

# **Learning to manage external constraints : Belgian monetary policy during the Bretton Woods era (1944-1971)**

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**Learning to manage external constraints:  
Belgian monetary policy during the Bretton Woods era (1944-1971)\***

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**Abstract**

This paper analyses the Belgian monetary and exchange rate policies at the time of Bretton Woods. It sheds light on the groping adjustment process by which internal economic policies are hit by or adapt to the external constraints. In 1944, an ambitious monetary reform laid down the economic policy objectives that remained in force for two decades, namely price stability and strong currency. However, we point out different incompatibilities between these objectives and the economic context of the 1950s and the 1960s that could have negative consequences on Belgian economic growth. More precisely, the long lasting European currencies inconvertibility (1944-1958) contradicted the orthodox approach of the monetary policy favoured by the Central Bank. When total convertibility was finally achieved, the huge increase of capital movements led to a progressive loss of the monetary policy autonomy, despite the setting up of a two-tier exchange market, which can be viewed as an institutional innovation responding to new constraints.

**Keywords:** monetary policy, Bretton Woods, currency inconvertibility, capital movements, two-tier exchange market.

**JEL classification:** N14, N24, E58, E65

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The Bretton Woods (BW) era is an interesting period of history in more than one respect. In the first instance, it may be regarded as the “golden age of capitalism” thanks to exceptional rates of growth. One of the reasons for this growth is almost certainly the dialogue that existed between nations with a view to setting up a stable international monetary system. The considerable exchange rate stability during the quarter of a century in question bears witness to the success of this coordinated approach. However, a detailed examination of the period shows that the apparent immobility of the system concealed constant shifts in the modus operandi, procedures based on trial and error and an ongoing process of adapting to change. Studying this seminal period and understanding how it came about, its heyday and its decline, yields a wealth of information that can help us to interpret the major upheavals affecting present-day economies.

The Belgian situation is also very enlightening. For a small and very open economy it is absolutely vital to manoeuvre a good position against the backdrop of a changing international scene. In 1944 Belgium had several advantages over other countries: it was located right at the heart of a Europe under construction; it had a fine industrial heritage and considerable institutional expertise; and it was well-versed in the art of dialogue, both social and international. Understanding how the Belgian economy was affected by the transformation of the international monetary system and how the Belgian authorities dealt with this casts new light on the way in which economic policy is created and matures within a nation.

We intend to review Belgium’s monetary and exchange policy during the BW era (1944-1971) against this background. This represents a particular historical interest since these thirty or so years have often been regarded as a period of extreme stability (fixed exchange rates, exceptional economic growth, convergence of western economies), but is actually marked by deep changes. The BW agreements only came into effect very slowly, since European currencies were initially inconvertible and there was a shortage of dollars. When these problems resolved themselves in the 1960s, other constraints came to light, sustained by the development of capital movements. On the national side, the definition and the instruments of the monetary policy were under deep changes and had to agree with the new objectives of the economic policy. At the same time, developments in the financial sector led to greater challenges with respect to monetary policy, which asked for institutional reforms.

We therefore propose to study just how Belgian monetary authorities learned to manage the ever-changing external constraint, by adapting to the context their instruments and sometimes the objective of the monetary policy. We are also interested in the consequences of this management process on the internal sources of money creation, and so on the internal dynamic of growth.

This article is divided into four sections. The first one is concerned with the key stages associated with the BW agreements between 1944 and 1971 and describes the process of setting up, the brief heyday and the ultimately rapid decline of the International Monetary System (IMS). This breakdown will then serve as a basis for the rest of the article. Section 2 focuses on the immediate post-war Belgian situation and explains the initial choices faced by economic policy in general terms and by monetary policy in particular. These choices were strongly influenced by the orthodox approach of the political and monetary leaders of that time: the key words were a strong franc and the battle against inflation. Section 3 forms the heart of this article and examines the notion of a strong franc in more detail by comparing the actions of the Central Bank with the changing external constraints, marked by the

inconvertibility of European currencies and capital mobility. The management of the external constraint was not without consequence for the financing of private and public sector, and so on the internal dynamic of growth. Section 4 of this article examines this aspect in more detail.

## **1. Bretton Woods: “stable” framework for national monetary and exchange rates policies?**

The quarter of a century during which the IMS was governed by the BW agreements is regarded as an exceptional period in the economic history of the western world: particularly strong economic growth, considerable exchange rate stability, moderate inflation rates, very low real interest rates, high level of convergence of national performance figures<sup>1</sup>. Many authors are agree that these remarkable results represent the fruits of coherent institutional collaboration built up after the Second World War: the disastrous experiences of the 1930s and the war years had convinced the ruling classes and trade union representatives of the need to work together, both in the international domain and in managing internal labour relations. At the moment when 44 nations signed the BW agreements, national policy was transformed: social pacts established a system for regulating relations between labour and capital, welfare states took shape and the first attempts at Keynesian macroeconomic policies were developed<sup>2</sup>.

Establishment of a stable exchange rate system is thus part of a wider raft of measures that demonstrate the commitment of nations and people to try a new form of governance of international and labour relations. And yet, history shows that there was a definite hiatus, which was only overcome gradually, and even then only partially, between the declarations of intent in the immediate post-war period and implementation of such a system of governance in practice. In this first section we shall review, in turn, the principles of the IMS established in 1944, the problems faced when implementing this system in practice in the early stages (1944-1958) and the reasons why it had such a brief heyday, ultimately leading to its collapse (1959-1971).

### *1.1. The characteristics of the Bretton Woods international monetary system*

In the mid 1940s, a return to the days of the gold standard seemed inconceivable. On the contrary, it was widely accepted that the abortive attempt to re-establish the gold standard during the 1930s had contributed to the Great Depression. This gave rise to the belief that each nation should be free to decide its own macroeconomic policy. In this situation, exchange rates had to display sufficient flexibility to be able to adapt to the inflation and employment targets selected by national governments rather than automatically complying with an international standard. However, to prevent a return to the “beggar thy neighbour” policies of the 1930s and to allow normal international trade to be restored, exchange rates had to be relatively stable. The BW negotiations were therefore dominated by the need to find a controlled mean of exchange rate flexibility with a view to ensuring exchange stability while avoiding the rigidity of the gold standard<sup>3</sup>.

The principles of the BW system, as established in 1944, are well known. Each country defined the value of its currency in gold or in dollars, which could be converted to gold at the

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<sup>1</sup> See A. Maddison (2001) p. 265 and M.D. Bordo (1994) on this subject.

<sup>2</sup> See the work of various authors on this subject, e.g. B. Eichengreen and P. Kenen (1994) or R. Boyer (1999)

<sup>3</sup> R. McKinnon (1994) pp. 1-2. For a more detailed account, see M.D. Bordo (1993).

rate of 35 dollars per ounce. Exchange rates were stable, but adjustable: in the short term, the effective exchange rate of each currency could not deviate from parity with the dollar by more than plus or minus one percent<sup>4</sup>; however, in the event of a “fundamental disequilibrium”, any nation could unilaterally adjust its parity by devaluing or revaluing its currency. Free currency convertibility applied to current account payments, but capital movements were restricted. The possibility of adjusting exchange rates and restrictions on capital movements were intended to ensure the autonomy of national macroeconomic policies.

Despite the clear-cut nature of these principles, it was difficult to put them into practice. This only happened in stages, requiring the introduction of additional institutions, and in actual fact led to an IMS that functioned much more asymmetrically than had been envisaged by its founders. There are three historical phases that are worthy of note: the slow progression towards convertibility, which continued until 1958; the “cruising” period, which lasted for barely a decade, and the decline of the system, which began in 1968. In the outline below, we shall combine the last two phases to enable us to stress the contrast between the pre-convertibility regime and the full currency convertibility period.

### *1.2. The uphill struggle to restore currency convertibility (1944-1958)*

Two major problems posed an obstacle to the rapid implementation of all the BW principles: first, due to the aftermath of WWII, international trade was limited. By consequence, it was impossible for European central banks to restore exchange reserves. Second, due to this lack of exchange reserves, European currencies were effectively inconvertible. For most of the signatory states, with the notable exception of the United States, the legacy of the war was a very restrictive set of exchange controls and trade constraints. The BW agreements made it possible to maintain exchange controls on current account transactions on a provisional basis. This thus signified recognition of the fact that currency convertibility could not happen overnight. As a pragmatic way to ensure resumption of foreign trade, the nations signed bilateral agreements with their main partners at the end of the war. On this basis, the net importer could acknowledge a debt to his partner instead of transferring exchange reserves. However, this was only a very temporary and very localised solution: on the one hand, if the imbalance was not transient and tended to recur, it was of no advantage to the net exporter to accumulate credits in this period of reconstruction when demand for goods and services was so high; on the other hand, this same country could not make use of its position as a creditor to finance imports from a third-party country, since the agreement was only bilateral. These agreements were therefore subject to licences and quotas.

A multilateral system of payments between European countries was gradually introduced with effect from 1947. Although this did have the effect of making it easier to control foreign trade, the multilateral agreements did not resolve the problem of the global trade imbalance between the block of countries that had signed the agreement and the rest of the world, and in particular between Europe and the United States. The contrast between these two world zones was huge: the first was faced with complete reconstruction and needed to import; the second had emerged from the war with a very strong production apparatus and was very willing to export. Nevertheless, gold reserves were concentrated in the United States and Europe had no dollars. The Marshall Plan and the European Payments Union represented a way out of this impasse.

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<sup>4</sup> This means that the parity between two currencies (except the dollar) could deviate by more than 2%.

The European Cooperation Agreement of 1948, which launched the Marshall Plan, was intended to help the countries of Western Europe (united within the Organisation for European Economic Cooperation, OEEC) to speed up their return to a market economy and to ensure economic stability, itself a guarantee of political stability. This plan played a crucial role in promoting the restoration of currency convertibility in Europe. It specifically encouraged the beneficiary nations to extend bilateral loans to other members of the OEEC. It provided Europe with much-needed exchange reserves in the form of dollars. The adjustments that it advocated between the currencies of the old continent very soon became official thanks to the creation of the European Payments Union (EPU, 1950-1958), which led the way towards full convertibility.

With the EPU, transferability of debts was extended to cover all the nations in the OEEC. In addition, balances, debts or claims were not drawn up with respect to a particular country but to the Union as a whole. Settlement of balances was governed by a system of quotas: up to a pre-agreed threshold, balances did not need to be settled in gold or in dollars. The countries simply recorded a debt or a claim against the EPU. By using mechanisms of this kind, the EPU provided a temporary answer to the shortage of gold and dollars.

However, the huge amount of aid provided to Europe by the United States and the ways in which this was administered propelled the IMS in a direction that caused it, little by little, to move away from its initial principles. The imbalance between the dollar and the other currencies was upheld by and large; the dollar becoming the international accounting unit in practice. Finally, the European nations came under pressure to fix the parity of their currencies with respect to the dollar – instead of it being “stable but adjustable”. These implicit rules of the game, which no longer corresponded to the initial intentions, led to reduced autonomy for national economic policies, while the United States emerged as the only nation to have any genuine monetary independence. Full convertibility and transferability for current movements of European currencies came about in 1958, which meant that the EPU had achieved its objective and could be wound up, but the IMS had taken a hitherto unexpected turn.

### *1.3. From convertibility to the decline of the system (1959-1971)*

After 1959, the BW system moved into its “cruising” period. Each country played a part in the exchange market by selling or buying dollars with a view to maintaining parity within the narrow margin of 1% either side of the dollar. The United States guaranteed a fixed rate of 35 dollars for one ounce of gold by selling or buying gold. The dollar gradually confirmed its status as the only international currency, finally usurping Sterling in the 1960s. It seemed appropriate to use dollars as an exchange currency in preference to gold, in which there was a marked lack of interest and which was not available in sufficient reserves to satisfy the vigorous growth of the 1950s and 1960s. This was accompanied by a lively development in capital movements as controls were gradually eased. The majority of countries gradually gave up the ability to adjust their parities in line with their internal macroeconomic conditions to avoid giving the financial markets signals that might encourage speculation. The “stable but adjustable” exchange rate system changed, little by little, into a fixed exchange rate system, then into a dollar standard. While the general macroeconomic context changed gradually – growth in international trade, relative improvement in European and Japanese competitiveness, development of financial markets – the tension between the principle of the

autonomy of national economic policies and the principle of fixed exchange rates became more pronounced, to the detriment of the former<sup>5</sup>.

Thus, even in its heyday, the weaknesses in the Bretton Woods system were starting to become apparent. In 1960, the gold reserves of the United States were insufficient to cover all external dollar commitments; with effect from 1964, they no longer covered the dollars held by foreign central banks<sup>6</sup>. While the initial scarcity of dollars gave way to abundance, or even overabundance, a dollar market was developing in Europe – the Eurodollar market - paving the way for many financial transactions that were still banned or restricted in the European currencies. The integration of national financial markets gained in momentum; speculation pressure increased and restrictions gradually crumbled away.

After 1968, the system encountered a period of more substantial unrest that it was unable to survive. Finally, when it became apparent that the dollar was overvalued with respect to European and Japanese currencies, the latent problems of confidence and liquidity rose to the fore and speculation raged. Pressure on the gold reserves of the United States was so intense that the Nixon administration decided to close the gold window on 15 August 1971. The following eighteen months were particularly fraught and showed that it would be impossible to return to a stable exchange rate system. The central banks withdrew from the exchange market on 1 March 1973 and left the dollar to float, thus sounding the death knell of the BW system<sup>7</sup>.

This brief overview of the principles and development of the IMS that reigned from 1944 to 1971 was necessary in order to provide a framework for the implementation of a national monetary policy. This first section stresses the extremely changeable nature of this framework, even though this is regarded as a historical model of stability. Ever-changing external constraints: such were the challenges faced by the Belgian monetary authorities. Before analysing this point in any greater detail (Section 3), section 2 dwells on the economic and institutional situation in Belgium in the immediate post-war period.

## **2. Main guidelines of the Belgian monetary policy just after World War II**

As in many European countries, the occupation years threw the economy into disarray and led to galloping inflation. However, as Belgium surrendered in May 1940, there was limited destruction and the industrial infrastructure was still intact. In addition, the fact that Belgium specialised in the production of staple commodities (coal, semi-finished metal, cement) was a considerable advantage at a time when all Europe needed to rebuild itself. Nevertheless, it was essential for the economy to take off again within a stable institutional framework. Discussions on how to use institutions to stimulate growth, which had started back in the 1930s, had continued throughout the war: economic leaders and social partners had conducted negotiations, either secretly or during their exile, with a view to restructuring the economy after liberation. When this came about, in September 1944, a *draft social solidarity agreement* had already been drawn up and was approved by the major socio-political forces within the country. It covered salaries, social security and joint participation, but also dealt implicitly

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<sup>5</sup> H. Schwartz (1994), p. 20.

<sup>6</sup> M. Bordo (1993) p. 6. These authors provide an excellent analysis of the problem as a whole. This problem had already been enhanced during the 1960s by R. Triffin.

<sup>7</sup> It can be seen that the end of the BW system coincided with an acceleration in European monetary construction (Barre plans of 1969 and 1970, Werner plan of 1970, “European currency snake” in 1972), but it would be beyond the scope of this article to develop this aspect any further.

with bringing inflation under control and selecting a strong exchange rate. This draft agreement, better known as the “social pact”, made it possible to implement both monetary and social reform with immediate effect. These aspects are probably the two most important factors that ensured a particularly rapid reconstruction process, which in Belgium’s case became known as the “Belgian miracle”<sup>8</sup>.

From the monetary viewpoint, there were two opposing schools of thought on the subject of how to restore balance to the inflated money supply resulting from the war years, while at the same time fitting into the framework imposed by the Bretton Woods agreements. In the face of the more “Keynesian” vision of the former Prime Minister, Paul van Zeeland, the “orthodox” vision of Finance Minister Camille Gutt and National Bank’s Governor Maurice Frère prevailed. In the eyes of the Bank’s management<sup>9</sup>, the best mean of responding effectively to the challenges posed by the reconstruction and the Bretton Woods agreements was to ensure monetary stability: “*The Bank can make a real contribution to the problem of re-equipping the nation by ensuring monetary stability to uphold State credit and maintain confidence in national currency savings*”<sup>10</sup>.

Monetary stability has first an internal aspect. They were keen to maintain the purchasing power of the franc at as high level as possible, which required a moderate inflation rate. Controlling inflation would ensure saver confidence by limiting the risk of savings losing their purchasing power. According to the Bank, this objective could be achieved by controlling the money supply<sup>11</sup>. This did not mean maintaining the amount of money in circulation at a stable level, but at a growing level ensuring the economy’s recovery of the country. In addition, indirect control of total expenditure within the economy by limiting the available funds to finance this expenditure should enable direct controls to be abolished as soon as possible and to restore the mechanisms of a market economy, another of the declared objectives of the authorities at that time. Avoiding any loss of monetary control became the Bank’s byword for internal action.

Secondly, monetary stability also equated to exchange rate stability. The new framework established at the BW Conference did not actually rule out the risk of devaluation. However, the Bank wanted to prevent the need to resort to such measures. They opted for an identical solution to achieve this “external stability”: only by controlling expansion of means of payment, and thus inflation, would it be possible to emit the necessary signals to generate confidence in the Belgian franc amongst foreign purchasers. In turn, this confidence would stimulate exports, which were particularly important for Belgian growth (Table 3.b.). The initial option was therefore to impose the discipline of a strict monetary policy. It seems that the Bank did not want to make use of all the flexibility granted under the BW agreements, but tended instead to the “orthodox” approach imposed by a gold standard system.

To make these objectives possible, a strong monetary reform was first essential. The so-called “Gutt plan” (organised by Finance Minister) was extremely significant for Belgian economic policy as a whole during the post-war years. There is no need to go into any further detail at this point as to the way this reform was implemented with effect from 7 October 1944. Nevertheless, we shall briefly summarise its objectives, as these reveal the choices faced by Belgium in terms of monetary policy:

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<sup>8</sup> Cassiers and Scholliers (1995)

<sup>9</sup> The term «Bank» is here used for the National Bank of Belgium.

<sup>10</sup> Banque nationale de Belgique, *Rapport annuel*, 1948, p. 12 (own translation).

<sup>11</sup> idem, p. 11.



- The main aim was to reduce the amount of money in circulation with a view to ruling out any latent inflation. In this way, the initiators of the reform hoped to control prices while eradicating the black market.
- The fight against latent inflation also contributed to the external objective: the stabilisation operation had to make it possible to maintain the exchange rate at the parity figure established on 5 October 1944 in the aftermath of the Bretton Woods Conference. This aim was all the harder to achieve as the chosen parity corresponded to a relative overvaluation of the Belgian franc as a result of the five wartime years<sup>12</sup>: the National Bank made the point that the exchange rate with the pound “*can only be maintained at 176.625 francs to one pound Sterling if the growth in national purchasing power does not exceed the amount resulting from parity of purchasing power with the major international currencies at this new exchange rate*”<sup>13</sup>. In other words, this value could only be maintained by drastic controls on the money supply. The money in circulation therefore had to be reduced “*to the level of the major allied nations, particularly the British system, which is of crucial importance for Belgium’s economic relations*”<sup>14</sup>.
- Finally, the reform included a fiscal objective by levying tax, sometimes at a rate of 100%, on any increased wealth that had come about as a result of the war.

For the monetary authorities, the reduction in the money supply brought about by the Gutt plan was just one of the stages that enabled them to rebuild monetary policy on a new sound footing. Indeed, monetary stabilisation would be compromised if commercial banks used their public debt securities for refinancing to grant corresponding loans to the private sector. The amount of public debt held by banks was considerable and represented more than three-quarters of their total debts in 1945, compared with one-third five years previously<sup>15</sup>. It would be easy for them to obtain funds by selling some of these certificates. Outstanding loans were therefore to be extended.

Despite all these measures and the willingness of the monetary authorities, the first problems soon came to light, i.e. before the end of the war. In fact, the continued hostilities in Belgium over the winter of 1944-45 meant that the war effort remained in place. The government had to contend with its own expenditure, which was already considerable, and bear the costs of the allied armies in accordance with mutual agreements<sup>16</sup>. Tax levies could not be increased, however. The government thus decided to finance its deficits by monetary means with the Bank’s assistance.

This situation had only been partially anticipated by the Bank, thus wiping out some of the effects of the Gutt reform<sup>17</sup>. However, this could not be regarded as a failure<sup>18</sup>. There is no doubt that the measures taken restored confidence in the franc both in Belgium and abroad, thus ruling out any speculation with regard to inflation or devaluation<sup>19</sup>. There would certainly

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<sup>12</sup> Baudhuin (1958), p. 10.

<sup>13</sup> Banque nationale de Belgique (1944), p. 73 (own translation).

<sup>14</sup> Banque nationale de Belgique (1944), p. 72 (own translation).

<sup>15</sup> Frère (1960), p. 93

<sup>16</sup> Frère (1960), p. 90.

<sup>17</sup> Despite the Gutt Plan reduced the money supply by 2/3 in 1944, table 2 shows that it grew by 92,8% in 1945.

<sup>18</sup> In the eyes of the National Bank, the Gutt plan was viewed as a success. For example, the National Bank’s annual report states that “*The situation in Belgium at the end of 1945 thus shows that our economy has been perfectly capable of accomplishing the monetary stabilisation programme adopted after liberation, despite the problems encountered*” (Banque nationale de Belgique, *Rapport annuel*, p. 12, own translation).

<sup>19</sup> Governor Frère spoke of a “psychological shock”; see Banque nationale de Belgique, *Rapport annuel*, 1946, p. 5, quoted by Frère (1960), p. 90.

have been a much greater growth in the money supply without any reform. We should also remember that the objective of the monetary policy was not to maintain the amount of money in circulation at 1944 levels. It was even considered desirable to have a level of growth compatible with moderate inflation and achieve exchange rate stability. The rapid recovery of the Belgian economy could thus justify in the eyes of the Bank a certain proportion of the increase in means of payment.

Convinced that the initial problems were only temporary, the Bank was not alarmed by the monetary situation. It thus sought to support the nation's economic recovery within the constraints of healthy monetary growth. History proves it to have been correct in the first instance, as military expenditure was short-lived. Moreover, from the end of 1945, the allied governments started to pay back the funds advanced previously, thus providing an important source of currency for the Bank<sup>20</sup> and a new means of government financing. The Bank was delighted with this turn of events and drew the conclusion that "*Belgium is facing the second year of reconstruction with a stable currency and considerable reserves of gold and foreign currency*".<sup>21</sup>

To conclude, the strength of the Belgian economy was partly due to the fact that its general economic situation was less serious than that of the other European nations affected by the war, and partly due to the extremely short time taken by the authorities to set up new institutions. This enabled Belgium to make a smooth transition from a wartime economy to a peacetime economy. In the following years, however, the choices posed in terms of monetary policy were challenged by the evolution of the BW agreements described in Section 1.

### **3. The monetary policy practice facing changing external constraints (1946-1971)**

During the period between 1944 and 1971, the Belgian franc demonstrated considerable stability with respect to the dollar, with the exception of the problems in 1971, which caused the Bretton Woods system to implode and had an impact on all currencies. Indeed, while exchange rate realignments were admissible in the event of a balance of payments imbalance, the Belgian franc was only devalued once, in 1949, and by a minimal amount compared with the realignments decided for other currencies. Furthermore, exchange fluctuations on the official dollar market remained for the most part below the fluctuations permitted under the BW agreements (graph 1).

These simple facts may lead one to believe that it was a very easy task to implement monetary and exchange policy under this international system. This most certainly was not the case. Detailed analysis of this period reveals all the complexity of maintaining a stable currency. The aim of this section is to show how the Belgian monetary authorities managed the external constraints dominated first by the inconvertibility of European currencies until 1958 and then by the development of capital movements.

#### *3.1. Monetary policy and currency inconvertibility*

During the period in which European currencies were inconvertible (1944-1958), it quickly became difficult for the Bank to achieve its aim of monetary stability in Belgium: the system of multilateral agreements that came into force from 1947 was certainly significant, as it made

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<sup>20</sup> Frère (1960), p. 91.

<sup>21</sup> Banque nationale de Belgique, *Rapport annuel*, 1945, p. 16 (own translation).

it possible to kick-start intra-European trade, but was based on the implicit assumption of a balance between current account movements between the various countries over the course of time. The current account surpluses that a country could register with respect to its partners had to be followed by deficits, with the result that the mutual loans granted by central banks cancelled each other out. However, Belgium's considerable current account surpluses compared to its European partners meant that Belgium was a net creditor with respect to these other nations. This imbalance was also reinforced by the voluntary waiting periods, known as leads and lags, between the time of a commercial transaction and the actual conversion of currency, coming from the growing confidence in the Belgian franc thanks to the initial choice of monetary policy and the country's rapid economic recovery.

This situation would not have posed a major problem if, in exchange, Belgium had been able to use these credits to pay for products from the United States, as, like all the European economies, Belgium was a net debtor with respect to the United States. However, there was no provision for such a solution. In accordance with multilateral agreements, only a small proportion of the sums due was payable in gold or in convertible currencies (dollars) and could be used for such purposes. As a result, imports from the United States had to be paid for by digging deep into the Bank's gold and convertible currencies reserves, which was against the Bank's aim.

The imbalance in Belgian foreign trade between European countries and the United States could compromise the monetary stability. In its 1947 report, the Bank toned down the enthusiasm of the first two years of the post-war period:

*“Although there is no doubt that the growth in the Bank's currency assets as part of the payment agreements concluded in the aftermath of liberation is largely responsible for the growth in our export business, we should not pretend that the development of this trend will affect the amount of money in circulation, and, as a result, the price system; and finally, the country's ability to compete<sup>22</sup>.”*

Indeed, all things being equal, an increase in the number of loans granted by the Bank and entered on the assets side of the balance sheet, would be offset by the increase in paper money entered on the liabilities side. The Bank therefore only had limited influence on the creation of money as a result of international trade, which could ultimately lead to a risk of inflation getting out of control. To avoid this risk, the Bank had to take measures aimed at restricting exports to European countries and ensuring greater control of other sources of money creation. These points will be examined in detail in Section 4. This reveals the problems involved in managing external constraints during the period of currency inconvertibility.

Thanks to the restrictive measures taken by the Bank, these post-war problems had a reduced effect on the external stability of the Belgian franc (strong franc objective). On the contrary, the general realignment of European currency exchange rates with respect to the dollar in 1949 provided the Belgian monetary authorities with the opportunity to confirm their objective of maintaining a strong currency. From the Bank's point of view, it was not necessary to modify the exchange rate between the Belgian franc and the dollar or gold, whereas the majority of currencies were devalued by some 30%. The government eventually decided to devalue the Belgian franc, but only by 12.3%, which represented a revaluation of

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<sup>22</sup> Banque nationale de Belgique, *Rapport annuel*, 1947, p. 13 (own translation).

more than 26% compared with the currencies of its principal partners. The choice of a relative revaluation seems to have been based on three considerations:

- the Belgian economy's much stronger and faster recovery than the European average in the immediate post-war period, sometimes referred to as the "Belgian miracle";
- the desire on the part of the Belgian monetary authorities to confirm their unconditional commitment to the gold standard, the best of all standards in the Bank's opinion;
- the implicit aim of these same authorities to relieve the Belgian current account surplus by restructuring foreign trade (American products became more expensive for Belgian importers and Belgian products became more expensive for European importers).

During the period between 1950 and 1958, the development of European trade was supported not only by the Marshall Plan, but also by the addition of a capital institution to back up the BW agreements: the European Payments Union (see Section 1). However, the EPU did not bring about full convertibility of European currencies. Despite partial settlement of deficits in dollars or in gold, it only served to prolong the credit system between signatory nations, as had been set up in the days of the first payment agreements. It still worked to the disadvantage of creditor countries, as noted by R. Triffin, and thus only represented a limited solution to the specific problems faced by Belgium<sup>23</sup>. By developing international trade, the agreement actually increased the risk of monetary expansion linked to the loans granted by the Belgian authorities. In fact, driven by the tensions of the Korean war in the early 1950s, the amount of the loans granted by Belgium<sup>24</sup> to all countries in the EPU rose rapidly, as shown in Table 1, and the quota fixed when the agreements were signed was reached as early as 1952, forcing the Bank to step up the restrictive measures it had taken at the end of the 1940s. Although the EPU was a step towards convertibility of European currencies, the Bank made the point that:

*"Operation of the system brings us up against major problems due to the changing nature of the accounts of some of its members; this is particularly relevant in the case of the excessive deficits that a number of countries within the Union have accumulated with respect to the BLEU. The latter is thus faced with a difficult decision. If it agrees to provide additional aid to the European Payments Union, it risks compromising the fruits of the orthodox monetary policy that it has imposed up until now and that has ensured the strength of the Belgian franc. If the measures that it adopts lead, in one way or another, to a tightening of export flows, it will be committing itself to a dangerous course in terms of maintaining its level of economic activity and the standard of living of its people<sup>25</sup>."*

Despite the EPU, the major constraint faced by Belgian monetary authorities was still the insufficient proportion of current deficits that were actually paid in gold and thus the volume of loans that *had* to be granted<sup>26</sup>. Belgium suffered from a lack of dollars and at the same time was forced into a position where it was building up claims on the other EPU zone countries. Table 1 shows the situation of Belgium in the EPU. In the first few years of operation of the EPU, less than 60% of the surplus was reimbursed in gold or in convertible currencies. The rest corresponds to loans granted to EPU members. Initially, the Government undertook to finance these loans. However, due to its chronic deficits, it was not in a position to play a significant role in covering these loans. The Bank was thus obliged to step in very soon in

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<sup>23</sup> Triffin (1957). See also Eichengreen (1993) and Janssens (1976) for specific measures concerning Belgium.

<sup>24</sup> In fact, Belgium and Luxemburg were merged for all monetary agreements, to form the Belgo-Luxemburg Economic Union (BLEU). However, we will here use the term «Belgium».

<sup>25</sup> Banque nationale de Belgique (1952), p. 85 (own translation).

<sup>26</sup> For a more detailed explanation, see Banque nationale de Belgique, *Rapport annuel*, 1952, pp. 90-91.

order to finance the loans on behalf of the State, with the associated risk of increasing the money supply.

For this reason, a number of countries, including Belgium, advocated a rapid return to convertibility with effect from 1955. Following the upheaval in the early years of the EPU, payments between European countries were effected increasingly smoothly. However, other countries wanted to see the agreement extended by a temporary system to avoid running into problems with the exchange markets. The risk of speculation on European currencies was likely to re-emerge and many central banks did not have the necessary resources to cope with it. An interim solution was therefore adopted in 1955: the EPU was renewed, but a greater proportion of the deficits was reimbursed in gold from then on. This is why Table 1 shows that the proportion of the surplus that was reimbursed in gold or in dollars increased sharply in the second half of the period in question. The increase in the inflows of gold and dollars made it possible to limit the pressure on the money supply (these currencies could be used to pay for imports from the dollar zone), but also to achieve an objective that was close to the Bank's heart: in 1957, it managed to get a monetary law passed, redefining the Belgian franc as a quantity of gold and restoring the obligation to have 30% cover in gold. This was in actual fact a barely concealed return to the gold standard, contrasting sharply with the situation in other European economies (Figure 3).

To conclude, the entire currency inconvertibility period was characterised by tension between external constraints and implementation of an orthodox monetary policy. This tension resulted from a combination of:

- the slow introduction of the BW agreements;
- the Belgian economy's unique position in Europe;
- the Bank's restrictive view of the BW agreements.

European currency convertibility for current transactions was finally ensured after 1959. The problems mentioned above thus resolved themselves, even though the continued existence of a current account surplus with respect to the rest of the world maintained a certain amount of pressure on the money supply. Although one of the Bank's major problems disappeared with the advent of European currency convertibility, other problems, linked to capital movements, started to assume increased importance at the same time.

### *3.2. Exchange policy, strong franc and capital movements*

From the 1950s, capital movements started to increase for two main reasons:

- The existence of free markets in foreign financial centres permitted, to some extent, capital transactions outside the influence of the central banks. Capital movements were thus alive and kicking despite all the controls and obstacles. They were also often concealed by current movements.
- The Bank wanted to remove any obstacles to natural operation of the exchange market. With this in mind, it was determined to lift restrictions on capital movements. Its aim was also to allow these movements to soften the effects of Belgium's trade surpluses with other European countries: if current account surpluses were offset by capital outflows, the central bank would be less likely to need to intervene in the exchange markets. For this reason also, the Bank aimed to conduct a very strict monetary policy. It hoped to maintain confidence in the franc to be able to lift restrictions on capital movements without any risk of major speculation, which might disrupt the exchange market.

Let us not forget that capital movements entail risks for the central banks: if any speculation arises or if such speculation forces events in an undesirable direction, it can amplify trade imbalances and make it imperative for the central bank to intervene more heavily in the exchange markets. This is one of the main reasons why restrictions on capital movements were imposed by the BW agreements. But the gradual lifting of restrictions on capital movements thus further curtails the autonomy of the central bank's monetary policy. In the extreme case of perfect capital mobility, this would inevitably boil down to following the prevailing interest rates abroad, thus losing a key instrument of monetary policy<sup>27</sup>.

To prevent this disadvantage while at the same time lifting restrictions on capital movements, the Belgo-Luxembourg Exchange Institute set up a two-tier exchange market from 1954 onwards. The Bank intervened in the official market to defend the parity of the Belgian franc in relation to other currencies. However, this market only affected current account transactions. Capital transactions were consigned to the free market where the Bank theoretically did not intervene. The Belgian franc exchange rate was thus allowed to float in this market<sup>28</sup>. Figure 2 shows, moreover, that free exchange rates for the principal currencies concerned deviated from the fluctuations authorised under the aegis of BW on several occasions.

Thanks to the two-tier exchange market, defending the franc's exchange rate became less of an issue for the Belgian monetary authorities. If capital movements substantially changed the Belgian franc's exchange rate in the free market, the floating exchange rate's own mechanisms automatically restored market balance. Belgian monetary authorities had maybe found the ideal solution to open up their economy: a clever mixture of fixed and floating exchange rates with the further possibility of allowing certain transactions to shift between markets.

However, the free market exchange rate expresses the value attributed to the Belgian franc by the market without any intervention on the part of the Bank. If there was a recurrent difference between the exchange rates on the two markets, this would indicate a structural over- or undervaluation of the exchange rate for the Belgian franc, which would give the signal for speculation to commence. As the barrier between the two markets is not entirely watertight, a development along these lines would sooner or later lead to intervention by the Bank. The latter – or to be more precise, the Belgo-Luxembourg Exchange Institute under the auspices of the Bank – is thus not precluded from all forms of intervention in the wake of capital movements, but may limit its intervention to long-term issues. In other words, the two-tier exchange market is only a short-term solution to the problems of the incompatibility triangle: the Bank is, however, required to maintain a strict monetary policy in order to prevent capital movements from causing the exchange rate in the free market to deviate significantly and permanently from official parity.

As a result, and in accordance with theory, the Bank gradually lost the ability to use interest rates as an instrument for internal purposes. External constraints thus had a definite influence on monetary policy in Belgium (this was no longer a deliberate choice): an interest rate change (in the light of inflation and the exchange rate) was rapidly reflected by major capital movements and a significant modification of the exchange rate in the free market. To prevent

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<sup>27</sup> This problem is known as the Mundell's triangle of incompatibility. See for example Mundell (1963) or Aglietta (1994).

<sup>28</sup> The IMF allowed Belgium to introduce this mechanism only because it was a small economy. Such an exchange market could not destabilize the whole Bretton Woods system.

this from becoming an ongoing situation, the Bank was then forced to align its interest rates with those applicable in the rest of the world, and occasionally had to intervene in the free market<sup>29</sup>. The development of the capital movements, encouraged by the speculation on Gold and the Dollar, accelerated the loss of autonomy, particularly during the second half of the 1960s.

In addition, the Belgian franc did not follow the example of the Mark and the Guilder in revaluing in 1961, or the further revaluation of the Mark in 1969. Should we regard this as a loss of confidence in the Belgian currency? There are several reasons that would tend to justify this view. First and foremost we can put forward the hypothesis that the development of capital movements and the parallel existence of a free market reduce the Bank's ability to maintain a particularly strong franc at all costs. Indeed, as explained above, the free market expresses the "fair value" of the Belgian franc. This was depreciated on several occasions during the 1960s, especially at the start of this decade and in 1969 (see Figure 2). In that particular year the Belgian franc had been linked to the French franc by the operators of the exchange markets and this had just been devalued. Against this background, it is difficult to understand how the Bank could have pushed through a revaluation with respect to the dollar and maintained parity with the Mark. There was no longer any question of the Bank remaining in the elite group of leading European currencies at any cost, as it could no longer afford to do so<sup>30</sup>. The early 1960s therefore marked a major change in the Bank's objectives: in theory, they were still primarily concerned with monetary stability, but in practice there was a good deal more flexibility. This shift in objectives was the result not only of internal debate (see Section 4), but also of the tightening of the external constraints.

The development of capital movements thus led to a major change in the way in which Belgian monetary policy was implemented by confirming the interrelationships between economies, thus restricting monetary policy autonomy, but also by revealing the value attributed to the Belgian franc by the markets via the free currency market. This shows that the return to European currency convertibility did not eliminate all the tension between the IMS and implementation of monetary policy. After 1958, this was principally due first to the changing interpretation of the Bretton Woods agreements: neither the development of capital movements nor the risks associated with inconvertibility of the dollar into gold had been anticipated in the initial version of the agreements. Second, the Bank's willingness to promote capital mobility facilitated speculation.

By conclusion, It seems that the learning curve involved in managing external constraints was rendered more difficult by a changing international monetary context: during the inconvertibility period, when the Bank had a certain degree of autonomy with regard to monetary policy, it chose to apply very restrictive policies in the name of monetary stability and the increasing openness of the economy. Following the return to convertibility, it was forced to gradually give up its autonomy.

It goes without saying that interaction between monetary policy and external constraints was not without effect on internal money supply management, as described above. Section 4 examines these effects in some details.

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<sup>29</sup> Some historical works show that the Bank intervened several times on the free market after 1955. For more detail, see Brion and Moreau (2005), p. 314.

<sup>30</sup> In fact, many reasons explain why Belgium could not remain in the «Leading» group of European currencies. The explosion of the public debt during the Fifties is one of them. For more details on this point, see Cassiers and Ledent (2005), chapter 4.

#### 4. Managing internal sources of money creation (1946-1971)

Section 3 showed quite clearly that managing external constraints took a great deal of effort on the part of the Belgian monetary authorities throughout the period in question. While European currencies remained inconvertible and Belgium was still a net creditor in its external trade relations with Europe, the recurrent pressure on the money supply imposed by granting loans to foreign countries increased the risk of inflation in Belgium. From the Bank's point of view, it was thus essential to curb other sources of money creation, so that these did not increase the external pressures, but rather offset these pressures to the greatest possible extent. However, the public sector budget had experienced considerable deficits since the end of the war, due to the reconstruction and new functions of the State. These deficits were initially financed by the Bank (hence money creation), which was not in keeping with its objectives. On the other hand, the reconstruction of the production apparatus required substantial loans. The introduction of "bank ratios" in 1946 did, however, provide a radical solution to this dual problem.

##### *4.1. The cost of monetary stability*

In theory, the imposition of "structural ratios" may be regarded as a standard monetary policy decision. Such ratios oblige commercial banks to cover a proportion of their deposits by reserves (cash or specified securities), either to ensure that their overall balance can be managed prudently, or to limit their capacity for creating bank money. Nevertheless, the measures taken by Belgium in 1946 represent a reform with wider implications.

Indeed, the Banking Commission's ruling of 29 January 1946, introduced at the Bank's instigation, represented the first use of structural ratios in Belgium and this was made possible by the banking reform of 1935<sup>31</sup>. Yet whereas this essentially aimed to safeguard the solvency and liquidity of banks with a view to protecting savings, the 1946 ruling also used ratios to deal with the prevailing problem of the time: financing public debt.

Apart from cash and solvency ratios aimed at ensuring prudent bank management<sup>32</sup>, a "cover ratio" required the banks to keep 50 to 65% of their total deposits in the form of public sector debt securities. This very high percentage corresponded to the situation as it existed at the end of the war and thus did not seem overly restrictive at first glance. The initial objective was to prolong the effects of the Gutt reform by freezing the bank assets structure: the aim was to prevent the banks from reselling the public sector debt securities in their possession on the market in order to obtain funds and thus grant loans to the private sector, as these would increase the amount of money in circulation. The constraints imposed by the cover ratio became tighter as deposits increased and really started to make their presence felt after 1949<sup>33</sup>. The aim of this measure was then to provide the State with a source of stable finance by channelling a constant proportion of the money created by the banks in the direction of the public sector.

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<sup>31</sup> See Cassiers (1997), Timmermans (1969) for further information.

<sup>32</sup> The cash ratio is calculated as the ratio between the bank's funds and its current short-term liabilities. The solvency ratio is defined as the ratio between the bank's own funds and the funds of third parties. See Cassiers (1997), p. 615, for more details.

<sup>33</sup> See Cassiers (1997), Graph 12, p. 667.



This legislation made it possible not only to transfer the onus for financing public deficits on to the commercial banks, but also to reduce their capacity for financing the private sector. In short, it represented a precarious kind of balance in the Belgian financial sector, which managed to keep almost all the participants happy:

- The Bank resolved the problem of providing monetary finance for the State and could also ensure a slight growth in the money supply (bank money in particular), since the mechanism established generated a very low monetary multiplier. Given the pressure exerted by the external money creation source, the Bank had no reason to impose any hasty changes on a system that was supposed to be temporary from the outset.
- The State obtained a simple and inexpensive source of finance. Indeed, the treasury bond market was not subject to the laws of supply and demand.
- Despite their reticence, the commercial banks were happy with this system, as it provided them with an important and particularly secure debtor base.

This is why the bank ratios system, although initially only temporary, would remain essentially unchanged until 1957 before being abolished in 1962.

When external pressure on the money supply became too great, notably in 1948 and 1951, the Bank also took measures to alleviate the situation with a view to restricting Belgian exports to European countries and the credit to the private sector. The Bank felt that these measures were necessary in order to ensure monetary stability and regarded the latter as the sole contribution it could make to economic growth. However, the combination of these measures and ruling seems unlikely to have stimulated Belgian growth during the 1950s (Table 3.a.):

- the 1946 legislation prevented the commercial banks from acting as financial backers to the private sector;
- the limited devaluation of the Belgian franc with respect to the dollar in 1949 made Belgian companies less competitive compared with their European competitors, which could account for the low level of investment during the 1950s;
- parallel measures to restrict exports had a negative effect on Belgian growth, as the Bank itself admitted.

So while Belgium's economic balance was particularly positive in terms of inflation (Figure 5) and exchange rates during the 1950s, the same could not be said of economic growth.

#### *4.2. Shifting objectives*

The 1946 legislation on bank ratios had a perverse effect, however. In the event of a downturn in the level of bank deposits, commercial banks could resell the public sector debt securities that they held, which would have posed a problem with regard to public sector finance. A situation of this kind arose in 1957 and triggered a series of reforms. Their aim was to bring about a change in State finance conditions based on market forces and to decompartmentalise the various money and capital markets in order to make interest rates more attractive. Private individuals were not in fact inclined to deposit their money in the bank due to the excessively low credit interest rates. This resulted in a marked preference for banknotes and thus a particularly low monetary multiplier (Figure 4).

After the general recession of 1957, the economic recovery that started in 1958 and 1959 seemed to take effect more slowly in Belgium, as acknowledged by the National Bank itself (Table 2). Moreover, growth in the 1950s was considered to be inadequate in some quarters.

This view was not entirely shared by the Bank<sup>34</sup>. Be that as it may, these two elements had an impact on the political and monetary authorities. The government became aware that public deficits had managed to have a negative influence on monetary policy during the previous decade, but also came to the conclusion that it needed to play a more active role in stimulating growth. For its part, the Bank realised that it could not depend solely on money supply controls to guarantee monetary stability. Its economic role in stimulating or holding back growth was just as important. To this end, it needed to have effective tools and efficient financial markets. The reforms introduced in 1957 did indeed represent a decisive factor in this context. This realisation was thus reflected by a shift in the objective of monetary stability: a higher rate of inflation was accepted as a necessary part of the equation. It can also be a reason why the Belgian franc did not follow the Mark and the Guilder revaluations in the 1960s. Nor should we forget that this change in regime was also brought about by the development of capital movements.

The first results of this shift were a stimulation of the private sector financing, and by consequence a higher rate of growth of the money supply, particularly of the levels of bank money (see Table 2), although the level of paper money remained very high compared with the other European countries (see Figure 4). This shift and the institutional reforms contributed also to break down the slow growth of the 1950s. Belgium recovers during the 1960s higher growth rates compared to other European economies, contrasting with the situation of the 1950s (Table 3.a.).

## Conclusion

The monetary and exchange rate policy is one of the tools for a national or supra-national entity to transform the external constraint into a growth stimulus. It deserves a particular attention from the historian or the economist, most probably during a seminal period like the BW era. Which lesson can be learned from the particular experience of Belgium? It seems that the turbulent path of the Belgian monetary policy during the BW period perfectly illustrates two characteristic difficulties of the monetary policy practice, which are still remaining nowadays.

First, it raises the question of the role of the monetary and exchange rate policy—should it essentially aim at price stability or could it follow other objectives, like economic growth or financial stability (Papademos 2003, Modigliani 1977)? Afterwar, the Belgian monetary authorities strongly chose the first option, this choice guiding the monetary policy practice to a very orthodox way. However, during the 1960s, the resilience against Keynesian principles diminished, because these principles asserted themselves in other countries or in other levels of the economic policy decision. Then a shift in the objective of the monetary policy occurred—monetary authorities accepted to contribute actively to the objective of economic growth. Despite this shift, the growing openness of the economy and the raise of capital mobility diminished the efficiency of a potential expansionary monetary policy. This fact reduced the ability to follow several goals, due to a loss of the monetary policy autonomy.

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<sup>34</sup>“In this respect, we should not forget that the Belgian economy’s growth rate in recent years was regarded as too slow by some parties. These criticisms are based on a certain degree of generalisation and a number of errors. There are no precise reasons and no absolute criteria on which to base a definitive and objective diagnosis.” Banque nationale de Belgique, *Rapport annuel*, 1960, p. 18 (own translation).

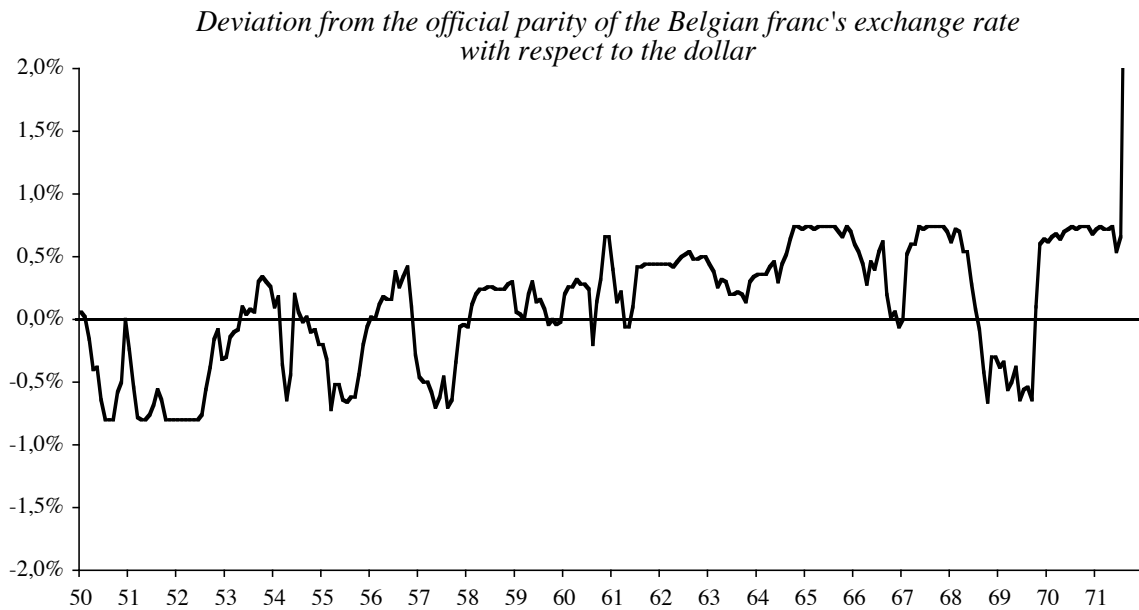
Secondly, the path of the Belgian monetary policy raise the difficulty for the monetary authorities to adapt themselves to new challenges<sup>35</sup>. In this paper, we concentrate our attention on the external constraint, characterised by the advent of a new International Monetary System and the development of capital movements. Facing these challenges, the monetary authorities chose not to use the whole flexibility of the BW agreements, because they strongly believed in the advantages of the Gold standard and preferred monetary austerity as a guarantee of stability. Then we demonstrate how this choice was uncompatible with the slow introduction of the IMS. Such a strategy certainly allowed the monetary authorities to complete their objectives of low inflation and strong franc up to the end of the 1950s, but a slower internal growth dynamic set up in return. Belgian monetary authorities were more reactive to the development of capital movements. They were encouraged to do so by the openness of the Belgian economy and by their willingness to promote the principles of the market economy. However, the introduction of a two-tier exchange market from 1954 did not prevent a progressive loss of the monetary policy autonomy. The leitmotiv of the Belgian monetary authorities during the BW period was to innovate in front of new challenges while staying the guarantor of the monetary stability. This is still today the dilemma for central banks, even if those challenges have changed.

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<sup>35</sup> Padoa-Schioppa (1994), p. 542.

## Figures

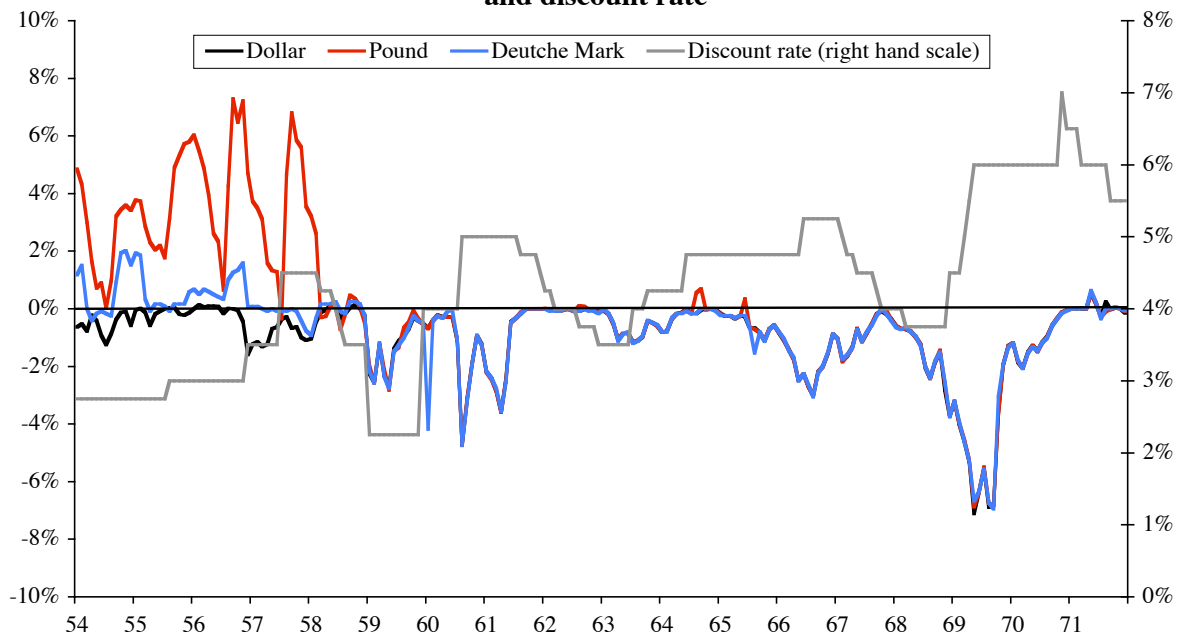
**Figure 1. Official foreign exchange market**



Source □ Banque nationale de Belgique, *Statistiques économiques belges*.

Note □ the line gives the deviation as a percentage of the official parity. A negative deviation means a depreciation of the Belgian franc with respect to the official parity.

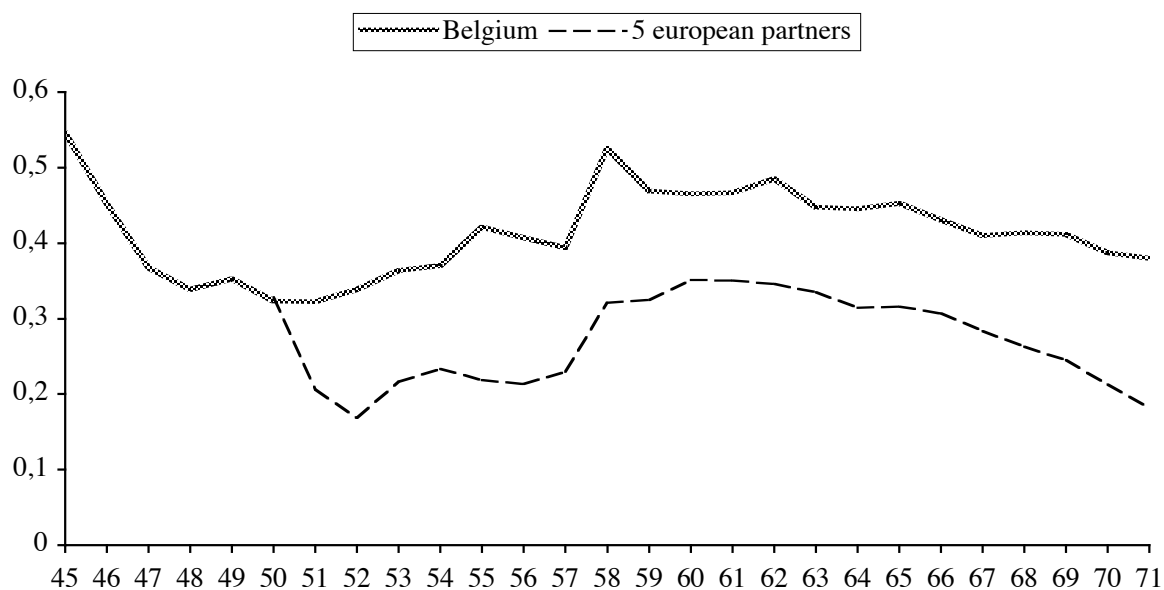
**Figure 2. Spread in the Two-tier foreign exchange market and discount rate**



Source □ Banque nationale de Belgique, *Statistiques économiques belges*.

Note □ the lines give the spread as a percentage of the official market's exchange rate. A negative deviation means a depreciation of the Belgian franc on the free exchange market. After 1959, exchange rates spread's lines are superimposed, as a consequence of arbitrage.

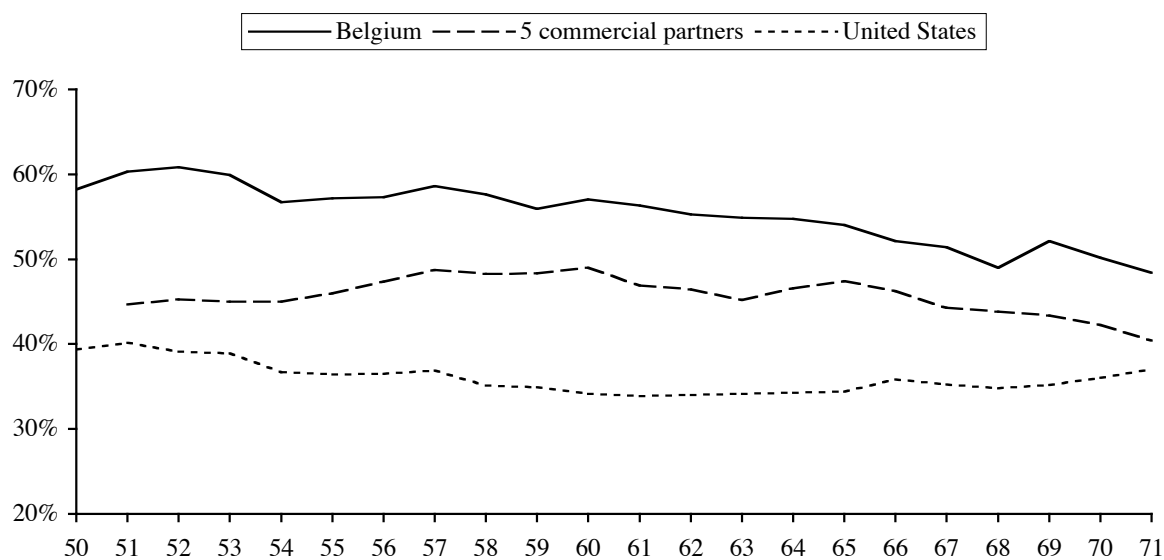
**Figure 3. Gold coverage of the monetary base (%)**



Source: International Monetary Fund, *International Financial Statistics*.

Note: five European partners: France, Germany, Netherlands, Italy and United Kingdom.

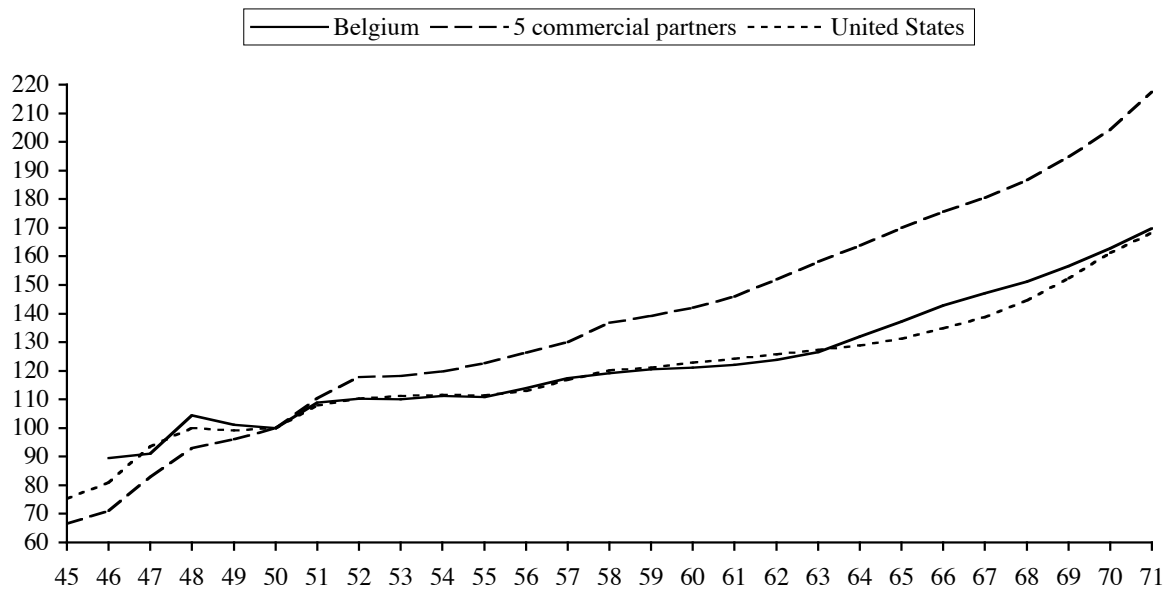
**Figure 4. Evolution of the ratio between paper money and the money supply**



Source: International Monetary Fund, *International Financial Statistics*.

Note: five European partners: France, Germany, Netherlands, Italy and United Kingdom.

**Figure 5. Consumer price index (1950 = 100)**



Source: Mitchell (2003).

Note: five european partners: France, Germany, Netherlands, Italy and United Kingdom.

## Tables

**Table 1. Evolution of the cumulative position of the BLEU with respect to the EPU**

Net position of BLEU to EPU (billions of Belgian francs)

	total claims (1) = (2) + (3)	Paid in Gold or dollar (2)	Loans to EPU and others (3)	Percentage of the position paid in Gold or dollars (2)/(1)
1951	28,1	11,5	16,6	41
1952	41,4	24,0	17,4	58
1953	38,9	23,0	15,9	59
1954	37,6	26,5	11,1	70
1955	45,3	33,7	11,6	47
1956	56,2	44,0	12,2	78
1957	52,9	43,6	9,3	82
1958	63,8	53,5	10,3	84

Source: Cassiers and Ledent (2005) Table 4.3. p. 117.

**Table 2. Evolution of the GNP, prices and money supply**  
Annual growth rate

	GNP (constant price)	Prices *	Paper money	Bank money	Total money supply	Percentage of paper money in total money supply
1945	-	-	84,6	106,0	92,8	59
1946	-	-	4,3	35,0	17,0	52
1947	-	-	6,9	1,3	3,9	59
1948	-	-	5,6	5,2	5,4	59
1949	-	-	2,9	5,4	3,9	58
1950	-	-	1,4	-3,0	-0,4	59
1944-1950**	-	-	123,6	218,1	160,2	59
1950	4,8	-1,2	1,4	-3,3	-0,5	59
1951	5,8	9,0	7,4	10,2	8,5	59
1952	-0,6	3,0	2,9	4,5	3,6	58
1953	4,2	-2,0	3,8	2,6	3,3	59
1954	4,6	-0,4	0,8	3,4	1,8	58
1955	3,1	3,4	3,8	6,4	4,9	58
1956	3,7	1,4	3,2	2,7	3,0	58
1957	2,5	3,5	1,0	-1,8	-0,2	58
1958	-1,8	2,6	4,2	8,1	5,8	57
1949-1958**	2,9	2,1	3,2	3,5	3,3	58
1959	3,7	-0,6	0,8	6,5	3,2	56
1960	4,4	2,0	4,5	-1,5	1,9	58
1961	5,0	1,1	4,3	12,4	7,7	56
1962	5,6	1,2	7,2	7,2	7,2	56
1963	4,4	2,9	8,5	10,0	9,2	55
1964	6,8	4,7	6,5	7,7	7,1	55
1965	3,8	5,1	5,9	8,6	7,1	54
1966	2,9	4,4	3,1	10,9	6,6	53
1967	3,9	3,1	0,8	5,8	3,2	51
1968	4,2	2,7	2,9	12,1	7,4	49
1969	7,1	3,6	-0,1	5,2	2,6	48
1970	6,3	4,8	3,0	13,3	8,3	46
1971	3,8	5,3	7,3	12,5	10,2	44
1958-1971**	4,8	3,1	4,2	8,5	7,4	52

Source: Cassiers and Ledent (2005), Table 3.4 p. 89, table 4.4 p. 122 and Table 5.2 p. 150

\* GNP deflator

\*\* Annual average

**Table 3. Structural data for the Belgian economy and its main trading partners**

**a. GDP per capita**  
Annual compound growth rate

	1944-1950	1950-1960	1960-1971	1944-1971
Belgium	4,8	2,4	4,3	3,7
Netherlands	14,6	3,3	3,7	5,9
West Germany	-6,1	7,1	3,4	2,5
France	13,8	3,6	4,4	6,1
Italy	6,0	5,4	4,7	5,3
United Kingdom	-0,5	2,3	2,2	1,6
Total of 5 partners	1,6	4,3	3,6	3,8

Sources: Maddison (1995).

**b. Degree of openness (X / (GDP + M))**  
Percentage

	1953	1960	1973
Belgium	24,6	26,1	36,2
Netherlands	35,4	35,6	31,9
West Germany	16,8	20,4	18,4
France	12,7	13,9	14,4
Italy	10,6	14,7	14,6
United Kingdom	18,6	18,7	18,8
Average of 5 partners	18,8	20,7	19,6

Source: Kredietbank (1996)

**c. Public finances**

	Public debt / GNP Percentage			National surplus (+) or deficit (-) / GDP Percentage		
	1950	1960	1970	1950	1960	1970
Belgium	73,0	69,3	48,0	-	-3,8	-1,8
Netherlands	-	44,0	28,7	1,6	0,7	-1,1
West Germany	7,4	7,4	7,0	-0,8	-0,6	-0,1
France	-	28,4	12,6	-5,7	-1,4	0,5
Italy	-	39,9	36,7	-	-1,6	-5,1
United Kingdom*	-	1,8	1,3	2,5	-1,9	1,4
Average of 5 partners**		24,3	17,3		-0,8	-0,9

Sources : International Monetary Fund, *International Financial Statistics*.

\*□internal debt only.

\*\*□the average is calculated on the basis of available data.



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