have introduced into the equation a dummy variable (8) that takes on value 1.00 for the period January 1963-January 1964 and value zero in all the other months; it has been indicated by DN ;

(c) capital movements determined by the difference between the yield rates of security investments in Italy and the corresponding foreign rates; in a sufficiently integrated market this difference reflects also any better fiscal treatment accorded by some countries compared with others. The choice of banknote exports in order to profit by such opportunities arises from the fact that under the foreign exchange provisions in force it would be necessary to deposit the securities with the Bank of Italy or its agent banks. To this end a simple average has been calculated of yields from German (public), French (private) and British (private) long-term securities and from it has then been subtracted the yield from Italian public long-term securities. The variable thus obtained has been indicated with the symbol RE ;

(d) capital movements arising from expectations of considerable changes in foreign market interest rates and, consequently, in the market value of securities. To measure this tendency, a calculation has been made of the increase or decrease in the average of the three rates mentioned sub (c) in each month, compared with the value of the same average three months earlier. This means to accept the assumption of an elasticity of expectations greater than zero (9) on the part of the market; the variable has been indicated with the symbol RS .

One can accordingly write the relation

$$[4.3] \quad UIB^{MC} = f(IP, DN, RE, RS)$$

or in linear form

$$[4.3'] \quad UIB^{MC} = \alpha_0 + \alpha_1 IP + \alpha_2 DN + \alpha_3 RE + \alpha_4 RS$$

(8) On dummy variables and the values they assume, see J. JOHNSTON, *Econometrica*, F. Angeli Editore, Milan, 1966.

(9) Cf. J. R. HICKS, *Valore e capitale*, UTET, Turin, 1954, chapter XXII, pp. 300-311.

The variable UIB^{MC} nevertheless cannot be empirically determined. Under the assumption that the factors influencing the movement of the components UIB^{BC} and BTI in the period considered are not correlated to those which, according to the assumption made above, have determined the movement of UIB^{MC} , the latter can be substituted by the total RB ; one can then write

$$[4.4] \quad RB = \alpha_0 + \alpha_1 IP + \alpha_2 DN + \alpha_3 RE + \alpha_4 RS + \Phi$$

where Φ is a function which represents the flowback of banknotes not dependent on capital movements, and proceed to regress RB over IP , DN , RE , RS . The estimated regression constant will represent the value $\alpha_0 + \Phi$, that is, the constant of the equation [4.3'] plus an estimate of the average of the values of UIB^{BC} and BTI during the period considered.

The following constraints can be placed a priori on the coefficients α_1 , α_2 , α_3 , α_4 :

$$0 < \alpha_1 \leq 1$$

a certain amount of portfolio investment can in fact call for, at most, the movement of an equal amount of banknotes. If the coefficient should be higher than unity, the variable IP would explain also banknote remittances due to UIB^{BC} and BTI ; in this case the assumption that the causes explaining UIB^{BC} and BTI are not correlated to the variable IP would not hold good;

$$\alpha_2 > 0$$

the reaction to a stricter application of the regulations on registration tends to determine an illegal outflow of capital and therefore an outflow and flowback of banknotes;

$$\alpha_3 > 0$$

rates abroad higher than those in Italy also cause a flight of capital; since the Italian yields have been subtracted from the foreign ones, it follows that when the difference increases, the export of Italian capital and banknotes increases likewise;

$$\alpha_4 < 0$$

a rise in rates abroad which causes expectations of further rises, that is, of a fall in security prices, leads to a smaller exportation of banknotes, other things being equal.

5. The Empirical Verification of the Model

The results of the regressions with monthly data from April 1962 through February 1967 are the following:

$$[5.1] \quad RB = 31 + 0.88 IP + 31.7 DN - 3.9 RE$$

(0.09) (9.5) (6.2)

$$R^2 = 0.785 \qquad D.W. = 1.18$$

$$[5.2] \quad RB = 27 + 0.85 IP + 33.7 DN - 50.0 RS$$

(0.09) (8.3) (22.1)

$$R^2 = 0.803 \qquad D.W. = 1.23$$

$$[5.3] \quad RB = 30 + 0.85 IP + 32.7 DN - 1.6 RE - 49.0 RS$$

(0.09) (9.2) (6.1) (22.7)

$$R^2 = 0.803 \qquad D.W. = 1.23$$

Below the coefficient its standard error is shown between parentheses. The symbol R^2 indicates the multiple determination coefficient and the letters $D.W.$ the coefficient of Durbin and Watson.

Equation [5.1] shows that 100 dollars of portfolio investment cause a shift of 88 dollars in banknote remittances. The regression coefficient of the variable IP appears significant, being almost ten times higher than its standard error; moreover, it is greater than zero and less than unity as was expected a priori. The variable DN , significant at the 99 per cent confidence level, seems to indicate that the increase of banknote remittances attributable to the investors' conviction that share registration had been rendered more effective by the 1962 Law totalled about 32 million dollars a month. The variable RE , on the other hand, does not seem significant, having a coefficient below its standard deviation and the wrong sign.

Equation [5.2] confirms the significance of the variables IP and DN , the coefficients of which do not differ greatly from those appearing in equation [5.1]. The variable RS , substituted for RE , appears significant at a level above 95 per cent, and is negative as expected. The coefficient of the variable RS indicates that every change of one percentage point in interest rates abroad causes an average change of opposite sign in the banknote remittances of 50 million dollars.

Equation [5.3] combines the variables used alternatively in [5.1] and [5.2], confirming the results obtained from them. The absolute levels and the degree of significance of the coefficients of the variables IP, DN and RS remain more or less equal; on the contrary, compared with [5.1] the coefficient of the variable RE (difference between foreign and Italian rates) comes out still less significant when it is estimated together with RS (changes in foreign rates).

While the multiple determination coefficient is sufficiently high in the three equations, that of Durbin and Watson appears too low, taking into account the number of observations; this is explained by the fact that, as the function does not include all the factors that have had any significant influence on banknote remittances, residuals are serially correlated.

The function does not contain, for example, a variable (10) that reflects speculation against the lira and, therefore, does not explain satisfactorily the behaviour of banknote remittances during the period when the former development became more pronounced (September 1963-January 1964).

6. Conclusions

To sum up, one must distinguish three principal reasons which lie at the root of banknote remittances.

First, there are the "precautionary" reasons in relation to the taxation authorities that become an extremely important factor under a law like that of December 1962 which offered a striking prize to any resident who succeeded in becoming a non-resident. Current legislation once again offers, even if in lesser degree, an incentive to Italians to invest in Italy under a foreign name; however, sufficient information is not yet available to warrant the statement that this has been happening again in recent months.

Secondly, strongly linked with the preceding reasons come those of a psychological character relating to the compulsory registration of shares. The entry of the Socialists into the Government and the nationalization of the electricity industry contributed to creating a climate of distrust, the result being that Italian investors were driven to exporting capital illegally in order to invest it permanently abroad.

(10) See footnote (7) on p. 82.

Finally, there are reasons linked with the different trends of capital markets. Their effects are the most harmful to the Italian economy, inasmuch as when they are operative, a reduction occurs in the percentage of re-entries into Italy — by means of portfolio investment — of capital exported in the form of banknotes. The results obtained confirm our thesis that, apart from the preponderant fiscal reasons, the factor which determines fluctuations in capital movements is not the difference between the absolute level of interest rates in the various countries but rather the expectation that they are going to rise or fall.

Before concluding, the limits of the analysis must be mentioned. The present study has been able to provide an economic explanation concerning capital outflows in the form of banknote remittances, and flowbacks of capital through portfolio investment. Nevertheless, a deeper examination of the problem analysed would probably require a simultaneous estimate of the factors that have an influence upon banknote remittances and upon portfolio investment, as the latter in its turn can be an effect of the banknote remittances. This can happen if it is assumed that the decision to export notes is in part dictated by extra-economic factors, the result being that portfolio investment depends upon the availability of funds abroad.

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