

Methods of Monetary Control in Italy: 1974-1983

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1. Introduction. Instruments and Objectives of Monetary Policy

Monetary policy aims at achieving specified values and results for variables outside the financial sector: aggregate demand, investment, the balance of payments and prices. These may be defined as final objectives of monetary policy and are strictly correlated with income, employment and the orderly course of economic and social life.

In some cases monetary policy objectives involve variables "inside" the financial sector such as the structure and nature of financial intermediation, the interest cost of the public debt, etc. These variables are considered not only to be of immediate importance for some categories of economic agents, but also to exert an influence in the long term, and sometimes a decisive one, on the final objectives of monetary and economic policy. The objectives "inside" the financial sector can sometimes also be seen as constraints rather than as objectives to be achieved or maximized (minimized).

The different objectives of monetary policy can be positively correlated between themselves. Sometimes, by contrast, they are negatively correlated so that pursuit of one implies renouncing, at least in part, pursuit of another.

Monetary policy employs instruments in the specific sense of variables that are under the *immediate* and *direct* control of the monetary authorities, and in particular of the central bank. Financial variables that are not important as economic policy objectives but which influence them and are only controlled *indirectly* by the central bank are usually known as intermediate objectives.

Intermediate objectives are correlated between themselves and related more or less closely to the different final objectives. The instruments may also be mutually correlated or independent to a greater or lesser extent, as well as being more or less closely correlated with the intermediate objectives.

Even when one particular aggregate is officially adopted as "the intermediate objective," the authorities monitor a series of intermediate objectives (and use a series of instruments), since they are aiming at several final objectives. Following Tinbergen, the number of (mutually independent) in-

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struments must be equal to the number of objectives.¹ Moreover, Mundell has shown that each instrument should be used for the objective that it influences most effectively.²

The emphasis placed on certain intermediate objectives (and instruments) depends on the whole system of interrelationships between instruments, intermediate and final objectives and on the priority attached to each objective.

A formal and rigorous attempt to trace back these relationships in the Italian institutional context has been made with the construction of the econometric model of the Bank of Italy.³ The aim of this paper is to focus on the evolution of the *modus operandi* of monetary policy during the last 10 years and to describe which analytical framework has been adopted. A review of some aspects of the general problem of choosing intermediate objectives (Section 2) is followed by a discussion of the approach adopted by the Bank of Italy in analyzing financial flows (Section 3) and of the modalities of its application in monetary and credit management since 1974 (Section 4). Finally, the evolution of the instruments of this policy is examined in the light of recent developments in the money and financial markets (Section 5).

2. The Choice of the Intermediate Target.

Taking into account information lags regarding final objectives and the structural lags in the effects of monetary policy on real variables, intermediate objectives provide a reference point for the authorities' action in the short term.⁴

The problem of the choice of intermediate objectives was thoroughly studied in the literature on optimal techniques of monetary control during the seventies. This has helped to clarify the basic elements and implications of the choice between various objectives. The solutions adopted in practice depend on knowledge of the relationships linking instruments, intermediate objectives and final objectives, both as regards the values of the parameters that define the financial structure and the stability of the key behavioral functions.⁵

The first basic alternative that authorities have to tackle is whether to define their intermediate objectives in terms of interest rates or monetary

¹J. Tinbergen, *Economic Policy: Principles and Designs*, North Holland, 1966.

²R. Mundell, "The Monetary Dynamics of International Adjustment under Fixed and Flexible Exchange Rates," *Quarterly Journal of Economics*, No. 2, 1960.

³*Modello Econometrico della Banca d'Italia, M2BI*, February 1979.

⁴B. Friedman, "Targets, Instruments and Indicators of Monetary Policy," *Journal of Monetary Economics*, October 1975.

⁵F. Modigliani and L. Papademos, "The Structure of Financial Markets and the Monetary Mechanism," *Controlling Monetary Aggregates III*, Federal Reserve Bank of Boston Conference Series No. 23, October 1980; B. Sitzia, "Teoria dei sistemi e programmazione economica," *Etas libri*, 1979.

aggregates. Under conditions of uncertainty deriving from the instability of economic agents' behavior and incomplete knowledge of the causal links between intermediate and final objectives, the first solution (given certain assumptions) is preferable when the factors causing instability primarily influence the supply and demand conditions of money and other financial instruments; the second when the factor causing instability mainly affects the real sector of the economy.⁶

During the seventies the disequilibria in the industrial countries stemming from the raw material and labor markets, as well as high and variable inflation rates, undermined the use of interest rates as intermediate objectives, and encouraged the increasingly widespread use of monetary and credit aggregates for this purpose. The abandonment of the fixed exchange rate system, which had anchored the various national monetary targets to that of the reserve currency, also contributed to this development.⁷

The replacement of interest rates by monetary aggregates had nonetheless already been prepared at the theoretical level by the criticism leveled against the text-book version of the Keynesian model and the success of monetarist doctrine, which postulates a basically stable relationship between the quantity of money and the level of economic activity.⁸

The choice of the aggregate for the purpose of monetary control raises some basic issues of monetary theory. A choice has to be made: a) between a narrow or a broad aggregate of financial assets, and b) between an asset or a liability aggregate in the private sector balance sheet.

According to Tobin, the special role of money in the transmission of monetary policy is due to its yield being fixed exogenously, while those of other financial assets are determined endogenously by the market.⁹ When the supply of a certain type of financial asset is increased, its yield and that of alternative assets will rise so as to induce the public to hold a larger quantity in its portfolio. If the supply of money increases, the adjustment will be entirely in terms of the interest rates on alternative assets since the yield on money is fixed. This explains why a substitution of securities with money in the public's portfolio has an expansionary effect. The decline in the interest rates on the assets that are the closest substitutes for money will also influence the yields on longer term assets owing to the attempt by the public to shift towards longer maturities. In the end this process will influence the demand for shares and capital goods. Furthermore, the decline in

⁶W. Poole, "Optimal Choice of Monetary Policy Instruments in a Simple Stochastic Macromodel," *Quarterly Journal of Economics*, May 1970.

⁷J. E. Woodsworth and F. Leonard De Juvigny (eds.), *New Approaches in Monetary Policy*, The Netherlands: Sitjhoff and Noordhoff, 1979; OECD, *Monetary Targets and Inflation Control*, Monetary Studies Series, 1979; A. Lamfalussy, "Rules versus Discretion: An Essay on Monetary Policy in an Inflationary Environment," *BIS Economic Papers*, April 1981.

⁸M. Friedman, "The Role of Monetary Policy," *American Economic Review*, March 1968.

⁹J. Tobin, "A General Equilibrium Approach to Monetary Theory," *Journal of Money, Credit and Banking*, February 1969.

interest rates will lead to a reduction in the cost of borrowing, so that the final outcome will be an increase in investment and income.

In the transmission of monetary policy these "substitution effects," produced by changes in interest rates, may be reinforced by "wealth effects," caused by the development of excess demand for (or supply of) financial assets.

Within this framework the definition of the most important aggregate depends on its relative stability vis à vis (a limited number of) real variables. An important part of the literature that took the Keynesian theory of liquidity preference as its basis and the Radcliffe Report as its monetary manifesto, has emphasized the greater stability in relation to income and wealth, compared with money, of a broader range of financial assets representative of what economic agents consider as their liquid reserves.¹⁰

In the Netherlands, for instance, the concept of "liquid assets," judged to be of greatest importance for the purposes of monetary control includes, in addition to money in the strict sense, all the liabilities issued by the public sector and banks that can be converted into money "at relatively short notice, without much expense or great losses on the transaction, and which can be used at their face value to make payments in satisfaction of current tax assessments."¹¹ This definition goes beyond the boundaries of the broadest monetary aggregates and embraces most of the economy's financial portfolio.

The formation of financial assets is the counterpart of the total flow of finance to the sectors that are final users of savings resources. In a closed economy the flow of credit is always equal, by definition, to the formation of financial assets. It is significant that the initial formulation of models in which credit plays a predominant causal role occurred when attempts were made to adapt monetary analysis models to the case of an open economy. In the analytical model developed by the IMF¹² credit is considered as the independent variable that generates expansionary impulses and hence the one that must be controlled by the monetary authorities. In a simplified model in which the formation of financial assets and liabilities is concentrated in the banking system, the existing stock of money derives from domestic credit (Domestic Credit Expansion) and from the foreign currency reserves accumulated by banks. An increase in the money supply is therefore the result of an expansion of credit or of a balance of payments surplus, taken as coincident with that of the current account.

This means, however, that, in the case of a balance of payments deficit, an intermediate objective in terms of money may mislead the authorities since, if the destruction of liquidity via the balance of payments is regularly

¹⁰M. W. Holtrop, "On the Effectiveness of Monetary Policy: the Experience of the Netherlands in the Years 1954-1969," *Journal of Money, Credit and Banking*, May 1972.

¹¹F. J. De Jong, "Dr. M. W. Holtrop, the Nederlandsche Bank, and the Monetary Model," in M. W. Holtrop, *Money in an Open Economy*, Leyden: Stenfort Kroese, 1972.

¹²J. J. Polak, "Monetary Analysis of Income Formation and Payments Problems," *IMF Staff Reports*, 1957.

offset, adjustment of the real disequilibrium could be postponed indefinitely. In the end the choice of the monetary objective is linked to that of the exchange rate objective. If the exchange rate is fixed, the intermediate objective of monetary policy must refer to the internal component of the monetary or financial aggregate that is most important in the transmission process.

The above-mentioned stylized description of the monetary mechanism is a useful representation of the real world if the credit and money markets are efficient and competitive. The less this is so, the less rapidly the impulses of monetary policy pass along the chain of substitutions between financial assets, until those affecting the demand for investment goods are reached. Moreover, if the price of credit is an administered price (which could be the case of "rationing")¹³ the movements in the cost of credit do not adequately reflect market conditions and, in particular, the availability of funds.

Indeed, reference to a credit target can be defended in its own right, rather than as the domestic component of an asset aggregate. If financial markets are not sufficiently competitive and economic agents rely heavily on credit to finance their spending, an intermediate objective expressed in terms of credit is more appropriate. Direct control of the flow of credit to the economy may have impact effects on the level of economic activity and the balance of payments that are more important than those obtained by controlling the money supply.

In general, there are two coordinates upon which to base the choice of the aggregate (or aggregates) that best serves the authorities as an intermediate objective: a) the financial structure, i.e., the different sources of corporate finance, the composition of households' financial assets and the extent to which the credit and money markets are developed and competitive; b) the degree of trade and financial openness of the economy, and hence the scope for a sufficiently independent exchange rate policy.

In conclusion, it is not surprising that different countries have adopted intermediate objectives with special features judged to be particularly appropriate to their institutional contexts. The criteria for choosing these objectives are, in fact, strongly influenced not only by each country's structural features and institutional organization, but also by different views of how monetary policy operates and of the influence of monetary variables on final objectives. This choice also depends on the availability of effective instruments with which to affect the values of the variables judged to be important.

¹³D. Jaffee and F. Modigliani, "A Theory and Test of Credit Rationing," *American Economic Review*, 1969.

3. Intermediate Targets in Italy.

A financial asset that can be defined as money and differs from the other assets in its means-of-payment functions and fixed yield (equal to zero or set by the authorities) exists in Italy only in the form of currency in circulation and of the other components of the monetary base. Bank deposits are remunerated at high and variable rates and, besides performing a means-of-payment function, also act as a store of value for a large share of households' financial wealth.

The fact that the interest rate on bank deposits can vary freely, makes it possible for the public's portfolios to absorb large fluctuations in their supply without this requiring—other conditions being equal—large changes in the yields on other financial assets or in the propensity to buy real goods. This, as well as the high degree of liquidity of the other component of financial portfolios,¹⁴ reduces the meaningfulness of the analysis of the quantity of money in the context of the transmission mechanism. The greater efficiency of the credit market and its more direct link with the markets for real goods make it a better channel for the transmission of monetary policy.

Moreover firms tend to borrow heavily, primarily from the banking system. A credit squeeze therefore has a direct impact on investment. The high proportion of short-term debt increases the effectiveness of an increase in interest rates, because it reduces enterprises' cash flows precisely when new credit is most difficult to obtain.

These features of the Italian financial structure, together with the aim of checking balance of payments deficits, led the authorities to consider control of credit expansion to be more important (in the short term) than control of the money supply or of some other financial aggregate.

The approach followed by the Bank of Italy from the mid-1960s on, however, has not been to announce a quantitative target for only one intermediate objective, but rather to indicate the main elements of a framework of mutually consistent financial flows. In analytical terms it is the approach of those who prefer to define and monitor monetary policy with a wide range of indicators rather than stressing one single relationship.

In 1974, when an IMF stand-by agreement was negotiated and the external constraint became tighter, a greater emphasis was placed on the importance of one single aggregate, i.e., total domestic credit (TDC) or, in other words, the domestic component of total financial assets (i.e., money

¹⁴During the second half of the 1960s bonds—the most important component of households' financial portfolios after deposits—were highly liquid because of the official pegging of the long-term rate. After 1973, due to the acceleration of inflation and to the greater variability of interest rates on fixed-interest securities, the switch to liquid assets stepped up: in 1977 bank deposits accounted for over 70 percent of the stock of domestic financial assets, against about 40 percent in 1961. Since the late 1970s the share of deposits decreased as the public turned gradually to short-term Treasury bills and, in the last couple of years to medium-term Treasury certificates, whose yield is indexed to that of six-month bills.

plus short-term securities and public and private bonds in the hands of enterprises and households).

Total domestic credit consists of domestic lending to the economy (enterprises and households) plus the public sector borrowing requirement (PSBR).¹⁵ It is easy to show that the sum of the two aggregates is equal to the saving available to the financial markets, net of the balance of payments.

The identity linking the flows of saving and investment can, in fact, be written as follows:

$$(1) \quad Y - C - T = I + (G - T) + (X - M)$$

that is, private sector saving is equal to private investment plus the public sector deficit and the external balance (the symbols have the usual meanings: Y: GNP, i.e., national income; C: private consumption; T: net overall taxation; G: government expenditure; I: private investment; X: exports; M: imports).

A direct correspondence can be established between the amount of saving and the formation of financial assets (FA); while the sum of private plus public sector deficits can be defined as total domestic credit (TDC). So one can write:

$$(2) \quad FA = TDC + BPC$$

where the terms of identity (1) differ from those of identity (2) by the amount of (corporate) gross self-financing (SF):

$$\begin{aligned} FA &= Y - C - T - SF \\ TDC &= I - SF + (G - T) \\ BPC &\equiv (X - M) \end{aligned}$$

If a certain amount of credit is extended (destroyed) to increase (decrease) the firm sector liquidity, the amount of credit and that of financial assets are increased (decreased) correspondingly. Taking into account capital movements from and to abroad we have that: capital inflows (CI) reduce the need for domestic credit:

$$TDC + CI = I - SF + (G - T)$$

and capital outflows (CO) the amount of domestic asset formation (DFA):

$$DFA + CO = Y - C - T - SF$$

We have then finally:

¹⁵The Federal Reserve Board announced in February 1983 that it will begin monitoring a comprehensive credit aggregate defined as the *total debt of domestic nonfinancial sectors*. This credit measure includes borrowing by private domestic nonfinancial sectors and by the federal, state, and local governments in U.S. markets and abroad; it excludes borrowing by foreign entities in the United States and corporate equities. The only difference with the definition of TDC is the inclusion in the U.S. aggregate of borrowing abroad.

$$(3) \quad \begin{aligned} \text{DFA} &= \text{TDC} + \text{BPC} + (\text{CI} - \text{CO}) \\ &= \text{TDC} + \text{BP} \end{aligned}$$

where BP is the overall balance of payments (current account plus capital movements).

The fundamental justification of the idea of controlling total domestic credit is therefore to control the level of domestic uses of saving, that is the sum of investment plus the government deficit.¹⁶ Financial asset formation is basically linked to saving formation in the private sector of the economy. The control of TDC affects the level of economic activity and through this the balance of payments.

Naturally, measures controlling the public deficit and private sector debt-financed expenditure influence the formation of saving; the negative influence restrictive measures have on the flow of saving is nonetheless only a fraction of the curbing of credit, partly because the increase in interest rates which accompanies credit restriction causes the saving to expand to a certain extent.

If the monetary authorities set the value of TDC, the adjustment of an external imbalance (i.e., between saving and investment) occurs in the market for goods and affects national production and income via the multiplier process. In terms of the usual IS-LM model, this implies that the authorities' measures act directly on the IS curve. The speed and accuracy of the adjustment depend on enterprises' initial liquidity position and their self-financing capacity.

More completely and explicitly a restriction of credit leads to an increase in the velocity of circulation of enterprises' liquid balances, with effects on interest rates. Firms buy fewer foreign assets and tend to raise more finance abroad; this has a positive effect on capital movements. The smaller amount of credit also tends to curb imports of raw materials and finished products and the build-up of stocks of domestic production. There is an immediate effect on the current account of the balance of payments. Another effect comes via a reduction in the level of economic activity as the scarcity of credit influences the demand for durable goods and fixed investment, including housing.

If fixed investment and inventory accumulation are covered by internal saving—this, however, is not the case in Italy—the credit restriction will only affect capital movements (and interest rates). In this case there is not much sense in trying to control the quantity of credit and it would be more effective to fix an intermediate objective directly in terms of interest rates.¹⁷

¹⁶A. Fazio, "Report on Italy" in M. Monti (Editor), *The New Inflation and Monetary Policy*, Proceedings of a Conference organized by the Banca Commerciale Italiana and the Department of Economics of the Università Bocconi in Milan, 1974, London, 1976.

¹⁷A. Fazio, "Monetary Base and the Control of Credit in Italy," *Banca Nazionale del Lavoro Quarterly Review*, June 1969.

In practice corporate saving, together with long-term credit, mainly finances fixed investment. Short-term credit covers mostly the acquisition of stocks of raw materials and finished products and financial assets. Consequently, measures to curb credit that focus primarily on bank credit will mainly influence firms' liquid assets, capital movements and inventories.

When the balance of payments is in equilibrium or in surplus, it is necessary all the same to monitor the conditions of financial equilibrium that are compatible with the desired (or accepted, for the inflationary component) rate of increase in nominal income; this in order to avoid the formation of excess liquidity that may raise the level of internal demand, and consequently lead to disequilibria of the opposite sign in the external accounts.

The amount of financial assets, which is the result of TDC expansion and the balance of payments, and of the economy's stock of assets at the start of the period, is an indicator of the economy's capacity to spend.

Whereas the effects of monetary policy are transmitted most strongly to the corporate sector via its impact on the flow of credit, the influence on households' behavior comes from the difference between the desired and actual stock of financial assets. In other words, the TDC approach can be interpreted within the framework of a stock-flow model that takes account of the effects of the accumulation of financial wealth.

This channel of monetary policy transmission presupposes a demand for (net) financial assets that is stable in relation to income, wealth and (real) interest rates. The literature does not provide a priori explanations of such stability that are as well-argued and convincing as those developed for the more traditional demand for money functions, but it can be rationalized on the basis of the hypothesis of a stable relationship between wealth and income, as is implicit in the life cycle theory.¹⁸ If the "services" supplied by real goods and financial assets that make up individuals' wealth are not perfect substitutes, it can be postulated that there exist desired ratios with respect to income for the two kinds of assets. So that changes in the supply of financial assets will be reflected mostly in changes in income via changes in expenditure.¹⁹

In fact, the desired composition of wealth also responds to changes in the relative yields of financial assets and real goods. Presumably, however, the degree of substitutability between them is smaller than that between the various components of the financial portfolio. A high degree of substitutability between financial assets does not necessarily imply instability of the demand functions for narrower financial aggregates (such as money), provided the elasticities with respect to the interest rates on the other financial

¹⁸F. Modigliani, "The Life Cycle Hypothesis of Saving, the Demand for Wealth and the Supply of Capital," *Social Research*, XXX, Summer 1966.

¹⁹B. Friedman, "Debt and Economic Activity in the United States," NBER, Working Paper 704, June 1981.

assets are predictable. The empirical evidence regarding Italy appears to confirm that the interest rate elasticity of money is higher than that found for broader aggregates of financial assets.²⁰

An appropriate level of the real interest rate can induce savers to hold a greater amount of financial wealth and in this way, at least in the short run, the effects of excess credit expansion on expenditure can be offset. However, during the 1970s, marked by large variations in inflation rates and repeated shocks in the supply of financial assets, the level of real interest rates necessary to induce the desired accumulation of financial assets in relation to income has progressively increased.

Of course the composition of financial assets is also important in the transmission mechanism since monetary impulses are propagated not only via wealth effects, but also via the chain of substitutions within the financial portfolio. The higher the proportion of money in total financial assets, the easier it is to finance expenditure. Although the links between money and income, for the reasons discussed above, are less strong in Italy than elsewhere, the authorities seek to maintain a structure of interest rates that will encourage a lengthening of the average maturity of financial assets. In terms of Hicks's analytical framework, this implies a gradual shift of the LM curve.

Total domestic credit is a mixed monetary and fiscal policy objective. The degree to which it can be controlled depends on the consistency of the two policies or on the ability of the central bank to offset deviations from the forecast of the public sector borrowing requirement, by variations of the opposite sign in the financing of the economy. Of course, a change in the composition of TDC will always affect the composition of demand, its level and other macroeconomic variables such as the balance of payments, because credit to the economy—mainly utilized by enterprises—has a more immediate effect on the level of output.

During the seventies, when the PSBR share of TDC, though tending to rise, averaged around 50 percent (Table 1) it was generally possible to offset deviations. The problem of offsetting arose primarily in connection with the cyclical and seasonal variations from the target in the borrowing requirement: a large end-of-year increase—caused, for example, by the advance payment of amounts due in the next financial year—might well cause the target for that period to be exceeded but, apart from short-term liquidity effects, this did not undermine the control of credit flows over the cycle as a whole.

But when the public component rose and settled at around two-thirds of TDC, the scope for offsetting action decreased dramatically. The control of TDC and of the formation of total financial assets is therefore closely linked to the possibility of keeping the public borrowing requirement in line

²⁰C. Caranza, S. Micossi and M. Villani, "La domanda di moneta in Italia, 1963-1982," *Quaderni M3BI*, June 1982.

Table 1
 Total Domestic Credit⁽¹⁾

Year	Stocks			Flows		
	TDC/GDP %	Credit to the economy/TDC %	Bank loans/ credit to the economy %	TDC/GDP %	Credit to the economy/TDC %	Bank loans/ credit to the economy %
1960-64	88.6	63.7	56.5	11.1	81.9	52.1
1965-69	101.9	68.2	54.3	11.5	71.1	52.9
1970	108.5	68.6	55.7	12.9	61.7	64.9
1971	116.7	68.0	55.6	17.1	64.2	50.3
1972	126.7	67.2	56.0	20.3	63.3	60.0
1973	129.3	67.0	55.0	23.2	65.8	53.4
1974	123.9	65.6	57.3	19.2	58.7	73.6
1975	134.7	62.9	56.0	24.9	54.3	53.8
1976	129.5	61.4	57.9	21.7	58.3	69.7
1977	125.7	57.8	56.9	18.8	49.8	60.4
1978	129.7	53.4	56.2	22.2	35.6	55.8
1979	126.4	52.3	59.0	19.7	46.5	76.5
1980	119.5	51.2	60.5	18.7	46.1	70.3
1981	119.0	48.5	59.8	18.1	38.3	48.0
1982	123.0	45.6	56.8	21.4	32.4	35.1

⁽¹⁾ State sector domestic borrowing requirement *plus* banks' and medium-term credit institutions' loans to and bonds issued by enterprises and households.

with the limits initially fixed.

In the short term, in fact, the central bank can only control the supply of credit to the economy and the composition of the means of financing of the public sector's deficit. If there are no ceilings on bank lending, the increase in the potential supply of credit, as a result of a larger than expected increase in the borrowing requirement, can be offset by a rise in interest rates that will induce the public to buy more government securities.

If the deviations of PSBR from target are very large, it may become practically impossible to offset them completely by changing the amount of credit to the private sector. Via interest rate policy, saving can be stimulated and brought into line with the new level of the PSBR. Interest rates also affect the demand for credit by the private sector.

Compared with a situation in which it was possible to regulate the total amount of domestic credit, the central bank's control over the economy's capacity to spend has been considerably reduced by the preponderant share of the PSBR in the total credit flow.

The impact of an overshooting of the borrowing requirement directly affects enterprises' liquidity and the composition of their working capital; through expectations it can also cause an increase in households' propensity to spend. In principle, it is possible to imagine a situation in which it would be possible to control such an impact effect with sufficiently large and frequent changes in interest rates. The latter have actually been more variable in recent years in nearly all the major industrial countries, partly in connection with the greater volatility of expectations. Faced with the increase in the public sector's demand for credit, central banks have tried to restore their freedom to use interest rates through institutional reforms and reorganization of the technical procedures of monetary control. The new techniques for financing the Treasury introduced in July 1981 (the so-called "divorce" between the Bank of Italy and the Treasury) are part of this trend (see section 5).

However, if in theory there is a series of interest rate combinations permitting equilibrium to be maintained on the money and foreign exchange markets, in practice there are "steps" which may lead to crises. The variability of interest rates is, in fact, objectively restricted by the need to maintain orderly conditions on the financial and foreign exchange markets.

4. Three Periods of Monetary Restraint in the Last Decade: a Comparison.

The different emphasis the central bank has given to total domestic credit, its composition and interest rates in each phase of the cycle can be clearly seen by comparing the policies pursued during the three periods of monetary restriction in the last 10 years: those of 1974, 1976-77, and the last one that started in 1980.

In 1974, the decision to set an objective in terms of TDC was directly linked to the urgent need to reduce the country's external deficit, which had

been seriously aggravated by the first oil crisis.

When the exclusive aim of monetary policy is to reduce the current deficit of the balance of payments, the credit aggregate being controlled must also include the financing that enterprises and the public sector raise abroad. At least, when fixing the desired expansion of TDC, account must also be taken of the inflows of capital attracted by the rise in interest rates. The more capital flows are sensitive to conditions in national and international credit markets, the more likely it is that the effects of the changed availability of credit and of portfolio adjustment will rapidly influence capital flows. In the (theoretical) limiting case of perfect capital mobility the impact of the restriction of credit is only felt on the foreign exchange market and the reduction in domestic credit is offset by inflows of capital.

The choice made in 1974 of a credit aggregate (TDC) that excluded foreign loans reflected the authorities' willingness to allow the restriction of credit to be offset in part by inflows of capital that would finance the oil deficit. On that occasion concern about checking the loss of official reserves made it advisable to take measures specifically designed to encourage inflows of foreign currency, such as the import deposit scheme.

Adjustment of the balance of payments on current account was the main aim of monetary policy after the first oil crisis. Between the second quarter of 1974 and the first of 1975 the rate of growth of TDC slightly exceeded 16 percent and was 2 points below the limit agreed upon with the IMF (Table 2). In 1974 the ratio of TDC to GDP declined to 19 percent, 4 points less than the year before. Specifically, the share of credit to enterprises fell from 15 to 11 percent of GDP and from 66 to 59 percent as a proportion of TDC (Table 1).

The balance of payments improved considerably and the rate of inflation declined by the end of 1975 to 11 percent, or less than half the value recorded the previous year. The level of economic activity also declined and GDP contracted by 3.5 percent in 1975.

During the restrictive phase of 1976-77, made necessary by the reappearance during 1975 of serious imbalances in public finances and by the deterioration of the external accounts, some aspects of the relationship between monetary policy and foreign debt policy were different and the equilibrium on the exchange rate markets carried relatively more weight. In the first place this was because fiscal and budget measures made an important contribution to the "real" adjustment. Moreover, the higher degree of indexation of the economy made it all the more necessary to avoid depreciations of the exchange rate that might have revived inflationary pressures.

The greater rigidity of indexation mechanisms deriving from the agreement that had been reached between employers and trade unions in 1975 made the economy much more vulnerable to destabilizing impulses from abroad. The mechanism for adjusting inflation rate differentials via the exchange rate was less easy to use in the new institutional context, in which gains in competitiveness stemming from a depreciation of the lira were

Table 2
Credit, Money and Real Aggregates
(Changes in billions of lire, % growth rates and % ratios of GDP)

Year	Total domestic credit				State sector domestic borrowing requirement			Credit to the Economy			BoP current balance	Consumer prices ³ M2			Financial assets ⁴	
	objective	Δ%	actual	Δ%	objective	actual	/GDP	objective	actual	Δ%	/GDP	percent changes			/GDP ⁵	
1974	22,400 ¹	18.6	20,015 ¹	16.6	9,200	8,796	7.9	—	12,513	16.1	-4.7	4.1	24.4	15.3	10.7	107.4
1975	24,700 ²	17.6	35,633 ²	25.4	8,000	14,237	11.4	—	16,936	18.8	-0.3	-3.6	11.3	23.5	20.9	110.7
1976	29,500	17.5	34,048	20.2	13,800	14,200	9.1	15,700	19,848	18.9	-1.5	5.9	22.0	20.8	20.4	106.5
1977	30,600	15.1	35,703	17.6	13,100	17,923	9.4	17,500	17,780	14.3	1.1	1.9	12.7	21.8	20.0	105.6
1978	38,000	12.9	49,240	20.6	—	31,707	14.3	—	17,533	12.7	2.4	2.7	11.6	23.0	24.8	111.0
1979	53,000	18.4	53,252	18.5	31,000	28,503	10.5	22,000	24,749	16.1	1.7	4.9	18.8	20.4	22.1	112.8
1980	59,300	17.4	63,150	18.5	37,900	34,008	10.0	21,400	29,142	16.3	-2.4	3.9	21.3	12.7	15.6	106.9
1981	64,500	16.0	72,771 ⁶	18.0	36,100	44,904	11.3	28,400	27,867 ⁶	13.4	-2.3	-0.2	18.1	9.9	16.7 ⁶	104.7 ⁶
1982	73,000	15.2	100,479 ⁶	21.0	43,000	67,964	14.5	30,000	32,515 ⁶	14.0	-1.6	-0.3	16.1	17.0	19.9 ⁶	106.2 ⁶

¹ April 1974–March 1975.

² April 1975–March 1976.

³ Change during year.

⁴ Economy's domestic financial assets, excluding shares.

⁵ Average stocks as a ratio of nominal GDP.

⁶ Corrected for the effect of the noninterest-bearing deposits on payments abroad.

rapidly cancelled by the spiral of wages and domestic prices.

Although a depreciation of the exchange rate to a more realistic level could not be avoided in the early months of 1976, an attempt was subsequently made to use exchange rate policy to help slow down domestic inflation. In particular, a compulsory deposit on foreign currency purchases was imposed for the second time.

By the end of 1976, bank credit ceilings which had been lifted in March 1975 (at the expiration of the IMF stand-by agreement) were reimposed. This time with the peculiarity of controlling only lire credits and exempting loans labelled in foreign currencies.

The large inflow of short-term capital through the banking system encouraged by this measure, helped stabilize the otherwise rapidly deteriorating exchange rate of the lira in the first half of 1977 (partly because of the lifting of the import deposit scheme) and consequently cool down inflationary pressures.

In relation to GDP, TDC declined from 25 to 22 percent between 1975 and 1976 and then another 3 points in the following year. Credit to the economy declined in relation to GDP from 13.5 percent in 1975 to 9.5 percent in 1977.

In April 1977 a new stand-by agreement was negotiated with the IMF within the framework of an economic stabilization program. As a consequence of the restriction of credit and the increase in taxation, domestic consumption and investment slowed down sharply. The GDP growth rate, which had been 6 percent in 1976, fell to 2 percent the following year; the current account of the balance of payments, negative by 1.5 percent of GDP in 1976, recorded a surplus in 1977, equal to around 1 percent of national income; the growth rate of consumer prices, which had risen to 22 percent in the course of 1976, fell to 13 in 1977.

The restrictive policies of 1974 and 1976-77 reduced the growth rates of domestic demand and income below the OECD average. As a result the growth rate of imports declined and that of exports increased, so that the current deficit caused by the first oil crisis, and equal to 5 percent of GDP in 1974, swung into a surplus equal to 2.5 percent of national income in 1978.

In 1979 consumption expanded under the stimulus of the growth in the public sector deficit, which had risen to nearly 15 percent of GDP in 1978. Investment also rose and this, together with the rise in exports, led to a revival of GDP growth, which reached 5 percent. This growth continued in the first part of 1980; in the year GDP expanded by about 4 percent.

In parallel with the growth in output, and in part as a result of the new increases in the price of oil, the rate of inflation, which had fallen below 12 percent during 1978, accelerated rapidly, especially after the middle of 1979. Monetary policy again adopted a restrictive stance in the autumn, but the 12-month rate of inflation of consumer prices rose, by the end of the year, to 19 percent. The balance of payments was still in surplus in the first half of the year, but deteriorated rapidly in the second, especially in the

fourth quarter.

Monetary policy remained restrictive throughout 1980, and was progressively tightened in the following year. It was less effective, or at any rate its effects less rapid, than in the past in slowing down domestic demand and consequently curbing the external deficit and inflation. The reasons for this slower and weaker effect are basically: a) the enormous growth of the public sector deficit, b) the development of uncontrolled (and uncontrollable) forms of financial intermediations, and c) the extent and persistence of inflationary expectations.

As regards the first point, the PSBR rose from 10 percent of GDP in 1977 to 15 percent in 1978. In 1979, the ratio fell to 11 percent, but this reduction was primarily due to the cutback in capital grants to public sector firms, while the transfers and other current payments to households continued to increase, thus raising consumers' disposable income. In the next two years the PSBR remained close to 11 percent of GDP, but in 1982 the ratio jumped again up to the high values of 1978.

As already mentioned, in 1974 credit to the economy declined to 11 percent of GDP from the 15 percent recorded the year before. In 1977 the same ratio declined from 13 to 9.5 percent. Between 1979 and 1982, owing to the already low level in 1979, this ratio declined much more slowly: from 9 to 8.5 percent in 1980, and then proved impossible to push below 7 percent in 1981 and 1982.

In view of the reduction in the economy's share of TDC, an attempt in 1982 to offset the greater than expected growth in the PSBR by cutting the credit to the productive sector would have resulted in the latter receiving only 5,000 billion lire, or around 1 percent of GDP.

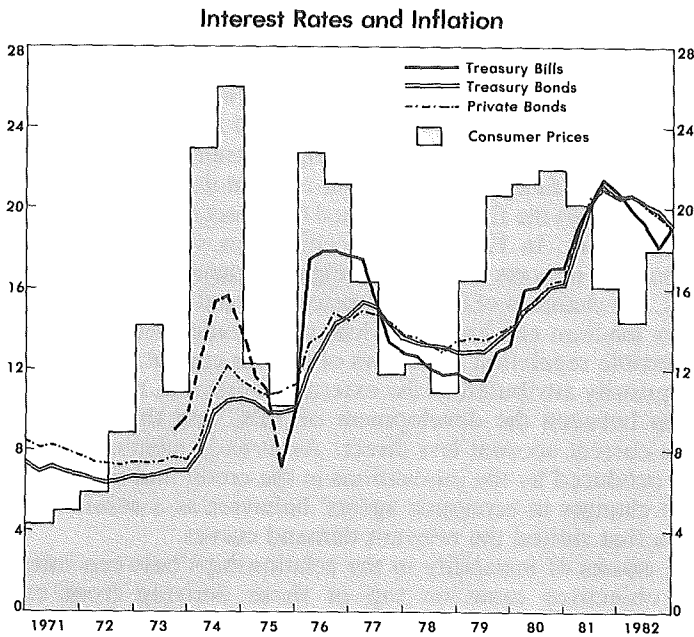
The other two reasons given for the course of the latest restrictive phase also played an important part.

Confronted with a prolonged period of monetary restriction, enterprises and banks sought to limit the use of the traditional channels of finance, controlled by the authorities, by developing new forms of intermediation, that link savers and enterprises directly, but were guaranteed in various ways by the banks themselves (see section 5). Enterprises, in turn, have reacted to monetary restriction by economizing their liquidity, thus increasing the velocity of circulation of money.

Finally, the prolonged period of inflation—in 1982 the purchasing power of the lira was about a quarter of what it had been in 1972—profoundly influenced economic agents' expectations. Households reduced their high propensity to save and increased their demand for durable goods. Enterprises also accelerated their fixed investments.

In 1974 and in 1977 inflation rates of over 20 percent were considered exceptional; this was no longer the case in the last three years. A greater degree of restriction and higher interest rates would therefore have been necessary. The above considerations and the problem of the stability of the financial markets made such a policy unadvisable.

The effect of the credit restriction was nonetheless felt by the economy,



even if the PSBR continued to expand. In 1981 and in 1982 domestic demand and GDP recorded virtually zero growth. Inflation slowed down. There was not, however, a significant improvement in the balance of payments, because of the deterioration in the terms of trade produced by the appreciation of the dollar.

The greater difficulty the authorities encountered in controlling the total volume of credit in this restrictive phase made it necessary to adopt an interest rate policy that would limit the expansionary consequences for expenditure. During 1980 and 1981 interest rates on government securities rose until they became positive again in real terms. In 1974 and 1976, on the other hand, even at the moment of greatest restriction they had remained below the rate of inflation (Chart 1). The phase of rising interest rates in 1974 lasted nine months and in 1976 twelve; during the latest period of restriction it lasted much longer, from the last quarter of 1979 to the end of 1981.

The inversion of the yield curve, which was very pronounced in 1974 and in 1976-77, was much less marked in 1980 and the curve became flat in 1981 as a result of long-term rates being raised. This permitted a large volume of medium-term securities to be placed.

The greater recourse to instruments permitting an indirect control of credit flows, through their effect on the relative yields of financial assets, as well as the greater efficiency of the credit market, contributed to the increase in capital mobility. Another contributory factor was the relative

stability of the exchange rate within the EMS.

As in 1976–77, a large-scale substitution of lira loans by foreign currency loans was a feature of the first part of the latest phase of tight monetary policy. The strong growth in bank loans in foreign currency and enterprises' and the public sector's direct borrowing abroad made it possible to avoid running down the reserves despite the large current account deficit.

This policy for financing the current-account deficit enabled the lira to remain stable within the EMS and limited the effect of the monetary restriction on investment. In 1981, after a ceiling was set on foreign currency loans to finance imports and the foreign payments deposit scheme was introduced, the channels of foreign finance changed, with bank loans being replaced by medium and long-term loans and trade credits.

The flexible regulation of inflows of foreign capital, depending on the degree of priority attributed to the external constraint, naturally made the relationship between the development of TDC and that of the external balance on current account less direct. As already mentioned, similar effects were produced by the innovations in the credit and financial markets and by the changes in economic agents' behavior as a result of inflation, phenomena that shifted the relevant demand curves.

These causes of instability in the relationships between intermediate and final objectives came on top of those deriving from exogenous shocks—such as changes in world demand, terms of trade or the distribution of income—that modified the assumptions upon which the maximum allowed expansion of TDC had been calculated.

To conclude, the greater instability both in the markets for credit and financial assets and in those for goods and labor, has made the link between TDC, the level of economic activity, the balance of payments and prices more complex. For similar reasons to those mentioned above, there was a weakening of the traditional links between intermediate and final objectives in nearly all the major countries, notwithstanding the variety of the intermediate objectives chosen.²¹

5. The Evolution of Instruments

The method of controlling domestic credit adopted in 1974 and in the subsequent 1976–77 restriction relied heavily on the use of ceilings for bank credit expansion. This was possible for three reasons: a) the share of TDC allocated to the private sector was sufficiently large; b) this credit was mostly intermediated by the banking system, since the crisis of the financial market had sharply reduced the scope for medium and long-term credit institutions and for the direct access of enterprises to capital markets; c) ceilings, applied for the first time in 1973, proved quite effective in curbing

²¹EEC Governors' Committee, "Special Report on Current Practice with Quantitative Intermediate Monetary Objectives in EEC Countries," February 1983.

the volume of bank lending.

The ceiling was originally introduced for selective purposes, at a time when banks were required by the authorities to increase considerably the amount of fixed bonds as a form of collateral reserve, but with the aim of channeling funds into medium-term credit institutions and finally to fixed investments. This tended to reduce the yield of bonds, and, given the amount of deposits, restricted the supply of loans. Because it was feared that an excessive reduction of credit to medium and small enterprises, would result, the ceiling was then imposed to limit the expansion of larger loans.²²

The selective features originally present in the ceiling mechanism gave way in early 1974 to curbing the total amount of bank credit available to the economy. This also occurred in a period in which the Treasury deficit began to expand, with automatic effects on the monetary base, making it more difficult to control the level of bank intermediation by the traditional methods of reserve management. Other things being equal, the ceiling tended to produce an increase in bank lending rates and conversely a reduction in those on government securities. However, this distortion occurs only if the availability of the monetary base leads to a volume of bank intermediation that generates a supply of lending in excess of the ceiling. Otherwise, taking into account the level of demand for loans, the ceiling is inoperative, except for its effect on the distribution of market shares among banks.

As time passed, the proportion of credit flowing through the banking sector was progressively reduced. There was also an increase in the cost of controls in terms of allocative efficiency, while banks began to circumvent restrictions by various means. The prolonged application of ceilings, as noted in the previous paragraph, encouraged enterprises and intermediaries to seek alternative channels of finance, both domestically and abroad.

Developments of this kind have shown that the prolonged use of direct controls involves progressively increasing their restrictiveness and broadening their scope. Thus the ceilings were made increasingly restrictive by extending them to credits in foreign currency for financing imports, and compulsory interest-free deposits with the central bank were introduced for cases of excess lending. The scope of direct controls was also extended by regulating the issuing of bankers acceptances and extending reserve requirements to repurchase agreements. The supply of credit by the medium-term credit institutions was also rationed indirectly during some periods, by fixing an upper limit on the yield of their security issues. The effectiveness of this measure was reduced, however, by the institutions' development of variable rate instruments that enabled them to increase their intermediation substantially. The central bank had recourse to moral suasion in 1982, with the aim of curbing lending by medium-term credit institutions.

To reduce the erosion in the ability to exercise control on credit expansion, and gradually restore the financial system's freedom of action, the

²²A. Fazio, "Monetary Policy," *Kredit and Kapital*, Heft 2, 1979.

authorities sought to develop methods that would reinforce the control over the creation of the monetary base. This was designed to allow the growth of monetary and credit aggregates to be better regulated, with administrative instruments being kept for use in emergencies. Consequently distortions would be attenuated and the impact effect of direct controls intensified.

This better control of the monetary base has resulted from the development, since the late seventies, of the Treasury bill market and has reduced the importance of the twist produced by the ceiling in the relative yields of the various components of banks' assets.

In conclusion, the mix of direct and indirect control instruments worked until the middle of 1983 as follows: the central bank intervened on the primary and secondary government security market to control the expansion of bank reserves and so the supply of total bank credit (i.e., loans plus bonds and Treasury bills), as well as the composition of the economy's financial assets (that is, the division between bank deposits and securities). The use of administrative instruments (credit ceilings) strengthened the control on the volume of credit and determined its composition.

The abolition of the ceiling on bank loans at the end of June 1983 has forced the monetary authorities to have recourse for controlling the flow of credit, primarily to market instruments. The return to a system of control resembling that used in Italy from the end of the war up to the early seventies, is now under way; some of the basic features of the new system can be foreseen.

In general, if the aim were to influence only money in the narrow sense, it would be more effective to exercise rigid control over the monetary base, and especially bank reserves. The changes that would ensue in the level and structure of interest rates as a result of the variation in the supply of money would gradually spread through the system, but the "closeness" of the instrument (the monetary base) to the objective (money) would make the authorities' interventions efficient.²³

On the contrary, if the intermediate objective is total credit, it can be more efficient to influence the supply of credit, either by credit ceilings or by acting on the level of interest rates which regulate the demand for credit; credit is in turn directly related to investments, inventory accumulation and capital movements. Continuing to apply the logistic criterion of closeness between objective and instrument, this strategy tends to minimize the lags in the transmission of monetary policy impulses.²⁴

The Bank of Italy tries to influence through its daily operations on the money market the level of the rate on repurchase agreements (up to a few weeks maturity) and the yield on Treasury bills. This latter rate influences

²³OECD, *Budget Financing and Monetary Control*, Monetary Studies series, 1982.

²⁴This approach tends to make the supply of bank reserves passive, at least in the short run. However this is true only when banks' assets are entirely made up by loans: the control of bank reserves remains crucial in controlling the amount and conditions of the remaining part of bank credit, made up of private and public securities.

the choice of the public between deposits and government securities, which is crucial to control, for any given PSBR, the monetary base and bank reserves. It also influences the choice of the banks between government and other securities, which determines the supply of (direct and indirect) bank credit to the private sector, for a given amount of deposits. In equilibrium, the intersection of the supply with the demand schedule for bank loans determines the bank lending rate and the division of bank credit between the public and the private sector.

When the differential between the bank deposit rate and that on Treasury bills widens (narrows) the public demand for Treasury bills increases (decreases) and bank intermediation falls (rises). The adjustment in banks' assets is achieved mainly through variations in their secondary liquidity in the form of Treasury bills, but their lending also varies, to an extent that depends on enterprises' demand for credit.

The effectiveness of the central bank's action on money market rates could be reduced if the banks react with deposit rate changes. In the end there would still be an increase in the average yield on financial assets, but with a smaller spread between the rates on the various assets and, with the same average rate, a composition of financial portfolios with money having greater weight (but a lower velocity of circulation because of the higher yield). In fact, traditionally, deposit rates have tended to be somewhat rigid, partly because the yields on a large proportion of bank assets do not fully adjust to increases in short-term rates.

The banks can from now on react more effectively to the disintermediation stemming from restrictive central bank action by offering the recently created negotiable certificates of deposit that would compete with Treasury bills. Banks could, in fact, raise the rates on these deposits, but in order to avoid losses they would also have to raise their lending rates. There would be a transition from a regime in which, as money market rates rise, the banks' funds gradually decline with deposit and lending rates slowly reacting, to one in which the effects on bank rates would be more immediate and the disintermediation less important.

The banks would also be led to react more promptly to money market conditions as a consequence of the lower level of secondary liquidity (Treasury bills) they would end up with. Without ceilings, this pattern, which enables the central bank to exert a direct influence on bank lending rates and hence on the *demand for credit*, would be preferable to the present one, in which the effect of restriction on the money market passes through the *demand for deposits*.

Values for intermediate and operating targets are determined within the framework of a detailed forecast of annual financial flows which covers banks' intermediation, the activity of medium-term credit institutions and the direct recourse to financial markets by public and private borrowers. An estimate is also made of the increase in the money supply considered to be consistent with such flows and in particular with the target for the credit to the economy. A programme for the monetary base creation is derived

from this forecast of the increase in the money supply.²⁵

The monthly operating targets for the monetary base that the central bank sets as a guide for its action in the money and foreign exchange markets do not constitute rigid constraints. They are aimed at with the discretion always necessary in monetary policy.

This is true both for the total amount of monetary base and its breakdown by sources. In theory, with a domestic credit intermediate objective the central bank should avoid offsetting variations in the foreign component of the base; in practice, since this component is highly variable, it could be destabilizing to allow it to produce its impact directly on bank reserves. Whenever the changes observed are not of a random or seasonal nature, the central bank engineers a variation in short-term interest rates in order to gradually produce the necessary change in the creation of the monetary base; this should also produce an improvement in the external imbalance as a result of capital inflows.

In the case of unforeseen changes in the Treasury borrowing requirement or of shifts in the public's demand for government securities, the central bank can again accept a divergence from its operational targets. In short, rather than allowing a restriction to be produced automatically via bank reserves, with the consequence of large swings in money market rates, the increase in the latter has to be regulated so as to produce a gradual restrictive effect on reserves and credit.

The task of controlling the domestic component of the base is made more difficult by the Treasury's direct access to the central bank's financing. The Treasury is, in fact, allowed to draw on its current account with the Bank of Italy up to a limit of 14 percent of government expenditures. Furthermore, when the Bank buys government securities at issue the borrowing margin is increased, since the value of the net purchases is credited to the Treasury's account. Since July 1981 the accepted practice whereby the Bank of Italy took up the securities not placed with the public or the banks has been terminated. The central bank intervenes at Treasury bill auctions, and buys other government securities at issue, only insofar as this is judged consistent with the control of the monetary base.

These new arrangements and the continuous improvement of the techniques of open market intervention have enhanced the central bank's capability of controlling bank reserves and short-term interest rates.

The large component of automatic monetary base creation through the Treasury's current account with the Bank of Italy has to be matched by a high coefficient of sterilization via the reserve requirement on bank deposits. The changes introduced at the end of 1982 in the reserve regulation will lead, when they are fully implemented, to an increase in the coefficient from around 15 to 22.5 percent of the stock of deposits, thus reducing the

²⁵A. Fazio and S. Lo Faso, "The Control of Credit and Financial Intermediation in Italy," *Review of Economic Conditions in Italy*, October 1980.

value of the multiplier by a third.

It nonetheless needs to be considered that, while the new reserve regime will make this instrument more effective in the short run, in the medium run its cost in terms of the controllability of the system will be the encouragement of disintermediation, deriving from the increase of the "fiscal" effect of the reserve (equal to the difference between the market rate and that paid on the reserve itself).

6. Summary and Conclusions

During the last decade fixing the target for total domestic credit expansion has become a reference point for the whole economic policy, and the occasion for coordinating fiscal and monetary policies by forcing consistency between financing the public deficit and financing the private sector of the economy.²⁶

In a system in which enterprises depend heavily on bank credit for inventories and working capital and on medium-term credit for investments, the control of total domestic credit affects the level of spending and the balance of payments considerably both directly and indirectly. A larger than desired expansion of total domestic credit, due to the public sector deficit, can be reconciled in the short run with the stability of the system by increasing the level of interest rates and restricting the access to credit by the private sector. It is not possible to rely indefinitely on higher real interest rates in order to keep the economic system afloat; there are thresholds in the process of portfolio adjustment beyond which an excessive formation of financial assets, as a counterpart of both private and public deficits, tends to spill over on to the level of demand for goods and purchase of foreign assets and hence to create foreign exchange and price pressures.

The control of domestic credit flowing to the private sector is an intermediate objective that the central bank seeks to achieve in the short term. This is accomplished either by administrative or by market instruments. The former, mostly under the form of bank credit ceilings, have proved to be quite effective in stabilizing the economy in periods of rapid inflationary pressures and of difficulties in the balance of payments.

The development of credit and financial markets and increasing allocative costs of credit ceilings has prompted the strengthening and the increased use of more market-oriented instruments of monetary control. In June 1983 the ceiling on bank loans, which was first used from July 1973 to March 1975 and then reintroduced at the end of 1976, was lifted. The achievement of credit and money targets was then promoted through action on the monetary base (the marginal reserve requirement for all bank deposits has been raised to 25 percent) which, in turn, must be consistent with a level and a structure of interest rates which allow the absorption of newly

²⁶C.A. Ciampi, "Canoni e prassi nell'attività di banca centrale," *Intervento all'IS-VEIMER*, gennaio 1983.

formed financial assets in the households' portfolios, and ensure their desired composition between money and securities. Interest rates also affect the demand for credit by enterprises.

Given the lags with which the demand for credit is affected by interest rates and the need for maintaining a strict control of credit flows to the private sector at a time in which PSBR is excessively large and still growing, the central bank has decided to continue a strict monitoring on bank loans even after the removal of quantitative ceilings. Banks have been asked to maintain the increase in lending within limits consistent with the intermediate objectives set by the monetary authorities, sharing with the central bank the responsibility of achieving macroeconomic objectives of economic and financial stability. Analogous requests for self-control in credit expansion have been made to medium-term credit institutions.

This safety-net may avoid, in the transition towards a more market-oriented design of monetary policy, too sharp fluctuations in interest rates and a destabilizing behavior by financial intermediaries and economic agents that would make it necessary to reintroduce more rigid and costly forms of monetary control.

A system of monetary control mostly based on market-oriented instruments will require further changes in the structure of the financial system, notably the development of money markets and perhaps a lower level of intermediation by the banking system. The basic conditions, however, for the workability of a system in which the use of the instruments of indirect control of credit ensures the achievement of monetary policy objectives remain a lower level of inflation and of the public sector deficit.

Discussion

Giacomo Vaciago*

Caranza and Fazio give an excellent account of the past, present, and future problems that confront monetary policy in Italy, and they explain in a very useful paper what has been the approach followed by the Bank of Italy and how—and why—this approach is now changing. I have to admit that I am in basic agreement with most of the Caranza-Fazio paper, and in fact with most of monetary policy in Italy. However, since my specific task as a discussant is to provide some critical comments, I have selected two topics which can be of some interest to this conference and which indicate that, after all, some disagreement is left.

An “IMF Syndrome”

If you compare monetary policy in Italy with recent experience in most other countries you would be struck by one feature. Italy is the only country which has continued to follow the IMF “letter of intent” approach even when the stand-bys expired and no “letters” were actually mailed to the IMF. This “IMF syndrome” is characterized by the following symptoms:

- (i) The balance of payments, and not domestic inflation, is the main goal of monetary policy.
- (ii) The appropriate monetary target is therefore some “domestic credit” aggregate.
- (iii) The required value for this aggregate is not specified as a “target,” or a “target range,” but it is fixed as an annual “ceiling” (so many trillions lire), in the true IMF tradition.

Caranza and Fazio, in their discussion of actual monetary policy in the 1974–1982 period, point out that this approach was very effective on two occasions: the balance of payments crises of 1974 and of 1976. It was much less effective in the recent post-1979 period. And they give three reasons for this reduced effectiveness:

- (i) The enormous expansion of the public deficit;
- (ii) the development of new forms of financial intermediation which could not be checked;
- (iii) the strength of inflationary expectations.

My reading of the 1979–1980 episode is different. For the public deficit, I have no difficulty in admitting that this is a problem in the Italian case. But it cannot be said that this was *the* problem in 1979–1980. As the data

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indicate (see Table 2 in the Caranza-Fazio paper), the public deficit exploded first in 1978 and then in 1982: which of the two should explain the reduced efficacy of monetary tightness in 1979–1980 (when in fact the public deficit was comfortably within its ceilings)? So we are left with the other two causes, inflation and financial innovations, for which the monetary authorities cannot put the entire blame on the public sector. In the 1979–1980 episode, monetary and credit tightness was less effective than in the two previous occasions because in this case a more “gradual” strategy was followed, i.e., a “credit crunch” was not planned. It was in fact bank credit that went much above its “ceiling” and forced new restrictive measures to be implemented in early 1981.

From that experience, I draw three conclusions:

- (i) The IMF approach is useful when there is only a balance of payments problem. Then, a package of stabilization measures can be appropriate, and effective if applied with determination.
- (ii) However, a ceiling on a “domestic credit” aggregate could be useful only if the goal is to finance a current account deficit through capital inflows (and thus protect official reserves). This was the main reason why in 1979–1980 domestic demand was not squeezed: its expansion was financed by borrowing abroad.
- (iii) When inflation is the main problem, and monetary tightness is implemented with much “gradualism,” there is going to be financial innovation that reduces the effectiveness of monetary and credit brakes.

From Credit Rationing to Market Controls

I turn now to the other part of the Caranza-Fazio paper where the authors explain how Italian monetary policy will change in the future. The changes appear to be limited to a choice of new instruments. But in fact I believe that eventually we will have to see major changes or no change at all.

Let me explain this drastic conclusion, by first recalling the analytical foundations of Italy’s monetary policy.

Caranza and Fazio devote the first part of their paper to a presentation of a model of monetary policy which is based on the assumption—emphasized by Modigliani-Papademos (1980)—that the appropriate intermediate targets depend on the economy’s financial structure. In the Italian case, credit flows and the stocks of financial assets—but not the money stock—are the relevant channels of monetary policy.

The money stock, and more generally portfolio or “substitution effects,” are considered to be not very important due to the fact that money in Italy pays an interest which is market-determined. Financial markets are neither very developed nor perfect (i.e., competitive). Firms rely heavily on bank loans for their debt financing, while bank lending rates are not market-determined but are “administered prices.”

The monetary policy transmission mechanism is therefore based on

these two main channels:

- (i) a ceiling on credit flows (on "total credit" or on "total domestic credit" according to the state of the balance of payments) is necessary to contain domestic demand. Due to market imperfections, the ceiling can be achieved more effectively through direct controls, i.e., by credit rationing.
- (ii) If and when credit flows cannot be restrained and thus the supply of financial assets tends to increase rapidly, the households' propensity to save and to hold financial assets needs to be raised through an increase in *real* interest rates. The role of the stock of financial assets, as a guide for monetary policy, is due to the importance of "wealth effects."¹

The "availability of credit" and "wealth effects" are now confirmed as the main channels of monetary policy also for the future. Caranza and Fazio explain, however, how the monetary policy *modus operandi* will change. Direct controls will be phased-out (this process has already started). Bank credit (and in fact total credit) will be kept under control by a closer check on monetary base creation and through its effects on the interest rate structure.

Caranza and Fazio point out, quite rightly, that the stability of the link connecting monetary base to total credit depends on a long list of factors which are not to be found, presently, in Italy's financial structure. There has to be a reduction in the size of the public deficit²; a more developed financial market; a reduction in the share of credit flows pertaining to the banks; and bank lending rates have to become market-determined and less "administered prices"³. If we can agree with this analysis—and with the proposed changes in the monetary policy *modus operandi*—two problems remain to be considered. The first problem is quite practical: what will the transmission mechanism be while these far-reaching changes in the financial structure are not yet achieved? Caranza and Fazio provide a reassuring note by stating that these new procedures do not allow any "fine tuning." But how is it that a reasonable "gross tuning" is also going to prevent an excessive degree of "gradualism"? Or, vice-versa, avoid the need for emergency measures?

The second problem has to do with the analytical scheme which was commented upon earlier. Is it true that credit, and not money, remains the

¹See Vaciego (1978). Incidentally, is this effect the reason for the assumed relevance (see Friedman 1982) of "total nonfinancial debt" as a guide for monetary policy in the United States?

²And possibly another change in the Treasury-Bank of Italy relationship. Even after the 1981 "divorce" (the Bank of Italy is no longer compelled to buy all the Treasury Bills unsold at the monthly auctions) the Bank remains the Treasury's "lender of first resort" by providing—during each month—all the cash the Treasury needs. It is this mechanism which makes certain that the public sector in Italy can never be counted among the "fringe of unsatisfied borrowers."

³This factor was not mentioned by Caranza and Fazio but it seems to me essential in order for money market rates to impinge on bank credit.

relevant channel of monetary policy if the financial structure changes and those factors which made the credit aggregates more relevant are gradually disappearing?

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