Moderate Monetarism: A Brief Survey of Dutch Monetary Policy in the Post-war Period

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Abstract

The paper discusses developments in Dutch monetary policy over the past five decades. It does not aim at providing a precise historical description, but rather focuses on the main trends and developments. Discussing these trends now is not only interesting from a historical point of view, but also because the Netherlands is about to become part of the European Economic and Monetary Union (EMU). This will end Dutch sovereignty over monetary policy, and mark the beginning of a joint responsibility for European monetary policy aimed at a stable value of the Euro. Will this imply a radical change in the way monetary policy is being conducted? To answer this question, the paper, which has been written from the perspective of the Nederlandsche Bank, focuses on three main themes: developments in monetary philosophy and strategy, the modernisation of the set of monetary instruments, and the achievements of monetary policy during the post-war period. It concludes that participation in EMU fits in well with post-war developments in Dutch monetary policy, which will contribute to a smooth transition when the Euro is introduced on January 1, 1999.

1 This paper is based on an earlier, Dutch version (Hilbers and Hoogduin (1996)).
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Chapter 1 Introduction

The onset of Economic and Monetary Union (EMU) in Europe presents a suitable opportunity to take a retrospective view of Dutch monetary policy over the last five decades. Dutch monetary policy in the post-war period has been remarkable not only in its conceptual framework but also in its strategy. For several decades, monetary authorities adopted a dual strategy of combined monetary and exchange rate targeting. As is widely accepted, in a small open economy, such as the Netherlands, these two goals cannot always be attained simultaneously, if there is full or a high degree of capital mobility. However, it should be borne in mind that during the first few decades after the Second World War, international capital movements were far from free. As restrictions on capital movements were gradually lifted in the 1970s and 1980s, the scope for independent money supply policies was reduced, given the Dutch preference for stable exchange rates. In the end these developments caused monetary policy in the Netherlands to shift from a dual strategy to pure exchange rate targeting. This gradual shift indeed runs through the paper as a continuous thread. Whilst most of the exposé takes a retrospective approach, the implications of impending monetary union, spelling the end of formal Dutch sovereignty over monetary policy, are also addressed. In particular, attention is paid to the question as to what extent EMU will entail a departure from the manner in which monetary policy in the Netherlands has been conducted up till now.

The aim of the paper is to outline major developments rather than to provide a detailed historical overview. The chosen perspective, moreover, is that of the Nederlandsche Bank. The paper is set up as follows. Chapter 2 sets forth the principal conceptual issues pertaining to Dutch monetary policy. Chapter 3 continues with a discussion of the main trends in monetary strategy. An overview of monetary instruments is presented in chapter 4. This includes both instruments aimed at the money supply and those directed towards the exchange rate. In chapter 5 the accomplishments of monetary policy are discussed. Chapter 6, finally, assesses EMU in terms of its differences and similarities with past monetary policy in the Netherlands.
Chapter 2 Moderate monetarism

2.1 Objectives of Dutch monetary policy

The Bank Act of 1948 provided the framework for monetary policy in the Netherlands for most of the post-war period and therefore forms a useful starting point for the discussion. According to this Act, the twofold objective of Dutch monetary policy was “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” (Section 9 (1)). In fact, the Act presented a compromise between the idea that monetary policy ought to be directed towards price stability and the broader view that monetary policy ought to contribute to economic prosperity. A number of relevant issues were allowed to be resolved in practice. For example, it was not specified whether the stabilisation of the currency concerns the internal value (price stability) or the external value (exchange rate stability) or perhaps both. Neither was touched upon questions relating to the definition and measurement of price stability. The view that monetary policy may influence economic prosperity originated in the concept of neutral money, developed by Koopmans in the 1930s and further elaborated by Holtrop, Kessler and Goedhart in the 1940s and 1950s. In fact, this concept formed the centrepiece of Dutch monetary strategy in the post-war period and therefore merits closer attention.

2.2 Neutral money

The basic tenet of Koopmans’ theory was that in a monetary economy, as opposed to a pure barter economy, demand for goods and services is not directly linked to their supply. Demand can be higher when savings are activated (dishoarding), while it can be lower when money is put aside rather than spent (hoarding). Ideally, monetary conditions should be “neutral” - that is, the balance of liquidity creation/destruction and hoarding/dishoarding should be such that there is no excess demand for or supply of output. This situation was characterised as monetary equilibrium. In such a situation the outcome of the economic process would be the same as that of a barter economy with fully flexible and competitive markets. This outcome would also be Pareto-optimal in that no economic subject could improve its position without reducing somebody else’s economic well being. The underlying aim of monetary policy in a broad sense - as opposed to exchange rate or narrow monetary policy - was to adjust the money supply to the demand for money necessary to finance

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3 This is also evident from the Explanatory Memorandum at the introduction of the 1948 Bank Act in Parliament: ‘Views amongst monetary economists as to what constitutes the most desirable guideline for monetary policy, differ greatly. Some recommend the stabilisation of the general price level. Others prefer the countering of the business cycle. Yet others prefer monetary policy to aim at effecting a neutral money supply, whilst there are also those who want full employment to be considered as a guideline for monetary policy. It would appear to the undersigned that, given this situation, the guideline for monetary policy cannot be phrased other than in the form of a general statement, that this policy must be conducted in such a manner as will be most conducive to the nation’s prosperity and welfare.’
(well-balanced) real economic growth, based on transaction and precautionary motives. This would in itself result in price stability, thereby meeting both obligations of Section 9 of the Bank Act.

Monetary analysis during the 1950s and 1960s was to a large extent based on Holtrop’s, Kessler’s and Goedhart’s interpretation of the ideas of Koopmans. A key element of Holtrop’s philosophy was to make a distinction between autonomous or spontaneous and income-induced monetary reactions. The first category was called monetary impulses. These impulses show which sector is ‘responsible’ for monetary expansion. Impulses can cancel each other out, or they can be compensated for by monetary measures, in which cases monetary equilibrium is maintained. The main aim of the analysis was to determine the location, size and character of inflationary or deflationary disturbances in the economy.

**Box 1 Monetary analysis in the 1950s and 1960s: basic equations**

The monetary analysis conducted by the Nederlandsche Bank in the 1950s and 1960s has been modelled by a number of authors.* These models are similar in nature. The six key equations are:

1. \[ \Delta L = L_{cr} + B \]
   The change in the money supply \( L \) equals domestic money creation \( L_{cr} \) plus the inflows coming through the balance of payments \( B \).

2. \[ L_{act} = k \Delta Y - \Delta L \]
   This equation defines the above-mentioned liquidity activation \( L_{act} \) as the liquidity needed for additional transactions, which is defined as a proportion \( k \) of the growth in income \( \Delta Y \), minus the actual increase in the money supply. This equation clearly shows that one might also interpret liquidity activation as the shortage of liquidity available to finance the growth in income.

3. \[ D = L_{cr} + L_{act} \]
   The domestic monetary impulse \( D \) is defined as the sum of liquidity creation and liquidity activation.

4. \[ E = B + \Delta M \]
   The external impulse \( E \) equals the balance of payments outcome \( B \) plus the income-induced change in imports \( \Delta M = m \Delta Y \), with \( m \) = marginal import ratio.

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* For details, see box 1. Important articles by Holtrop are collected in Holtrop (1972) and his ideas are summarized in Vanthoor (1991). Holtrop’s introductions to the Nederlandsche Bank’s annual reports are also illuminating, as well as Goedhart (1955a and 1955b). For Kessler’s ideas, see Kessler (1975, 1985).
By rewriting these equations, the impact of the two monetary impulses on income and the balance of payments can be derived:

\[
\Delta Y = \frac{(D + E)}{(k + m)}
\]

\[
B = \frac{(kE - mD)}{(k + m)}
\]


The key elements of the analysis were rather straightforward. Economic growth results in an increase in demand for liquidity. This demand was supposed to be a linear function of income, which reflects a very rudimentary money demand function. At the supply side, two separate inflationary ‘impulses’ were defined: domestic money creation and dishoarding, the latter of which was also described as the ‘activation’ of existing liquidity. This concept of activation was a key aspect of the monetary analysis, but also one of its weaker elements, since it appeared difficult to define.

Liquidity creation and activation together formed the so-called domestic monetary impulse. In an open economy the balance of payments also has monetary implications. Surpluses result in monetary expansion and deficits in monetary contraction. However, external monetary implications, stemming from the outcome of the balance of payments, depend on developments in income as well. A higher income results in higher imports, thereby causing a deflationary reaction. The external monetary impulse was defined in such a way as to compensate for this impact of income growth on the balance of payments.

Both impulses together determined the monetary conditions for growth of the economy. For this reason, the monetary analysis along these lines has been characterised as a conditional model. This conditional nature can be illustrated by turning the ‘model’ around and determining the implications of the domestic and external monetary impulse for income and the balance of payments (see box 1, equations 5 and 6).

Holtrop’s ideas gradually found their way into the Nederlandsche Bank’s annual reports. The 1950 report still only contained a survey of the sources of money creation. This was combined in 1953 with an analysis of sectoral money holdings, and between 1954 and 1959 the monetary analysis was further refined. In 1959 monetary impulses were first calculated systematically for the years back to 1950. In 1965 the impulse and sources analysis were combined into one monetary survey.5

As indicated above, the main purpose of the Dutch monetary analysis was to locate inflationary and deflationary disturbances in the various sectors of the economy (government, private sector, financial

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5 The Dutch framework for monetary analysis drew criticism from several directions. The various arguments levelled against it are discussed in section 3.4.
institutions and the foreign sector) and to determine what sector was to carry the burden of adjustment.

The central government was expected to refrain from monetary financing of the budget deficit, apart from a clearly specified and limited option for seasonal financing provided by the central bank. Potential money creating activities by local authorities were limited by the so-called cash limit regarding the amount of short-term debt of these entities. The Nederlandsche Bank should ensure that money creation by the banking sector would be in line with domestic money demand corresponding to the increase in real transactions. The authorities could not control foreign money creation through the current account, given the fixed exchange rate (Bretton Woods arrangement) and the openness of the Dutch economy. Therefore, they geared the volume of domestic liquidity creation towards a balanced development of the current account of the balance of payments. In particular, the authorities were worried that runaway domestic money creation might lead to substantial deficits (or the threat of such deficits) on the current account. In order to avoid accommodating such imbalances, the norm for domestic money creation was established on the basis of the absence of net inflows or outflows through the current account. In other words, within this framework foreign money creation was assumed to be zero in the medium term. Under this rule, an outflow would imply that total liquidity creation would be less than estimated demand for liquidity, thus resulting in a tightening of the monetary policy 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-payments equilibrium.

In practice it proved difficult to distinguish between money held for precautionary reasons and for speculative purposes. In addition, surplus funds held for precautionary reasons could be used at a later stage to finance an inflationary process. Therefore, in the late 1960s and early 1970s the analysis of monetary impulses gradually disappeared and the key intermediate target became the liquidity ratio, or total liquidity (M2) in proportion to national income, implicitly assuming a stable money demand function and a unit elasticity of demand for money with regard to nominal income. Total liquidity was so defined as to include not only currency and demand deposits, i.e. primary liquidity or M1, but also those short-term claims on money-creating institutions which could at very short notice and on a massive scale be converted into primary liquidity at negligible cost, so-called secondary liquidity or near money. Unlike broad liquidity definitions frequently used today, secondary liquidity also covered short-term claims on government. In order to be able to distinguish monetary assets included in M2 from non-monetary assets, the authorities introduced so-called form requirements regarding the capital market. In particular, 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 the likelihood of

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6 For a detailed analysis, see Van Straaten (1989).
7 Monetary financing by the state was understood to be the issuance by the state of debt with a maturity of less than two years or the depletion of liquid assets.
8 Capital account transactions, however, were still highly restricted, which meant that external developments were more predictable than in later years.
9 For a more detailed discussion of the pros and cons of this analysis of monetary developments, see section 3.4.
capital market paper serving as a liquid asset when close to maturity. This also loosened the link between interest rates on the money and the capital markets. Control over M2 required a clear-cut distinction between money-creating institutions, such as banks and central government, and other financial institutions, such as pension funds. As the authorities appreciated the possibility that this distinction might become blurred over time, the Act on the Supervision of the Credit System specifically allowed for the introduction of monetary supervision on near-banks.

Dutch monetary policy has been described as “Moderate Monetarism”, since it clearly contained elements of monetarism as later developed by Friedman and others. In particular, money played a central role in policy-making, far more so than in most other countries which on the whole adopted a more Keynesian approach in the first decades after the Second World War, stressing the relative efficacy of budgetary policy. 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. In fact, the very use of money was perceived to be potentially destabilising as money hoarding and dishoarding might drive a wedge between spontaneous demand and supply. Second, it acknowledged the key role of fiscal policy and wage developments in supporting price stability. For this reason Dutch monetary thinking has always stressed the importance of rules of conduct for the government and the employers’ organisations and trade unions. We will come back to this theme at the end of this chapter. Third and most important, money supply policies were combined with a strong preference for fixed or at least stable exchange rates. Many mainstream monetarists, on the other hand, preferred floating exchange rates as a means to isolate the economy from inflationary pressures. This topic will also receive due attention. Finally, Dutch monetary policy stood out in operational terms for its emphasis on domestic credit rather than the total money supply, at least in the short run, given the endogenous nature of the total money supply.

2.3 Role of the exchange rate

As stated above, establishing a stable exchange rate has always been a key element in Dutch monetary policy. This is for example shown by the fact that the Dutch were amongst the last to reluctantly abandon

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10 See Zijlstra (1982).
12 Note that the Crown on the recommendation of the Minister of Finance formally determined the exchange rate regime, whilst the Nederlandsche Bank was responsible for its execution. This was the arrangement laid down in the 1978 Act on the Exchange Rate of the Guilder.
the Gold Standard in 1936. During the first decades after the Second World War the Netherlands participated in the Bretton Woods system. After the demise of Bretton Woods in the early 1970s, the Netherlands joined two European initiatives. First, the Snake arrangement and, subsequently, the Exchange Rate Mechanism of the European Monetary System. One reason behind this strong preference for exchange rate stability was that it ensures maximum certainty about the prices of goods sold or bought abroad in terms of the domestic currency. More importantly, in an open economy such as the Netherlands the goal of internal price stability is inextricably linked to exchange rate stability. The existence of an exchange rate arrangement was considered a powerful means to enforce prudent and consistent macro-economic policies on an international level. In the absence of such policy co-ordination inflationary pressures abroad would ultimately frustrate the objective of internal price stability. Of course, the success of any international monetary system based on fixed exchange rates crucially depends on the reliability of the nominal anchor. Qualified for the role of anchor are precious metals, such as gold, and the currency of a country pursuing an independent and successful policy aimed at price stability.

How does such a system contribute to prudent macro-economic policies? Imagine that the authorities of a participating country allow domestic inflationary pressures to build up, be their origin in dissaving by the public, excessive growth of credit or otherwise. Given fixed exchange rates, the country’s competitive position will deteriorate, i.e. its currency will appreciate in real terms. This will result in lower foreign demand and import substitution and a deterioration of the country’s current account. The concomitant unemployment will exert downward pressure on wage claims and prices. The economy will only return to equilibrium once real exchange rates have been restored. In order to avoid this costly and slow adjustment process, the authorities should ensure that their policies are sound.

2.4 Institutional structure

The 1948 Bank Act granted the Nederlandsche Bank almost complete operational independence so as to shield the guilder from political interference. At the same time it was acknowledged that the decisions by monetary policy-makers ultimately required political sanctioning and that monetary and budgetary policy needed careful co-ordination. For these reasons, final parliamentary responsibility for monetary policy was assigned to the Minister of Finance. In legal terms this responsibility was laid down in Section 26 of the Bank Act. According to this Section the Minister of Finance had the right to give directions to the Nederlandsche Bank on matters of monetary policy, should he judge it necessary to do so in light of the co-ordination of monetary and budgetary policy. Stringent procedural safeguards were introduced, however, in order to protect the Nederlandsche Bank’s independence. As it happens, the right to give directions to the Nederlandsche Bank was never invoked, although this was considered on at least one occasion. The arrangement was meant to ensure regular contacts and co-ordination between the central bank and the
budgetary authorities. The construction did, indeed, encourage frequent consultations between the Nederlandsche Bank and the Ministry of Finance at various hierarchical levels.

Another restriction on the Nederlandsche Bank’s independence was laid down in the 1978 Act on the Supervision of the Credit System. Section 22 stipulated that the Nederlandsche Bank could only curb lending activities by banks after having consulted their representatives. Should the Nederlandsche Bank prove unable to reach an agreement with these representatives, the Bank was required to confer with the Minister of Finance. In practice this meant that the Bank and the Minister of Finance had to be in agreement on the issue of credit controls so as to avoid being played off against one another. Thus, the Act on the Supervision of the Credit System also encouraged consultations with the Ministry of Finance.

The Nederlandsche Bank had its own niche in the Dutch post-war consensus model. This is evident not only from the provisions laid down in Section 22 of the Act on the Supervision of the Credit System but also from the existence of the Bank Council. In addition to the Ministries of Finance, Economic Affairs, Social Affairs and Employment and Agriculture various socio-economic groupings were represented on this platform: employers, unions, banking, agriculture, science, etc.. From the point of view of the Nederlandsche Bank, the Bank Council provides an opportunity to keep in touch with society at large and to vent its opinion on issues such as budgetary policy and wage developments. The meetings of the Bank Council were strictly confidential. In its old form the role of the Bank Council was by no means restricted to the exchange of information. Had the Minister of Finance ever invoked his right to give the Bank directions with regard to its monetary policy according to Section 26 of the 1948 Bank Act, he would have been required first to seek the advice of the Bank Council. More in general, the Bank Council had the right to advise the Minister on all legislation concerning the Bank’s activities.

2.5 Budgetary policy and wages

The Nederlandsche Bank has always recognised that controlling inflationary pressures may well be very costly in terms of unemployment unless its policies are flanked by appropriate budgetary policies. The Bank’s monetary tasks are therefore a sufficiently compelling reason for the Bank to comment regularly on matters of fiscal policy. However, the Bank has assumed a more general counselling function to the government (though it is not under a legal obligation to do so). It for example partakes in the Council for Economic Affairs, the Central Economic Commission, the Social and Economic Council, and the Study Group on the Budget Margin. The Bank’s recommendations concern in particular its view on the size of the budget

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13 With a view to the upcoming Economic and Monetary Union the tasks of the Bank Council have been revised. For further information see Chapter 3.
14 The Council for Economic Affairs, the Central Economic Commission and the Social Economic Council advise the government on a broad range of socio-economic issues. Whilst the Council for Economic Affairs
deficit. In the past the Bank also regularly stressed its preference for financing the budget on the capital market. Since the Second World War fiscal strategies have changed a number of times. The Bank did not instigate these changes. Rather, it accepted the ruling strategy as a premise, whilst promoting its enforcement and stimulating transparency, consistency and prudence on the part of the government. For this reason the Bank’s view on the permissible size of the budget deficit has fluctuated over time.

In contrast, the Bank’s view on the foundations for a sound wage development has been remarkably stable over the years. In general, wage increases ought to be consistent with low inflation and satisfactory business sector profitability. This may be achieved if the following three guidelines are adhered to. First, in the longer run increases in real labour costs need to keep pace with productivity increases, adjusted for changes in the terms of trade. Second, the nominal component of total wage growth needs to correspond with price stability. Third, nominal wages should not adjust to changes in rates of indirect taxation or government subsidies to wage earners. In times of inadequate business sector profitability, real wage increases should lag behind productivity increases for some time, thereby allowing a recovery of the financial position of the business sector. Excessive wage increases will result in a loss of competitiveness, thus enforcing discipline in the wage determination process. This plea for responsible wage setting behaviour should not be mistaken for an argument in favour of constant wage restraint. Such a strategy would boil down to either a continuous improvement of competitiveness, i.e. a ‘beggar-thy-neighbour-policy’, or a continuous improvement of business sector profits at the expense of labour income. Of course, in practice it may be extremely difficult to judge whether business sector profitability is adequate. For example, just after the Second World War wage restraint was undoubtedly necessary in the Netherlands. With hindsight, however, this policy was continued for too long. In a situation of overemployment it finally provoked a wage explosion in 1963. The consequent price-wage spiral could only be broken in the 1980s.
Chapter 3 Trends in monetary strategy

During the post-war period the Netherlands did not experience any drastic changes in the conduct of monetary policy. Not surprisingly given its monetarist characteristics, Dutch monetary policy turned out to be relatively immune to the power shift between Keynesians and monetarists, which strongly influenced monetary policy in many other countries. This chapter describes the main developments with regard to the objectives, target variables and indicators of monetary policy.

3.1 Price stability as the final objective

Over the years, as national monetary policies aimed at stabilising the business cycle gradually became less effective in small open economies with a fixed exchange rate due to the integration of international financial markets, the emphasis of Dutch monetary policy increasingly shifted more towards maintaining price stability. This shift was reinforced by a policy reorientation towards Germany (see below), where monetary policy focused mainly on price stability in the medium term. Developments in mainstream monetary thinking also made a contribution. Firstly, economists and policy-makers came to appreciate the fact that attempts to stabilise the business cycle suffered from long, variable and indeed unpredictable lags in the effects of policy changes.\textsuperscript{15} Secondly, the idea that the trade-off between employment and inflation existed at best in the short term, gained foothold. In the longer run expansionary monetary policies would only lead to higher (expected) inflation. In other words, the well-known Phillips curve, which visualises the trade-off between employment and inflation, was seen to be vertical in the long run. Thirdly, experience taught that inflation expectations, once high, take time to adjust downward. Thus, inflation is easier to prevent than to cure. In sum, the authorities came to the conclusion that focusing monetary policy on price stability best safeguarded long-term growth and employment.

Since the late 1980s a more precise definition of price stability has been worked out. At present, in Europe price stability is understood to mean an increase of the consumption price index in the medium term of 2% or below. Greenspan, the current chairman of the American Federal Reserve System (FED), defines price stability as a rate of inflation that does not affect economic decisions. Of course, such an abstract definition is not easily translated into operational terms. In practice, the FED seems willing to accept a somewhat higher rate of inflation than the monetary authorities in Europe.

Price stability is generally not defined as a single figure so as to take account of measurement errors. It is believed that, on the whole, measured inflation overstates actual inflation. For this reason the definition comprises only positive values. Distortions arise not only from the fact that price increases are partly induced by quality improvements but also from the fact that goods which are subject to relative price increases tend to

\textsuperscript{15} This was expressed for the first time by Friedman (1959), p. 87-88.
be consumed less over time (= substitution effect). This latter effect only makes itself felt when price indexes are constructed on the basis of a fixed basket of consumption goods determined in some base year.  

3.2 Towards an exchange rate policy

During the period under discussion gradual changes occurred with regard to the relative weights attached to the various intermediate targets (liquidity ratio, domestic money creation, current account of the balance of payments, and exchange rate). On the whole, these changes arose gradually. They represented not so much a shift in the philosophy behind monetary policy, but rather a practical adjustment to changes in the national and international economic environment, in particular with respect to the financial system. These changes concerned the combined effects of liberalisation and deregulation of the financial sector and revolutionary developments in communication technologies, the result of which was a dramatic increase in international capital flows.

Immediately after the Second World War Dutch foreign exchange reserves were extraordinarily low, whilst the exchange rate was fixed. This placed the current account of the balance of payments in the foreground, explaining why domestic money creation rather than the liquidity ratio constituted the main intermediate target variable of monetary policy in the short term. The liquidity ratio could be influenced only in the longer term. Over time, the current account improved structurally. In the majority of years current account surpluses were recorded.  

For this reason, attention shifted towards the liquidity ratio, although the current account and domestic money creation never completely vanished from view. In times of current account deficits the old approach resurfaced. Roughly speaking, the first approach was applied until the early 1970s, the second one until the mid-1980s.

During the first two decades following World War II the Dutch preference for fixed exchange rates revealed itself in the participation in the Bretton Woods system. In this system exchange rates fluctuated within a narrow range. In the case of fundamental imbalances exchange rates could be realigned, provided, though, that the International Monetary Fund (IMF) consented to such a move. The Dutch went about cautiously with exchange rate adjustments. For example, in 1961 the Nederlandsche Bank only reluctantly agreed to a revaluation of the guilder in the wake of the revaluation of the Deutsche mark. The Minister of Finance ultimately decided on matters regarding the guilder’s exchange rate, after having consulted the Nederlandsche Bank.

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16 Various studies with regard to the issue of measurement biases have been published in recent years. These estimates suggest a bias in the consumption price index of around 1.1 percentage points in the United States, as against 0.75 percentage point in Germany and up to 0.25 percentage points in France. For more information the reader is referred to Boskin et al. (1996), Hoffman (1998), and Lequiller (1997).

17 For a more detailed discussion of the development of the current account, see chapter 5.
At first, the nominal anchor provided for in the Bretton Woods system was gold. All currencies were tied to the dollar, which, in turn, was tied to gold. Before long the dollar assumed this role, as most countries refrained from exchanging dollars received for gold. This allowed the United States to finance its current account deficits more easily than other countries. After all, dollars constituted the principal global reserve currency. Thus, the external discipline imposed by the system applied less to the United States than to the other participants.

The Bretton Woods system began to break down in the mid-1960s. The principal reason was that the United States, partly in order to finance the war in Vietnam, pursued inflationary policies. This resulted in significant current account imbalances. Countries such as Germany registered large surpluses. In these countries the continuous inflow of liquidity hindered monetary policy. Maintaining the price of gold in terms of dollars proved increasingly difficult. When President Nixon of the United States suspended the convertibility of the dollar into gold at the beginning of the 1970s, the system finally collapsed. Many countries sought refuge in flexible exchange rates, believing that flexible exchange rates provided protection against inflationary influences from abroad.

The Dutch monetary authorities never fully shared this optimism. Instead, they continued to attach great importance to stable exchange rates. For that reason the Netherlands joined the exchange rate agreements entered into by a number of European countries upon the demise of Bretton Woods, better known as the Snake arrangement. The Snake did not turn out to be an unqualified success. In particular, the number of participants varied considerably, thereby narrowing the basis for the agreement. More far-reaching agreements proved only possible at the end of the 1970s, once many countries had become convinced that flexible exchange rates did not live up to expectations. On the initiative of Helmut Schmidt (then Chancellor of the Federal Republic of Germany) and Valéry Giscard d’Estaing (then President of France) the European Monetary System (EMS) was founded on 13 March 1979. At the heart of the system was the exchange rate mechanism, designed to create a zone of monetary stability in Europe. It goes without saying that the Dutch monetary authorities applauded the establishment of the EMS and that the Netherlands participated in it.

With the reduced role of the dollar as nominal anchor, the orientation of Dutch policy shifted towards the Deutsche mark in the 1970s. The resulting peg to the Deutsche mark was initially not consciously planned, but came about gradually. Although the arguments in favour of the peg follow logically from the premises of Dutch monetary policy, they were explicated only after the peg had been maintained for some time. Of key importance was the argument that the peg allowed the Dutch monetary authorities to copy Germany’s low inflation record by imposing external discipline on domestic macro-economic policies, thereby ensuring a relatively low rate of interest. A system such as the EMS has also served as a handle on economic policy co-

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18 Berk and Winder (1994) show that this indeed holds for the EMS period.
ordination. In addition, exchange rate stability provides certainty to those Dutch businesses trading or competing with German companies about the nominal price structure they face, all the more so if there are more countries pegging their currency to the Deutsche mark. Furthermore, an exchange rate policy has the advantage of being fairly uncomplicated. The exchange rate can be observed at all times, whilst, technically speaking, short-term interest rates are easily controlled. Finally, monetary policy based on exchange rate targeting is transparent to the public. Admittedly, pegging the guilder to the Deutsche mark also has certain disadvantages. The rate of inflation in the Netherlands may in the short term diverge from that in Germany. This may lead to fluctuations in the Dutch competitive position. Moreover, there exist certain structural differences between the Dutch and the German economy, whilst their business cycles are not perfectly synchronised. For that reason the interest rate level suitable to the German economy may occasionally, from a purely domestic point of view, not be equally suitable to the Dutch economy. The Dutch monetary authorities have always been aware of these costs. However, they have always accepted them as they believe that the benefits in terms of structurally low inflation and structurally low interest rates are far greater.

An exchange rate target is not difficult to meet in technical terms, provided that the monetary authorities are prepared to defend the peg even if this requires sharp increases in short-term interest rates. The Dutch monetary authorities are of the opinion that interest rate measures are more effective than interventions in the foreign exchange markets, particularly as financial markets occasionally view interventions as a sign of weakness rather than strength, thus exacerbating existing exchange rate pressures. Once the reputation of the authorities has been established, the price for exchange rate stability in terms of high short-term interest rates need not be paid in practice. Domestic interest rates will closely follow those of the anchor country whilst exchange rate expectations are stable. Credibility is not easily gained in financial markets. It took the Dutch monetary authorities the second half of the 1970s and a large part of the 1980s to build up a strong reputation, among other things by showing willingness to hike the short-term interest rate in defence of the guilder, initially if need be by a substantial amount.

The monetary authorities in the Netherlands have regularly been criticised for their exchange rate policy. In particular, it has been argued that the peg to the Deutsche mark and the resulting strength of the guilder harmed the competitive position of the Netherlands. Arguments in favour of devaluation were expressed mainly, but not exclusively, in the 1970s and 1980s. A 1990 study of the position of the Dutch industrial sector by Van der Zwan and others concluded that the interest rate level associated with the peg was harmful to both industry and the government sector. Van Wijnbergen made the point that differences in structural developments between Germany and the Netherlands warranted abolishing the peg. In 1991, Brakman, De Haan and Jepma indeed argued in favour of a revaluation of the guilder, based on increasing German inflation, and the limited scope for further interest rate reduction in the Netherlands. A few years later, Metten again favoured a weaker guilder to improve the per capita income position of the country. In his view,
the benefits of a moderate wage development for the competitive position of the Netherlands were diminished by the strength of the guilder. The Nederlandsche Bank, however, has always believed that changes in the nominal exchange rate will only temporarily lead to competitive advantages. Ultimately, they will be completely absorbed by changes in the rate of inflation. For that reason exchange rates should not be adjusted for competitive gain. Problems in terms of a lagging per capita income in the early 1990s should be attributed to malfunctioning labour and product markets and disincentives stemming from the social security system, which in the Bank’s view should not be compensated for by a weak guilder. The exchange rate should only be adjusted when relative nominal developments diverge to such an extent that they can only be corrected at great costs in real terms. Thus, exchange rate realignments must be viewed as a ‘remedy of last resort’. This view became accepted in Dutch politics only after the experience of the 1983 devaluation. In March 1983 the opportunity of a realignment within the EMS was seized to devalue the guilder by 2% so as to stimulate exports. Yet exports were stimulated at best temporarily, whilst it would seem that for years interest rates in the Netherlands (both on the money and on the capital markets) exceeded levels which would have applied, had the devaluation not occurred. After all, investors required compensation for the possibility of another devaluation. Since 1983 the guilder and the Deutsche mark have not been realigned. As a matter of fact, the peg has become stronger over time. In practice, the range of fluctuation is far narrower than the 2½%-margins, which have been agreed upon.¹⁹

All this begs the question of when nominal divergences must be deemed large enough to warrant exchange rate realignments. This question is not easily answered. It would seem that president Holtrop of the Nederlandsche Bank found realignments wholly unacceptable, whilst his successors Zijlstra and Duisenberg took the view that under certain circumstances realignments were inevitable. However, all shared the view that realignments needed to be accompanied by appropriate policies so as to avoid further adjustments in the future.

Though the Bretton Woods system collapsed well over twenty-five years ago, certain traces are still visible. This concerns in particular the relatively large gold reserves held by the Nederlandsche Bank. In order to bring the share of gold in the Bank’s total gold and foreign exchange holdings more into line with that of other major gold-holding countries, 400 tonnes of gold were sold in 1992 and another 300 tonnes in 1996. Clearly, gold no longer plays an active role in monetary policy nor does the Bank strive for such a role.

Since the demise of Bretton Woods, the three main economic blocs (United States, Japan and Europe) have refrained from entering into new exchange rate arrangements, even though within Europe a system of fixed exchange rates was established fairly soon. These European exchange rate arrangements were initially

¹⁹ For a more detailed discussion of the guilder / Deutsche mark exchange rate, see chapter 5.
viewed as a stepping stone towards the restoration of a global system of stable exchange rates. However, the Bank has had to acquiesce in the fact that the differences between the main economic blocks, including sometimes differences in terms of monetary philosophy, have been too large to make exchange rate agreements possible, or even desirable. That does not alter the fact that as a matter of principle the Bank still is a proponent of international policy co-ordination. In fact, in the Bank’s view it is impossible to uphold exchange rate arrangements that are not backed by policy co-ordination. Neither does it make sense. Interventions in foreign exchange markets alone will ultimately not suffice to stabilise exchange rates or redirect their course. Whilst this applied in large measure to the past, when capital movements were limited, it is an inescapable truth in today’s world, in which trade in currency markets amounts to more than 1 trillion dollars each day.

3.3 Implications of financial sector liberalisation

Whilst Dutch exchange rate policy was increasingly being geared towards the Deutsche mark, the difficulties experienced in combining exchange rate strategies and money supply policies gradually increased. The liberalisation of international capital flows in the 1970s and 1980s affected monetary transmission, because the liquidity ratio became even more demand-determined. Restrictions on domestic credit expansion became less effective in reducing the money supply and thus the liquidity ratio, leading to foreign inflows of capital instead. Money supply policies (broad monetary policy) were aimed at the long-term end of the market, whereas money market policies geared towards the exchange rate (narrow monetary policy) 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 a dual monetary strategy. The almost complete liberalisation 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, thereby also eroding the usefulness of the distinction between broad and narrow monetary policy. Moreover, in the 1980s, not only did the possibilities to conduct money supply policies decline, but also the actual development in the liquidity ratio became difficult to explain. A persistent increase of the ratio coincided with a decrease in inflation, which made it hard to defend measures to reduce domestic credit expansion. This means 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 relationship with the final target, were compromised.

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20 See for example the Nederlandsche Bank’s annual reports on 1973 and 1974, p. 17 and p. 17-18, respectively.

21 Kuipers and Sterken (1995), however, made the point that due to asymmetric information small and medium-sized businesses are by and large denied access to international financial markets and the international credit system. Given limited capital mobility in this segment, the Nederlandsche Bank had greater control over the money supply than it admitted to, according to the authors.

22 See De Haan cs (1994), Fase and Winder (1990), and Kuipers and Boertje (1988).

23 See also the discussion of the liquidity ratio in chapter 5.
These developments resulted in two subsequent changes in the focus of broad monetary policy. The first amounted to the gradual subordination of money supply policy to exchange rate policy. It included a shift from targeting the liquidity ratio to the avoidance of permanent liquidity outflows. In gearing domestic money creation towards equilibrating 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, this strategy would support the exchange rate in situations where a continuous outflow of capital created downward pressures on the guilder. It would avoid sharp increases in the short-term interest rate that would otherwise be necessary to sustain the currency peg. This policy clearly had a medium-term perspective.

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 outflows subsequently put pressure on the exchange rate.

At the beginning of the 1990s, however, only the first assumption was still considered valid. This brought about a second shift in the focus of monetary policy. Restrictions on domestic money creation would only be introduced if:

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

These conditions were very strict and never materialized. The result was that in fact Dutch monetary policy in the 1990s had become pure exchange rate policy.

3.4 The analytical framework

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24 See Fase (1985), Wellink (1989) and the Nederlandsche Bank’s 1991 annual report. Monetary policy was aimed at the balance of non-monetary sectors of the economy as it was presumed that the banking sector (including the Nederlandsche Bank) would balance the transactions of the other sectors.

25 This is explained in the Nederlandsche Bank’s 1991 annual report. For an analysis of recent Dutch monetary policy, see Kool (1995).
The post-war Dutch framework for monetary analysis as described in section 2.2 triggered an interesting debate, both at a national and an international level. From this debate it became clear that the analysis had merits in that it provided a framework for analysing monetary developments, both at an aggregate and a sectoral level. It was particularly relevant to small open economies, where external developments form an important factor influencing monetary outcomes. In this respect, the analysis showed similarities to the framework used by the International Monetary Fund (IMF) in developing monetary adjustment programs for its member countries suffering from balance of payments imbalances. From this perspective, the Dutch model drew the attention from staff of the IMF.

However, the debate also showed a number of interrelated weaknesses of the model, as summarized in Box 1 (p. 5):

- the system consisted only of identities, and did not contain behavioural equations; this made it difficult to make a clear distinction between causes and reactions (the so-called causality problem), i.e., whether a change in a sector’s liquidity position was an impulse by the sector itself or a reaction to impulses by other sectors; to determine impulses an estimate had to be made of the ‘normal’ liquidity position of the private sector, which in practice was done rather roughly by assuming a constant liquidity ratio (ratio of money to income);

- there were no feedback mechanisms; income and the balance of payments were exogenous variables, and relationships linking monetary and real economic developments were mostly absent;

- there was no lag-structure and all adjustments were supposed to take place within one year; furthermore, there was a dimensional problem (Polak (1961)).

In practice, the impulse analysis was basically a backward-looking instrument, used to assist in assessing cyclical developments. The detailed analysis and quantification of inflationary (and deflationary) impulses was gradually abandoned in the 1970s. The related analysis of the sources of money creation was retained far longer. In fact, this part of it became one of the cornerstones of monetary analysis and policy by the Nederlandsche Bank during much of the post-war period. However, once the monetary policy shift towards exchange rate policy had been completed, the analysis of the sources of money creation gradually became less important as well. In itself pure exchange rate policy requires little formal analysis. Nonetheless, the Nederlandsche Bank has always found it prudent to monitor economic and monetary developments at home and abroad. To this end, more general econometric models were developed by the Bank’s research

26 See, for example, Witteveen (1955), Polak (1966), Kessler (1972), Selden (1975), Gutiérrez (1977), and Fase (1987).
department to analyse and assess monetary developments and simulate policy responses. These models also served as an expedient tool in advising the government on matters of economic policy.

### 3.5 Institutional developments

For most of the post-war period the Nederlandsche Bank’s institutional framework remained essentially unaltered. Only recently did some major institutional changes occur, mostly in connection with the establishment of the Economic and Monetary Union (EMU) in Europe on 1 January 1999. On 1 June 1998 the Nederlandsche Bank, together with the central banks of the other countries participating in EMU and the European Central Bank (ECB), became part of the European System of Central Banks (ESCB). From 1999 on, the Bank’s decision-making powers on matters of monetary policy will be handed over to the ECB’s Governing Council. In preparation for this, the Bank had to gain complete independence. This meant, in particular, that the ties with the Ministry of Finance had to be cut. To this end a new Bank Act was drawn up, which came into effect in 1998. In this new law, the Minister of Finance’s right to give directions to the Nederlandsche Bank has been terminated. In addition, since its remaining advisory tasks to the Minister of Finance have been abolished, the Bank Council has been transformed into an internal body. Nowadays, the Bank Council primarily functions as a forum for the Bank to exchange information with the various socio-economic groupings of Dutch society. The Act on the Supervision of the Credit System was already amended in 1992. It is no longer required that the banking sector agrees to the design and the application of the Nederlandsche Bank’s monetary instruments. In this respect, too, the role of the Minister of Finance in the Bank’s doings has disappeared.

Nonetheless, while heeding its formal independence and other provisos embedded in the statutes of the ESCB, the Bank will keep in close touch with the Ministry of Finance and the banking sector. In addition, the president of the Nederlandsche Bank will, on request or on his own initiative, inform Parliament on the ESCB’s policies. The Bank views transparency with regard to the ESCB’s policies as a necessary supplement to its independence because it both enhances the effectiveness of policy measures by creating the correct expectations by the economic agents and structures the discussions held within the ESCB.

Since the start of the second stage of EMU on 1 January 1994 the government is no longer allowed to borrow from the Nederlandsche Bank. Furthermore, though the government still has an account with the Nederlandsche Bank, it has been agreed to stabilise the outstanding balance at around Fl. 50 million from 1 January 1997 onwards. Instead, it may issue a limited amount of short-term negotiable debt, so-called Dutch Treasury Certificates (DTCs). Initially, the upper limit was set at Fl. 10 billion, though it has subsequently been stretched to Fl. 30 billion (4½ per cent of GDP). The advantages of these new arrangements are twofold. Firstly, the Nederlandsche Bank has better control over money market developments. Secondly, DTCs are
more market-based than is monetary financing. Banks can decide on the share of short-term government debt in their portfolios and thereby influence the total amount of short-term government debt absorbed by the market.

The member states of the European Union have moved to harmonise the definition of monetary aggregates (money supply). For purposes of policy and analysis it was agreed that a harmonised measure of broad money, or M3H, would be used. For the Netherlands this meant adding short-term savings (< 2 years) to M2, whilst removing short-term government debt held by the public. All in all, broad money according to the new definition came out substantially higher than according to the old one. The removal of short-term government debt from the concept of broad money, however, did not have a large impact in quantitative terms. That is only logical given that in principle the government finances the budgetary deficit on the market for long-term capital. As a matter of fact, precisely because the government in principle finances its deficits at the long-term end of the capital market, could the Nederlandsche Bank agree to the definition of harmonised broad money. The ESCB will conduct its analysis of monetary developments on the basis of monetary aggregates defined in a uniform way. This implies that M3H will be replaced by a new broad monetary aggregate, M3B. Although M3H provided a harmonised definition, there were still differences in measurement across countries and cross-borderholdings of money in countries participating in EMU were not included. The new monetary aggregate takes account of these deficiencies.

An interesting development is that in the 1992 Act on the Supervision of the Credit System the provision allowing the introduction of supervision of near-banks was dropped. This may come as a surprise. During the last few decades opportunities for companies to gain access to capital markets have increased markedly. Dutch companies have cashed in on these opportunities, though to a lesser degree than their American counterparts. Until the early 1990s the Nederlandsche Bank monitored the development of near-banking activities with the help of surveys. The Act was amended and the surveys were abolished in part so as to reduce the mass of paperwork burdening the business sector. In addition, the Bank was reluctant to impose supervision on a large number of companies as near-banking activities increased. In any case, such a move would not be justified in light of the fact that the Netherlands pursued an exchange rate policy. Although this will be different in EMU, it is highly unlikely that this would lead to reimposing supervision on near-banks.

3.6 The role of supporting policies

As was noticed earlier, the Bank’s views on what constitutes a sound wage development, have been remarkably constant over time. Yet its views on how to bring this about, have changed. A parallel shift

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28 For details, see EMI (1996).
occurred in society at large. The idea of income policies such as those introduced shortly after the Second World War, has been abandoned. At present, it is generally believed that the wage determination process is best left to the market. How to combine such free market thinking with elements of the post-war Dutch consensus model (such as the administrative extension of collective wage agreements to cover all businesses in the sector concerned) has not yet been fully resolved.

The Nederlandsche Bank supports the drive for more flexible labour markets, which is evident from current economic policies. Yet it should be noted that too much flexibility in the wage determination process might introduce instability in the sphere of price determination. In other words, there may be a trade-off between flexibility and stability. Hicks and Keynes had already expounded this view in the 1930s. They stressed that a certain degree of nominal wage rigidity was needed to guarantee price stability. Without price stability the market mechanism cannot function properly. For the moment, though, the view predominates that due to excessive labour market rigidities the introduction of more flexibility is not (yet) at odds with price stability.

The Nederlandsche Bank holds to the view that monetary policy must be supported by adequate fiscal policies. The meaning of ‘adequate’ in this context has changed, though. Since the Second World War the Netherlands has pursued anti-cyclical budgetary policies (1957–1960), a structural deficit norm (1961–1974) and a deficit reduction time path (1980–1994). Currently, a real net expenditure limit is wielded in combination with a deficit ceiling. Although the formulation of such budgetary norms has naturally been the domain of the government, the Bank has always critically monitored budgetary policy, commenting on recent developments for example in its annual report. In recent years particular attention was devoted to the convergence criteria contained in the Maastricht Treaty. These criteria, stipulating the reduction of the budget deficit and general government gross financial liabilities as a percentage of GDP to a maximum of 3% and 60%, respectively, determined in large measure the decision by the heads of state of the European Union in May 1998 which countries could join EMU in the first wave. From 1999 onwards the Stability and Growth Pact will be the major guideline in the sphere of budgetary policy. Countries have the obligation to bring the government budget in line with the Pact’s requirement of “close to balance or surplus in the medium term”.

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29 Keynes states: “In fact we must have a factor, the value of which in terms of money is, if not fixed, at least sticky, to give us any stability of values in a monetary system” (Keynes (1936), p. 304). Hicks remarks: “A monetary system… is inherently unstable; it needs to have frictions imposed upon it to make it work. They will be frictions from the point of view of the arm’s length ‘price-mechanism’, which I do not at all deny has a part – a great part – to play. From that point of view they are a nuisance. Still we need them” (Hicks (1982), p. 275). Lerner pointed out: “Any money which was completely cured of wage and price rigidity would not be able to survive as money” (Lerner (1952), p. 191). Hoogduin (1991) elaborates on this theme in chapter 4.

30 See Wellink (1996).
Chapter 4 Monetary policy implementation

During the post-war period, a number of monetary instruments have been used in the Netherlands. This chapter will first set forth some definitional issues. It appears that, in particular in the Dutch context, it is useful to distinguish between the character of an instrument in terms of its primary target (direct versus indirect controls) and its degree of market orientation. Against this backdrop, the gradual development in the use of credit controls is then discussed, from very rigid qualitative credit ceilings toward more market-based systems (see table 1).

Table 1: Post-War Instruments of Credit Control in the Netherlands

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

The various exchange rate instruments deployed by the Dutch authorities are discussed separately towards the end of this chapter. As will be evident from the discussion, the changes that have occurred over time in the monetary apparatus are closely bound up with the transformation of Dutch monetary policy into a pure exchange rate policy.

4.1 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. The instruments of the first category are called "direct", because they directly affect the banks' position vis-à-vis the non-bank 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 credit or deposits (interest rate controls) or restrictions on the size of credits (credit ceilings). Of course, direct controls require a sound legal framework, since these regulations affect financial relationships that do not involve the central bank.

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 funds (deposit and credit rates). In a liberalised environment, money market policies will also have implications for the exchange rate, which may be an important additional transmission channel of monetary policy.

Another 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.

4.2 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 fitted 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

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31 For more details about the difference between direct and indirect monetary instruments, see Balino and Zamalloa (1997), Alexander, Balino and Enoch (1995), and Hilbers (1993).
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 stabilising the general price level, as indicated above. Toward the end of the 1950s, however, the need for the Nederlandsche Bank to exert these rather detailed and rigid controls gradually disappeared.\footnote{There was one exception: during 1969-72 there was a restriction on personal loans, introduced at the request of the Minister of Finance.}

\subsection*{4.3 1960s: Quantitative restrictions}

At the beginning of the 1960s, quantitative credit controls were introduced by which the growth of total bank credit, irrespective of its sectoral distribution, was limited.\footnote{Van Straaten (1989), Wellink (1994).} These restrictions took the form of a maximum growth rate for an individual bank's 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).

\subsection*{4.4 Liquidity reserve requirement (1973–79)}

During the 1970s, the Nederlandsche 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 hold 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. This reflected 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.

\footnote{For details on credit ceilings, see Farahbaksh and Sensenbrenner (1997).}
4.5 Net credit restriction (1977–81)

In 1977, credit ceilings were reinstalled in response to the rapid increase in the liquidity ratio in the first half of the 1970s. The aim was to reduce the liquidity ratio by some four percentage points to around 36%. 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. 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 would credit ceilings 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, issues of bonds, and the like), created more room for market forces and competition in determining the outcome.

4.6 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 an exchange rate system of stable, albeit adjustable, par values. This also meant that circumvention by channelling credits through foreign branches became more of a problem for the monetary authorities. In addition, international capital flows became an indicator for monetary policy. Ample domestic credit expansion resulted less than in the past in domestic inflation and current account imbalances. Instead, it led to outflows of liquidity through the capital account of the balance of payments, potentially putting pressure on the exchange rate. All of these factors resulted in 1986 in a “gentlemen’s agreement” between the Nederlandsche Bank and the banking sector to limit credit expansion in 1986 to 5½–6 percent.

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 had occurred, and

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35 Credit ceilings were based on the Act on the Supervision of the Credit System, which described the various instruments the central bank could use in controlling monetary developments.
36 Swank (1994).
37 Van der Werff and Sluijter (1989). The reason to opt for an agreement instead of a formal credit restriction under 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 revision of the Act in 1992.
the yield curve had flattened in comparison to the anchor country, Germany. Thus, the agreement was extended to cover two years, with net 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 allowing these institutions 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.

4.7 Open-market policy in the capital market (1989)

In October 1987, while the gentlemen's agreement regarding credit growth was still valid, the Nederlandsche 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 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 Nederlandsche Bank would indicate that it favoured a somewhat steeper curve (a higher long-term interest rate), thereby mitigating possible exchange rate pressures caused by capital outflows. Given the modest size of the portfolio (3 billion guilders, or approximately 1 billion US 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 signalling role. The underlying idea was that banks would react to the policy intentions of the Nederlandsche Bank by adjusting their credit and funding policies. This reaction would be reinforced 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 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 and a reversal of capital outflows.

Later in that same year, the Nederlandsche 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 signalling 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.

4.8 Monetary cash reserve (1989 - 90)

In the spring of 1989, agreement was reached with the banking sector about a new instrument of monetary policy. The driving force was the need to develop an instrument to control credit growth in a more market-based fashion than by straightforward net 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.

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. 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 emphasised that the MCR also clearly differed from traditional cash reserve arrangements which, when aimed at monetary control, influence credit expansion through their effect on money market conditions. The MCR hardly affected money market conditions because the banks did not

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actually have to hold the reserves. This made it quite a unique instrument of monetary control, which has had few counterparts in other countries.

The MCR first became effective in July 1989. The arrangement 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.\textsuperscript{40}

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 never developed, and the Netherlands fully relied on exchange rate policy from the early 1990s onwards.

4.9 Money market policies aimed at the exchange rate

Throughout the post-war period the key instruments deployed in Dutch exchange rate policies have been those geared towards the money market. However, during the 1950s the exchange rate did not require very active management. This followed from the prevalence of stringent restrictions on capital movements, the virtual absence of speculation on the money markets and prevailing current account surpluses. Interest rate policy was aimed at keeping the rates low enough to induce the banking sector to hold balance-of-payments surpluses in the form of foreign rather than domestic assets, thus preventing 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 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. Note that the government by and large refrained from monetary financing, so that balance-of-payments surpluses did not inflate the economy. 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 Nederlandsche 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. In the end, a money market deficit arose, driving the banks into the arms of the central bank. As a result, the official rates started to function as a floor. The central bank also influenced

\textsuperscript{40} Van Rooden (1990).
money market conditions by using foreign exchange interventions, both through outright transactions and by conducting currency swaps.

In the 1970s, the Nederlandsche Bank broadened its range 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 “quota”).\(^{41}\) 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.

Gradually, money market policies became fully determined by exchange rate purposes. By influencing money market conditions, both in terms of rates and volumes, the interest rate was influenced to keep the guilder within narrow bands around its parity in terms of the Deutsche mark. The Nederlandsche Bank used a number of instruments to regulate the banking sector's liquidity. The system of advances provides the banks with the bulk of their financing needs. However, this system did not cover the entire demand for central bank money, and therefore additional special advances were provided, when needed, through an auction. Now and then the Nederlandsche Bank intervened through foreign currency swaps and, even more exceptionally, through interventions in the call money market.\(^{42}\)

In 1988, a money market cash reserve requirement was introduced. This instrument was aimed at absorbing excess liquidity in the banking sector, and therefore it was clearly very different from the monetary cash reserve arrangement mentioned above. The money market cash reserve requirement determined 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 was calculated on the basis of the bank’s liabilities. This cash reserve was the successor to the earlier cash reserve requirements that dated back to the 1950s. An important difference was that the money market cash reserve carried a market-based interest rate. During the first few years of its existence the size of required reserves increased dramatically, mainly to counter the effects of the crisis in the European Monetary System, whereas more recently the required amounts decreased in reaction to the introduction of central bank paper. This central bank paper (Nederlandsche Bank Certificates or NBCs) was first auctioned to the banks in 1994. Sales of NBCs were aimed at absorbing excess liquidity, but in a more market-based fashion than under a reserve requirement.

4.10 Recent developments in money market instruments

\(^{41}\) Den Dunnen (1985).
\(^{42}\) The Nederlandsche Bank conducted open-market operations relatively infrequently, thereby avoiding a continuous presence in the market, which may have strengthened its autonomy (De Beaufort Wijnholds and Hoogduin (1993)).
Recently, the instruments were adjusted to prepare for the move toward Economic and Monetary Union in Europe 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 marginal lending (Lombard) facility was introduced; and special advances have been provided on a regular basis. The size of the money market reserve requirement was based on considerations of interest rate stabilisation, and the remaining excess liquidity was absorbed through the sale of Nederlandsche Bank Certificates (NBCs) and/or foreign currency swaps. Leading up to EMU, the use of NBCs was gradually phased out.

4.11 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, more indirect monetary instruments have gradually replaced direct credit controls. Second, the market orientation of the instruments used has increased gradually. In both cases, there is a clear relationship with changes in monetary strategy and the liberalisation of financial markets. The transition from a dual strategy aimed at targeting both the liquidity ratio and the exchange rate to pure exchange rate policy, 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. Alternatively, the liquidity reserve system of the 1970s was an early example of an indirect instrument aimed at controlling money growth. Nevertheless, it is clear that the transition toward a full-fledged exchange rate policy contributed to the demise of direct instruments because the exchange rate was 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 (see table 2).

Table 2: Classification of Dutch Monetary Instruments

<table>
<thead>
<tr>
<th>Direct:</th>
<th>Qualitative credit controls</th>
<th>Quantitative credit controls</th>
<th>Net credit controls</th>
<th>Net credit controls + trade in margins</th>
<th>Monetary cash reserve requirements</th>
</tr>
</thead>
<tbody>
<tr>
<td>Signalling:</td>
<td>Open-market policy in the capital market</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Indirect:</td>
<td>Quota system</td>
<td>Cash reserves</td>
<td>Remunerated cash reserves</td>
<td>Swaps</td>
<td>Special loans</td>
</tr>
</tbody>
</table>

Note: The degree of market orientation of a monetary instrument cannot exactly be 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.
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 trading 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 above 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 shift 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 liberalised Dutch financial system.

4.12 International comparison

In comparison with other countries the Netherlands stands out as it held on to direct instruments relatively long, as it did to the combination of a money supply policy, a stable exchange rate and relatively liberal capital movements. In both cases it was apparently believed that even if no benefit was derived from such a strategy, neither could it do much harm. Welfare theory in fact suggests that such a line of argument is questionable. Yet it should be borne in mind that the said restrictions were in place for only limited periods of time, while they rarely were biting. The proof of the pudding is in the eating: monetary conditions and exchange rate developments did not lead to significant imbalances in the real economy, whilst the banking sector, which bore the brunt of monetary measures, flourished in the years concerned. An important factor behind this result may have been the extensive consultations between the central bank and the banking sector on matters of monetary policy, which constitutes one of the fairly unique features of the Dutch consensus model. This allowed the elimination of potentially damaging elements from the set of monetary instruments. In any case, some of the more rigid forms of credit control were abolished along with the revision of the Act on the Supervision of the Credit System in 1992.
Finally, it should be pointed out that for a long time the Dutch range of money market instruments deviated markedly from international practice for example in that it lacked a Lombard-like rate and repos. However, this did not influence the effectiveness of Dutch interest rate policies in any way.
Chapter 5 Policy achievements

5.1 Inflation in the Netherlands

This overview would not, of course, be complete without a discussion of the achievements of Dutch monetary policy in terms of its primary final objective, price stability. During the post-war period as a whole the Netherlands did not enjoy price stability (inflation of 2% or below). On average, inflation ran at 4.4%. This is nonetheless slightly lower than the OECD average, which came out at 4.6%. Germany, on the other hand, did considerably better, recording an average rate of inflation of only 3.3%. The difference between the Netherlands and Germany is mainly the result of developments in the 1940s, the 1950s and 1970s. While the 1940s and 1950s are hardly representative due to differing economic circumstances following the Second World War, the Netherlands did indeed underperform in terms of inflation compared to Germany in the aftermath of the oil crises in the 1970s. Since the Second World War the Netherlands has known 13 years characterised by price stability. In this respect, the Netherlands scores better than both the OECD area as a whole (5 years of price stability, the last of which in 1960!) and, interestingly, Germany (12 years of price stability). From table 3 it is evident that since 1983 the Netherlands has been characterised by low inflation over a longer period. This is in part the result of more moderate inflation world-wide during the last decade, but can also be traced to the fact that precisely in 1983 the peg to the Deutsche mark was definitely realised.

The post-war era may be subdivided roughly into four periods: 1945-1951, 1952-1962, 1963-1982 and 1983-present. During the first period, the Netherlands suffers from the aftermath of the war. Inflation is generally high due to the scarcity of goods in combination with the dissolution of price controls and distribution systems. At the beginning of the 1950s the Netherlands regains control over price developments, an occasional flare-up aside. The year 1963, however, marks the start of a protracted period of inflation. In this year wage developments ran out of control. Yet the
Table 3 inflation in the Netherlands, Germany and the OECD

<table>
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<th>Germany</th>
<th>OECD ¹</th>
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<td>1997</td>
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average:

1945-97  4.4  3.3  4.6
1983-97  2.0  2.2  3.6

¹) Excluding Czech Republic, Hungary, Mexico, South-Korea and Turkey
causes of inflation were not confined to purely domestic ones. In fact, inflation was a more global phenomenon in this period, particularly in the years after the first oil crisis. During the last period, inflation in the Netherlands is not only low, but it also keeps pace with price developments in Germany. The Deutsche mark peg is evidently coming to fruition in these years. Thus, since the Second World War there have been two periods characterised by relatively low inflation: 1952-1962 and 1983-present. In the remaining years things went less well, due not only to domestic but also to foreign causes. Dutch inflation is strongly influenced by events abroad. This justifies the emphasis on exchange rate policies in the Netherlands, and underscores the need for a stable anchor country.

5.2 Liquidity ratio

The development over the years of both the liquidity ratio and inflation is depicted in figure 1.

**Figure 1**

Liquidity ratio and inflation (1945-1997) percentage of GDP and annual percentage change respectively

Source: Inflation: OECD, IMF and Statistics Netherlands; Liquidity ratio: Nederlandsche Bank

during, underscoring the fact that monetary policy in a small and open economy is fairly powerless in the face of imported inflation and rapidly increasing wages unless strong-arm tactics are applied. During the 1970s the liquidity ratio and inflation seem to move in tandem again. Policies aimed at reducing the liquidity ratio in the second half of the 1970s appear to have been reasonably successful. However, in the 1980s the liquidity ratio starts to increase explosively, accompanied by a decrease in the rate of inflation, which had
soared in the 1970s due to the oil shocks. The lack of correlation between the two variables in these years lends support to the decision to abandon the liquidity ratio as the intermediate target variable.

A Granger causality test confirmed that the relationship between the liquidity ratio and inflation has been feeble at best. Neither over the period as a whole nor over the relevant subperiods (1945-1960, 1955-1970, 1970-1980, 1980-1997) did the tests show any meaningful statistical outcomes. However, this may in part be due to the small size of the samples. As was to be expected on the basis of the above visual inspection, the lack of result is least evident for the earliest period (1945-1960), while most conspicuous for the latest period (1980-1997).

5.3 Exchange rate

Figure 2 shows the exchange rate of the guilder against the Deutsche mark. Three subperiods may be distinguished: the period of Bretton Woods (until 1971), an interim period (1971-1983) and the period of the successful Deutsche mark peg (1983-present). During both the first and the last period the guilder / Deutsche mark exchange rate is stable, whilst the interim period is characterised by a virtually continuous depreciation of the guilder. As is evident from the graph, the policy of pegging the guilder to the Deutsche mark takes until the early 1980s to become effective, even though it was already launched in the second half of the 1970s. Since then, however, it has proven its merit by allowing Dutch interest rates to fall to German levels, and sometimes even below the German level for money market rates.

Source: Statistics Netherlands, De Nederlandsche Bank
Despite this obvious success two words of caution are in order. First of all, even though the use of exchange rate pegs has proven beneficial in combating inflation, it is not sufficient. For example, during the Bretton Woods period inflation in the Netherlands was rather high on the whole, due to both inflationary policies in the anchor country and domestic wage rate inflation. Secondly, it should be borne in mind that the Netherlands succeeded in establishing a credible exchange rate peg in a relatively favourable period (1975-1985) in terms of capital mobility. In the present world of potentially high capital mobility it may prove far more difficult to do so. In fact, this very factor, which manifested itself in Europe for example in 1992 and 1993, is an important argument in favour of consolidating the present European exchange rate arrangements by means of a monetary union.

5.4 Balance of payments

Since 1946 the current account of the Dutch balance of payments has been in surplus for altogether 36 years. For 16 years the current account showed a deficit, the last of which in 1980 (figure 3).

Figure 3
Current account (1946-1997)
as a percentage of gdp

Source: Statistics Netherlands, Nederlandsche Bank
NB periods of current account deficits are highlighted
The current account proved particularly menacing to monetary policy in the years immediately following the Second World War. From 1946 until 1951 the current account was in deficit as a result of the post-war reconstruction of the Netherlands, accompanied by outflows of liquidity in the period 1946-1948. This pattern of current account deficits and outflows of liquidity repeated itself in the periods 1956-1957 and 1978-1980.

As has already been discussed, monetary policy in the Netherlands has been based on the assumption of a balanced balance of payments of the non-monetary sectors. Since 1946 there have been 36 years of liquidity inflows, against 16 years of outflows. The aforementioned assumption has therefore evidently been violated in this period, which may have contributed to the difficulties experienced in controlling the liquidity ratio. From 1993 onwards there have been substantial net outflows.

### 5.5 Budgetary and labour market developments

Since 1951 the government has faced liquidity shortages in 21 years and liquidity surpluses in 26 years, resulting in a small cumulative surplus of Fl. 0.1 billion. On average the goal of neutral monetary financing has therefore been met. That does not alter the fact that at times it proved difficult to remain on course. This especially holds true for the period 1975-1983. Only in 1980 did the Minister of Finance formally agree to the principle of neutral monetary financing.

During the post-war period there have been a number of periods during which budgetary policies and labour market developments did not adequately support monetary policy. With regard to fiscal policies this particularly concerns the period 1975-1983, when the budget deficit increased rapidly. To this very day the Dutch government is making efforts to undo this development. In this light it is only natural that in its annual reports the Nederlandsche Bank frequently addresses fiscal policy issues. With regard to wage developments the 1960s and 1970s worked out particularly unfavourably. As a result of the sharp wage increases in this period the labour income ratio rose to a peak of 95.1% in 1982 (figure 4).

![Figure 4 Labour income ratio (1950-1997)](image-url)
The labour income ratio has come down since and has in recent years fluctuated between 80 and 85%. All in all, in the 1980s budgetary policy and the labour market took a turn for the better in terms of supporting monetary policy.
Chapter 6 From guilder to Euro

On 1 January 1999 stage three of Economic and Monetary Union (EMU) in Europe will begin. For the Netherlands, membership of EMU is the logical follow-up of the peg of the guilder to the Deutsche mark. Since 1983 the Netherlands has formed a *de facto* monetary union with Germany. Exchange rate fluctuations of the guilder against the Deutsche mark have been very limited, whilst interest rates in the two countries, both short-term and long-term, have moved virtually in parallel. The fashioning of a monetary union with Germany (and the other nine countries that join EMU in the first wave) formally secures this peg. Participation in EMU is evidently also in line with the great importance the Netherlands has always attached to exchange rate stability in Europe, as evidenced by its membership of the Snake and ERM.

In terms of the setting in which monetary policy is conducted, EMU entails a number of changes for the Netherlands. The Netherlands will lose sovereignty over its monetary policy, but it will gain influence over monetary policy at a European level. The Euro area, being a large and relatively closed economic area, will in principle be characterised by a floating exchange rate against major non-European currencies such as the dollar and the yen. Thus, in contrast with the past situation in the Netherlands, there will be ample scope for an independent monetary policy in the Euro area. Yet one should not exaggerate the extent to which EMU will present a departure from the past for the Netherlands. In fact, there will be some important elements of continuity.

Within EMU monetary policy will be the responsibility of the Governing Council of the European Central Bank (ECB). The Governing Council comprises the members of the Executive Board of the ECB and the Governors of the national central banks of the EU member states participating in the Euro area. The statute underlying the ESCB (European System of Central Banks)/ECB stipulates that the primary objective of the ESCB shall be to maintain price stability. In addition, the ESCB shall support the general economic policies in the Community, provided that this does not compromise the objective of price stability. The continuity with the past is obvious.

Regarding the future monetary strategy, already in 1997 the European Monetary Institute had discarded exchange rate targeting, interest rate targeting and nominal income targeting. The remaining alternatives were monetary targeting, direct inflation targeting or a strategy using elements of both. In October 1998 the ECB Governing Council decided to opt for a strategy combining elements of both monetary and inflation targeting. The main components of this strategy are:

44 See EMI (1997) for a summary of the main arguments involved. See also Issing (1993).
- a quantitative definition of the primary objective of the single monetary policy in the medium term, price stability, defined as a year-on-year increase in the harmonised consumer price index for the Euro-area of 2% or below;

- a prominent role for money with a pre-announced reference value for the growth of a monetary aggregate. Differences between actual money growth and the reference value signal risks to price stability and will be analysed in detail by the ECB. Depending on the outcome of such an analysis they may result in monetary policy decisions, but there is no commitment to mechanistically correct deviations over the short term\textsuperscript{45};

- in parallel with the analysis of money growth in relation to the reference value, a broadly-based assessment of the outlook for future price developments and risks to price stability, including the use of a wide range of economic and financial variables as indicators for possible inflationary pressures.

Thus, whereas monetary aggregates will play a prominent role in monetary policy preparation in EMU, other indicators will be included in the analysis as well. This might be considered a European version of moderate monetarism, creating yet another link with past monetary policies in the Netherlands.

This is also the case with regard to the position of the central bank. Although the Nederlandsche Bank only recently attained \textit{de jure} independence, it has been \textit{de facto} independent throughout the post-war period. The European Central Bank has had its independence laid down in its statute from the very start.\textsuperscript{46}

In order to achieve its objectives, the ESCB will have at its disposal a set of instruments, which includes the following\textsuperscript{47}:

- A marginal lending facility, the interest rate on which will normally provide a ceiling for money market rates;
- A deposit facility, the interest rate on which will under normal circumstances provide a floor for money market rates;
- Reverse transactions (repos) with a fixed frequency and a fixed maturity as the main instrument for open-market operations aimed at steering money market rates within the corridor formed by the rates on the two ‘standing facilities’ (marginal and deposit facility);

\textsuperscript{45} Much will depend, of course, on the stability of money demand in EMU. Studies based on data for the pre-EMU period by Kremers and Lane (1990), Van Riet (1992) and Fase and Winder (1993) have shown promising results. See Arnold (1992) for a diverging view.

\textsuperscript{46} For details on central bank independence, see Eijffinger and De Haan (1996).
- Outright transactions, foreign exchange swaps and the collection of fixed-term deposits as special-purpose open-market instruments.
- Issuance of debt certificates aimed at the structural liquidity position of the banking sector;
- Fully remunerated minimum reserve requirements, with an averaging facility and a fixed maintenance period, to be used to stabilise money market rates, and create or enlarge a structural liquidity shortage; the level of the reserve requirement will be 2% of selected liabilities, with a threshold of Euro 100,000.

Note that there are no provisions for direct credit controls because in the Maastricht Treaty it is stipulated that the ESCB will only have market-based instruments at its disposal. As was already pointed out, Dutch monetary instruments have been adjusted many times over the past five decades, with the effect of increasing market conformity. The latest adjustment, in 1997, ensured virtual coincidence with the instruments-to-be of the ESCB, so as to allow the Dutch banking sector to gain experience with what the operations of the ESCB will be like from 1 January 1999 on.\textsuperscript{48}

Finally, awareness that monetary policy must be supported by appropriate budgetary policies has grown over time in Europe. This has resulted in the Pact for Stability and Growth, which was agreed upon at the Summit of June 1997 in Amsterdam. This pact stipulates that all member states strive for a budget which is “close to balance or in surplus” in the medium term. The efforts of the member states will be closely monitored to ensure compliance. In case of persistent excessive deficits, sanctions may be imposed. It would carry too far afield to discuss the stability pact in more detail here.\textsuperscript{49} It should be clear that the spirit of this pact neatly fits the views of Nederlandsche Bank over the last fifty years. Similarly, policy-makers in Europe increasingly have come to appreciate the need for sound wage developments. In light of the encouraging results in the Netherlands, the Nederlandsche Bank will likely continue to call attention to this theme.

Concluding, EMU presents a momentous event without precedent. It entails a number of important challenges for the Netherlands’s economy in general, and for the financial sector in particular. However, in the case of the Netherlands important elements of continuity pertaining to the role, the implementation and the targets of monetary policy will contribute to a smooth transition.

\textsuperscript{48} Van Velden (1997).
\textsuperscript{49} For details, see Amtenbrink (1997) and Houben (1997).
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