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**Financial Sector Reform and Monetary Policy in the Netherlands**

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**Abstract**

Financial sector liberalization, both domestic and in cross-border transactions, was a major force behind the gradual move to indirect controls and the shift toward full reliance on exchange rate targeting in the Netherlands. This paper analyzes the different steps in this process, discusses the main arguments behind the gradual approach, and draws lessons for other countries involved in this process. The paper argues that reforms in the financial sector, liberalization of the capital account, adjustments in supervision and regulation, and modernization of monetary management are strongly interrelated and should be part of a comprehensive reform strategy.

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## SUMMARY

Financial sector reform, including the liberalization of international capital flows and deregulation of domestic financial markets, has had a key impact on the strategy and implementation of monetary policy in the Netherlands. The paper discusses developments in these areas during the post-war period. What is special about the Dutch case is that a gradual approach was adopted, both in terms of the move toward full reliance on exchange rate policy and in terms of the transition from direct to indirect instruments of monetary control. The paper analyzes the different steps in this process and determines the relationship with liberalization and deregulation of financial markets and with developments in the legal and regulatory framework.

The advantage of an integrated and gradual approach is that one gains experience with new strategies and instruments, while still relying—at least to some extent and temporarily—on existing policy practices. This “belt-and-braces” approach reduces the risk of losing control over macroeconomic and financial sector developments during the reform process. Therefore, the Dutch model can be interesting for other countries, in particular those where a structural adjustment process coincides with macroeconomic instability and financial sector weaknesses. Furthermore, the Dutch model illustrates that in the design of monetary instruments specific aspects of the financial system, in particular the degree of regulation of both domestic and international capital transactions, should be taken into account.

## I. INTRODUCTION

The Netherlands has a tradition of doing things gradually and by consensus. This not only includes the capturing of land from the sea but also applies to its economic policy (the "Polderland" model) and monetary policy.<sup>2</sup> A clear example of this preference for gradualism has been the transition from direct to indirect monetary controls. During a period of two decades, direct instruments were gradually phased out and monetary policy came to rely more and more on indirect controls, whereas in other countries this process took place within a much shorter period.<sup>3</sup>

The transition process was inextricably linked to three other developments: a conversion from the use of monetary indicators to full reliance on an exchange rate target, a gradual deregulation of domestic financial markets, and liberalization of international capital flows. In fact, the deregulation and liberalization of financial markets were basic factors underlying both the change in monetary strategy and monetary instruments. This paper first describes in broad terms the financial sector reform process, whereby a distinction is made between liberalization of cross-border financial transactions and deregulation of domestic financial markets (section II). It then discusses the implications of this process for the monetary strategy and in particular the choice between monetary and exchange rate targeting (section III). Subsequently, the paper analyzes the gradual transition from direct to indirect controls in the Netherlands (section IV), and draws some lessons from the Dutch approach (section V).

## II. FINANCIAL SECTOR REFORM AND LIBERALIZATION

In line with developments in other industrialized countries, the Netherlands liberalized international capital transactions and deregulated domestic financial markets in the 1970s and 1980s.<sup>4</sup> Both developments were based on the notion that freeing up financial markets increases efficiency and improves the allocation of resources. These two developments were clearly interrelated: the integration of domestic markets in the global financial market resulting from capital account liberalization forced the authorities to adjust their regulatory policies to prevent domestic institutions from becoming noncompetitive.

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<sup>2</sup>International Monetary Fund (1997).

<sup>3</sup>In some countries, however, it appeared necessary to reinstall direct controls temporarily at a later stage, see Quintyn (1991).

<sup>4</sup>See Table 1 for an overview of major developments in the Dutch financial system during the post-war period.

**Table 1: Major Developments in the Dutch Financial System during the Post-War Period**

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1945	Foreign Exchange Decision regulating international payments
1948	Adoption of the Bank Act
1952/56	Adoption of the Act on the Supervision of the Credit System; a temporary act was adopted in 1952, and the final, slightly revised version in 1956
1961	Establishment of full current account convertibility and acceptance of the Fund's Article VIII
1977	Simplification of the system of capital controls; shift from a negative to a positive system
1978	Adoption of a revised Act on the Supervision of the Credit System
1981	Adoption of the Law on Foreign Financial Relations, including automatic approval of all foreign loans with a maturity over two years
1982-83	Problems in the mortgage banking sector
1983	Abolition of the remaining restrictions on capital inflows
1986	Liberalization of foreign issues on the Dutch capital market; Deregulation of the Dutch capital market
1988	Liberalization of remaining domestic capital market restrictions
1990	Liberalization of the structural policy separating banks and insurance companies; Establishment of a Protocol regarding supervision of financial conglomerates; Supervision of mutual funds by the Netherlands Bank
1990-91	Major mergers between banks and between banks and insurance companies
1991	Ending of prohibition of indexed loans
1992	Revision of the Act on Supervision of the Credit System, including a streamlining of procedures for activating monetary policies
1995	Supervision of exchange bureaus by the Netherlands Bank
1998	Planned adoption of a revised Bank Act; Planned participation in EMU

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### **A. Liberalization of International Capital Flows**

In light of its openness, the Netherlands has always put a great weight on freedom of international trade and payments. Directly after the second World War, international payments were regulated according to the Foreign Exchange Decision of 1945. In 1961, the country fully liberalized all current account transactions and accepted the obligations of Article VIII of the Fund's Articles of Agreement.<sup>5</sup> In addition, foreign direct investments were allowed without restrictions, but most short-term and medium-term capital transactions were strictly controlled. This was based mainly on a concern that liberalizing these flows might create monetary complications. In particular, the monetary authorities were afraid that short-term capital inflows would undermine the effectiveness of credit controls. Therefore, they wanted to keep the option of introducing capital controls (temporarily), when monetary circumstances warranted this. However, this option was not exercised frequently, and the system was in effect already relatively liberal in the 1970s.

In 1977 the system of capital account controls was simplified considerably. It was transformed from a negative one (no transactions allowed, apart from certain explicit exceptions) to a positive one (all transactions allowed, apart from certain exceptions). In 1981 this practice was formalized in the Law on Foreign Financial Relations, which replaced the earlier Foreign Exchange Decision. The new law and the associated guidelines required prior approval by the authorities for both guilder-issues by nonresidents in the Netherlands and other loans to nonresidents, as well as for foreign credits taken up by residents.

As of July 1, 1983, the restrictions on capital inflows were abolished. Already in 1981, after the abolition of the credit ceilings (see below), the Netherlands Bank had agreed to grant approval for all foreign loans with a maturity over two years. In October 1986 foreign issues on the Dutch capital market were liberalized, and the Netherlands became the fourth OECD member country to have fully liberalized its capital transactions.<sup>6</sup> Since then, there no longer have been any restrictions on transactions by nonresidents on the Dutch capital market, and there is a completely level playing field for national and international guilder transactions.

In sum, the Netherlands opted for a relatively progressive approach in liberalizing international capital transactions. The developments were fully in line with the European Council Guideline issued in 1988, which stated that by July 1990 all capital transactions between EC members had to be completely liberalized. Apart from welfare-theoretical arguments, an important reason behind the Dutch liberalization process was that it had become more and more difficult

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<sup>5</sup>On December 29, 1958 convertibility of the guilder had been established for all nonresident holdings except those on the capital account and some bilateral accounts. The Netherlands made substantive progress in further reducing restrictions and discrimination in trade and payments between 1958 and 1961, when full current account convertibility, as defined in Article VIII, was established.

<sup>6</sup>Bakker (1995), pp. 173-74.

to control international capital transactions, given the openness of the economy, the internationalization of the banking industry, and the development of on-shore and off-shore financial centers.

## **B. Deregulation of Domestic Financial Markets**

Domestic financial markets were deregulated for the same reasons that supported the liberalization of international capital flows, namely that liberalization would result in a better allocation of financial resources. For capital account liberalization, this principle applies internationally, whereas domestic deregulation supports the optimal allocation of surplus funds on a national level. In fact, the international liberalization process in a sense forced the authorities to deregulate on a national level. Prevailing domestic restrictions were no longer considered appropriate in an international climate of deregulation, and domestic deregulation was necessary so as not to put Dutch financial institutions in a less favorable competitive position. Furthermore, it became more and more difficult to enforce national controls within a liberalized global environment.

In 1986 a major deregulation of the Dutch capital market took place, including the virtual elimination of most existing obligations regarding the form and issuance of financial instruments. This included:

- abolition of calendar requirements (obligations to request permission for a planned issue) for all but very large issues;
- a lowering of the minimum maturity of bonds from five to two years;
- elimination of the obligation to stagger redemption in at least four annual terms, which enabled the issuance of bullet loans;
- freedom to issue floating rate notes, commercial paper and certificates of deposit; and
- permission for Dutch subsidiaries of foreign banks to act as lead managers on the Dutch capital market.

This deregulation effectively ended the separation of money and capital markets, which had important implications for monetary policy (see section III).

In 1988 a second, smaller wave of liberalization of remaining restrictions took place, including:

- allowing continuous issuance of long guilder paper to all issuers, thereby facilitating the offering of medium-term notes;
- abolition of the remaining obligation to request permission for the date of a large bond issue, although the obligation to inform the Netherlands Bank beforehand remained;
- lifting of the ceiling for the share arranged by foreign co-managers; and
- allowing the issuance of deep-discount and zero-coupon bonds.

Finally, in 1991, one of the last remaining restrictions--the prohibition of indexed loans--was abolished.

With the expanding possibilities for foreign financial institutions to penetrate the Dutch financial market, domestic institutions were faced with increasing competition. This development was further strengthened by the opening of the European market for all financial services as of January 1, 1993. However, the Netherlands already had a tradition of accepting foreign institutions in its markets, so the changes in the marketplace were rather gradual and market participants were able to prepare themselves for the intensified international competition.<sup>7</sup>

Another important trend in the financial sector was the blurring of distinctions between different categories of financial institutions. In particular since the liberalization, in 1990, of the so-called structural policy regarding banks and insurance companies, which had previously separated banking and insurance, these two industries have become much more integrated, resulting in a number of mergers between large banks and insurance companies. This development was partly due to the need for larger financial players within an integrated European and global financial marketplace, and therefore acceptable to the supervisory authorities.<sup>8</sup>

In general, the process of liberalization of the Dutch financial markets was carried out without creating major problems in financial institutions. This in itself is a remarkable accomplishment, since a major cause of banking crises appears to be financial liberalization, which often produces radical changes in the banking sector's operating environment, thus increasing banking risks.<sup>9</sup> Therefore, liberalization, when not accompanied by prior and concurrent measures to strengthen supervision and regulation, can result in overindebtedness and affect banking soundness. In addition, it can lead to asset price bubbles.

In the Dutch case there were problems in the banking sector in the early 1980s due to a combination of high inflation, high interest rates, and a recession (stagflation), which resulted in a rapid increase in the number of bankruptcies among firms and industries. At the same time, there was a sharp decrease in the value of both commercial real estate and a bursting bubble in prices of residential real estate. This, in combination with imprudent lending policies, finally led to the bankruptcy of one mid-sized mortgage bank and the restructuring of other mortgage banks, which were basically taken over by other banks and institutional investors.

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<sup>7</sup>For a more detailed description of developments in the Dutch banking system, see Custers and Van Gils (1997).

<sup>8</sup>The Netherlands Bank supervises the Dutch banking system, while supervision of insurance companies is conducted by the Insurance Chamber.

<sup>9</sup>Lindgren, Garcia and Saal (1996), pp. 100-104.



These developments served as a wake-up call for the financial sector in general, and since the early 1980s there have been no major problems in the banking sector. In addition to adequate and strict supervision, this may also be related to the process of concentration in the Dutch banking sector.<sup>10</sup> This process has created relatively strong and broad-based financial institutions, which are not very vulnerable to developments within certain segments of the financial markets or certain (categories of) borrowers. In 1990, a protocol was agreed upon between the Netherlands Bank and the Insurance Chamber, including rules for supervision of holding companies of banks and insurance companies. Supervision of these financial 'conglomerates' is basically conducted at a decentralized level, with separate supervision of the holding company carried out by either the Insurance Chamber or the central bank, depending on the major activity of the holding (the 'solo-plus' model).

Where deregulation might lead to unacceptable practices and risks, additional and improved supervision was developed. This not only applied to supervision and regulation of traditional banking practices, but also to related financial sector activities. In 1990, the Netherlands Bank was given the task to supervise mutual funds, aimed at the establishment and support of well-functioning and transparent financial markets and protection of the position of the investors on these markets. In 1995, the central bank was asked to supervise exchange bureaus in order to counter money laundering practices.

Important changes in the relation between the central bank and the banking sector are worth noting as well. At first, there was a strong presumption of coordination and collaboration in the area of monetary policy. However, it appeared in the course of time that banks became less and less willing to accept guidance by the central bank, which threatened to hamper monetary policy implementation. The new situation required an adjustment of the Act on Supervision of the Credit System, which was revised in 1992.<sup>11</sup> An important change was that the necessity for the central bank to try to reach agreement with the banking sector about monetary measures was eliminated.

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<sup>10</sup>In 1990, Algemene Bank Nederland and Amsterdam Rotterdam Bank announced their plans to merge, while in the same year Rabobank Nederland acquired a large share of a major insurance company (Interpolis). In 1991 NMB/Postbank and Nationale Nederlanden (the Netherlands' largest insurer) merged. As a result, in the mid 1990s the consolidated assets of the three largest financial groups in the Netherlands reached a total of over 70 percent of the assets of all registered institutions combined.

<sup>11</sup>Another major reason for adjustment of this act was the need to incorporate the Second EC Banking coordination directive, including home country control of branches.

### III. MONETARY STRATEGY

#### A. Moderate Monetarism

According to the Bank Act of 1948, the objective of Dutch monetary policy is to “regulate the value of the Netherlands monetary unit in such a manner as will be most conducive to the nation’s prosperity and welfare, and in so doing seek to keep the value as stable as possible” (Article 9, section 1). Two elements are included here: economic development and a stable currency value. The Act does not state explicitly whether the stabilization of the currency concerns the internal value (price stability) or the external value (exchange rate stability). The relationship to economic prosperity is based on the theory of neutral money, developed by Koopmans in the 1930s and further elaborated by Holtrop in the post-war period.<sup>12</sup> The basic element of this theory is that in a money economy, as opposed to a pure barter economy, demand for goods is not directly linked to supply. Demand can be higher when monetary reserves (savings) are activated, whereas it can be lower when income remains unspent. The basic operational conclusion is that monetary policy should be “neutral”—that is, it should have the same Pareto optimal outcome as a barter economy with fully flexible and competitive markets.

This theory formed the basis for monetary policy in the 1940s and 1950s. In operational terms it meant that the aim of monetary policy was to adjust the money supply to the demand for money necessary to finance real economic growth, based on transaction and precautionary motives. This would in itself result in price stability, thereby meeting both obligations of Article 9 of the Bank Act. In practice it appeared difficult to gauge demand for money based on motives other than the ability to conduct transactions. In addition, surplus funds could be used at a later stage to finance an inflationary process, and therefore the authorities’ operational conclusion was that the share of money in terms of national income should be stabilized. This resulted in the use of the liquidity ratio, or the share of broad money (M2) to national income, as the key indicator of monetary policy, implicitly assuming a stable money demand function and a unit elasticity of demand for money with regard to nominal income.

This policy has been described as “Moderate Monetarism”, since it clearly contained elements of monetarism as later developed by Friedman and others. However, there were differences as well, which explains the use of the word “Moderate”. First, the policy did not build on the presumption of a stable money demand function in the short run and an inherently stable market economy. Second, it acknowledged the key role of fiscal policy and wage developments in supporting price stability<sup>13</sup>, and third and most important, it was combined

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<sup>12</sup>Holtrop (1957, 1972).

<sup>13</sup>It has always been recognized in the Netherlands that monetary policy alone cannot control an inflationary process without appropriate budgetary and income policies. This has been the basis for determining the position of the Netherlands Bank in budgetary matters and in

(continued...)

with a strong preference for fixed exchange rates. It is clear, however, that in the course of time the emphasis of the Dutch monetary authorities came to lie more and more on maintaining price stability rather than trying to stabilize cyclical fluctuations or stimulate the economy, based on the assumption of a vertical long-term Phillips curve. In targeting price stability, monetary policy had a medium-term orientation, aimed at bringing and keeping the rate of inflation under the broadly accepted limit of 2 percent.

To be able to make a distinction between monetary assets included in M2 and nonmonetary assets, a number of so-called form-requirements ensued regarding the capital market. The main one was that for bonds issued on the Dutch capital market the date of redemption had to be based on a random procedure (a lottery), so as to limit to the extent possible the likelihood of capital market paper ending up as a liquid asset when close to maturity, thereby complicating the definition of broad money. This also loosened the link between interest rates on money and capital markets.

Given the openness of the Dutch economy —the average share of exports and imports in terms of GDP is over 50 percent—the current account of the balance of payments has always been a crucial factor in monetary policy. In periods of substantive deficits or threats of such deficits, monetary policy was aimed at avoiding the accommodation of these deficits. This was achieved by assuming a zero value for foreign money creation. In other words, the norm for domestic money creation was established on the basis of the absence of net inflows or outflows of money through the current account. If there was an outflow, this would imply that total liquidity creation would be less than estimated demand for liquidity, thus resulting in a tightening of the monetary stance and a tendency for interest rates to increase. This would contribute to a lowering of domestic demand and subsequently to a return to balance of payment equilibrium. The bottom line was that in years of balance-of-payments disequilibria, monetary policy was aimed at controlling domestic money creation rather than the liquidity

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<sup>13</sup>(...continued)

discussions with the Ministry of Finance and others on fiscal policy. Moreover, the central bank expresses its views on wage developments, which tend to be the result of careful consensus-style procedures between employers and employees, at least since the early 1980s when wage moderation became the key to a return to healthier financial conditions in the economy.

ratio.<sup>14</sup> This illustrates the medium-term character of Dutch monetary policy aimed at the liquidity ratio.

### **B. Role of the Exchange Rate**

As stated above, establishing a stable exchange rate has always been a key element in Dutch monetary policy. In the first decades after the second World War this was ensured by participation in the Bretton Woods system. In 1961 the guilder was revalued somewhat reluctantly, together with the German mark. When the system of Bretton Woods broke down in the early 1970s, the option of a fixed exchange rate in terms of all other currencies disappeared, and the Netherlands had to decide to which currency or currencies to peg the guilder. Within Europe the Snake arrangement and, subsequently, the Exchange Rate Mechanism (ERM) of the European Monetary System were developed to provide greater exchange rate stability. The Netherlands has participated in both arrangements.

The German mark emerged as the leading and strongest European currency with the lowest inflation, and given the fact that the Netherlands trades mostly with its German neighbors, it was decided to stabilize the guilder in terms of the mark. This, however, did not happen overnight, but rather was a policy preference that developed gradually. During the 1970s, the guilder could not fully keep up with the mark, and in 1983 the last devaluation of the guilder in terms of the German mark took place. Since then, the currencies have been linked at an unchanged parity, first solely within the framework of the ERM, and since 1993 also under a bilateral agreement between the German and the Dutch monetary authorities. According to this agreement, the guilder will not deviate more than 2.25 percent around its German mark parity, which is to be achieved essentially by the use of money market instruments.<sup>15</sup>

It must be emphasized that the character of exchange rate operations has changed considerably in the past decades. It was only in the 1970s that regulation of the exchange rate began requiring a more active policy. During the 1950s and early 1960s, little intervention was

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<sup>14</sup>The emphasis in Dutch monetary policy on credit rather than money, at least in the short run, was in line with the country's openness and fixed exchange rate, and thereby the endogenous character of its money supply. In such open economies, nominal money supply tends to adjust to money demand through the balance of payments, at least when there is current account convertibility. Capital account convertibility makes this case even stronger, but is not necessary for the money supply to be determined endogenously. When the money supply is endogenous, and thus cannot be controlled by the monetary authorities, monetary policy needs to be formulated in terms of domestic credit expansion. This point, which later became the essence of the monetary approach to the balance of payments, was made by Guitián (1977) in response to Selden (1975).

<sup>15</sup>It should be noted that the Minister of Finance is responsible for the choice of the exchange rate regime, including adjustments of the parity, whereas the Netherlands Bank is responsible for the daily management of the exchange rate within the agreed regime.

necessary. This was the result of strict limitations on international capital transactions, the fact that exchange rate stability in the early days of the Bretton Woods system was taken for granted and speculative attacks were rare, and the considerable surpluses of the Dutch balance of payments during most of that period. All this changed during the late 1960s and 1970s, when a far more active approach in terms of money market interest rate policy and—sometimes— interventions, was required.

### **C. Implications of Financial Sector Reform and Liberalization**

The liberalization of international capital transactions had a major impact on Dutch monetary policy. It seriously affected monetary transmission, because the liquidity ratio became even more demand determined. Restrictions in domestic credit expansion no longer resulted in a decrease in the money supply and thus in the liquidity ratio, but led to foreign inflows of capital, reflecting the inconsistency of a combination of free international capital flows, a fixed exchange rate and independent monetary policy. Under a fixed exchange rate regime, one has to either give up the independence of monetary policy or restrict capital transactions.<sup>16</sup> This meant that when capital account restrictions were abolished in the 1980s, given the preference for a pegged exchange rate, the room for an independent monetary policy declined drastically.<sup>17</sup>

Of course, international capital account liberalization was a gradual process with the use of new opportunities developing even more gradually, so also the degree of freedom for independent monetary policy disappeared gradually. Furthermore, as indicated in section IV, money supply policies were aimed at the long-term end of the market, whereas money market policies geared toward the exchange rate primarily affected conditions at the short-term end of the market. This implied that as long as these two markets could be separated, there would still be some room for monetary policy. However, the almost complete liberalization of domestic financial markets, which took place in the second half of the 1980s, eliminated the form requirements that to some extent had separated developments in these markets.

Moreover, in the 1980s, not only did the possibilities to conduct independent money supply policies decrease, but also the actual development in the liquidity ratio became difficult to explain.<sup>18</sup> A consistently high growth rate of the ratio coincided with a decrease in inflation,

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<sup>16</sup>Of course, in the post-Bretton Woods period the rate of a national currency cannot be fully fixed in terms of all other currencies. However, what counts here is the fact that by pegging to the German mark, the interest rate instrument has to be used to maintain the peg and can no longer be used independently for domestic monetary purposes.

<sup>17</sup>Mackenzie (1987).

<sup>18</sup>Traditional money demand functions no longer provided a satisfactory explanation for monetary developments; see Fase and Winder (1990) and Traa (1991) for to use of more  
(continued...)

which made it hard to defend measures to reduce domestic credit expansion. This meant that the two main conditions for a useful indicator in the monetary transmission mechanism, namely its controllability by monetary instruments and the stability of its relation with the final target, were compromised.

These developments resulted in two subsequent changes in the focus of broad monetary policy. The first one included a shift from targeting the liquidity ratio to the avoidance of permanent liquidity outflows. This strategy would support the exchange rate in situations where a continuous outflow of capital created downward pressures. It would avoid sharp increases in the short-term interest rate that would otherwise be necessary to sustain the currency peg. This policy had a medium-term perspective; the aim was to equilibrate the balance of payments of the non-monetary sectors of the economy, whereby no distinction was made between the current and the private sector capital account.<sup>19</sup>

The role of broad monetary policy in support of the exchange rate was based on the following four key assumptions:

- it is possible to control net money creation by banks;
- the money demand function is stable in the medium-term;
- liquidity outflows are mainly caused by domestic credit expansion; and,
- the flows subsequently put pressure on the exchange rate.

At the beginning of the 1990s, however, only the first assumption was still considered valid.<sup>20</sup> This brought about a second shift in the focus of monetary policy. According to the present strategy, restrictions on domestic money creation will only be introduced if:

- there are (threats of) fundamental disequilibria in the real economy;
- money creation is very high;
- there are substantive foreign outflows; and,
- this threatens confidence in the economy and in the guilder.

These conditions are very strict and unlikely to materialize. The result is that in fact Dutch monetary policy in the 1990s has become pure exchange rate policy.

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<sup>18</sup>(...continued)

advanced dynamic models to establish a stable demand function for M1 and M2.

<sup>19</sup>This was in line with the assumption coined by Feldstein and Horioka (1980) that current account imbalances had become less important as indicators of macroeconomic stability in a world without capital restrictions.

<sup>20</sup>The Netherlands Bank, Annual Report 1991.

#### IV. MONETARY POLICY IMPLEMENTATION

During the post-war period, a large variety of monetary instruments have been used in the Netherlands. This section will first set forth some definitional issues. It appears that, in particular in the Dutch context, it is useful to make a distinction between the character of an instrument in terms of its primary aim (direct versus indirect controls) and its degree of market orientation. The section will then discuss the gradual development of the use of direct controls, from very rigid qualitative credit ceilings toward more market-based systems of credit control (Table 2).<sup>21</sup> As indicated above, the Netherlands Bank has also controlled exchange rate developments during this period, both by interventions and interest rate policies, which are discussed at the end of this section.

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<sup>21</sup>See Den Dunnen (1979, 1981), Wellink (1994), and Hilbers and Hoogduin (1996) for details. Interest rate controls have not played a major role in the Netherlands.

**Table 2: Post-War Instruments of Credit Control in the Netherlands**

Period	Instrument	Aim
1945–60	Different forms of qualitative and quantitative credit controls	Support rebuilding of the economy and reduce inflationary pressures
1961–72	Short-term credit ceilings	Limit monetary expansion
1965–72	Plus: limit on net long-term activities	
1973–79	Liquidity reserve system	Reduce (over)liquidity in the banking sector and control monetary expansion
1977–81	Net credit restriction	Reduce the liquidity ratio
1986–87	Gentlemen's agreement	Reduce growth of net money creating activities and thereby capital outflows
1989	Open-market policy in the capital market	Signal assessment of the central bank regarding monetary and interest rate developments (yield curve)
1989–90	Monetary cash reserve arrangement	Control net credit growth and support exchange rate policy

#### **A. Direct versus Indirect Controls; Market Conformity**

Central banks can steer monetary developments basically in two different ways: by issuing regulations regarding credit expansion by banks, and by controlling base money (in particular the banks' deposits with the central bank), which banks need for the settlement of payments and, possibly, for meeting reserve requirements.<sup>22</sup> The first category of instruments are called "direct", because they directly affect the banks' position vis-à-vis the nonbank sector, which is the channel through which banks influence monetary developments. In principle, these direct controls can take two forms: limitations on the price of credits or deposits (interest rate controls) or restrictions on the size of credits (credit ceilings). Of course, direct controls require a solid legal framework, since these regulations affect financial relationships that do not involve the central bank.

<sup>22</sup>For more details about the difference between direct and indirect monetary instruments, see Baliño and Zamalloa (1997), Alexander, Baliño and Enoch (1995), Hilbers (1993) and Lindgren (1991).



Indirect instruments, on the other hand, influence monetary relationships indirectly by affecting the prices and volumes in the money market, i.e., the financial relationship between the banks and the central bank. These measures are generally aimed at money market interest rates and the position of the banks vis-à-vis the central bank. Subsequently, this will influence the rates at which banks attract and lend their funds (deposit and credit rates). In a liberalized environment, money market policies will also have implications for the exchange rate, which may be an important alternative transmission channel of monetary policy.

Apart from the difference between direct and indirect monetary instruments, a distinction can be made with regard to the degree of market orientation of monetary instruments. This can be defined as the degree to which market forces, at a micro level, can determine the outcome of the process of money creation. This distinction is sometimes confused with the one between direct and indirect controls, but it concerns clearly distinct aspects of monetary instruments. For example, a credit ceiling that exactly specifies the maximum credit growth of an individual bank is very rigid and not market-based. Such a ceiling does not leave the bank any option to grow faster than its competitors, thereby increasing its market share. On the other hand, a system whereby banks can expand their credit growth beyond the ceiling by attracting long-term funding or by buying unused margins for credit expansion from other, slower growing banks, is much more market-based, even though the outcome in terms of credit expansion for the banking system as a whole may be the same as under a more rigid regime.<sup>23</sup>

### **B. 1950s: Qualitative Credit Controls**

After the second World War, economic policy in the Netherlands was primarily aimed at rebuilding the economy at a rapid pace. Qualitative or selective credit controls fit well within this general approach. These measures regulated sectoral credit expansion to make sure that those sectors considered most vital for economic development would be supplied with the necessary financing. At the same time, banks were encouraged, mostly through moral suasion, to limit credits for other purposes, such as consumer loans. This policy was consistent with the dual aim of monetary policy to support the economic well-being of the country while stabilizing the general price level, as indicated above. Toward the end of the 1950s, however, the possibilities for the Netherlands Bank to exert these rather detailed and rigid controls gradually disappeared.<sup>24</sup>

### **C. 1960s: Quantitative Restrictions**

At the beginning of the 1960s, quantitative credit controls were introduced according to which the growth of total bank credit, irrespective of its sectoral distribution, was limited. These restrictions took the form of a maximum growth rate for an individual bank's

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<sup>23</sup>For details on credit ceilings, see Farahbaksh and Sensenbrenner (1997).

<sup>24</sup>There was one exception: during 1969-72 there was a restriction on personal loans, introduced at the request of the Minister of Finance.

outstanding credits, a policy which was enforced as long as the banking sector as a whole exceeded a predetermined rate of credit expansion. At first, the restrictions applied to short-term credits, based on the assumption that long-term credits were fully funded by long-term deposits not included in the definition of the money supply. It appeared, however, that this presumption became less valid in the course of time, and therefore an additional limit was set on "net" long-term financial activities of the banks (long-term lending minus long-term funding).

#### **D. Liquidity Reserve Requirement (1973–79)**

During the 1970s, the Netherlands Bank temporarily relied on an indirect system of liquidity reserve requirements in order to control credit and money growth. According to these requirements banks were obliged to keep liquid funds in relation to short-term deposits. However, this regulation soon created conflicts with the use of money market policies aimed at the exchange rate, since both the liquidity reserve requirement and money market policies influenced short-term interest rates. The interest rate implications of the liquidity reserve requirement (aimed at steering the money supply) sometimes conflicted with the required short-term interest rates for exchange rate purposes, which is in fact the basic dilemma of any country that attempts to target both domestic monetary conditions and the exchange rate with essentially one instrument aimed at money market conditions.

#### **E. Net Credit Restriction (1977–81)**

In 1977, credit ceilings were reinstalled, aimed at a reduction in the liquidity ratio by four percentage points.<sup>25</sup> This time, however, the restriction applied to net money creating activities of the banking system. These net activities equal gross credit expansion less long-term funding. This meant that the two elements controlled under the previous restriction (short-term credit and net long-term activities) were combined. The net ceilings did not suffer from interference with money market policies, since banks tended to adjust by funding a larger part of their credits long-term or by selling long-term assets (such as government debt), which put upward pressure on long-term rather than short-term interest rates.<sup>26</sup> Of course, an important assumption was that money and capital markets were separated, or at the very least that there was no full integration of these markets; only under that assumption credit ceilings would not interfere with money market policies aimed at the exchange rate.

In addition, the feature that banks could expand credit above the ceiling by funding at long-term maturities (long-term deposits, savings deposits, issue of bonds, and the like), created

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<sup>25</sup>Credit ceilings were based on the Act on the Supervision of the Credit System, which described the different instruments the central bank could use in controlling monetary developments.

<sup>26</sup>Swank (1994).

more room for market forces and competition to determine the outcome. In other words, the net credit ceilings of the 1970s were more market-based than the gross ceilings of the 1960s.

#### **F. Gentlemen's Agreement (1986–87)**

In the 1980s capital mobility increased significantly, which implied that it became more and more difficult to control the money supply under a fixed exchange rate system. This also meant that circumvention by steering credits through foreign branches became more of a problem for the monetary authorities. In addition, international capital flows became an indicator for monetary policy. Less than in the past, ample domestic credit expansion resulted in domestic inflation and current account imbalances, but instead it led to transfers of liquidity abroad through the capital account of the balance of payments, subsequently putting pressure on the exchange rate. All of these factors resulted in 1986 in a “gentlemen's agreement” between the Netherlands Bank and representatives of the banking sector to limit credit expansion in 1986 to 5.5–6 percent.<sup>27</sup>

At the end of 1986, when the monetary results became available, it appeared that the targeted reduction in the rate of credit expansion had not been achieved. Furthermore, a substantial outflow of funds abroad had occurred, and the yield curve in comparison to the anchor country, Germany, had flattened. Thus, the agreement was extended to cover two years, with credit expansion limited to 11–12 percent during 1986–87. In light of the overshooting in 1986, this resulted in a significant tightening of monetary policy for 1987, with a growth rate for net credits of not more than 2 percent.

In order to spare small and newly established credit institutions, for which a credit restriction might prove especially harmful and for which the alternative of long-term funding might not be feasible, a special clause was introduced wherein these institutions were allowed a higher growth rate. In addition, in 1987 the option of trading unused margins under the ceiling was introduced. This option was used by a number of large banks, which were able to transfer these margins through interbank transactions.

#### **G. Open Market Policy in the Capital Market (1989)**

In October 1987, while the gentlemen's agreement regarding credit growth was still valid, the Netherlands Bank announced that it would build up a portfolio of long-term government debt (bonds) in order to be able to perform open-market operations in the capital market. There were two interrelated reasons for this. First, the systems of credit controls that had been in place were considered rather crude, since they could only be turned on or off. Second, once

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<sup>27</sup>The reason to opt for an agreement instead of a formal credit restriction according to the Act on the Supervision of the Credit System were the relatively burdensome procedures associated with the introduction of a credit restriction. These procedures were eased and streamlined with the adjustment of the Act in 1992.

turned on the system would have to be maintained for some time. In other words, these credit controls lacked flexibility.

It is important to note that the open market instrument in the capital market was meant to function mainly as a signal. It would reflect the view of the monetary authorities on monetary developments and, in particular, the interest rate structure. For instance, when the yield curve was considered too flat, sales of paper by the Netherlands Bank would indicate that it favored a somewhat steeper curve (a higher long-term interest rate), thereby mitigating possible inflationary pressures. Given the modest size of the portfolio (3 billion guilders, or approximately 1 billion U.S. dollars at the time) in relation to turnover in the capital market, it was clear from the outset that the impact of these open-market policies would be limited to a signaling role. The underlying idea was that banks would react to the policy intentions of the Netherlands Bank by adjusting their credit and funding policies. This reaction would be supported by the fact that the banks knew that the central bank could always reintroduce credit controls when necessary.

In March 1989, the instrument of open-market policy in the capital market was used for the first time. There had been a swift growth of the net money creating activities of the banking sector, and there was anxiety that this domestic monetary expansion might result in capital outflows and pressure on the exchange rate. The signal to the banks was that they should intensify their efforts to attract long-term funding, which would lead to a steepening of the yield curve.

Later in that same year, the Netherlands Bank introduced the monetary cash reserve arrangement (MCR; see below). From then on, any use of the open-market instrument would signal possible future use of the MCR. However, the need for signaling had decreased, since the MCR was far less rigid in its application than former credit restrictions. In fact, the introduction of the MCR made the open-market instrument largely superfluous. Therefore, it was not used anymore after 1989, and in 1992 the central bank decided to gradually sell the portfolio of government bonds it had built up for this purpose. This process was fully accomplished in 1993.

## **H. Monetary Cash Reserve (1989–90)**

In the spring of 1989, agreement was reached with the banking sector about a new instrument of monetary policy.<sup>28</sup> The driving force was the need to develop an instrument to control credit growth in a more market-based fashion than by straightforward credit ceilings. There would no longer be a ceiling for individual banks, but banks for which the rate of credit expansion exceeded a certain threshold value (the permitted exemption) would in principle be obliged to hold a non-interest-bearing cash reserve (deposit) with the central bank. The permitted exemption and the structure of the cash reserve requirement were identical for all banks.

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<sup>28</sup>Hilbers (1989).

There would be no formal obligation to actually hold these reserves with the central bank, but only an obligation to pay the associated interest costs. In essence, these costs represented a penalty for rapid credit growth.<sup>29</sup> The fundamental difference with earlier credit restrictions was that individual banks were explicitly allowed to exceed the permitted exemption, but any excess would be restrained by attendant costs. Thereby, a cash reserve would raise the cost of lending financed by short-term funds and thus make long-term funding more attractive. Short-term financing remained permitted—in contrast to the situation under a credit ceiling—but, above a certain limit, only at a price. Thus, market forces governed the outcome of the process of an individual bank's money creation. This made the MCR distinctly more market-oriented than previous credit ceilings. It should be emphasized that the MCR also clearly differed from traditional cash reserve arrangements which, when aimed at monetary control, work through the implications of credit expansion on money market conditions. The MCR hardly affected money market conditions because the banks did not actually have to hold the reserves. This made it quite a unique instrument of monetary control, which had few counterparts in other countries.

The MCR first became effective in July 1989. As a benchmark, the average level of money creating activities during the first quarter of 1989 was chosen, with a franchise for credit growth of about 6 percent, corresponding to a money growth rate of 4 percent. The arrangement, according to which the Netherlands Bank could activate the MCR at short notice, was extended in June 1990 for a period of three years, but in light of monetary developments the cash reserve ratio had already been set at zero in April 1990 and remained at that level until 1993, when the arrangement expired.<sup>30</sup>

Due to changes in monetary relationships, and in particular instabilities in the money demand function, it was decided in 1992 to abstain from further use of the MCR. As stated previously, the central bank decided that reactivation would only be considered in the case of serious macro-economic imbalances threatening confidence in the economy and the currency. Such a situation has not developed since then, and the Netherlands has fully relied on exchange rate policy since the early 1990s.

## **I. Money Market Policies Aimed at the Exchange Rate**

During the 1950s, interest rate policy was aimed at keeping the rates low enough to have balance-of-payments surpluses transform into net foreign assets held by the banking sector. This strategy avoided these surpluses from leading to increases in official reserves and associated surpluses in the domestic money market. The official rates served as an upper limit for interest rates in the money market. The main thrust of money market policy was to avoid

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<sup>29</sup>The absence of an explicit interest rate element may make a similar arrangement appealing, e.g., within the framework of Islamic Banking. For details on the implications of Islamic banking for monetary policy, see Iqbal and Mirakhor.

<sup>30</sup>Van Rooden (1990).

the rates from dropping to very low levels. This was achieved by absorbing the free reserves of the banking system through cash reserve regulations and the issuance of treasury bills. Short-term steering of conditions on the money market was conducted through open market operations in treasury bills.

In the beginning of the 1960s, conditions on the money market started to change. The endogenous increase in banknotes in circulation caused a tightening of conditions, which increased the grip of the Netherlands Bank on the market. This development resulted in a decrease in cash reserves and the abolition of the use of treasury bills to absorb liquidity. Finally, a money market deficit drove the banks into the arms of the central bank, whereby the official rates started to function as a floor. The central bank reacted by using foreign exchange interventions to control money market conditions, both through outright transactions and by conducting currency swaps.

In the 1970s, the Netherlands Bank broadened its arsenal of instruments by introducing a quota system, which gave banks the option, on average over a three-month period, to discount paper or take up advances up to a certain maximum (the "contingent").<sup>31</sup> This instrument, together with the official rates and special advances became the basic set of money market instruments. In addition, the central bank frequently used currency swaps for short-term, fine-tuning purposes.

At present, money market policies are fully determined by exchange rate purposes. By influencing money market conditions, both in terms of rates and volumes, the interest rate is influenced to keep the guilder within narrow bands around its parity in terms of the German mark. The Netherlands Bank uses a number of instruments to regulate the banking sector's liquidity. The quota system provides the banks with the bulk of their financing needs. However, this system does not cover the entire demand for central bank money, and therefore additional special advances are provided, when needed, through an auction. Now and then the Netherlands Bank intervenes through foreign currency swaps and, with even greater exception, through interventions in the call money market.<sup>32</sup>

In 1988, a money market cash reserve requirement was introduced. This instrument is aimed at absorbing excess liquidity in the banking sector, and therefore it is clearly very different from the monetary cash reserve arrangement mentioned above. The money market cash reserve requirement determines a minimum amount of required liquidity to be held in the form of deposits with the central bank for each individual bank for a given period. The required liquidity is calculated on the basis of the bank's liabilities. This cash reserve is the successor to the earlier cash reserve requirements that date back to the 1950s. An important difference is

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<sup>31</sup>Den Dunnen (1985).

<sup>32</sup>The Netherlands Bank conducts open market operations relatively infrequently, thereby avoiding a continuous presence in the market, which may strengthen its autonomy (de Beaufort Wijnholds and Hoogduin (1993)).

that the money market cash reserve carries a market-based interest rate. During the first years of its existence the size of required reserves increased dramatically, mainly because of the effects of the crisis in the European Monetary System, whereas more recently the required amounts decreased as a result of the issuance of central bank paper. This central bank paper (Netherlands Bank Certificates or NBC's) was first auctioned to the banks in 1994. Sales of NBC's are aimed at absorbing excess liquidity, but in a more market-based fashion than under a reserve requirement.

Recently, the instruments have been adjusted slightly to prepare for the move toward a European Economic and Monetary Union and the introduction of the euro in 1999. Within this framework, the averaging facility was shifted from the quota system to the money market cash reserve; a Lombard facility was introduced; and special advances have been provided on a regular basis. The size of the money market reserve requirement is based on considerations of interest rate stabilization, and the remaining excess liquidity is absorbed through the sale of NBC's and/or foreign currency swaps.

## J. Trends in the Choice of Instruments

When examining the post-war period, two important developments regarding the use of monetary instruments can be distinguished. First, direct credit controls have gradually been replaced by more indirect monetary instruments. Second, the market orientation of the instruments used has increased gradually (Table 3). In both cases, there is a clear relation with changes in monetary strategy and the liberalization of financial markets. The transition from broad monetary policy aimed at the liquidity ratio to narrow monetary policy aimed at the exchange rate, however, did not fully coincide with the move from direct to indirect controls. As discussed previously, direct instruments were used in the 1980s to support the exchange rate.

**Table 3: Classification of Dutch Monetary Instruments**

Direct instruments:	qualitative credit controls	quantitative credit controls	net credit controls	net credit controls + trade in margins	monetary cash reserve requirement	
Purely signaling instruments:						open market policy in the capital market
Indirect controls:	quota system	cash reserves	remunerated cash reserves	swaps	special loans	sales of central bank paper
	⇐ low					high ⇒
	degree of market orientation					

Note: The degree of market orientation of a monetary instrument cannot be exactly established. The above ordering is a relative one for each category of instruments, and thus direct and indirect instruments in the same column do not necessarily have a similar degree of market orientation.

Alternatively, the liquidity reserve system of the 1970s was an example of an indirect instrument aimed at controlling money growth. Nevertheless, it is clear that the transition toward a full-fledged exchange rate policy has contributed to the demise of direct instruments because the exchange rate is controlled more efficiently through money market policies than through policies aimed at the banks' credit growth.

The second important development concerns the move toward market-based instruments, both within the group of direct and indirect controls. Within the group of direct controls, the very rigid qualitative and quantitative gross credit ceilings of the 1950s and 1960s were replaced by the more market-based net credit restrictions with the option of trade in unused margins of the 1970s and 1980s. This development culminated in the introduction of the monetary cash reserve arrangement in 1989, which was probably one of the most market-based and flexible instruments possible to control the banking sector's credit growth directly. It left the individual banks ample room for competition since there were no credit ceilings, but penalties to be paid for credit growth over a certain threshold. Also, within the group of indirect controls there has been a tendency toward increasing the degree of market orientation. Examples of this were the market-based interest remuneration on the money market cash reserves introduced in 1988 and the use of open-market operations in central bank paper since 1994.

Although the point has been made that there is no one-to-one link between the degree of market orientation and the directness of instruments, it cannot be denied that the relatively complex measures needed to increase the degree of market orientation of direct instruments have contributed to a preference for indirect controls. The transition toward fully indirect instruments in the 1990s therefore can be explained both by the change in monetary strategy (from a combination of monetary and exchange rate targeting to pure exchange rate targeting) and the need for simple, transparent and flexible instruments which fit within the deregulated and liberalized Dutch financial system.

## V. CONCLUDING REMARKS

The financial sector reform process in the Netherlands has been based on an integrated approach toward the modernization and liberalization of the financial system. It included adjustments in the legal and regulatory framework, strengthening and expanding the scope of supervision of the financial sector, liberalization of international transactions, deregulation of domestic financial markets, and modernization of monetary management (Table 4). Any successful financial sector reform process has to be accompanied by adequate prudential regulation and supervision and is most effective within a stable macroeconomic environment.<sup>33</sup> The Dutch monetary and supervisory authorities have put a great weight on these two conditions, and on the whole they have been able to combine the reform process with maintaining a sound banking system and macroeconomic stability.

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<sup>33</sup>Galbis (1994) and Sundararajan (1996).



**Table 4: Financial Sector and Monetary Policy Reform: An Overview**

<b>Legal and regulatory framework</b>	...1948 Bank Act..... 1998 Revision ..... 1952/56 Act on Supervision.....1978 Revision.... 1992 Revision .....1990 Structural policy liberalized
<b>Liberalization:</b>	
- of international transactions	.....1961 Adoption Article VIII..... .....1983 Capital account convertibility
- of domestic financial markets	.....1986 First wave of liberalization .....1988 Second liberalization wave
<b>Monetary and exchange rate strategy</b>	1945-71 Bretton Woods System...1973-98 European exchange rate arrangements 1945-86 Various strategies aimed at controlling the money supply ..... .....1986-90 Credit controls when necessary ..... to support the exchange rate .....1991-98 Exchange rate policy
<b>Credit control policies</b>	1945-60 Occasional (qualitative) credit controls..... .....1961-72 Quantitative credit ceilings..... .....1977-81/1986-87 Market-based credit ceilings .....1989-90 Monetary cash reserve
	----- 1945            1955            1965            1975            1985            1995

Note: In some cases developments took place over a number years, in which case the accompanying entry refers to the year or years during which the key changes were accomplished.

It appears that the financial sector reform process has had a key impact on the implementation of monetary policy in the Netherlands. In terms of monetary strategy it has resulted in the gradual elimination of money supply policies, due to the impossibility to achieve simultaneously two different targets (the internal and external value of the guilder) with one instrument (the interest rate). Given the preference for a fixed exchange rate—a peg to the German mark—the choice was made in favor of using the interest rate as an instrument to keep the exchange rate within narrow bands around its parity in terms of the mark. Based on high trade shares with Germany and the assumption of a sound German monetary policy, this was considered the most effective and efficient way to achieve price stability in the medium-term. Thus, during the 1970s and 1980s the Netherlands gradually moved from a combination of monetary and exchange rate targeting to full reliance on the peg to the mark as the benchmark for its monetary policy in the 1990s.

Financial sector liberalization and deregulation not only affected Dutch monetary strategy, but also the operation of monetary policy, including the use of monetary instruments. Rigid credit ceilings did not fit in well within a market-based framework for financial markets, since they hamper competition, block an optimal resource allocation and form an impediment for financial sector development. Moreover, the possibilities for circumvention increased sharply

with full capital account liberalization. The widespread movement toward enhancing the role of price signals in the economy, an increasingly open economic environment, and financial innovation argued for a change in monetary policy implementation in the Netherlands. Therefore, more market-based alternatives were developed in the 1970s and 1980s. It appeared that there are variations of direct controls that leave more room for competition than others. In particular, the monetary cash reserve arrangement introduced in the late 1980s was an example of a relatively market-oriented direct instrument of monetary control.

What is unique about the Dutch case is that a relatively gradual approach was adopted, resembling the approach taken in other areas of economic policy -- one of gradual adjustments, built on consensus and cooperation, while placing a high weight on maintaining economic, monetary and financial sector stability. As a result, the Netherlands has continued the use of direct instruments, in particular credit ceilings, longer than surrounding countries. An advantage of such a gradual approach is that one gains experience with new instruments, while still relying—at least to some extent and temporarily—on existing controls. This “belt-and-braces” approach reduces the risks of losing control over the reform process during the transition. In addition, it should be noted that since the early 1980s credit ceilings in the Netherlands have only been used for relatively short periods (one or two years) and have generally not been set at very restrictive levels. As a result, their drawbacks in terms of inhibiting the growth of financial intermediaries, the distortion of resource allocation, and circumvention have been relatively limited.

When drawing lessons for other countries, two additional comments should be made. First, a consensus has developed that indirect controls are clearly superior in terms of economic efficiency and that within any monetary framework the move toward these instruments should in principle be completed as soon as possible. Second, the Dutch financial liberalization process took place during the 1970s and 1980s, a period during which the entire industrial world liberalized its financial systems. Therefore, the reform process, although more gradual, was not out of line with developments in surrounding countries. Presently, countries with relatively closed and highly regulated financial systems must reform their systems within a much more liberalized international environment. If anything, this will generally argue for a swifter reform process than a few decades ago.

Nevertheless, the gradual model can be interesting for other countries as part of an integrated approach toward modernization of monetary policy. It may be particularly relevant to countries where a structural adjustment process coincides with macroeconomic and financial sector instabilities during the process of adjustment. The Dutch model illustrates that in the design of monetary instruments specific aspects of the financial system, in particular the degree of regulation of both domestic and international capital transactions, should be taken into account.

## References

- Alexander, William, Tomás Baliño, and Charles Enoch, 1995, "The Adoption of Indirect Instruments of Monetary Policy," *Occasional Paper 126* (June) (Washington: International Monetary Fund).
- Bakker, Age, 1995, *The Liberalization of Capital Movements in Europe*, Kluwer Academics, Dordrecht.
- Baliño, Tomás and Lorena Zamalloa, 1997, *Instruments of Monetary Management: Issues and Country Experiences*, Washington, International Monetary Fund.
- Custers, Jos and Monique Van Gils, 1997, "The Netherlands: a demonstration of dedication," in: *Banks, Financial Markets and Monetary Policy*, by Wim Boonstra and Sylvester Eijffinger (eds.), NIBE, Amsterdam, 1997, pp. 245-70.
- De Beaufort Wijnholds, Onno, and Lex Hoogduin, 1993, "Central Bank Autonomy: Policy Issues", in: *A Framework for Monetary Stability*, edited by Onno de Beaufort Wijnholds, Sylvester Eijffinger and Lex Hoogduin, Dordrecht, 1993.
- Den Dunnen, Emile, 1973, "Monetary Policy in the Netherlands," in: K. Holbik (ed.), *Monetary Policy in Twelve Industrial Countries*, Federal Reserve Bank of Boston, pp.282-328.
- \_\_\_\_\_, 1979, "Postwar Monetary Policy," *De Economist*, Vol. 127, No. 1.
- \_\_\_\_\_, 1985, *Instruments of money market and foreign exchange market policy in the Netherlands*, Netherlands Bank Monetary Monographs, No. 3.
- Farahbaksh, Mitra and Gabriel Sensenbrenner, 1997, "Bank-by-Bank Credit Ceilings: Issues and Experiences," in: *Instruments of Monetary Management: Issues and Country Experiences*, 1997, Tomás Baliño and Lorena Zamalloa, Washington, International Monetary Fund.
- Fase, Martin and Carlo Winder, 1990, "The Demand for Money in the Netherlands Revisited," *De Economist*, Vol. 138, pp. 276-301.
- Feldstein, M. and C. Horioka, 1980, "Domestic Saving and International Capital Flows," *Economic Journal*, Vol. 90 (358), June, pp. 314-29.
- Galbis, Vicente, 1994, "Sequencing of Financial Sector Reforms: A Review," IMF Working Paper, WP/94/101 (Washington: International Monetary Fund).

- Guitián, Manuel, 1977, "Dutch Monetarism: A Comment," *Journal of Monetary Economics*, Volume 3, No. 3 (July) .
- Hilbers, Paul, 1989, "Monetary cash reserve arrangement," *The Netherlands Bank Quarterly Bulletin* 1989-2, pp. 27-39.
- Hilbers, Paul, 1993, "Monetary Instruments and Their Use During the Transition from a Centrally Planned to a Market Economy," IMF Working Paper, WP/93/87 (Washington: International Monetary Fund).
- Hilbers, Paul and Lex Hoogduin, 1996, *Developments in Dutch Monetary Policy after the Second World War* (in Dutch), Financial and Monetary Studies, Vol. 14, No. 4.
- Holtrop, Marius, 1957, "Methods of Monetary Analysis Used by De Nederlandsche Bank," *Staff Papers*, International Monetary Fund.
- Holtrop, Marius, 1972, *Money in an Open Economy*, Leiden.
- International Monetary Fund, *Exchange Arrangements and Exchange Restrictions*, several years.
- International Monetary Fund, 1997, Western European Division, European Department, "From Dutch Disease to Dutch Miracle," *IMF Survey*, July, pp. 206-208.
- Iqbal, Zubair and Abbas Mirakhor, 1987, *Islamic Banking*, IMF Occasional Paper, No. 49 (Washington: International Monetary Fund).
- Lindgren, Carl-Johan, 1991, "The Transition from Direct to Indirect Instruments of Monetary Policy," in: *The Evolving Role of Central Banks*, by Patrick Downes and Reza Vaez-Zadeh (eds.), Washington, International Monetary Fund.
- Lindgren, Carl-Johan, Gillian Garcia, and Matthew Saal, 1996, *Bank Soundness and Macroeconomic Policy*, Washington, International Monetary Fund.
- Mackenzie, George, 1987, Targeting Monetary Aggregates in a Small Open Economy, *IMF Survey*, July, pp. 222-23.
- Quintyn, Marc, 1991, "From Direct to Indirect Monetary Policy Instruments: The French Experience Reconsidered," IMF Working Paper, WP/91/33 (Washington: International Monetary Fund).
- Selden, R. T., 1975, "A Critique of Dutch Monetarism," *Journal of Monetary Economics* 2, pp. 221-32.

Sundararajan, V., "The Role of Prudential Supervision and Financial Restructuring of Banks During Transition to Indirect Instruments of Monetary Control," IMF Working Paper, WP/96/128 (Washington: International Monetary Fund).

Swank, Job, 1994, *Bank Behaviour and Monetary Policy in the Netherlands*, Amsterdam.

The Netherlands Bank, Annual Reports, various years.

Traa, Bob, 1991, "Money Demand in the Netherlands," IMF Working Paper, WP/91/57 (Washington: International Monetary Fund).

Van Rooden, Ron, 1990, Monetary Cash Reserve, *The Netherlands Bank Quarterly Bulletin*, 1990-3, pp. 21-32.

Wellink, Arnout, 1994, "Experience Gained with Monetary Instruments in the Netherlands," in: *Monetary Policy Instruments: National Experiences and European Perspectives*, Bankhistorisches Archiv. Zeitschrift zur Bankengeschichte, Vol. 27, Frankfurt, pp. 22-41.