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Volume Author/Editor: Michael Michaely

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THE NETHERLANDS

1. Policy Instruments

MONETARY POLICY

The Netherlands Bank, the central bank in the Netherlands, has gradually changed in character. Some acts affecting the Bank's structure, powers, and functions have been adopted since World War II. The Bank's constitution and the definition of its functions are incorporated primarily in the Act of April 1948.

The Netherlands Bank is almost entirely independent of the government. Its Board of Managers and its President are appointed by the Crown for periods of seven years. Representatives of the government participate in meetings of the larger Bank Council in an advisory capacity. The Finance Minister may formally give instructions to the Board of Managers; the latter is entitled in this case to present its objections to the Crown, which then has to make public both the arguments and counterarguments and the final decisions it reaches. In effect, no such instructions have ever been given since the 1948 Act, and the Bank may thus be regarded as independent of the Ministry of Finance.

Banking institutions in the Netherlands vary widely in functions and structure. The greater part of banking transactions, however, are conducted by regular commercial banks. These are highly concentrated: a few large banks, each with a large number of branches (up to 200-250), play a dominant role. The assets of the four largest banks amount to some 60 per cent of the total assets of commercial banks, and those of the thirty-three "representative" banks to 95 per cent. The high measure of concentration and the ease of communication may be important reasons for the tendency of the Netherlands Bank to act as much as possible by agreement with the banks rather than by

directives and coercion; these reasons also contribute to the high level of mutual understanding which is found between the Bank and the commercial banks.

The Netherlands Bank employs primarily the three classical instruments of monetary policy: changes in the discount rate, changes in minimum-reserve ratios of the banks, and open-market operations. To a lesser extent, it also applies quantitative credit controls.

The Discount Rate. Lending by the Netherlands Bank to commercial banks takes three forms. First, it may be done by discounting at the Bank. Eligible for discounting is short-term paper, such as Treasury bills or commercial bills of not over 105 days to maturity. More often, banks will resort to the second alternative, which is receiving advances on current account against the pledge of collateral—usually of Treasury bills. The rate charged by the Bank on these advances is one-half of 1 per cent above the discount rate. Finally, the Bank may buy Treasury paper from the banks with a repurchase stipulation. Technically, the Netherlands Bank regards such a transaction as the equivalent of a lending operation rather than an open-market operation.

In general, lending by the Bank to the commercial banks is very slight, and so are the absolute fluctuations in the amount of lending. Borrowing from the Bank is considered an emergency act, intended for the shortest duration, rather than one intended to add reserves to the borrowing bank for any length of time.

Changes in the discount rate thus have a very slight impact on the size of the banking system's reserves, since the amount of borrowing from the Bank is generally insignificant in relation to the size of reserves. However, the discount rate is considered an important yardstick. Changes in it are supposed to reflect the intentions of the Netherlands Bank, thus giving a directive to the commercial banks with regard to the tightening or relaxation of credit supply. A conventional semiautomatic relationship exists between the discount rate and the commercial banks' interest on their lending. Usually, the rate charged on lending to prime borrowers from the banks is about 2 per cent above the discount rate, although it could not fall below the level of 5 per cent.

Minimum-Reserve Ratios. Minimum-reserve policy was, most often, the major tool of the Netherlands Bank after 1954. Although the

Bank was empowered by law to impose minimum-reserve ratios on the banking system, it preferred to do so by agreement. In February 1954 a gentlemen's agreement was concluded between the Bank and some forty commercial banks which in their aggregate constituted the overwhelming majority of the banking system. According to the agreement, the participating banks were required to maintain balances at the Netherlands Bank at a ratio to their deposits determined by the Bank. Subject to this requirement were all sight and time deposits, excluding saving deposits and deposits in foreign currency. The ratio is the same for all types of banks and deposits covered by the agreement. It was not, however, to exceed 15 per cent, and the Netherlands Bank undertook not to raise it above 10 per cent without first selling Treasury paper in the open market on a large scale. In fact, the ratio has always stayed within the 10 per cent limit. The lower limit of fluctuations in the ratio was 4 per cent for most of the time. During 1963, however, it was reduced to zero and has stayed at that level since; that is, the minimum-reserve ratio has not been used as a policy instrument since mid-1963. Before that, on the other hand, changes in the ratio had been rather frequent.

The gentlemen's agreement was concluded at a time when commercial banks were extremely liquid due to an influx of foreign exchange. Market rates of three-month Treasury bills came down to as low as .4 per cent, and the Netherlands Bank was not equipped to eliminate liquidity to the desired extent by open-market operations. The reason for the highly liquid position of the banks is well reflected in the agreement itself. Given its importance, this part of the agreement deserves to be quoted:

"In view of the desire of the Netherlands Bank that the commercial banks should make a contribution towards financing the greatly increased stock of gold and foreign exchange the undersigned [name of bank] is prepared to enter into a gentlemen's agreement with the Netherlands Bank, directed to the maintenance at the Netherlands Bank of a cash reserve adaptable in relation to the movement in the stock of gold and foreign exchange."¹

This relationship was explained by the Netherlands Bank in terms of equity:

". . . the central bank must be supplied with . . . resources for the

¹ Preamble to the gentlemen's agreement, *Netherlands Bank Report*, 1953, p. 176.

purpose of holding [stock of gold and foreign exchange]. Unless it is desired that these resources shall be provided by the Treasury, that is to say at the cost of the taxpayer, they will have to come from the banks—which in our modern national economy provide a part of the money in circulation, just as much as the Netherlands Bank does, and enjoy the resulting benefits in the form of interest. It is no more than reasonable that, as against these benefits, the banks should also contribute towards providing the means for carrying the international cover for the country's money.”²

The exceptions to the rule of behavior indicated in these passages are also explained in terms of equity. Suppose credit supply increases due to some autonomous factor. As a result of this expansion, foreign exchange reserves fall. There would be no need under these circumstances to increase commercial bank profits by increasing their lending capacity, since the banks already had their credit raised at the beginning of the process. For such reasons, the Netherlands Bank stated that the relationship of the reserve ratio to gold and foreign exchange reserves should not be entirely automatic, but that the Bank would investigate the reasons for the movements of foreign exchange reserves in each case.

Open-Market Operations. Until 1952, open-market operations were conducted by the Treasury. In July 1952 an agreement between the Treasury and the Netherlands Bank specified that the former would limit itself to issuing new Treasury paper when old paper falls due, and since that time open-market operations have been conducted by the Netherlands Bank. But this does not rule out other financial operations by the Treasury which, as will be noted later, have the same effect as open-market operations.

Although the Bank is empowered to deal in a variety of papers, its stock—and its operations—have been restricted to Treasury paper. These are mainly Treasury bonds with a maturity of one to five years. The stock of this paper held by the Bank at the beginning of its operations, in 1952, was later replenished by converting part of the Treasury's book debt to the Bank into Treasury paper, as well as by the transfer—against Treasury paper—of claims on the EPU from the Bank to the Treasury.

² *Ibid.*, p. 79.

Open-market operations are not transacted with commercial banks. They are handled by special brokers which buy and sell both for their clients and on their own account, financing the latter transactions by borrowing on the call-money market and, on occasion, by resorting to rediscounting at the Netherlands Bank. While the greater part of the Treasury paper which serves as instrument in open-market operations is held by banking institutions, a substantial proportion is also held by others, such as institutional investors, corporations, or households.

Open-market operations appear most of the time to be periodic rather than continuous: they are usually concentrated within short periods and not conducted gradually in small amounts.

Quantitative Controls. The Netherlands Bank is entitled by law to impose quantitative (as well as qualitative) restrictions on credit. In 1954, the Bank also concluded a gentlemen's agreement with the banks to that effect. The provisions of this agreement were not implemented; but on one occasion, between the fall of 1957 and the spring of 1958, the Bank tried to impose credit ceilings by charging penalty rates on the amounts by which the Bank's lending to commercial banks exceeded specified ceilings. In 1960, a new gentlemen's agreement was concluded by which quotas may be imposed on each bank's credit according to a uniform formula relating the size of credit to its size at some base period. A commercial bank which exceeds its quota would have to deposit at the Netherlands Bank, interest-free, an amount equal to the excess. In July 1961, the banks were directed under the stipulations of this agreement not to let the size of their lending exceed that of the base period (which was either the last quarter of 1960 or the corresponding month of the previous year) by more than 15 per cent. After that date, the banks were allowed to increase lending by .5 per cent per month. Since August 1962, it was found that this restriction was not effective; the actual size of credit was below the size permitted. The restrictions were removed altogether in January 1963. In September 1963, however, they were renewed and remained in effect until the end of the period investigated. The average amount of each bank's credit during the first half of 1963 was taken as the base. By the end of September 1963, the amount of the banks' lending should not have exceeded the base amount by

more than 5 per cent; from that month on, expansions of credit by 1 per cent or .5 per cent per month were allowed, for a total of 3 per cent (of the base amount) during the last quarter of 1963, 9 per cent in 1964, and 10 per cent in 1965.

In the last few years of the period, the Netherlands Bank thus appears to have used quantitative restrictions of credit to a significant extent. The Bank has also, on a few occasions, exercised its authority to restrict certain types of credit.

Occasionally, the Bank tried to prevent what it considered an excessive credit expansion by "moral suasion." Due to the close relationship between the Bank and commercial banks, this may have had some effect. However, in general, the Bank did not rely on this means as an important policy instrument.

FISCAL AND DEBT POLICY

The central government's budget consists of an ordinary and an extraordinary section. The latter always shows a large deficit—its expenditures may be as much as five or six times larger than its revenues. In the ordinary budget, on the other hand, a surplus is normally maintained. Most of the time the surplus in the ordinary budget is smaller than the deficit in the extraordinary budget; that is, total expenditures exceed total revenues. The difference is financed, usually, by borrowing from the public.

The central government maintains a strong influence on local budgets. The major source of the municipalities' normal revenue is transfers from the central government, which assigns 12 per cent of its tax revenues to the Municipalities Fund and, in addition, finances major local expenditures such as the costs of police and education. Borrowing by the municipalities is also largely subject to regulation and control by the central government in the form of general quantitative ceilings, ceilings on the rate of interest, and requirements for ad hoc approval of borrowing by the government.

The Treasury's cash balances are held exclusively at the Netherlands Bank, while those of local authorities are held outside it. According to the 1948 Bank Act, the Treasury is entitled to automatic advances from the Bank within fl. 150 million; beyond that, current advances to the Treasury may be given at the Bank's discretion. In effect, such advances have been negligible, usually nonexistent. The

Bank extends credit to the government, instead, by purchasing Treasury bills. Variations in the size of this credit too are usually not considerable. In the earlier years of the period the Bank held a substantial book claim on the Treasury. From early 1952 this was gradually diminished until it disappeared completely by the beginning of 1958. On the other hand, in the earlier part of the period, the government maintained "special deposits" at the Bank, representing the counterpart funds of foreign aid. These grew considerably until early 1952, but declined continuously from then on until they too disappeared in early 1958.

Thus, until 1958 the movement in the government's net indebtedness to the Netherlands Bank was dominated by the movement of the Treasury's book debt and "special deposits," and to some extent by the movement of Treasury bills. Since then, the major sources of variations in the size of this indebtedness are the Treasury bills and, even more often, government's deposits. The latter are a highly fluctuating category: weekly or monthly changes in them are very large in comparison with longer-term movements.

Besides financing budgetary deficits, the government very often conducts financial transactions with the public for the exclusive purpose of affecting monetary conditions. It may, for instance, borrow from the public and deposit the proceeds at the Netherlands Bank. Changes in the government's net indebtedness to the Bank thus reflect not only the cash balance of its budgetary operations but also its financial transactions with the public. To an extent, therefore, the government conducts financial operations which have the same effect as, and may be regarded as a substitute for, open-market operations of the Bank.

2. Statistical Analysis

Movements of foreign exchange reserves in the Netherlands do not present any cyclical pattern. An attempt to divide the whole period into cycles and use cyclical analysis does not, therefore, seem to be very useful. However, though a strong upward trend of reserves is apparent, a substantial number of episodes in which reserves declined, or rose with particular rapidity, makes the analysis of policy reactions to balance-of-payments disturbances possible.

In Table 7, the period is thus divided into subperiods according

TABLE 7
The Netherlands: Movements of Policy Variables During Subperiods of Disturbances

Subperiod	Foreign Exchange Reserves (indication of disturbance) (1)	Discount Rate (2)	Market Rate for 3-Month Treasury Bills (3)	Reserve Ratio Require- ments (4)	Open-Market Operations (net) (5)	Netherlands Bank Claims on Commercial Banks (6)
I-IV 1950	rise	- raised	* stable	a	a	n.a.
IV 1950-III 1951	fall	+ raised	- falls	a	a	- rise
III 1951-II 1953	rise	+ lowered	+ falls	a	- sales	- fall
II 1953-II 1954	rise slightly	* stable	+ falls	a	- sales	* stable
II 1954-I 1956	stable	stable	rises	stable	no trend	stable
I 1956-III 1957	fall	+ raised	+ rises	- lowered	* no operations	- rise
III 1957-I 1959	rise	+ lowered	+ falls	- raised	- sales	- fall
I-IV 1959	stable	raised	rises	lowered	purchases	insignificant
IV 1959-IV 1961	rise	* stable	+ falls	- raised	* no trend	insignificant
IV 1961-I 1963	stable	no trend	no trend	lowered	purchases	insignificant
I-IV 1963	rise	* stable	* stable	+ lowered	* no operations	insignificant
IV 1963-II 1964	fall	+ raised	+ rises	a	+ sales	insignificant
II-IV 1964	rise	* stable	n.a.	a	* no operations	insignificant
IV 1964-II 1965	stable	stable	n.a.	a	* no operations	insignificant

(continued)

TABLE 7 (concluded)

Subperiod	Commercial Bank				Budgetary Balance (12)	
	Netherlands Bank Net Claims on Government (7)	Netherlands Bank Total Domestic Claims (8)	Lending to Public (rate of change) (9)	Money Supply (rate of change) (10)		"Primary and Secondary Liquidity" (rate of change) (11)
I-IV 1950	- fall	n.a.	n.a.	n.a.	n.a.	- surplus
IV 1950-III 1951	* no trend	- rise	- rises	+ falls	n.a.	- smaller surplus
III 1951-II 1953	- fall	- fall	- falls	+ rises	n.a.	- larger surplus
II 1953-II 1954	+ rise	+ rise	+ rises	* stable	* stable	+ balanced
II 1954-I 1956	rise	rise	falls	falls	falls	balanced
I 1956-III 1957	- rise	- rise	+ falls	+ falls	+ falls	- deficit
III 1957-I 1959	- fall	- fall	- falls	+ rises	+ rises	* deficit
I-IV 1959	no trend	no trend	rises	falls	falls	surplus
IV 1959-IV 1961	- fall	- fall	- falls	+ rises	+ rises	+ no trend
IV 1961-I 1963	no trend	rise	falls	stable	rises	deficit
I-IV 1963	- fall	- fall	* stable	* stable	- falls	- smaller deficit
IV 1963-II 1964	- rise	- rise	- rises	* stable	* stable	- larger deficit
II-IV 1964	- fall	- fall	- falls	* stable	+ rises	* deficit
IV 1964-II 1965	n.a.	n.a.	n.a.	rises	stable	n.a.

Note: + indicates a movement in the direction required for balance-of-payment adjustment.

- indicates a movement in the opposite direction.

* indicates no movement or a very slight one.

n.a. = not available.

a not applicable.

to the fluctuations of the balance of payments. This division is based on the movements of foreign exchange reserves until 1958, and from 1958 onward, on the IMF data of surpluses and deficits in the balance of payments. The latter series almost invariably gives results similar to those provided by the series on foreign exchange reserves.

Starting with the discount rate, it may be seen that this variable is changed most often in the direction that would be required for balance-of-payments adjustment. Only in one subperiod—during 1950—is an opposite movement found; while in a few other episodes in which balance-of-payments adjustment would have required a change in one direction or the other, the discount rate remained stable. To further test this relationship, Table 8 examines the balance-of-payments movements during all quarters in which changes were made in the discount rate. It appears, again, that discount rate changes were overwhelmingly consistent with balance-of-payments requirements. This is true particularly with regard to all the changes made before 1962. Out of fourteen such discount rate movements, only one was in the opposite direction to the requirements of adjustment; three took place when no balance-of-payments adjustment was required; and ten could be explained by the requirements for balance-of-payments adjustment.

To test this association still further, Table 8 also presents a description of the movements of alternative target variables. It appears that the price stability target performs, in general, about as well as the balance-of-payments adjustment target—and better from 1962 on. On the basis of this evidence, one could not assert that the discount rate was used exclusively for balance-of-payments adjustment. It is evident that the requirements of the two targets—balance-of-payments adjustment and price stability—coincided most of the time, so that the discount rate changes were consistent with both. This coincidence of the two targets may be expected in a country whose share in world trade is not very large, while the share of trade in its own economy is substantial. Changes in conditions abroad are likely to have only small impact on the trade of such a country; while inflationary or deflationary pressures within the economy, which are likely to be reflected in price movements, may be expected to have an immediate and substantial effect on the country's trade balance.

Movements of the other two targets represented in Table 8—industrial production and employment—do not reveal any consistent pattern

TABLE 8
The Netherlands: Changes in the Discount Rate and
Movements of Policy Targets

Quarter	Discount Rate (1)	Foreign Exchange Reserves (2)	Price Level (Cost of Living Index)		Unemploy- ment (5)
			Compared with Trend (3)	Industrial Production (rate of change) (4)	
III 1950	raised	* stable	* stable	+ rises	* stable
II 1951	raised	+ fall	+ rises	- falls	* stable
I 1952	lowered	+ rise	- rises	* stable	+ rises
III 1952	lowered	+ rise	+ falls	* stable	+ rises
II 1953	lowered	+ rise	+ falls	- rises	- falls
I 1956	raised	* stable	* stable	* stable	* stable
III 1956	lowered	- fall	* stable	* stable	- falls
IV 1956	raised	+ fall	* stable	* stable	* stable
III 1957	raised	+ fall	+ rises	- falls	- rises
I 1958	lowered	+ rise	+ falls	+ falls	+ rises
II 1958	lowered	+ rise	+ falls	* stable	+ rises
IV 1958	lowered	+ rise	+ falls	- rises	+ stable-high
I 1959	lowered	+ rise	+ falls	* stable	- falls
IV 1959	raised	* stable	+ rises	+ rises	+ falls
II 1962	raised	- rise	+ rises	- falls	* stable
I 1963	lowered	* stable	- rises	+ falls	* stable
I 1964	raised	* stable	+ rises	* stable	* stable
II 1964	raised	* stable	+ rises	+ rises	* stable

Note: + The change in the target variable would justify the direction of change in the discount rate.

- The change in the target variable would justify the opposite direction.

* The change in the target variable would call for no change in the discount rate.

in relation to discount rate changes. It appears from the evidence of this table that these two were not usually regarded as the targets at the service of which the discount rate is employed.

Column 3 in Table 7 shows the changes in another short-term interest rate, which is often quoted in the Netherlands: the rate (yield) of three-month Treasury bills. As may be seen from Chart 7, the

CHART 7

The Netherlands: Time Series of Selected Variables

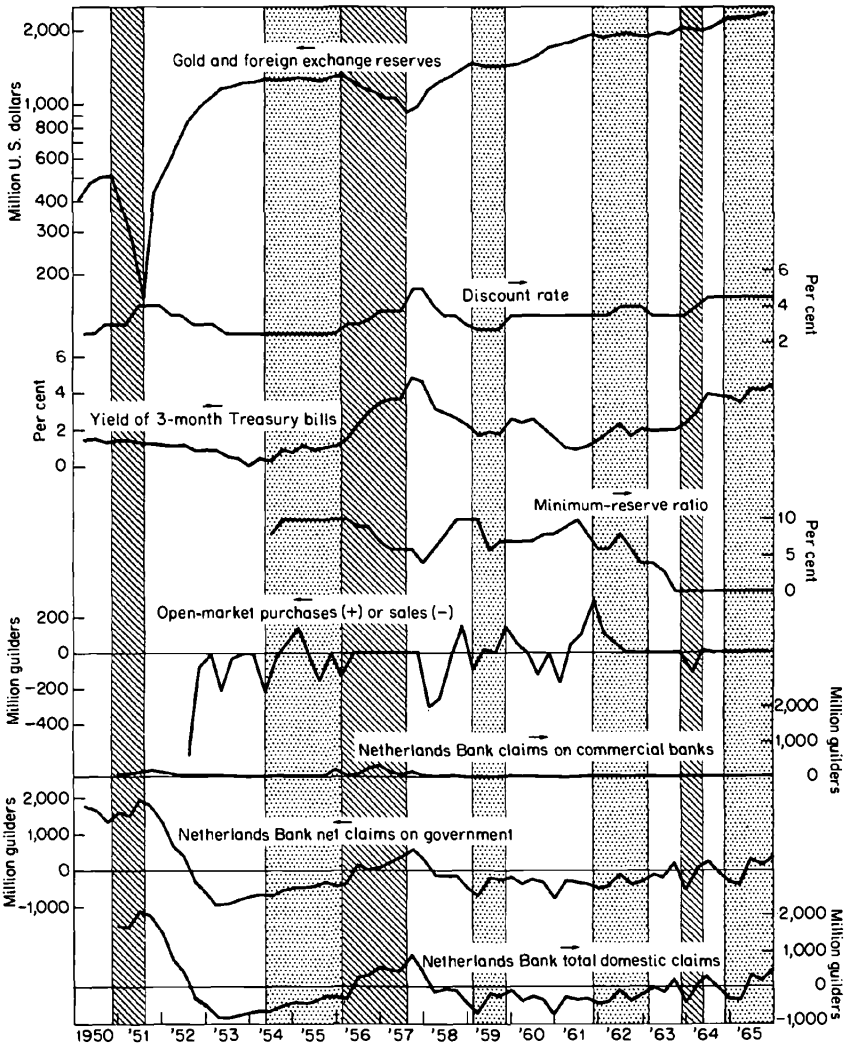
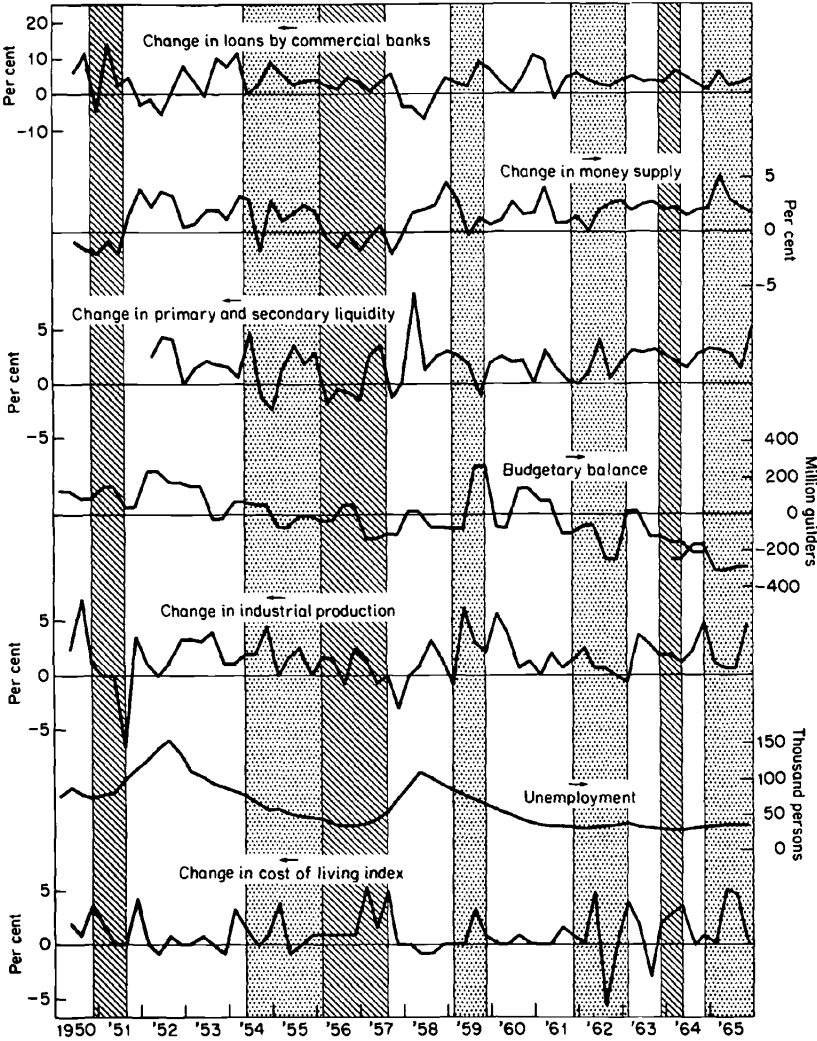


CHART 7 (concluded)



Note: Diagonal-line areas represent periods of downward imbalances; gray areas represent stability; and white areas represent upward imbalances.

movements of this rate and of the discount rate are highly correlated. It is thus not surprising that Table 7 shows this variable also moving in a way which is, by and large, consistent with the requirements for balance-of-payments adjustment.

In column 4 of Table 7, movements of the minimum-reserve ratio are described for the period for which this instrument was used, that is, from 1954 to 1963. It appears that throughout these years, this variable was changed mostly in a direction *opposite* to the requirements of balance-of-payments adjustment. This relationship is examined in greater detail in Table 9, which lists all the quarters in which the reserve ratio was changed.³ The impression which emerges from this table is very clear: the rule that the minimum-reserve ratio is changed in the opposite direction to balance-of-payments requirements was observed consistently, with only few exceptions. Out of eighteen quarters in which the ratio was changed, this held true in thirteen instances, while the opposite held true only four times. The association is even more striking for the period prior to mid-1961. This relationship might have been expected, of course, from the very justification given to concluding the gentlemen's agreement, which established and governed the instrument under consideration, and the mode of operations which the agreement specified. As will be remembered, the agreement stated that movements of the minimum-reserve ratio should, as a rule, be positively correlated with movements of foreign exchange reserves: when the latter rise, the ratio should be raised, and vice versa. This, of course, is a policy which works in the opposite direction from what balance-of-payments adjustment would require. The agreement did not call for a strict adherence to this rule, and the Netherlands Bank was always careful to point this out. Yet, throughout the 1950's this was virtually an airtight rule.⁴ Only in the 1960's

³ Excluded from this table are the changes through the first half of 1954. When reserve requirements were first introduced, by the gentlemen's agreement of February 1954, the rate was determined at 5 per cent, and was then increased each month by 1 per cent, until it reached the level of 10 per cent. These increases, however, should be regarded as part of the gradual process of establishing a starting ratio of 10 per cent.

⁴ Just a single exception is found, in the last quarter of 1957: while foreign exchange reserves were rising, the minimum-reserve ratio was lowered, rather than raised as was the normal practice. This, however, may perhaps be ascribed to a time lag and imperfections of knowledge and measurement. The ratio was lowered in October 1957; foreign exchange reserves were falling until September 1957, and then started rising only just before the ratio was lowered.

TABLE 9

The Netherlands: Changes in the Minimum-Reserve Ratio
and Movements of Policy Targets

Quarter	Minimum- Reserve Ratio (1)	Foreign Exchange Reserves (2)	Price Level (Cost of Living Index) Compared with Trend			Unem- ploy- ment (5)
			(3)	Industrial Production (rate of change) (4)		
II 1956	lowered	- fall	* stable	* stable	- falls	
IV 1956	lowered	- fall	* stable	* stable	* stable	
I 1957	lowered	- fall	- rises	* stable	* stable	
IV 1957	lowered	+ rise	- rises	+ falls	+ rises	
I 1958	raised	- rise	- falls	- falls	- rises	
II 1958	raised	- rise	- falls	- falls	- rises	
III 1958	raised	- rise	- falls	+ rises	- rises	
II 1959	lowered	- fall	+ falls	- rises	+ falls-high	
III 1960	raised	- rise	- falls	+ rises	+ falls	
I 1961	raised	- rise	- falls	* stable	+ falls	
II 1961	raised	- rise	- falls	* stable	* stable	
III 1961	lowered	+ rise	* stable	* stable	* stable	
IV 1961	lowered	+ rise	- rises	* stable	* stable	
II 1962	raised	- rise	+ rises	* stable	* stable	
III 1962	lowered	* stable	+ falls	* stable	* stable	
IV 1962	lowered	- fall	+ falls	+ falls	* stable	
II 1963	lowered	+ rise	- rises	* stable	* stable	
III 1963	lowered	- fall	+ falls	- rises	* stable	

Note: See Table 8 for explanation of symbols used. Here minimum-reserve ratio replaces discount rate.

did this practice change, and exceptions to it became as frequent as observance of it.

The competing targets are also observed in Table 9. It appears that the minimum-reserve ratio was definitely not used to maintain price stability; the ratio was changed in the opposite direction, as a rule, to that which price stability would require—a relationship which must be attributed to the correlation between price movements and balance-of-payments disturbances noted earlier. Once more, this seems to change during the 1960's. From 1962 on (to the effective abolishment

of the use of this instrument towards the end of 1963), changes in the reserve ratio were mostly consistent with the requirements of price stability, and might be explained by this target. On the other hand, no consistent relationship appears between changes in the minimum-reserve ratio, on the one hand and either the level of unemployment or the level of industrial production, on the other. It appears quite safe to conclude that, like the discount rate, the minimum-reserve ratio instrument was not generally employed either to serve the ends of high industrial production or high employment.

The third monetary instrument, open-market operations, is represented in column 5 of Table 7. It appears to move less often in the direction required for balance-of-payments adjustment than it does in the opposite direction; but over all, the relation between this instrument and the movements of foreign exchange reserves seems to be much weaker than it appears to be in the use of either the discount rate or the minimum reserve ratio. Open-market operations were taken, we recall, rather sporadically. They seemed to have been intended most of the time to "stabilize the market"—that is, to help maintain an existing level of interest rates. Apparently, they were considered a secondary tool rather than a major one and were not universally employed in pursuit of one of the major global targets.

Commercial bank borrowing from the Netherlands Bank is described in column 6 of Table 7. It will be recalled that as a rule, the amount of this borrowing was very small, hence changes in it were of no quantitative significance either. In only two episodes did the amount of borrowing rise to considerable proportions. In the two instances of substantial declines of foreign exchange reserves which may be distinguished, during 1951 and 1956-67, this item increased materially; in both instances it dropped back to its normal low level in the subsequent periods of rising foreign exchange reserves. These, of course, are movements in an opposite direction to the requirements of balance-of-payments adjustment. It should also be noted that they are in a direction opposite to that which movements of the discount rate should engender: that is, in both episodes, commercial bank borrowing increased when the discount rate was raised and decreased when the discount rate was lowered.

The net indebtedness of the government to the Netherlands Bank (excluding changes due to open-market operations) is represented next,

in column 7 of Table 7. It appears immediately that its movements were usually in a direction opposite to the requirements of balance-of-payments adjustment: the indebtedness rises, most often, when foreign exchange reserves fall, and falls when reserves rise. A glance at column 12, which describes the budgetary balance, will show that this pattern is quite similar to that of the movements of the budgetary balance, but it is even more consistent in its negative relationship to the balance of payments. The greater consistency must be attributed, thus, to the government's financial transactions with the public—in distinction to the "real" transactions which find expression in the budget. In other words, the government must have conducted its equivalent of open-market operations—borrowing from the public and depositing at the central bank, or repaying (lending to) the public by drawing on deposits at the Bank—in a direction opposite to balance-of-payments requirements. To some extent, this direction seems to have been due to public initiative. When foreign exchange reserves fall and reduce the economy's liquidity, banks (and other potential buyers) are less likely to increase their lending to the government (i.e., to buy Treasury bills or bonds), and more likely to reduce the amount of these assets held by them; and the opposite is true when the economy's liquidity increases by an accumulation of foreign exchange reserves.

Total domestic claims of the Netherlands Bank, the combination of the last three elements (Bank lending to the commercial banks, Bank acquisition of government paper in the open market, and other net lending of the Bank to the government), is represented in column 8 of Table 7. The net claim on the government was usually the main component of this category and accounted for most of the changes in it. Since it (as well as Bank lending to the banks) moved opposite to the requirements of balance-of-payments adjustment, it is of course not surprising to find that so did the combined category. Indeed, this pattern was even more consistent for the total than for each of its components: only a single exception—the period from mid-1953 to mid-1954—appears to violate this inverse relationship. Thus, by the Nurkse-Bloomfield criterion, the Netherlands Bank appears to have played very consistently against the "rules of the game."

Lending by commercial banks to their customers, described in column 9 of Table 7, appears to move in the disadjusting direction. It

rises faster than usual when foreign exchange reserves fall, and falls (or rises only much less than the trend) when reserves rise. This inverse relationship seems to be indicated clearly, although there are a few exceptions to it.

Quite the opposite pattern applies to changes in money supply, as is shown in column 10 of Table 7. It moves almost invariably in the direction which balance-of-payments adjustment would require. Money supply and foreign exchange reserves appear clearly to rise together and fall together. Essentially this is true also with regard to another measure of the economy's liquidity, to which much attention is given in the monetary analysis of the Netherlands Bank: the magnitude of "primary and secondary liquidity,"⁵ which is represented in column 11 of Table 7. Like money supply, which is itself, of course, a major component (roughly two-thirds) of "primary and secondary liquidity," it moves most of the time in the direction indicated by the need for balance-of-payments adjustment, that is, in the same direction as foreign exchange reserves.

Budgetary policy is described in column 12 of Table 7. As has been mentioned before, it appears to run most often in a direction contrary to the requirements of balance-of-payments adjustment. When foreign exchange reserves rise, the government's excess demand falls (that is, its deficit turns to surplus or becomes smaller in absolute magnitude, or a surplus gets bigger); and when reserves fall, the government's excess demand rises. This pattern has its exceptions, but they are few.

To further test the budgetary policy, Table 10 analyzes the episodes in which the budget was clearly either in a surplus or in a deficit position: Movements of foreign exchange reserves are represented in column 2 of the table. It appears, as before, that the budgetary balance behaved most of the time—but not consistently—contrary to what balance-of-payments adjustment would require. The price stability target does not fare better (Table 10, column 5). The industrial production and employment targets, shown in columns 3 and 4, respectively, also do not appear to be generally served by

⁵ The "primary" liquidity is money supply, defined in the conventional way. "Secondary" liquidity includes: (1) claims on the government; (2) claims on the local authorities; and (3) claims on money-creating institutions, i.e., time deposits and day-to-day loans, foreign-currency balances of residents, and balances in savings accounts.

TABLE 10
The Netherlands: The Budgetary Balance
and Movements of Policy Targets

<i>Period</i>	<i>Budgetary Balance (1)</i>	<i>Foreign Exchange Reserves (2)</i>	<i>Price Level (Cost of Living Index) Compared with Trend (3)</i>	<i>Industrial Production (rate of change) (4)</i>	<i>Unem- ploy- ment (5)</i>
I 1950-II 1953	surplus	- rise	* stable	* stable	- rises
IV 1956-IV 1957	deficit	- fall	- rises	+ falls	+ rises
II 1960-II 1961	surplus	- rise	- falls	* stable	+ falls
II 1961-IV 1962	deficit	* rise slightly	* stable	* stable	* stable
II 1963-IV 1964	deficit	+ rise	* stable	- rises	* stable

Note: See Table 8 for explanation of symbols used. Here budgetary balance replaces discount rate.

budgetary policy, which seems to be "neutral" to these targets. In general, budgetary imbalances (surpluses or deficits) were rather small and apparently played only a minor role in pursuit of short-term targets. During one episode only, from the beginning of the period surveyed to the middle of 1953, were budgetary surpluses large and consistent. As can be seen from Table 10, none of the targets represented there could explain the surpluses during the period of the early 1950's. Foreign-exchange reserves were rising rapidly. Price increases were normal, that is, not exceeding their long-term trend, or even slightly below it. Industrial production was also rising at its normal rate, while employment was even falling. The large surpluses must be explained either by other targets or as an accidental phenomenon. One explanation sometimes suggested is that budgetary policy was aimed at encouraging long-term growth by accumulating capital through government saving. Another possibility is that the surpluses resulted, as in Germany, from the planning of military expenditures which did not in fact materialize.

Another interesting episode of budgetary imbalances is that of 1957. During that year, there was an obvious contradiction between the requirements of the targets of balance-of-payments equilibrium and

price stability, on the one hand, and employment and output on the other. In this year changes in circumstances abroad were, apparently, particularly important and must have played a significant part in the Netherlands' balance-of-payments situation. While most often, as has been pointed out before, balance-of-payments deficits were accompanied by domestic expansions, this episode was an exception. Foreign-exchange reserves were falling and prices were rising rapidly, while unemployment was rising and industrial production falling. The budgetary policy during those years appears to be expansive, as would be required by the targets of employment and production. Monetary policy, on the other hand, if judged by the movements of money supply and interest rates, was restrictive—as would be required by the balance-of-payments equilibrium and price stability targets.

3. Summary and Interpretation

From the preceding analysis it seems clear that, at least during the 1950's, monetary policy was strongly associated with the balance of payments—although in a somewhat intricate manner which, on the surface, appears to involve contradictory tendencies.

A point of major importance is the extremely high share of foreign trade in the economy of the Netherlands. Foreign trade in proportion to national income is higher in the Netherlands than anywhere in Europe (save Luxembourg, which for economic purposes may in effect be considered a region of Belgium). Any change of a given proportion in exports or imports carries thus a heavier weight in the Dutch economy than in most other countries. Since the ratio of foreign exchange reserves to trade is not particularly low in the Netherlands, the large trade means also a large size of reserves in relation to income or to money supply. A given proportional change in reserves thus has a particularly large monetary impact there.

Any imbalance of payments has thus a very large automatic impact on the economy of the Netherlands in comparison with other countries; and this inflationary or deflationary impact seems to have been judged too large by the Netherlands policy makers—that is, the impact, by itself, gives too much weight to balance-of-payments adjustment and too little to other targets. Therefore, policy has been directed at counteracting this automatic impact. Thus, the discretionary mone-

tary policy runs counter to the requirements of balance-of-payments adjustment. However, the counteraction is not complete, so that some adjustment is still allowed to take place.

Let us consider a disturbance in which foreign exchange reserves fall. The typical pattern of monetary policy would be as follows: The fall of reserves is, by itself, a factor which tends to diminish money supply and commercial bank reserves. The lending capacity of banks is thus reduced—a factor which, if not offset, would tend to lead to a further reduction of money supply through reduced lending. At the same time, *demand* for credit by the banks' customers probably tends to rise, due to the drain on their liquidity caused by an imbalance in transactions with the outside world.⁶ In effect, commercial bank credit to the public increases in such instances more often than it diminishes. This is accommodated by replenishing the lending capacity of banks in three principal ways. First, the minimum-reserve ratio of the commercial banks is reduced; this is quantitatively of major importance. Second—and this is normally much less significant—banks increase their borrowing from the Netherlands Bank, despite an *increase* in the Bank's discount rate. Third, net indebtedness of the government to the Netherlands Bank increases, thus raising the liquidity of the economy in general and bank reserves in particular. To some extent, as has been mentioned earlier, this is an automatic reaction: lending by the public (including commercial banks) to the government—in the form mainly of acquisition of Treasury bills and bonds—falls, thus automatically raising the government's indebtedness to the central bank. In other words, some substitution takes place: the commercial banks increase their lending to private customers at the expense of their lending to the government. Yet even when an increase in commercial bank credit occurs, and is combined with the increased indebtedness of the government to the Bank, the expansionary impact on money supply is not sufficient to fully offset the initial effect of the decline in foreign exchange reserves. In the end, the amount of money does go down from its level in the period prior to the disturbance (or, more often, rises significantly less than the trend). Interest rates thus go up—as indicated, for instance, by the yields of short-term Treasury bills. The discount rate is raised, presumably for three in-

⁶ It could also happen, however, that the increased demand for credit *preceded* the balance-of-payments deficit, and was the cause of it.

terrelated purposes: one is to prevent the banks from increasing their borrowing from the Netherlands Bank to an even larger extent than they actually do; the second is to "follow the market"—namely, some market rates (such as the yield of Treasury bills) which rise through the aforementioned process of diminished liquidity and reduced demand for the bills; and third—and this is probably a most important consideration—to indicate the trend of policy. The discount rate is regarded in the Netherlands, as in many other places, as a major weathervane of the government's intentions. Moreover, interest rates on commercial bank lending are traditionally tied to the discount rate. As mentioned before, the rates on prime loans are usually 1.5 to 2 per cent above the discount rate; they move with the latter—as do other interest rates—in a semiautomatic way. Since in the final analysis money supply is diminished and interest rates should rise, the increase of the discount rate is thus called for.

This resolves the apparent contradiction between the movements of the two major monetary instruments employed—the minimum-reserve ratio and the discount rate. Minimum-reserve ratios are reduced in order to offset the automatic effect of a fall in foreign-exchange reserves. Yet this is only a mitigation and not a full counteraction. Eventually, money supply would fall and interest rates should rise—hence the increase of the discount rate. Whether this whole pattern of monetary measures should be called "restrictive" or the opposite is an open question. Likewise, it may be debated whether this should be called an "adherence" to the classical "rules of the game" or its opposite. According to the definition suggested and defended earlier in this study, this should indeed be regarded a compliance with the "rules of the game."

Similarly, when foreign exchange reserves rise, the process runs in the opposite direction. In general, no asymmetry shows up in the conduct of monetary policy in the Netherlands. It appears to be equally consistent in adhering to the pattern described here, both in the course of balance-of-payments surpluses and deficits.

Compliance with this pattern was almost uniform during the 1950's, but from 1961 or 1962, this no longer holds true. From this point to the end of the period surveyed, the level of foreign exchange reserves was rather stable in comparison with earlier years. Fluctuations in the level were rather weak; and the existing slight upward trend was

apparently regarded as a desirable feature, not strong enough to be considered a disturbance. Monetary policy during these later years appears, thus, to be less concerned with balance-of-payments developments. It is now employed in the service of other targets as well—to a large extent, probably, the target of price stability.⁷ It is important to note that the change in pattern came at a period of generally rising—albeit slowly—foreign exchange reserves. An element of asymmetry may be indicated by this; however, it would be necessary to contrast a long period of slightly and gradually declining reserves with this period in order to check this indication, and such cannot be found.

Budgetary policy was oriented in a direction contrary to the requirements of balance-of-payments adjustment more often than it was in the direction which adjustment would require. This may be consistent with the hypothesis that automatic income effects of the trade balance were considered more than sufficient to achieve the necessary adjustment, so that some counteraction was called for. In view of the generally small size of either budgetary surpluses or deficits, however, a conclusion that budgetary policy was indeed fashioned in this way may not be justified. It seems that this policy was usually intended to be “neutral,” not only in relation to balance-of-payments developments, but also with regard to other major targets. It would be even less correct to conclude that the combined pattern of monetary-fiscal policy adhered to the well-known policy mix, assigning monetary policy to the pursuance of balance-of-payments equilibrium and fiscal policy for “domestic” targets. Only one episode—1956–57—might be explained in this way. In this case, restrictive monetary policy could have been intended to adjust the balance of payments and expansionary fiscal policy, to counteract unemployment and slack production. In the two other episodes of significant budgetary deficits, increases in the discount rate are again found; but on these occasions the opposite movements could not be explained by the requirements of balance-

⁷ This impression is supported by the observation of quantitative credit restrictions. Their introduction in 1961 came at a time of rising foreign exchange reserves; their relaxation during 1962–63, at a time of stable reserves; and their reintroduction, in 1963, again at a period of accumulating reserves. This would be consistent with the pattern of the 1950's, of a counteracting policy. Yet the quantitative restrictions since 1963 do not seem to be affected by the balance-of-payments position. On the other hand, these years are characterized by substantial price rises, which could explain the introduction and preservation of credit restrictions.

of-payments equilibrium, on the one hand, and domestic targets on the other.

The rate-of-exchange instrument was used on only one occasion, March 1961, when the rate was lowered (and the currency appreciated) by 5 per cent. During the preceding period, foreign exchange reserves were rising, and the economy was showing inflationary tendencies. This, indeed, is a combination in which currency appreciation would be a proper measure. However, the development of reserves and prices prior to the revaluation does not seem to be radically different in size or other circumstances than it was on many other occasions. The use of currency revaluation in this instance may thus presumably be explained, as, indeed, was insistently argued by policy makers when the measure was taken, only by the fact of the similar German measure. Since Germany is a major trading partner of the Netherlands, the appreciation of the mark could be expected to strongly intensify the trends of rising foreign exchange reserves and rising prices in the Netherlands. Speculation could have contributed to it even further. It was thus not so much actual developments as the anticipations of strongly intensified trends which led to the Dutch measure. The fact that a change in the exchange rate could be represented as following the lead of another country must have also been a strong contributing factor. An additional explanation could be the realization that a long-term accumulation of foreign exchange reserves may be an indication of fundamental disequilibrium. Despite this episode, it is obvious that during the period surveyed changing the exchange rate was not considered a proper instrument for balance-of-payments adjustment in the Netherlands.