Selective Credit Policy: Italy's Recent Experience[*]

I. Indirect Instruments of Monetary Control and the Distribution of Credit

I. 1 - *The Monetary Base*

In Italy, monetary policy mostly uses what we term *indirect instruments* for intervention in the economic system. Until 1973, these instruments aimed at regulating the process of monetary base creation.

The management of the monetary base is an indirect instrument because the Central Bank exerts it without paying special attention to the conditions of the individual banking institution, or to the way the monetary base is distributed between banks. The Central Bank gives even less thought to how the bank decides to allocate the surplus of reserves, that might derive from a faster growth rate of monetary base, between loans and securities or between loans to different categories of clients. Similarly, the Central Bank is not interested in the way the effects of possible restrictions on the flow of monetary base to the system are distributed between banks and, within one bank, between the different balance-sheet items and the various types of clients.

The major objective of this indirect instrument, from the Central Bank's viewpoint, is to regulate the *total* amount of credit or, considering the phenomenon in relation to the other side of the banks' balance sheet, the system's total amount of financial assets.

I. 2 - *The Control of Credit Distribution*

We term *selective credit control instruments* those which not only aim to achieve a certain total amount of credit but which also pursue a particular target as far as its *composition* is concerned.

If we ask ourselves which are the instruments of selective credit control, the first thing to note is that all instruments, including those which are used without any particular distribution target, and which are indirect and undifferentiated, are not actually devoid of impact on the distribution of credit.

The most significant instance of this in Italy — one not without influence on the choices made by the monetary authorities in 1973 — occurred in 1969-1970 when a credit squeeze was introduced. It became evident at the time that during the squeeze the percentage of new credit received by the smaller clients was much lower than the percentage they received in different economic situations.[1] This is largely due to perfectly rational behaviour on the part of the banking system, which first tends to cut down credit to the higher-risk clients, who offer less possibility of returns or who are in a worse bargaining position.

The second point is that, even before 1973, the Italian system could offer some important examples of credit policy instruments, even indirect ones, which were aimed specifically at influencing the distribution of credit. The most important one is subsidised credit, which can be termed an indirect instrument in the sense that it does not lay down exactly who the bank or credit institute must grant credit to and how much credit must be granted; instead, this instrument uses a system of incentives based on preferential interest rates for certain types of operation or client to affect the distribution of credit. The Italian monetary authorities' power to grant or refuse authorisation to issue securities is another instrument that can be used to influence the distribution of credit.

The problem does not therefore concern the merits and demerits of a laisser-faire economy which have long been the subject of debate. It is not a matter of deciding *whether* or not to influence the distribution of credit but rather one of choosing *what* type of

influence should be used and *how* it should be used. There can be no choice at the level of principles, because in practice it is impossible to cancel out all economic policy effects on distribution; the only choice is how far one should carry selective policies. Moreover, in order to maintain that no selective credit control policy should be pursued, one should be able to define a policy that is totally neutral as far as distribution is concerned; it is not easy to make such a definition.

What type of selection should be used? Briefly, one can say that credit distribution has several features and can be viewed from different angles. One can influence distribution through the maturity dates, the branches or sectors of economic activity, the size of the clients and the size of the loans or through the type of operations. One can also affect credit distribution through the intermediaries or, finally, one can attempt to shape credit according to the stages of the production process which it tends to finance.

Naturally, not all these methods are equally viable: the last one, aiming to influence credit distribution according to the stages of the production process, is clearly the most difficult. It is impossible to know exactly how the funds loaned are used; there are no special techniques or financial institutions allowing one to identify correctly the final destination of credit by its type.

Instead, other types of discrimination or of selective policy are easier to put into effect and there are several examples of the instruments used to carry them out. I will mention only one of them, found in the United States, that is of interest both because it was used in a country which on principle is very much opposed to distribution control methods and because it presents analogies with recent experience in Italy. The United States *Regulation Q* acted as a system of selection at a time when the growth of interest rates put the institutes that were placing their deposits into long-term loans in a difficult situation. Deposit rates had to be revised far more quickly and frequently than it was possible to re-negotiate the terms of the loans; this was dangerous not only for these institutes (the *Savings and Loan Associations*) but also for those industries such as building, which made considerable use of the financing offered by the institutes. The regulation of deposit rates prevented fund-raising competition with more flexible financial intermediaries from placing the *Savings and Loan Associations* in the dilemma of whether to loose a large percentage of their deposits (and thus

have a liquidity crisis on their hands) or face a profit crisis by accepting to attract depositors with higher interest rates while they were unable to offset these with lending rates.

The differential reserve coefficients placed on different categories of loans in France, or the quantitative limits on certain bank operations in Japan, count as other examples of selective control policies.

In 1973 and 1974, a selective policy was introduced in Italy with two provisions: one prescribed fixed minimum purchases of securities for the banks, the other placed growth ceilings on certain categories of loans. The contents of these two provisions, and of those which followed, concerning securities and loans are summarised in the Appendix A.

II. The Effects of Selective Controls

II. 1 - *The Advantages*

There is open debate on the advantages and disadvantages of selective control policies and in particular, keeping to Italy's experience, on a policy of *direct* control.

The first point in favour of such a policy is that it provides the monetary authorities with a further instrument, in addition to that already available for influencing the total amount of credit. Should the total amount of credit that is compatible with internal price equilibrium or external equilibrium tend to be distributed in such a way as to jeopardise the survival of certain categories of firms, then the monetary authority whose only tool is the monetary base will be faced with the dilemma of whether to pursue the objectives concerning the total amount of credit or whether to pursue those relating to the composition of credit. Those who defend the use of selective controls maintain that this dilemma can be solved if one possesses an instrument that does not touch on control over total credit and that allows the composition of credit to be influenced.

The second advantage is speed. When a policy relies upon indirect instruments, to pursue it one must rely on the behaviour of thousands of operators and considerable time must pass before the results are obtained. If, instead, this policy relies on administrative controls (" ceilings " or " floors ") then it need no longer rely also on

spontaneous behaviour which the economic politicians shape by creating incentives; rather it directly binds the individual operators. The question of speed is important because the longer it takes for some tools to work the longer will be the periods that the authorities must forecast correctly.

The question of speed is linked to a third advantage: the greater precision of a direct control policy as compared to indirect action. If the banking system is compelled to purchase no less than three thousand billion worth of securities over a six-month period, one can be sure that, with the exception of a few non-compliances (unlikely to become so widespread as to make the results unsuccessful), the system will purchase no less than that amount of securities. Yet, when indirect tools are used (even with the reassuring support of sophisticated statistics on the links between these tools and the actual behaviour of the system) there is always a particularly marked deviation from what was forecast, as far as concerns both size and the time necessary to achieve the objective. In some cases the need for considerable precision can be due to commitments to third parties, as with Italy's commitments to the International Monetary Fund, which were undertaken at the time of the *stand-by* agreements; these commitments place strict limits on the expansion of total credit. If the action taken to enforce these limits can only rely on indirect control instruments, then one will most likely have to keep well below the established limits in order to be sure that the margins of error, which must be taken into account when forecasting the way that indirect control instruments work, do not cause the agreed limits to be exceeded.

II. 2 - *Modus Operandi*

Before putting forward the arguments of the opponents of direct controls, I would like to take a brief look at the logics of the way these controls work. Basically, direct controls rechannel financial funds from forms on which limits have been placed to forms which are exempt from limits. For example, if one places a ceiling on the growth of certain categories of loans of some financial intermediaries (the ceiling being effective when it is below what the financial intermediaries would otherwise make on that market), the result is an excess of demand for such operations and a consequent rise in the interest rates or prices at which they take place.

At the same time, the financial intermediaries will have a surplus of funds, which they will tend to invest in other markets where there will consequently be an increased supply and a drop in interest rates (see Appendix B). Thus, the composition of total credit will alter; and this will be accompanied by a twist in the rates structure.[2]

Obviously, the aim of such a policy is not so much to exert its influence during the *intermediate* phase of financial intermediation as to affect the distribution of credit among the *final* users. The aim is achieved, insofar as it will be possible to ensure that the impact during the intermediation phase is transmitted in some way to the distribution between final users.

When is this transmission successful? Clearly, it does not succeed when the various forms of credit are perfectly substitutable, from both the point of view of demand and that of supply. If it makes no difference to a bank whether it increases its securities or loans, then it is not going to be in the least affected by the fact that the growth of one of these forms is regulated and that of the other not. The same applies to the final users of credit: if a firm does not mind whether it obtains financing from the banking system, the special credit institutions, from abroad or from other firms, then the closing or regulating of one of these channels of financing is not going to have any effect whatsoever on its behaviour or on its ability to obtain money.

Selective control policies are also ineffective in the other extreme example, when the preference — of the firms on one hand and the financial institutions on the other — for a particular composition of financial flows is so set and unalterable that it forces the "real" and "financial" operators to cut down not only on the types of financing that are subject to limits, but also on all the other types, merely in order to keep their composition unchanged. When, for example, a bank wishes to keep twenty per cent of its credits in securities and eighty per cent in loans, and regards any other distribution as totally undesirable, a policy aimed at placing a limit on the total of loans is also going to reduce the total of securities.

In substance, direct control policies are ineffective for two contrasting reasons, in the two extreme cases of perfect substitutability

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2 Cf. F. Cotula and T. Padoa-Schioppa, "The Quantitative Control of Credit: 'Ceilings' as a Monetary Policy Instrument", in this Review, June 1971.

and perfect complementarity of the forms of financing. They are effective, instead, in the mid-way cases of imperfect substitutability; that is, when the operators, both lenders and borrowers, are prepared to switch from one form of financing to another but only at a certain price. The efficacy of selective and direct control measures lies, basically, in this imperfect substitutability.

II. 3 - *Criticisms*

It is in fact upon this imperfect substitutability that critics of direct controls base their arguments.

The various forms of financing are not perfectly substitutable for two reasons. Firstly, they are intrinsically different and the operators feel this factor is of some importance; secondly, it is expensive to change over from one form of financing to another. In other words, both the content and the cost of credit contracts preclude perfect substitutability. However, as soon as access to certain types of financing is limited the operators will attempt to expand other types. The financial intermediaries will do so because they must lend their funds at a profit, and the borrowers because they need the funds. It may become profitable to set up a " border " market; and so the system can find a way round the selective measures and somehow reduce their effectiveness.

The critics of a direct controls policy point out that, whereas over the short run the system is affected by these controls and does actually alter the structure of financing, over the long run it manages to avoid them. Eventually the system can create forms of financing, categories of transactions or even types of financial institutions which, while lacking the requisites necessary to be subject to administrative restraints, yet basically retain the same features as the transactions it was hoped to restrict. Ultimately the system would become not only as uncontrolled as it was before, but also less manageable in the future. This, because it would have created contracts and organisations not covered by the legal or administrative forms contained in the regulations.[3]

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[3] One need not imagine illegal transactions or the creation of new contracts or institutions to give examples of such possibilities for evasion; both the accounts of a large bank and the huge variety of business relations with its clients (within the field of legal transactions) offer ample opportunity to preserve the economic substance of financial deals which direct controls aim to restrict.

The second point made by the critics of direct controls is that the lack of a precise quantitative link between monetary base and credit is the result of economic agents' ability, in the absence of controls, to adapt both the size and nature of their affairs to new and unforseeable circumstances that cannot be fitted into statistical analyses. In their opinion, far from being an advantage, the greater precision obtained with direct controls indicates a loss of efficiency.

The last objection to the use of direct controls raises the question of fairness.[4] Because direct control measures apply in exactly the same way to all financial institutions and all types of clients, they must of necessity disregard the structural differences between the various financial institutions and various types of clients. Consequently, they affect the individual financial institutions to varying extents. For example, a provision compelling all banks to increase their securities portfolio by at least 20 per cent is going to weigh heavily on the banks that traditionally increase their portfolios at a rate of, say, 5 per cent; this will not be so, however, for the banks whose normal rate of increase is 25 per cent. Such a policy, which seems to be equal for all, in fact attacks the freedom of the various financiers to a different extent. The same goes for the borrower.

III. Italy's Experience in 1973-74

III. 1 - *The Measures Taken and their Direct Effects*

One can now try to find a trace of these considerations in Italy's experience during the period following June 1973.

One example of the first point (i.e., the possibility that direct control instruments allow one to pursue a further target, in addition to those that can be achieved using only instruments for controlling the total volume of credit) is that, in fact, during the first months of 1973 the dilemma of Italian economic policy was whether to give priority to one set of objectives or to another.

The first signs of economic recovery began to appear at the beginning of 1973, at the same time as an incipient balance-of-

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[4] For a discussion on direct controls from this point of view, see R. S. MASERA, " The Quantity Theory of Money: a Comment ", in this Review, December 1971.

payments deficit and strong price tensions. The balance on current account, which had been in surplus during the first five years from 1968 to 1972, registered a deficit during the first months of 1973. Prices started to rise, although they had been basically stable during that five-year period (with the exception of 1970). However, at the same time productivity, investments and production registered fast growth rates and employment rose: it seemed that aims which had been long pursued over the preceding years were to be achieved (cf. Appendix, Table 1).

When there was only the instrument of total credit control a choice inevitably had to be made between maintaining and fostering this emergent recovery — which it seemed, and still seems, one must go through if the Italian economy was to overcome its long-standing bottlenecks — or ensuring the equilibrium of foreign accounts and prices. In order to solve this dilemma, an attempt was made to equip economic policy with additional tools. Thus, at the beginning of the year fiscal policy provisions were considered, but not enacted; later an attempt was made to weaken the balance-of-payments constraint, first through the two-tier market and then by floating the lira. Finally, direct credit control policies were resorted to with the June and July 1973 provisions.

On June 18, 1973, shortly after the sudden fall of the lira and the much-feared collapse of the bond market, each individual bank was compelled to increase its bond portfolio by no less than 6 per cent of the total amount of deposits at end-1972: intermediate maturity dates were established, as were the types of securities which could be used to fulfill this requirement. A month later, on July 26, a second provision (one complementary to the first) was introduced, under which growth limits were placed, for each bank, on the total amount of credits used by certain categories of clients; the clients were divided according to the extent of their indebtedness to the bank or according to the branches and sectors of economic activity to which they belonged. In substance, it was decided to make sure that the distribution of total credit corresponded to the Central Bank's monetary base policy for 1973, in order to prevent too large a portion being used for short-term bank loans and, within this category, to prevent too much being allocated to the clients who usually take advantage of the other categories at times when credit tends to be scarce.

Had there been no policy for controlling the composition of credit, it would have been necessary to drastically revise the target of total credit, in order to ensure that enough bonds and securities were introduced into the banking system's portfolios. Alternatively, one would have had to accept that the policy of net disinvestment of securities pursued by the banks at the beginning of 1973 would last for the entire year and block, from the viewpoint of financing, the rapid recovery of investments that for many years had been the main objective of our economic policy.[5]

A few figures suffice to illustrate the fact that the distribution of credit between loans and securities and, within the category of loans, between the different categories of clients, has altered drastically.

As far as *securities* are concerned (Appendix, Table 2), the banks' net disinvestments amounted to about 140 billion during the first six months of 1973; during the second half of the year, net investments were worth over 4,800 billion. During the five years 1968-72, net investments in securities averaged about 400 billion during the first half of each year, and about 600 billion during the second half. One receives an equivalent impression from looking at the growth rate of the banks' securities portfolios, or that of the amount of net bond issues purchased by the banks, or finally by observing the composition of the flows of bank credit (see Table 2).

Differences of similar magnitude can be found in the case of the provisions on *loans* enacted in July. During the beginning of 1973 and, on average, during the previous five years, the total amount of credit used by the "smaller" clients (i.e., those whose debts to a single bank were below the 500 million mark) grew at a much slower rate than the credit used by the larger clients (about half). The growth rate of used credit of these smaller clients was, however, much higher (almost double) during the second half of the year. The phenomenon is all the more marked since it occurred at a time when the total amount of credit destined to loans tended to be "scarce"; that is to say, in the kind of circumstances when the smaller clients' percentage over the total credit flow usually drops.

Vast changes were also registered in the distribution of loans by branches of economic activity. Loans to clients in financial and

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5 Banca d'Italia, Annual Report for the year 1973, pages 274-75.

commercial activities (the group of clients subject to growth ceilings, irrespective of size) grew at a much lower rate than those to clients involved in production during the period 1969-73 (10.2 per cent compared with 19.8). During the four months preceding the enactment of the provision (April to July) this ratio turned around (16.6 per cent, against 10 per cent); however, it reverted back to normal when the provision came into force (Table 3).

III. 2 - *Differential Effects on the Various Categories of Banks*

One must therefore conclude that direct control operations were extremely successful in influencing the composition of credit. How- ever, this assertion must be qualified in the light of the arguments put forward by the critics of direct control instruments.

In order to establish to what extent the credit control provisions had a different impact on the individual banking institutions (in other words, how far each group of banking institutions had to "deviate" from its normal patterns of behaviour) one must first choose a criteria for classifying the banks. For several years now the Banca d'Italia's analyses have distinguished between commercial and savings banks because — although the institutional differences between the two categories are beginning to fade — they are still fairly marked; in addition banks are classified according to size. The system now prevails over the old one, whereby the banks were classified according to their legal form, because, apart from the difference between commercial and savings banks, the size factor seems to be of greater importance in explaining the banks' behaviour.

The provision governing *securities* can be dealt with rapidly: during the second half of 1973 the banks increased their bond portfolios at six times the average rate for the second halves of the previous five years; the equivalent figure for the savings banks was instead below 4 per cent.[6]

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6 These figures refer to the amount actually purchased by the commercial and savings banks: at the end of 1973, the commercial banks made huge purchases of bonds, to the point where they exceeded the minimum set by the June 18 provision by several hundred billion. One of the many reasons for this behaviour was the imminent introduction of the new tax system which made it convenient to anticipate issues.

To assess how different was the impact of the provision govern- ing *loans* on the various categories of financial institutions, we can measure how much of the total loans granted by each individual group of commercial or savings banks went to the group of clients, called the "free group", that was not subject to growth ceilings. The "free group" was slightly larger in the case of the commercial than the savings banks (24.5 per cent, against 22.5 per cent); perhaps because of the latter's dealings with local authorities and other large-sized borrowers. Yet, here, the correlation between the size of the bank and the expansion of the unregulated area is of greater interest. In fact, this area is larger the smaller the banks, both commercial and savings. One ought to conclude that the provision on loans had a stronger impact on the larger than on the smaller banks: the percentage of loans not subject to growth ceilings was actually twice as large in the case of the smaller banks than in the case of the five largest banks.

These figures support those who maintain that direct control measures have a different impact on the different institutions. Nat- urally, to pass a negative judgement on these measures one must prove that this result is either undesirable or unjust.

III. 3 - *Compensatory Effects*

The third and last problem is whether the system was able to react and influence the distribution of credit between final users in such a way as to partly or totally offset the influence of provisions concerning the distribution of credit during the period of financial intermediation.

Whereas in the case of the "floors" on *securities* investments there is no significant evidence of compensatory effects, it is more difficult to pass judgement on the provisions governing *loans*. Some indication of how the system managed to get round the ceiling should be gleaned from the movements of "trade" credit, which can be used to heavily influence the distribution of credit between final users. By altering the settlement dates on contracts between two firms one can transfer credit in exactly the same way as one can transfer the tax by fixing the prices at which the exchange is made. If a large firm (one belonging to the group of clients whose loans are subject to growth ceilings) manages to greatly extend the

terms of payment to smaller firms that are exempt from the ceilings and that supply it, it actually evades — through the intermediation of these small firms — the restrictions placed on its dealings with the banking system. The distribution of credit among final users can remain exactly as it was before the enactment of the selective provisions, with the sole difference that the small firms have become financiers of the large firms.

Unfortunately, we have no information on loans between firms and are unable to explain exactly what took place; statistics on trade credit are still pretty poor, not only in Italy. The difficulties involved in obtaining data on substitution through trade underline the danger, referred to above, that forms of financial intermediation which evade all possibility not only of control but also of document-ation by the monetary authorities, may wholly or partly destroy a selective control policy.

Instead, the statistics provide us with information on substitution within the financial system; in other words, change-overs from one bank to another or from bank loans to loans granted by the special credit institutions.

The first possible form of compensation is by extending the device of multiple loans, which is already fairly marked in Italy. The fact that growth ceilings were placed on groups of clients that were classified according to their indebtedness towards a single bank and not their indebtedness to the entire banking system, made it possible for a firm to take out several loans, for less than 500 million when it had already taken out loans for larger amounts with other banks. It does not appear that this took place very frequently: our information on the splitting up of loans does not point to any large change in the average amount of splitting up within the banking system during the period covering the intro-duction of the July 1973 provision.

The other form of compensation is to increase recourse to loans from the special credit institutions to substitute the drop in loans by the banking system. Here the figures indicate considerable com-pensation activity. During the four months preceding the enactment of the provisions, loans by the commercial banks grew at twice the rate of those granted by the special credit institutes. During the months following the enactment of the provisions (from August 1973

until March 1974) this ratio became inverted, only very slightly in the case of the clients involved in production (and therefore only partly subject to ceilings, according to their size) but very markedly for those clients belonging to branches or sectors of economic activity covered by the provisions irrespective of their size (financial, commercial and various activities). Thus, while the percentages of bank and special credit remained basically the same for the first category of clients, in the case of the second category there was a definite shift towards special credit. During the twelve months from March 1973 to March 1974, special credit rose at three times the rate of bank credit (Table 4).

One could say much the same in the case of clients classed according to their size.

It is difficult to say to what extent this substitution phenomenon was desirable and to what extent not: the "floor" on investments in bonds was intended to allow the special credit institutes to extend their operations. And to a certain degree this was successful. But, in order to pass a complete judgement one should establish the optimal distribution of credit by maturity dates and decide how wise it was to increase the percentage of special credit — con-sidering the type of economic activities that were gaining ground in Italy.

IV. Conclusions

It has not been my intention to give a judgement on Italy's experience of selective controls, but only to explain some of the facts and concepts necessary in order to understand this phase in our monetary policy. An overall judgement would have to take other factors into account.

First of all, to deal with the causes one should re-examine the assumption that it is possible to influence independently the volume and composition of credit and ask whether some of the 1973-74 provisions cannot be put down to the Central Bank's increasing difficulties in controlling total credit with traditional instruments. The limited substitutability of the different forms of credit restricts the possibilities of redistribution: it affects their duration and their strength. Recourse to direct controls instead of indirect ones, more-

over, raises the problem of whether it is possible to coerce people into behaving in a way which does not fit in with the incentives which are at work in the economic system. The size of the balance of payments of an economy that is so largely dependent on the world economy, along with the remarkable growth of the government budget, has gradually altered the circumstances in which the Central Banks originally defined their duties and the possibilities for intervention. However, paradoxically, these duties have become greater while the action of other operators has gradually reduced the Central Bank's power over the variables traditionally assigned to it. Recourse to direct controls is one aspect of this paradox.

From the viewpoint of efficacy, one should be able to assess the impact of selective provisions on the "final" policy objectives, concerning external equilibrium and price stability. The problem of prices and balance of payments has certainly not become any less serious during the year analysed in these pages. Some signs of improvement are only being felt now, at a time of recession, after several months of stronger and more widespread monetary restriction. However, it would not be right to form an opinion only on the basis of these considerations because, undoubtedly, without a selective policy it would only have been possible to avoid suffocating at birth the 1973 economic recovery at a much higher cost in terms of inflation and foreign exchange reserves.

On the other hand, while experiments with these new instruments were in progress, the world economy was affected by too many new and disturbing events for a clear-cut link to be established between the causes and effects.

Final judgement on the selective policy should be seen not only in the light of these considerations but also within the framework of the problem of the growth of a mixed economy. When spontaneous and disciplined patterns of behaviour co-exist, any intervention that alters the border-line between these two should not only be assessed from the viewpoint of its immediate objectives but also from that of its ability to maintain equilibrium between the two, and prevent both the strength of spontaneous behaviour from altering the regulating intervention and the latter from stopping the spontaneous mechanisms. Changes in this border-line are always brought about by a *force majeure*, occasionally even against the deepest

convictions of those who carry them out:[7] in this sense they inevitably further more immediate aims. However, because these changes achieve their ends by affecting the actual structure of the economic system, any judgement on them must also depend on longer term considerations. If the order of causality which is implicit in the very concept of "economic policy" is still valid despite economic and social changes as far-reaching as those which have characterised Italy's experience of credit selection, then any judgement on the changes must depend on one's concept of equilibrium in a mixed economy such as ours, of the type of financial system considered appropriate for a mature, highly concentrated and industrialised economy and one open to the international market. Themes such as these however overstep the bounds of the present discussion.

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[7] Einaudi, who in 1913 criticised the State with these words: "it is taking advantage of its right to rule ... and is now beginning to introduce quantitative limits, tomorrow it will regulate the use of deposits", may seem a very different man from the Einaudi in 1947, who laid down that 20 per cent of bank deposits had to be placed in government securities. The difference lies not so much in changed convictions as in altered circumstances and in the man's responsibilities.

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APPENDIX

A. SELECTIVE REGULATIONS IN 1973-74

A 1. *Floors on securities investments by banks*

Under the regulations which came into force on *June 18, 1973* the banks, with the exception of the rural and artisans' banks, were required to increase their portfolios of fixed-interest securities during the year from end-1972 levels by an amount, net of investments made in compliance with compulsory reserve and liquidity requirements, equal to not less than 6 per cent of savings and demand deposits as at December 31, 1972. Of this 6 per cent, 5 per cent was to be in the form of bonds of the industrial credit institutions (excluding those issued by the Crediop on behalf of the Treasury), the ENEL, the IRI, the ENI and private companies, and 1 per cent in the form of government paper (excluding Treasury Bills) and securities issued by the autonomous government agencies and by the Crediop on behalf of the Treasury. The objective of promoting the financing of productive investment was thus pursued not only by favouring securities investments over short-term bank loans but also by devoting a major part of portfolio requirements to bonds issued by the industrial credit institutions.

On *December 15, 1973* the term of the provisions governing securities investments was extended from December 14, 1973 to June 30, 1974 and the required rate of increase was raised to 9 per cent. Since the base date of December 31, 1972 was retained, securities purchased in 1973 in excess of the June 18 requirements were good for compliance with the new provisions. A modification introduced by the December measure was that the distinction between the different types of bond issue concerned was abolished and bonds for agricultural improvement credit were also included.

Finally, on *July 18, 1974* it was decided that the amount due at June 30, 1974 had to be increased — before December 31, 1974 — by 3 per cent of total deposits held on December 31, 1973. The required investment could not exceed 50 per cent of the increase in deposits over the six months from June to November 1974. As in the previous regulation, securities investments in excess of the previous " floor " could be used to satisfy the new requirements. The eligible categories of securities were not modified.

A 2. *Ceilings on bank loans*

The first instance of any significance of direct control over bank lending for purposes of anti-cyclical policy began on *July 26, 1973*.

For the period from March 31, 1973 to March 31, 1974 the increase in loans to financial and commercial enterprises and non-profit-making organisations reaching amounts of 500 million lire or more within that period was limited to 12 per cent. The same ceiling was placed on the remainder of loans to the same categories of borrowers and on loans to other categories reaching amounts of 500 million within the same period. So as not to hamper investment financing, prefinancing on long-term loans arranged with the special credit institutions was excluded from these limits. The provision applied to each individual bank, except the rural and artisans' banks, in respect of the total of its customers within the various categories and left the expansion of individual positions completely free.

Further supplementary provisions exempted from the growth ceilings first the financing operations of public works contractors, lending to non-residents and foreign currency loans to residents (August-September 1973), and subsequently compulsory advances under Article 70 of the Law on the levying of direct taxes and prefinancing on loans arranged with the Central Post Office Savings Fund or the banks' own autonomous special credit departments, as well as loans to leasing companies for amounts of less than 500 million (October 1973).

On *April 6, 1974* the selective controls on lending were renewed to cover the period from March 31, 1974 to March 31, 1975. Some modifications were introduced.

The ceiling of 12 per cent of loans to financial and commercial enterprises and non-profit-making institutions was maintained; but the distinction between loans below and above 500 million was abolished, while loans below 30 million were exempted altogether. A 15 per cent ceiling was imposed on the growth of loans (of 30 million or more) to local authorities and their agencies, and on those (of 500 billion or more) to the other clients. Finally, an overall ceiling was set on total loans of 30 million or more: 8 per cent for the semester April '74 – September '74 and 15 per cent for the year April '74 – March '75.

Loans to the eletricity industry, health services, railways and for the support of agricultural production, were exempted from any ceiling.

B. ANALYTICAL PROPOSITIONS ON THE EFFECTS OF CREDIT CEILINGS AND CREDIT FLOORS

B 1. *The model*

To prove some basic propositions on the effects of direct credit controls we consider a simple model which analyses the behaviour of the "banking sector" and the "other sectors". Banks collect *deposits* (D) and invest them in *loans* (L) and bonds (B): we label the two assets of banks in this way but the logic of what follows is, in general, valid for any pair of assets whose supply functions to the banking system have different parameters. The model is composed of the following equations:

(1) $D = f(r_D, r_B)$

(2) $B = \varphi(r_D, r_B, r_L)$

(3) $L = \psi(r_B, r_L)$

(4) $D = B + L$

(5) $r_D = r_B$

(6) $r_D = r_L$

The model (1) to (6) determines the equilibrium value of interest rates and assets:

$$\hat{D}, \hat{B}, \hat{L}, \hat{r}_D, \hat{r}_B, \hat{r}_L.$$

The first three equations, describing the behaviour of non-bank operators, set constraints on the optimising behaviour of banks; the last three equations describe the balance sheet and the optimum conditions for the banking system; banks fix the three rates in such a way as to satisfy eqs. (4) to (6).

Some assumptions qualify the behaviour of non-bank operators. In particular we shall assume that: *a*) non-bank operators are net borrowers on the bond market; *b*) there is imperfect substitutability between loans and bonds; *c*) direct effects are stronger than indirect effects. Analytically, we have the following restrictions:

on eq. (1): $\quad f_{rD} > 0; \; f_{rB} < 0; \; |f_{rD}| > |f_{rB}|$

on eq. (2): $\quad \varphi_{rD} > 0; \; \varphi_{rB} < 0; \; \varphi_{rL} > 0$

$\quad\quad\quad\quad |\varphi_{rB}| > |\varphi_{rD}|; \; |\varphi_{rB}| > |\varphi_{rL}|$

on eq. (3): $\quad \psi_{rB} > 0; \; \psi_{rL} < 0; \; |\psi_{rL}| > |\psi_{rB}|$

on eq. (1) and (2): $\quad |f_{rD}| > |\varphi_{rD}|; \; |f_{rB}| < |\varphi_{rB}|$

on eq. (2) and (3): $\quad |\varphi_{rB}| > |\psi_{rB}|; \; |\varphi_{rL}| < |\psi_{rL}|$

B. 2. *Effects of a "floor" on bonds investment*

If a "floor" is imposed on investments in bonds, eq. (5) is replaced by:

(5a) $B = \overline{B} > \hat{B}$,

the inequality expressing the fact that the floor is effective. The bond rate r_B then becomes irrelevant for banks, since in the bond market optimising behaviour by banks is replaced by compliance with administrative rules. With model (1) - (5a) (6) we can prove:

Proposition 1: *A "floor" on investments in bonds:* 1a) *raises the rates on loans and deposits;* 1b) *lowers the rate on bonds;* 1c) *reduces total loans;* 1d) *increases total bank intermediation.* 1a) and 1b) show the so-called *twist* in interest rates.

Proof:

Substitution of (1), (3) and (5a) into (4) and of (5a) into (2) yields

$$f(r_D, r_B) = \overline{B} + \psi(r_B, r_L)$$

$$r_D = r_L$$

$$\overline{B} = \varphi(r_D, r_B, r_L).$$

By total differentiation and rearrangement of terms we obtain (defining $d\,r_D = d\,r_L \equiv d\,r_{D,L}$):

$$\begin{bmatrix} a & b \\ c & d \end{bmatrix} \begin{bmatrix} \dfrac{dr_{D,L}}{d\overline{B}} \\ \dfrac{dr_B}{d\overline{B}} \end{bmatrix} = \begin{bmatrix} 1 \\ 1 \end{bmatrix}$$

where, considering the behavioural assumptions above;

$a \equiv f_{rD} - \psi_{rL} > 0 \qquad\qquad a > c$

$b \equiv f_{rB} - \psi_{rB} < 0 \qquad\qquad a > |b|$

$c \equiv \varphi_{rD} + \varphi_{rL} > 0 \qquad\qquad |d| > c.$

$d \equiv \varphi_{rB} \quad\quad\quad < 0 \qquad\qquad |d| > b.$

It follows that

$$\Delta \equiv \begin{vmatrix} a & b \\ c & d \end{vmatrix} = ad - cb < d(a+b) < 0$$

$$\Delta r_{D,L} \equiv \begin{vmatrix} 1 & b \\ 1 & d \end{vmatrix} = d - b < 0$$

$$\Delta r_B \equiv \begin{vmatrix} a & 1 \\ c & 1 \end{vmatrix} = a - c > 0$$

and hence that

$$\frac{dr_{D,L}}{d\bar{B}} = \frac{\Delta r_{D,L}}{\Delta} > 0 \qquad\qquad\qquad proposition\ 1a$$

$$\frac{dr_B}{d\bar{B}} = \frac{\Delta r_B}{\Delta} < 0 \qquad\qquad\qquad proposition\ 1b$$

$$\frac{dL}{d\bar{B}} = \frac{dL}{dr_L}\frac{dr_L}{d\bar{B}} = \psi_{rL}\frac{\Delta r_{D,L}}{\Delta} < 0 \qquad proposition\ 1c$$

$$\frac{dD}{d\bar{B}} = \frac{dD}{dr_D}\frac{dr_D}{d\bar{B}} = f_{rD}\frac{\Delta r_{D,L}}{\Delta} > 0 \qquad proposition\ 1d.$$

B 3. *Effects of a " ceiling " on loans*

An effective " ceiling " on loans $(\bar{L} < \hat{L})$ excludes the loan rate from optimising behaviour and substitutes eq. (6) with (6a) $L = \bar{L} < \hat{L}$.

We can then prove:

Proposition 2: *A " ceiling " on loans: 2a) raises the loan rate; 2b) lowers the rate on bonds and the rate on deposits; 2c) increases the amount of bonds held by banks; 2d) reduces the volume of bank intermediation.*

Proof:

Following the same procedure that we have used for " floors " we obtain the system

$$\begin{bmatrix} \alpha & \beta \\ \\ \gamma & \delta \end{bmatrix}\begin{bmatrix} \dfrac{dr_{D,B}}{dL} \\ \\ \dfrac{dr_L}{dL} \end{bmatrix} = \begin{bmatrix} 1 \\ \\ 1 \end{bmatrix}$$

where, considering the restrictions imposed on the functions:

$$\begin{aligned}
\alpha &\equiv f_{rD} - f_{rB} - \varphi_{rB} - \varphi_{rB} > 0 & \alpha &> \gamma \\
\beta &\equiv \varphi_{rL} & > 0 & \quad |\delta| &> \gamma \\
\gamma &\equiv \psi_{rB} & > 0 & \quad |\delta| &> \beta \\
\delta &\equiv \psi_{rL} & < 0 &
\end{aligned}$$

It follows that:

$$\frac{dr_L}{-dL} > 0 \qquad\qquad\qquad proposition\ 2a$$

$$\frac{dr_{D,B}}{-dL} < 0 \qquad\qquad\qquad proposition\ 2b$$

$$\frac{dB}{-dL} = \frac{dB}{dr_B}\frac{dr_B}{-dL} > 0 \qquad proposition\ 2c$$

$$\frac{dD}{-dL} = \frac{dD}{dr_D}\frac{dr_D}{-dL} < 0 \qquad proposition\ 2d.$$

C. STATISTICAL TABLES

TABLE 1

OVERALL PERFORMANCE OF THE ITALIAN ECONOMY IN 1973 COMPARED WITH THE PREVIOUS FIVE YEARS

		1968	1969	1970	1971	1972	Average 1968-1972	1973
Gross national product (*) (1)	Year	6.4	5.7	4.9	1.6	3.1	4.3	5.9
Gross fixed investment (*) (1)	Year	9.7	8.1	3.4	—3.5	0.4	3.6	9.9
Gross fixed investment / Gross national product	Year	20.0	20.5	20.2	19.2	18.7	19.7	19.4
Industrial production (*) (2)	1st half	2.1	3.5	8.1	—0.4	2.9	3.2	3.9
	2nd half	3.8	— 4.3	—0.1	0.1	2.0	0.3	8.7
	Year	5.2	3.2	5.7	—0.4	4.0	3.5	9.5
Employment (*) (2)	1st half	1.9	0.4	1.5	0.6	— 0.7	0.8	0.3
	2nd half	1.1	1.3	1.5	—1.1	— 0.4	0.5	2.0
	Year	1.8	1.6	2.9	0.8	— 1.4	1.2	1.1
Productivity (*) (2)	1st half	0.2	3.0	6.5	—1.0	3.6	2.5	3.6
	2nd half	2.8	— 5.6	—1.5	1.2	2.4	— 0.2	6.6
	Year	3.4	1.5	2.7	—1.3	5.5	2.4	8.3
Wholesale prices (*)	1st half	0.3	2.2	4.5	1.9	1.8	2.2	8.6
	2nd half	— 0.6	4.0	1.4	1.3	3.2	1.9	12.1
	Year	0.4	3.9	7.3	3.3	4.1	3.8	17.0
Balance of payments (3)	1st half	776.2	864.1	189.3	176.3	754.8	552.1	— 718.2
	2nd half	865.6	598.2	286.3	804.9	413.8	593.8	— 686.6
	Year	1641.8	1462.3	475.6	981.2	1168.6	1145.9	— 1404.8
Terms of trade (4)	1st half	93.8	93.0	96.1	95.0	96.2	94.8	91.9
	2nd half	92.5	95.6	94.6	92.2	94.4	93.9	85.5
	Year	93.2	94.2	95.4	93.6	95.2	94.3	88.4
Total monetary base (*)	1st half	— 1.4	— 2.3	1.5	7.3	7.6	2.5	5.0
	2nd half	9.5	9.8	9.4	9.3	7.6	9.1	13.6
	Year	7.9	7.3	11.1	17.3	15.8	11.9	19.3
Treasury cash requirements / Gross national product (5)	Year	5.0	4.0	7.3	10.5	12.1	7.8	16.4
Long-term rates (6)	1st half	6.8	6.7	8.6	8.3	7.5	7.6	7.4
	2nd half	6.8	7.4	9.5	8.1	7.3	7.8	7.5
	Year	6.8	7.1	9.0	8.2	7.4	7.7	7.5
Rates on bank loans (7)	1st half	7.3	7.3	8.7	9.3	8.1	8.1	7.6
	2nd half	7.3	7.8	9.6	8.7	7.7	8.2	9.0
	Year	7.3	7.5	9.2	9.0	7.9	8.2	8.3

(*) Percentage changes.
(1) At constant prices. — (2) In the manufacturing industry; seasonally adjusted figures. — (3) Balance on current account; billion lire. — (4) Ratio of export prices to import prices on the basis of 1966 = 100. — (5) At current prices. — (6) Average yield on industrial credit institute bonds. — (7) Average rates for the period.

TABLE 2

INVESTMENTS IN SECURITIES BY THE BANKING SYSTEM

Periods	In absolute value (billion lire)	As a percentage of:			
		Securities at the beginning of the period	Net issues during the period	Flow of credit during the period	Deposits at the beginning of the period
Average 1968-'72					
1st semester	425.1	7.6	19.3	40.2	1.1
2nd semester	623.3	10.2	26.1	16.9	1.6
Year	1,048.4	18.7	22.9	21.6	2.8
1973:					
1st semester	— 138.0	— 1.5	— 5.0	— 5.3	— 0.2
2nd semester	4,851.5	53.5	57.9	50.9	8.1
Year	4,713.5	51.2	42.3	38.8	8.4

BANK LOANS

TABLE 3

By size and sector

Periods	By size				By sector			
	Average '69-'73		1973-1974		Average '69-'73		1973-1974	
	0-499 mill. lire	500 mill. & over	0-499 mill. lire	500 mill. & over	comm. & financl. activs.	prod. activs.	comm. & financl. activs.	prod. activs.
April-July	4.4	6.8	9.4	13.2	5.8	6.8	16.6	10.0
August-November	1.4	5.4	5.2	0.7	2.2	4.0	2.4	2.3
December-March	5.3	8.5	11.3	7.9	2.0	7.9	4.5	9.1
Year	11.4	22.2	28.1	23.0	10.2	19.8	24.7	22.8

By size and sector

Sectors	Size	Percentage changes			
		April-July	August-Nov.	Dec.-March	Year
Financial & commercial firms & non-profit-making institutions	500 mill & over	23.3	0.5	0.9	25.1
	below 500 mill.	12.8	3.4	6.7	24.4
Other sectors (1)	500 mill & over	9.1	0.4	5.3	15.4
	below 500 mill.	11.9	6.2	17.2	39.3
Total (1)		11.1	2.3	8.3	23.1

(1) Excluding health services.

LOANS GRANTED BY FINANCIAL INSTITUTIONS
(Percentage changes)
Classified by the size of the debt

Period	Banks		Total	
	0-1.999bill.	2bill & over	0-9.999bill.	10bill & over
Amounts at March 31, 1973	12,930.9	19,501.7	26,460.6	35,237.3
1973-1974 (percentage changes)				
April-July	9.6	13.0	7.9	12.6
August-November	4.8	1.0	5.1	4.6
December-March	11.1	8.1	10.1	6.7
Year	27.5	23.4	24.8	25.7

Classified by economic activity

Period	Financial & commercial activities			Productive activities			Total		
	Banks	Special credit instits	Total	Banks	Special credit instits	Total	Banks	Special credit instits	Total
Amounts at March 31, 1973	5,827.6	1,619.8	7,447.4	25,777.4	17,305.5	43,082.9	31,605.0	18,925.3	50,530.3
1973-1974 (percentage changes)									
April-July	14.2	7.3	12.7	10.6	4.4	8.1	11.3	4.6	8.8
August-November .	— 6.7	7.7	— 3.8	4.6	8.5	6.1	2.4	8.4	4.6
December-March .	2.7	11.2	4.7	10.0	10.8	10.3	8.8	10.8	9.5
Year	9.4	28.5	13.6	27.2	25.5	26.5	24.0	25.7	24.6

Classified by categories of enterprises

Periods	Public			Main private			Remaining private		
	Banks	Special credit instits	Total	Banks	Special credit instits	Total	Banks	Special credit instits	Total
Amounts at March 31, 1973	4,798.6	4,130.2	8,928.8	8,166.7	5,485.7	13,652.4	11,687.6	5,882.0	17,569.6
1973-1974 (percentage changes)									
April-July	12.8	7.3	10.3	6.3	2.3	4.7	13.2	5.6	10.7
August-November .	0.5	14.5	6.8	— 0.2	6.6	2.5	6.6	7.5	6.9
December-March .	13.2	9.1	11.2	4.9	12.9	8.2	14.3	10.3	13.0
Year	28.4	33.9	30.9	11.2	23.2	16.0	38.0	25.2	33.7

T. P.-S.