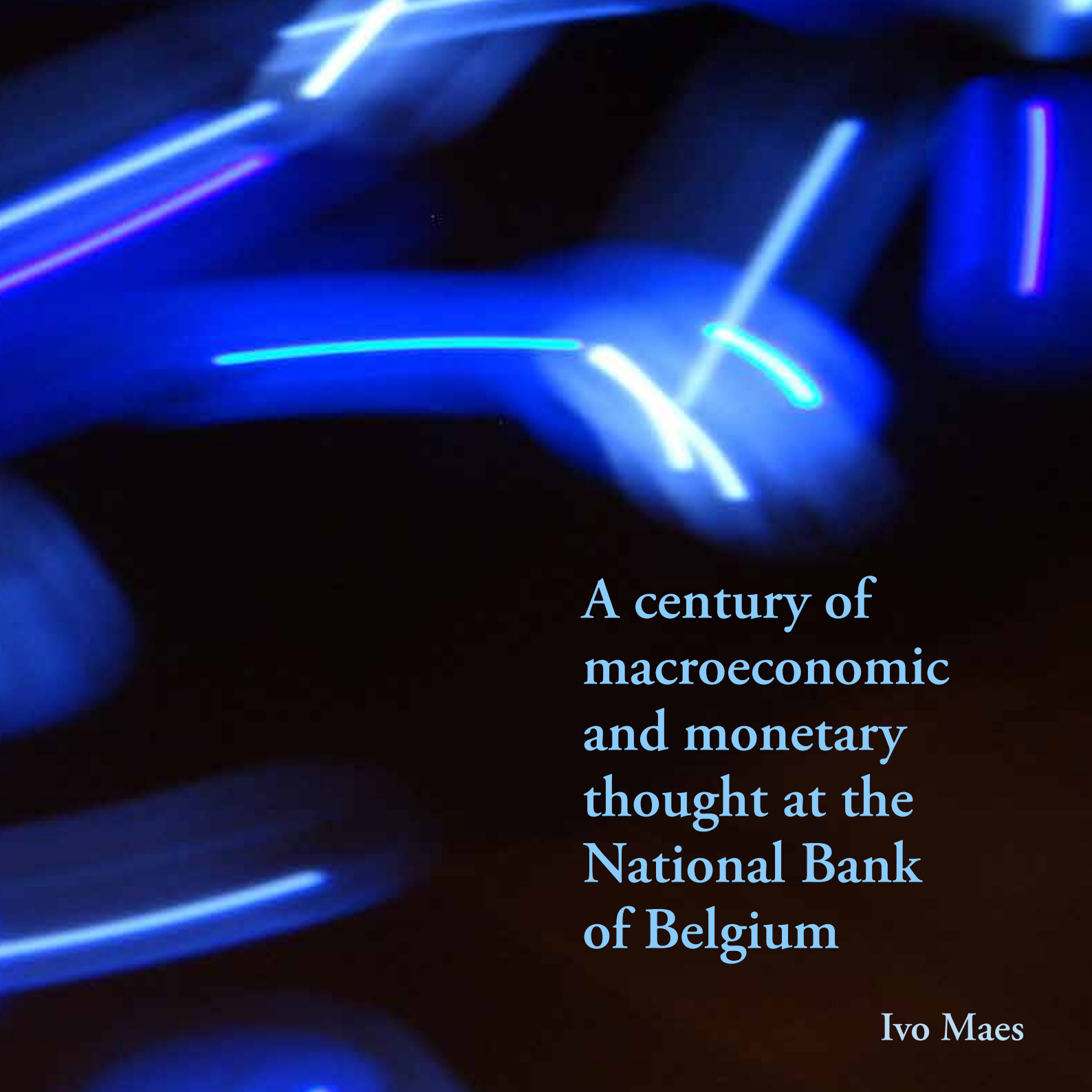

A century of macroeconomic and monetary thought at the National Bank of Belgium

Ivo Maes

A century of macroeconomic and monetary thought
at the National Bank of Belgium

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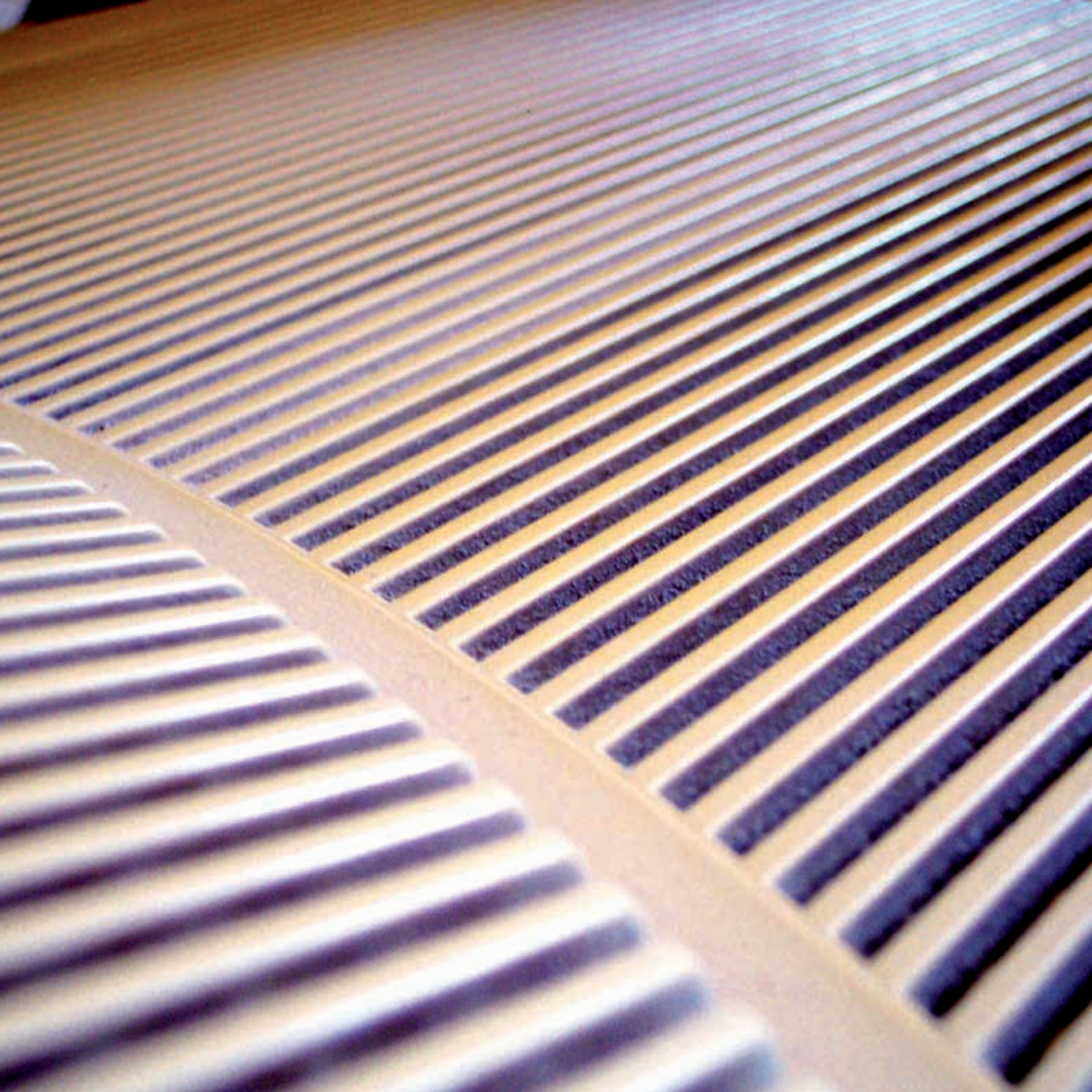

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Introduction

Economic research plays an important role in central banking. This is clearly so at the European Central Bank, which started operating in June 1998. Professor Otmar Issing, previously the chief economist of the Deutsche Bundesbank who then became responsible for the ECB's Directorates General Economics and Research, described the function as *"a weighty responsibility. In any central bank, these two areas are at the very centre of monetary policy-making. This is where the analyses on the real economy and monetary conditions are produced, macroeconomic projections drawn up, speeches on monetary policy drafted, and relevant public statements crafted. In-house research and the monitoring of the latest developments in economic studies outside are further indispensable elements"* (Issing, 2008, p. 71).

Two elements are clearly important for any modern central bank research department: contributing to monetary policy-making and sustaining a dialogue with the academic community. Research departments fulfil very much a bridging function between monetary policy-making and the academic world. This is more or less a constant in the history of the Research Department of the National Bank of Belgium as well as other central banks.

In the policy work of a research department, one might further distinguish two types of activities. First, there is the role as a think tank, proposing new policy initiatives and proposals, very much a bottom-up activity. Secondly, once policy decisions are taken,

research departments play a role in the concrete elaboration of policies, much more a top-to-bottom process.

This study takes a look at how this analysis and research function has been developing over the years at the National Bank of Belgium. Throughout the study, the emphasis will be on the major policy debates and the specific lines of macroeconomic and monetary thinking at the National Bank of Belgium. The focus is very much on the role of its Research Department in policy-making and the dialogue (and debates) with the academic community.

The first chapter looks back at the establishment and early decades of the National Bank, which was founded in 1850 as an issuing and discount bank. The monetary expertise then lay with the Board of Directors. It was only at the beginning of the twentieth century that a nucleus of an Economic Service started to emerge at the Bank.

In the second chapter, we analyse the interwar period. The monetary chaos after the First World War led to the formal establishment of an Economic Service at the National Bank in 1921. We focus further on the stabilisation plans for the Belgian franc in 1926 and the Great Depression of the 1930s, especially the 1935 currency devaluation and the fundamental reforms of the financial system.

The third chapter discusses the postwar period, extending to the end of the 20th century. The early postwar period saw the establishment of a fully-fledged Research Department at the NBB. In its early decades, it played an important role, not only in monetary and credit policy, but also in setting up business surveys and preparing the ground for major reforms of the financial system. The world-wide economic crisis of the 1970s hit the Belgian economy heavily. During the ensuing decades, the exchange rate of the Belgian franc became a major issue of economic policy debate.

With the advent of EMU and the introduction of the euro, the National Bank of Belgium entered a new era. This will be the topic of the fourth chapter. We will discuss how this has affected economic analysis and research at the National Bank of Belgium.

In the conclusions, we will present an overview of economic analysis and research at the National Bank of Belgium. The overall assessment will focus in particular on the influence of the Economic Service on economic and monetary policy-making in Belgium and its reputation in the academic world.

This study would not have been possible without the support of several people. A few words of gratitude, even if they remain imperfect and incomplete, are certainly appropriate.

First of all, I would like to express my gratitude to Governor Quaden for his support for this project, as well as for others. I would like to thank him, not only for his comments and suggestions, but also for his openness for this type of project.

A special word of thanks goes to Jan Smets, Director of the Research Department, Serge Bertholomé, the Head of the Department, and Vincent Périlleux, First Advisor. Working with them, since the start of my career at the National Bank of Belgium, has not only been stimulating, but also very enjoyable. To a certain extent, this is also their project. I would also like to thank them for their insight and suggestions.

I would further like to express my gratitude to several other people for their observations and suggestions, in particular, in alphabetical order: Jan Abraham, Erik Buyst, Anne Camus, Marie-Henriette Lambert, Alexandre Lamfalussy and Walter Pluym.

There were many other valuable contributions to this project, especially from the Documentation Service, the Archives, the Statistics Department, Prepress & Image, and the Research Department's Secretariat. I would also like to thank Amanda Ellerton for the revision of the English.

Naturally, there remains a dimension of individual responsibility, which I, of course, assume. Neither the National Bank of Belgium, the Eurosystem nor any other institution is responsible for any of the views expressed in this volume.

Ivo Maes

Brussels, 15 March 2010

I.

The origins of the Economic Service

The creation and first decades of the National Bank (of Belgium)

In Belgium, as in other countries, financial crises highlighted that the stability of the monetary system was a matter of public interest. The banking crises in Belgium of 1838 and 1848 gave Walthère Frère-Orban, the then Minister of Finance, the impetus to draw up a plan to establish an issuing and discount bank (Buyst, Maes et al., 2005). The law founding the National Bank was signed on 5 May 1850. It gave the National Bank three important missions, typical for an issuing institute: the issue of banknotes, the organisation of short-term commercial credit, in particular the rediscounting of commercial paper, and the function of State cashier.

The National Bank was *de facto* entrusted with the monopoly for issuing banknotes, so as to ensure a unified circulation of paper money in Belgium. In order to make the banknotes issued always convertible into precious metal, the National Bank was not allowed to get involved in the field of shareholdings or medium- to long-term lending. In the same vein, the government had wide-ranging powers

for overseeing its activities. The Governor was appointed by the King and there was also a Government Commissioner, distinguishing the central bank from those in neighbouring countries. The function of State cashier underlined the public nature of the institution, too. Moreover, in return for the right of issue, the government received part of the resulting income.

Like many other early central banks, the National Bank of Belgium was set up as a special type of commercial bank. Over time, the public character of the National Bank has been reinforced. An important step came in 1873, when the banknotes issued by the National Bank became legal tender. This made the right of issue even more important. Also, over time, the State's share of the Bank's profits was raised, notably upon renewal of the right of issue.

Balance sheet of the National Bank of Belgium in 1910
(in millions of BEF)

Assets		Liabilities	
Gold and silver reserves	376.8	Banknotes in circulation	904.5
Discount credit and bills for collection	524.5	Current accounts	105.1
Public funds	94.8	Nominal capital	50.0
Advances on public funds	88.4	Reserves, depreciation and non-distributed profits	54.6
Sundry	41.7	Sundry	12.0
Total	**1 126.2**	**Total**	**1 126.2**

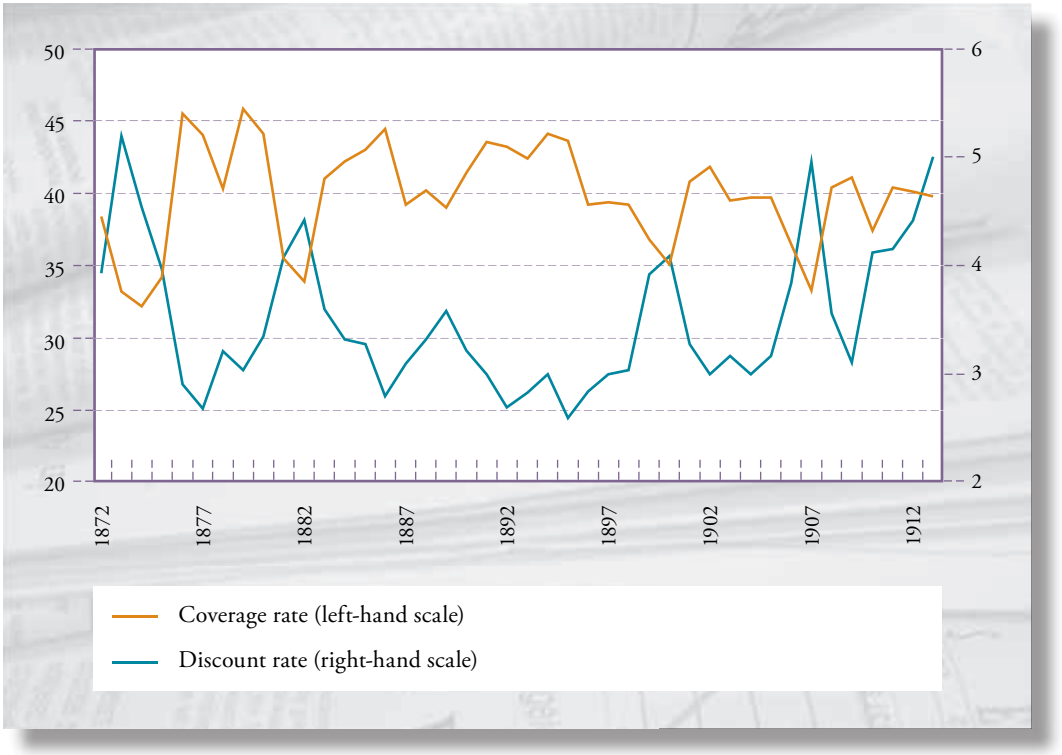
Source: Annual Report of the National Bank of Belgium, 1910.

The activities of the National Bank are brought to the fore in its balance sheet. Two main items dominated the assets side: precious metals and discount credit. The liabilities side is dominated by banknotes in circulation.

Originally, banknotes represented claims on metal standard money and were intended mainly to facilitate large-value payments. At the end of the 19th century, banknotes became more widely established as payment instruments. The large-scale replacement of coins by notes also led to a growing concentration of the country's stock of precious metal at the National Bank. Thus, the National Bank played an ever-growing role in settling the balance of payments, and became the custodian of the country's international payment instruments. As noted by A.-E. Janssen, this contributed to the growing importance of the *"monetary"* function of the National Bank, as compared to its *"credit"* function (discount credit) (A.-E. Janssen, Comment par une lente évolution la fonction monétaire de l'Institut d'émission est devenu dominante, AEJA).

In order to guarantee the convertibility into precious metal of its banknotes, the National Bank would employ the discount rate. So, in the case of an outflow of precious metal, the National Bank would raise the discount rate. This policy provided a guarantee of both the internal and external stability of the franc and enabled the National Bank to fulfil its mission of safeguarding the value of the currency.

Discount rate and coverage rate, 1872-1913
(annual averages, percentages)



Note: the coverage rate is the proportion of precious metal plus foreign exchange portfolio in relation to liquid liabilities.

Source: NBB.

In the early decades, the National Bank's monetary expertise lay almost exclusively within the Board of Directors, with eminent specialists as François Depouhon, Jonathan-Raphaël Bischoffsheim and Eudore Pirmez. By the end of the 19th century, however, after the departure of Pirmez in 1890, there were no distinguished

monetary experts left on the Board and the National Bank lapsed into a state of *"apathy"* (Kauch, 1950, p. 255).

The National Bank also built up a statistical capacity. This was, at least initially, very much focused on its own activities and boosted by the Bank's time-honoured obligation to publish an Annual Report. This contrasted with the practice of other issuing banks. The Nederlandsche Bank, for instance, which was established in 1814, did not publish its first Annual Report until 1865, some thirteen years after the National Bank of Belgium's first edition in 1852 (Pluym, 2000). In 1884, the National Bank published a study called *"Diagrammes"* (diagrams). It contained seven charts, which had been compiled by the *Institut cartographique militaire* (the military cartographic institute). The study analysed different items of the National Bank's balance sheet, as well as the relationship with movements in the discount rate, over the period 1851-1881. It further provided a comparative analysis of the relationship between the discount rate and the coverage rate for the issuing banks of Belgium, the Netherlands, England and France.

With its numerous branch and discount offices, the National Bank contributed to the unification of the Belgian money market. The foundation of the National Bank created a framework within which the Belgian financial system could develop. It was the centralisation of banknote issuance and the organisation of the short-term commercial credit by the National Bank, especially discount credit, that enabled the big banks to focus on their business activities, something which would strongly support Belgium's industrial revolution (Kauch, 1950).

The structure of its headquarters in Brussels was naturally also a function of the Bank's activities. Back in 1907, there were nine services: Secretariat, Treasury, Discount, Portfolio, General Accounting, Inspectorate-General and State Cashier Accounting,

Closed Deposits and Public Funds, Open Deposits, and Banknotes. With the exception of the Secretariat and Accounting, all other services were directly related to banking activities.

The library as the nucleus of an Economic Service

The origins of the Economic Service at the National Bank of Belgium can be traced back to the establishment of the library (Maes and Buyst, 2005a). When the National Bank was founded in 1850, the need for documentation was limited and involved more or less exclusively the Board of Directors, where the monetary expertise of the Bank also lay. It concerned mostly legal publications (like the Belgian Moniteur or the French Journal Officiel) as well as monetary studies, especially ones related to the Latin Monetary Union (Maes, 1953, p. 471).

Yet the idea of centralising documentation was maturing. So, as Governor Théophile de Lantsheere wrote to the owner of a bookshop on 1 December 1906: *"The Bank's management is not in a position to create a new library from scratch. But it already has a good many elements for it. The only trouble is that they are scattered all over the place. What needs to be done is to bring them together and classify them"* (as quoted in Maes, 1953, p. 472). So, the decision was taken to create a centralised library.

A key role in setting up the library, as well as the Economic Service, was played by Albert-Edouard Janssen. Janssen was a student of Victor Brants at the University of Leuven / Louvain. He obtained degrees in Law, in 1907, and in Political and Diplomatic Sciences, in 1909.

Janssen's doctoral dissertation, *"Les conventions monétaires"* (Monetary unions), was a discussion of international monetary relations, from both a legal and an economic perspective. The main body of the book contained a detailed analysis of the German, Scandinavian and, in particular, Latin Monetary Unions. In his assessment of currency unions, he was pessimistic about the latter. He realised that, from the late 19th century onwards, nation states increasingly considered monetary matters as an integral part of their national sovereignty. Therefore, monetary unions could only survive if they were preceded by political unification, a process that was not on the agenda in the early 20th century (Janssen, 1911, p. 433-435). In a fifth chapter, he examined the then ongoing discussions on international monetary relations. Janssen's perspective was partly historical, but also very forward-looking. He took a great interest in the future development of the international monetary and financial system: *"So we find ourselves in the midst of a straightforward case of economic development; … it has come about by the extension of sophisticated means of payment, moving on from coins to the banknote, from the banknote to the cheque and through the cheque to transfer and settlement"* (Janssen, 1911, p. 423).

Albert-Edouard Janssen

Janssen's dissertation was awarded the Belgian Royal Academy prize in 1911. He became a professor at the School of Political and Social Sciences of the University of Leuven / Louvain in 1911, teaching courses on *"Issuing banks"* and *"Money and credit"*.

In 1908, A.-E. Janssen started working at the National Bank of Belgium, in the Legal Unit of the Secretariat (NBBA, PV du CA, 30-5-1908). He was introduced by Victor Brants, the supervisor of his doctoral thesis, to Director de Moreau (Plater-Zyberk, 1976, p. 45). The Board of Directors also instructed him to set up a library. On 22 February 1910, the first librarian was appointed, Mr Emile Van Isacker (NBBA, PV du CA, 22-2-1910).

Janssen made a quick career, becoming Secretary of the Bank in 1914 and Director in 1919. In the first part of the history of the National Bank of Belgium, Pierre Kauch described his role as:

"The Bank only extracted itself from its apathy after bringing into the Legal Unit a young man with a doctorate in Law, very curious about everything to do with currency and credit: A.-E. Janssen ... He soon became a rising star, thanks to his analyses that stimulated Board members, even those less open to new ideas, into reconsidering conventional and outdated concepts. He also took on the role of a mentor ... and created a dynamism which eventually gave the Bank back the vitality that one might have thought to have been exhausted" (Kauch, 1950, p. 255).

Growing monetary tensions in the pre-1914 period

In the decades leading up to the First World War, Belgium enjoyed strong economic growth, driven by the rapid expansion of the steel, coal and machinery production industries. However, this favourable picture was disturbed by structural problems in the monetary area (Buyst and Maes, 2007). Belgian firms and private persons invested large sums in Russia, China, Latin America and the Mediterranean area to build railway and tramway lines, and to set up coal and steel plants. As a result of these massive capital exports, Belgium's balance

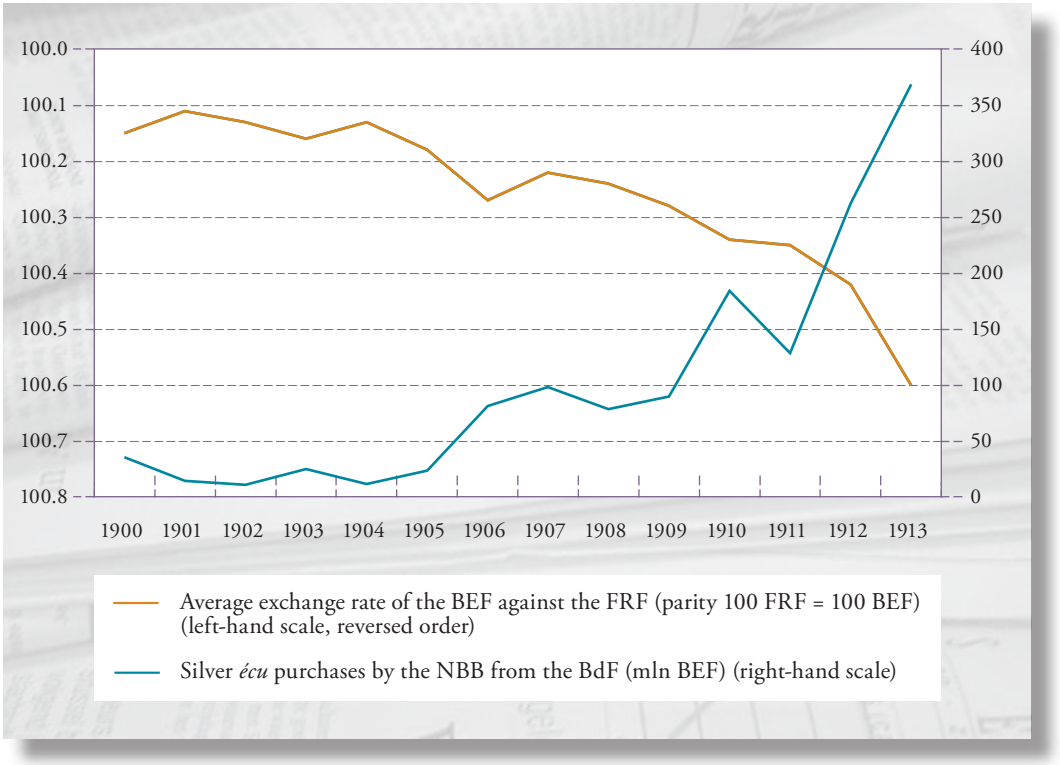
of payments showed persistent deficits. Increasingly, these deficits exerted downward pressure on the exchange rate of the Belgian franc, especially *vis-à-vis* the French franc (Kurgan-Van Hentenrijk, 1997). In the decades before World War I, most observers considered that a deviation of 0.4% from the official parity was already a threat to the smooth functioning of the international payments system (Janssens, 1976). In 1906, the Belgian franc's market rate reached this important psychological barrier for the first time. Also thereafter, the Belgian franc's exchange rate situation continued to deteriorate.

Moreover, the Belgian franc's depreciation produced annoying side effects. As France and Belgium were neighbouring countries and both members of the Latin Monetary Union, speculators could easily exploit the divergence between the official Belgian/French franc parity and the market exchange rate.

The basics of the speculative mechanism primarily involve speculators using French banknotes to buy Belgian banknotes at the market exchange rate. These Belgian notes are then exchanged at the local branches of the National Bank of Belgium for silver coins. As these *écus* circulate in both Belgium and France at par (Latin monetary union), it is profitable to export them to France where they are changed for French banknotes. And the vicious circle can start again (Janssen, 1911).

The gradual weakening of the Belgian franc increased the profitability of draining silver coins from Belgium to France. From 1906, the amounts involved in these speculative operations increased significantly. They not only disrupted the normal circulation of coins in Belgium, but also regularly forced the NBB to buy large quantities of *écus* from the Banque de France to replenish its depleted reserves of silver coins (Kauch, 1950).

Exchange rate of the Belgian franc (BEF) against the French franc (FRF) and silver *écu* purchases, 1900-1913



Source: NBB and Janssens, 1976.

Both the silver outflows and the Belgian franc's relative weakness soon drew criticism. In 1907, Professor Maurice Ansiaux of the University of Brussels published an article that severely criticised the NBB's monetary policy. Ansiaux argued that the Belgian central bank had not raised the discount rate sufficiently to defend the Belgian franc on the international currency markets. In this respect, he suggested that the National Bank gave priority to its commercial

interests as a private joint-stock company, to the detriment of its duties as a central bank. This conflict of interest was also related to the Law of 26 March 1900 which stipulated that the revenues from a discount rate above the 3.5 % level went to the Treasury. Consequently, Ansiaux argued, the NBB was more concerned about maximising the number of discount operations and reluctant to raise the discount rate above 3.5 % (Ansiaux, 1907).

Albert-Edouard Janssen also turned his attention to the weak position of the Belgian franc and the massive drain of silver coins to France. Building on his analysis of the Swiss situation, Janssen recommended that the NBB should abandon its traditional policy of keeping minimal metal reserves and instead increase its gold reserves (Janssen, 1911, p. 384-408). He was convinced that a substantial increase in gold reserves would restore confidence in the Belgian franc, narrowing the difference between the market rate of the Belgian franc and the official parity. This was also a policy pursued by other central banks, like the Banque de France (Plessis, 2005). Janssen's analysis and recommendations were taken up and made more explicit in a comprehensive memorandum for the NBB's Board of Directors (Lepreux, 1911). However, with the beginning of the First World War in 1914, it is not possible to assess the effects of this new policy.

A.-E. Janssen also was a member of the Finance Minister's *"Monetary Commission"* and produced several reports (Janssen, 1913a, b, c and 1914). So, Janssen acted as a kind of one-man Economic Service. He also considered himself as such, which is illustrated by the following quote: *"In recent years, the main banks of issue – and we shall mention only those of Germany, Belgium, France, Italy, Sweden and Switzerland – have acquired research and statistics departments; it would be a good thing to have closer and more frequent contact between these research centres, which have the great advantage of being in touch*

with the everyday world of business. At present, there is only occasional contact." (Janssen, 1911, p. 438).

So, at the NBB, the institutional origins of the Economic Service can be traced back to the decision to set up a library (Maes and Buyst, 2005a). By the end of the 19th century, the NBB's need for documentation was still limited and mainly concerned the Board of Directors. When Albert-Edouard Janssen joined the Bank in 1908, the Board instructed him to set up a centralised library. Janssen interpreted his task very broadly and *de facto* established a centre for research and documentation.

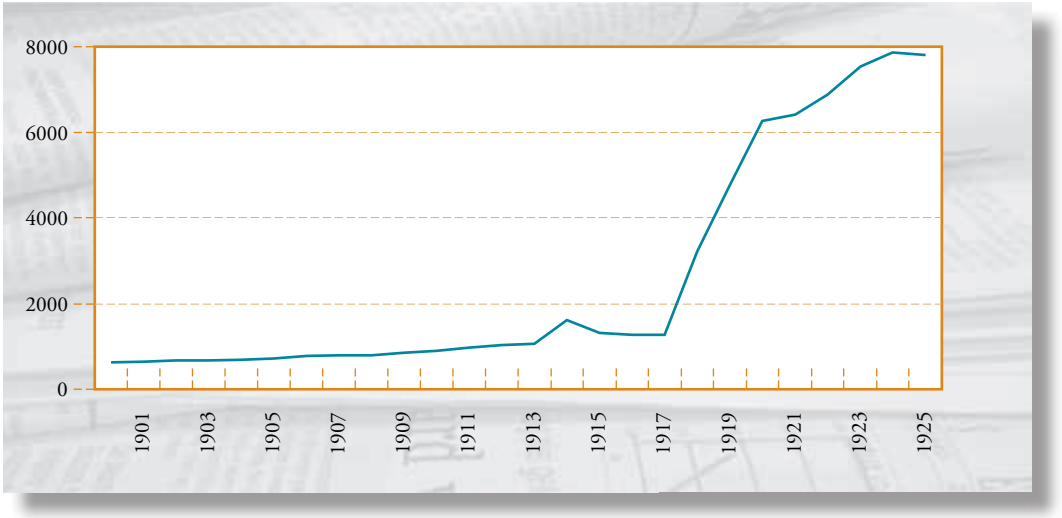
II.

The formal establishment and first decades of the Economic Service

The economic crisis after the First World War

After the First World War, the longing for a return to the (mythical) period of the gold standard was very strong, also in Belgium. However, the war was a catastrophe for the Belgian economy. Manufacturing activity came to an almost complete standstill. Meanwhile, the heavy war levies were largely financed by money creation. The increase in the money supply received a new and even bigger impetus when the German authorities started paying in German marks for their purchases in Belgium at a compulsory, overvalued, exchange rate. By November 1918, about half of the money supply in occupied Belgium consisted of German marks. As a consequence of the war, the money supply rose by a factor of six, which created severe inflationary pressures (Buyst and Maes, 2007).

Banknotes in circulation, 1900-1925
(millions of Belgian francs)



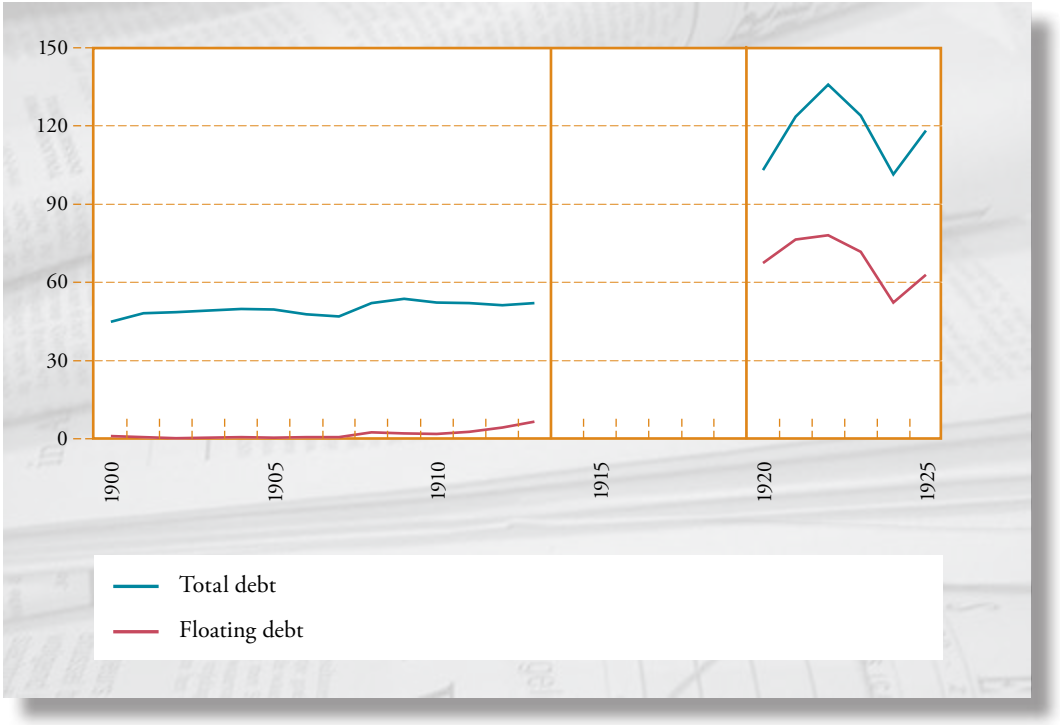
Source: NBB.

Shortly after the Armistice, the Belgian government decided to exchange all domestic holdings of German marks for Belgian francs at the rate formerly imposed by Germany. The measure caused a massive fraudulent influx of marks. The Belgian authorities did little to prevent these illegal exchanges in the firm belief that Germany would eventually pay. Naturally, this once again pumped up Belgium's money supply, with all its inflationary consequences.

The expectation of German war reparations tempted the Belgian government into a lax budgetary policy. As a result, both the budget deficit and public debt skyrocketed. Moreover, the composition of public debt changed dramatically after the First World War. Continuous price increases eroded investors' confidence in long-term loans, so that the government increasingly had to rely on short-term

credit. Moreover, the public sector's borrowing requirements could no longer be placed on the domestic market. Short-term foreign credits were thus indispensable. Consequently, Belgium's public finances became extremely vulnerable to financial crises. Moreover, these lax budgetary and monetary policies affected the balance of payments. The Belgian current account recorded deficits of 8 to 10 % of GNP per year in the early 1920s (Buyst, 1997). All these imbalances only served to undermine confidence in the Belgian franc.

Belgium's public debt, 1900-1925
(as a % of GNP)



Note: central government only.
Source: Pirard, 1999 and Buyst, 1997.

By the end of 1922, Germany claimed that it was no longer able to pay for the reparations. In January 1923, France and Belgium retaliated by occupying the Ruhr area. This spectacular action, however, failed utterly. So, the Belgian situation became even more precarious and the Belgian franc fell victim to massive capital flight and speculation. In the space of a couple of months, the franc lost about 35 % of its value against the pound sterling.

Albert-Edouard Janssen was one of the first in Belgium to warn against the perils of inflation. In 1919, he was a member of the Allied Mission in the United States, where he gave a well-documented lecture about Belgium's financial situation (AEJA, No. 639). However, he soon became closely involved in international monetary matters, representing Belgium in various international committees. Among the most important was his membership, and on two occasions his chairmanship, of the Financial Committee of the League of Nations. In this capacity, he took part in several international missions, playing a role in the financial stabilisation plans of Austria and Hungary, among others. During the Austrian mission, he was even offered the governorship of the Austrian central bank (Frère, 1976).

Strengthening economic analysis at the NBB

So, after the First World War and the ensuing economic problems, the need to reinforce economic analysis at the National Bank became paramount. During discussions in the Board of Directors, Janssen argued strongly in favour of formally establishing an Economic Service (Van der Wee and Tavernier, 1975). Moreover, Janssen had a brilliant student at the University of Leuven / Louvain, in the name of Paul van Zeeland, who he had been steering towards the leadership of this new Economic Service.

Like Janssen, Paul van Zeeland had studied Law and Political and Diplomatic Sciences at the University of Leuven / Louvain. In 1920, along with the first group of *"CRB fellows"*, he went to Princeton University to study Economics (Henau, 1995, p. 37).

The *Commission for Relief in Belgium* (C.R.B.) was established in 1914 in the United States in order to save Belgium from starvation during the German occupation. After the Armistice, the remaining funds were used to set up several educational and scientific associations. One of them was the *C.R.B. Educational Foundation*, which awarded grants to promising young Belgians to study at top American universities. Many of the C.R.B. fellows would later play a prominent role in the academic and policy-making world (Paul van Zeeland, Gaston Eyskens, Franz De Voghel, Robert Triffin, Jacques Drèze, etc.). The C.R.B. also contributed to an early and strong *"Americanisation"* of economics in Belgium (Maes and Buyst, 2005b).

As advised by Janssen, van Zeeland followed several courses by Professor Edward Kemmerer. He also wrote a paper on *"The Financial and Monetary Crisis in Belgium"* (Report by Paul van Zeeland, PUA).

Kemmerer was a monetary expert of international renown in the early decades of the 20th century. In his (unpublished) Mémoires, van Zeeland described Kemmerer as, *"Petit, mince, tout en nerf, ne vivant que pour et par sa science ; le meilleur théoricien de la finance que j'aie rencontré"* (Small, thin, always on edge, living only for and through his science, the best finance theorist that I have ever met) (van Zeeland, Mémoires, I.B., PVZA). As a specialist in central banking issues, Kemmerer had been closely involved in setting up the Federal Reserve System in 1913 (Gomez, 2009). He had also gained a strong reputation in helping to stabilise the currencies of several Latin American countries.

In 1918, Kemmerer wrote a memorandum outlining the possible objectives and organisation of a Statistics Department at the Federal Reserve Bank of New York. In January 1920, the Statistics Department became operational. Its main purpose was to prepare regular reports for the Federal Reserve Board on business and credit conditions on *"a more economical and scientific basis than at present"* (Prof. Kemmerer's comments on the organisation of the Statistics Department, September 1918, FRBNYA).

Paul van Zeeland was clearly influenced by Kemmerer's close links with the Federal Reserve System. He obtained an internship at the newly-created Statistics Department of the New York Fed for the three weeks of the Christmas holidays (Paul van Zeeland, Report of the Foundation Scholars, BAEFA). Under the direction of Kemmerer, van Zeeland also started working on a study of the Federal Reserve System. The topic also fitted in perfectly with Janssen's research programme on issuing banks. His study on the organisation and functioning of the Federal Reserve System became his Ph.D. dissertation at the University of Leuven / Louvain, with Janssen as his promotor (van Zeeland, 1922).

Paul van Zeeland

Back from the United States, Paul van Zeeland started working at the Economic Service of the National Bank in October 1921. He made a quick career, becoming Secretary of the Bank in 1924, Director in 1926 and Vice-Governor in 1934. He was

very much involved in international monetary matters, like the creation of the Bank for International Settlements. He also pursued an academic career (Dujardin and Dumoulin, 1997). So, together with A.-E. Janssen, he became one of the founders of the Institut des Sciences Économiques at the University of Leuven / Louvain in 1928.

So, when van Zeeland returned to Belgium in 1921, he had acquired a profound knowledge not only of monetary economics but also of how economic research at a central bank should be organised. It should come as no surprise then that, on 1 October 1921, Paul van Zeeland was recruited as an advisor to the Economic Service at the National Bank of Belgium (NBBA, A070).

Soon after joining the NBB, van Zeeland produced a note of 107 pages on the theme of *"Inflation et déflation"* (Inflation and deflation), containing a comprehensive plan to remedy Belgium's monetary difficulties (NBBA, N099/7). His policy conclusion was clearly in favour of deflation. Following Kemmerer's approach, he used the quantity theory of money to explain the increase in prices. Van Zeeland rejected the idea of a stabilisation of the Belgian franc at a lower level than the pre-war gold parity. His main argument was that this would destroy the economic, social and moral order of society. On this point, van Zeeland's type of analysis had quite some similarities with Keynes' discussion, in the *Tract on Monetary Reform*, of the *"consequences to society of changes in the value of money"* (Keynes, 1923). Naturally, Keynes rejected a deflationary policy. Moreover, van Zeeland also advanced certain technical arguments in favour of a return to the pre-war gold parity. First, the volatility of several key currencies – like the British pound – made it very difficult to determine a credible new gold parity for the franc. Second, many investors hoarded large amounts of Belgian banknotes speculating upwards. In this context, fixing a new official exchange rate below the pre-war gold parity would immediately provoke massive selling

of Belgian francs. These speculative flows would soon make the new exchange rate untenable. Therefore, van Zeeland concluded that going back to the pre-war gold parity was the only way out.

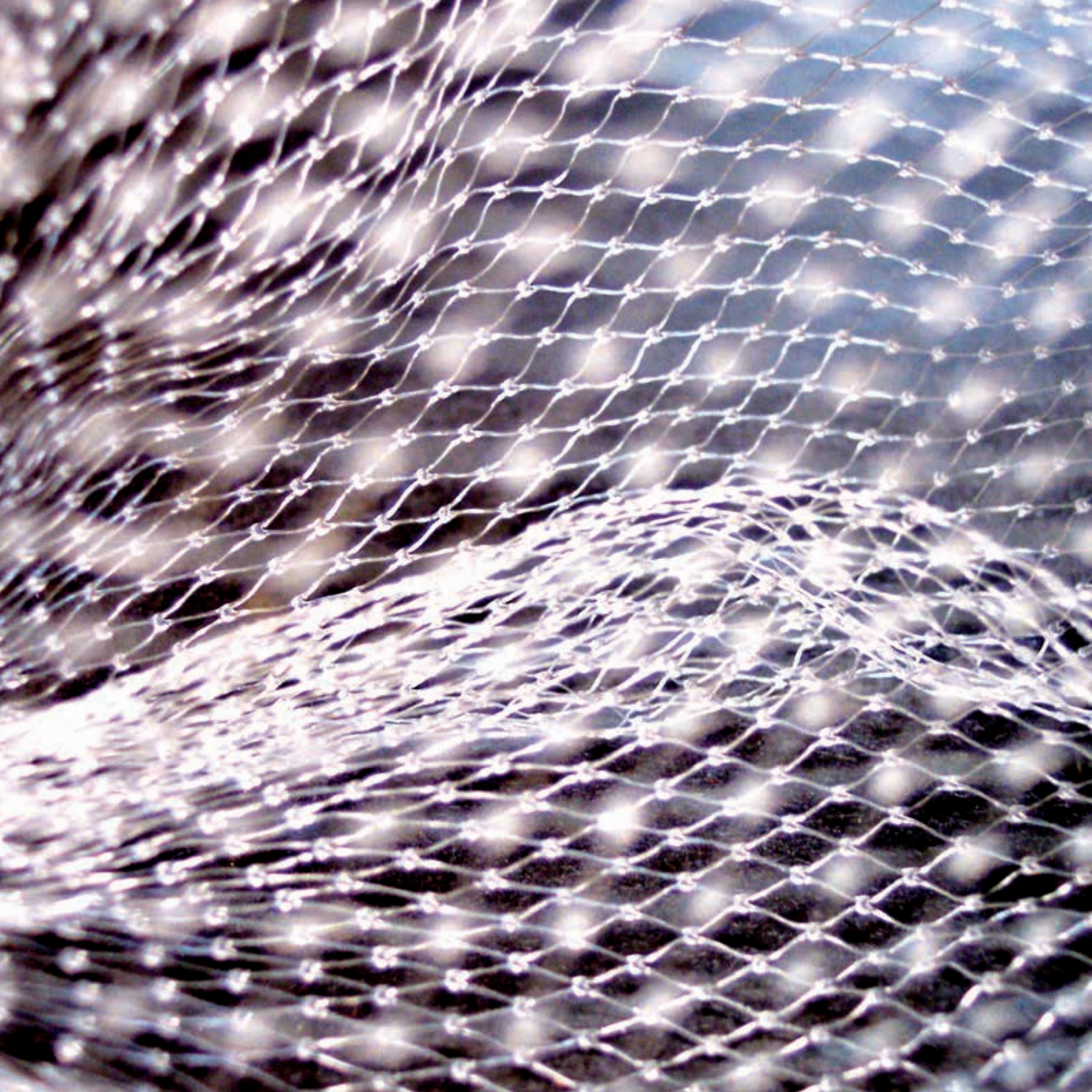
However, according to van Zeeland, a return to the gold standard at the pre-war parity did not imply a return to the pre-war price level, as the purchasing power of gold had fallen substantially since 1914. Hence, the dose of deflation needed was not as painful as previously thought. He calculated that reducing the money supply by three billion francs should be sufficient. Van Zeeland's analysis and recommendations became the NBB's policy guideline in the early 1920s and figured prominently in various publications and speeches (e.g. Rapport BNB, 1921; Lepreux, 1922).

The official establishment of the Economic Service

The appointment of Paul van Zeeland, on 1 October 1921, can be considered as the formal start of the National Bank's Economic Service. In May 1922, van Zeeland was given a permanent post as the head of the Economic Service.

Over the following years, the Service expanded (Maes and Buyst, 2005a). In December 1922, Jean-Jacques Vincent was appointed as the deputy head of the Economic Service. In 1924, the year that van Zeeland became Secretary, Louis Mahieu joined the group. In 1925, two brilliant young economists were recruited, Léon-H. Dupriez and Robert Lemoine.

Within the Economic Service, the work was specialised up to a certain level. Van Zeeland worked chiefly on monetary and exchange rate policy, the key theme of the first half of the 1920s. Vincent's analyses mainly covered banking and public finances, while Dupriez



was the specialist in business cycle analysis. Later, as a university professor, he went on to publish a number of major works on the subject (Dupriez, 1947 and 1959). Dupriez, who was at the National Bank up to 1945, was to lay the foundations for the Bank's business cycle analysis, which still to this day is one of the strong points of the Bank's research.

Van Zeeland also worked on the organisation of the Economic Service. According to the 1928 Internal Rules of Procedure of the National Bank, the Economic Service was made up of five sections: Library, Documentation, Statistics, Research, Press and Publishing (Bulletin). Their functions were further spelt out:

- The library acquires and keeps all works of economic or financial interest.

  Over time, the library's collections were to expand significantly, especially from the early 1920s onwards, when the Economic Service was set up. Before the Second World War, with about 40 000 volumes, it featured amongst the biggest central bank libraries, surpassed only by the Reichsbank with 100 000 books, but larger than the Bank of England's 25 000, or the Nederlandsche Bank's 15 000 (Maes, 1953).

- The Documentation section collects various national and foreign newspapers, as well as the reviews and periodicals to which the Bank subscribes.

  A (daily) press review and a (weekly) review of reviews point up the most interesting articles and provide a brief analysis of them.

- The Statistics section keeps records of all items of interest of the Bank's operations, exchange rates, the main production figures, etc., and in some cases also compiles charts from the data.

- The Research section prepares theoretical studies on all questions sent in by the Bank's Board of Directors.

- The task of the Press and Publishing section is to prepare studies and articles for publication. It compiles the Information and Documentation Bulletin which features analyses on topical economic and financial issues.

The concept of an Economic Service was rather vague at the end of the 19th century. However, in the last decades of the 19th century, the central banks of England, Germany, France and Italy created an office that was responsible for compiling statistics and preparing reports (Feiertag, 2005, p. 17). In 1884, the National Bank of Belgium produced a report on developments in its balance sheet for the period 1851-1881 and the relationship with movements in the discount rate. It further offered a comparison with the issuing banks of France, England and the Netherlands.

There are significant parallels between the creation of the Economic Service at the National Bank of Belgium and these in other central banks. So, the need for information on the domestic economy was a crucial driving force in setting up a research unit (Martin-Aceña and Tortella, 2006, p. 3). Further common elements were the links with the library (a specialised documentation centre) and the recruiting of brilliant economists, mostly drawn from the academic world, like Paolo Baffi at the Bank of Italy, Germán Bernácer at the Bank of Spain or Pierre Quesnay at the Bank of France (who, in 1930, became the first General Manager of the BIS, Toniolo, 2005).

The Bulletin of the National Bank of Belgium

An important step in the development of the Economic Service was the creation, in June 1926, of the *"Information and Documentation Bulletin"*, now known as the *"Economic Review"*. Baudhuin (1946) considered it as Belgium's first economics journal. Initially, the Bulletin was divided into three parts: financial issues, industrial, commercial and agricultural issues, and statistics.

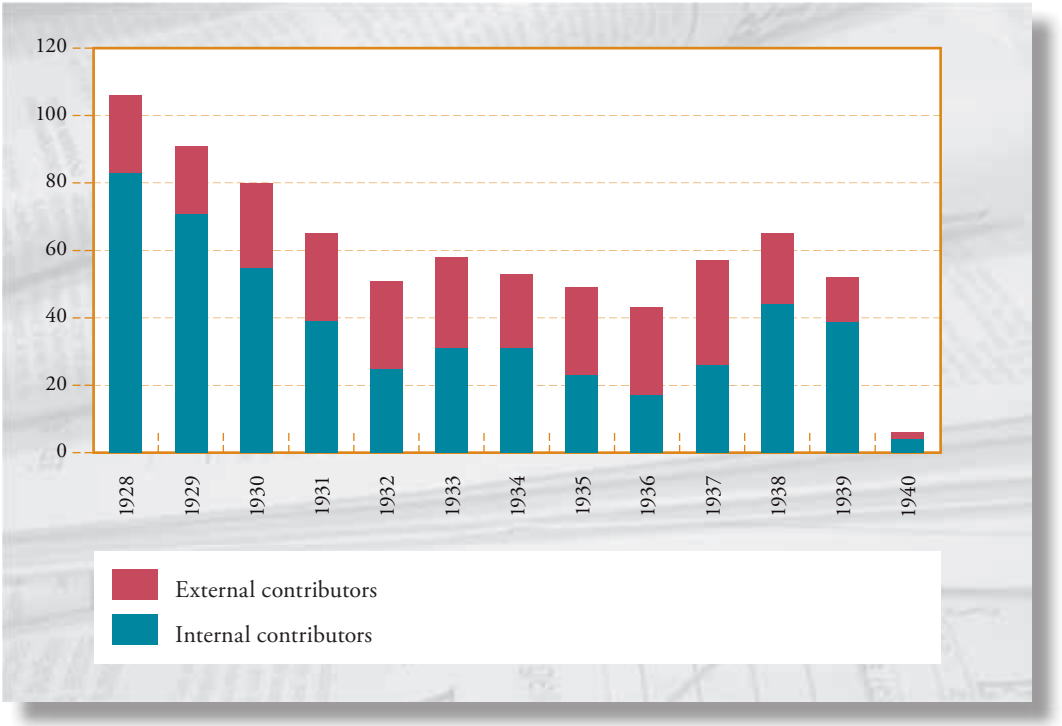
As pointed out in an article in the jubilee issue of the Bulletin in 1955, very few central bank journals can claim such a long lifespan. The Federal Reserve Bulletin has been published since 1914, shortly after the Federal Reserve Act came into force; the Monthly Bulletin of the Bank of Finland since 1920; the former German Reichsbank's *Zahlen zur deutschen Wirtschaftslage* and the Monthly Bulletin of the Bank of Norway since 1925; and the next year saw the launch of three new journals, namely the Bulletin of the National Bank of Switzerland, the Monthly Report of the National Bank of Hungary and the National Bank of Belgium's Bulletin.

The first issue appeared in the form of one single column, while the second issue spanned two columns and bore the word *"confidential"*. In March 1927, the wording was replaced to say: *"This Bulletin is published as objective documentation. The articles reflect the views of their authors, independently of the opinion of the Bank"*. Originally set up chiefly for the National Bank's own internal needs, the Bulletin later enjoyed a wide circulation both in Belgium and abroad.

An initiative was soon taken to call on the services of external contributors. From the first issue of 1928 onwards, the Bulletin published contributions from authors outside the National Bank, mainly professors from Belgian universities. So, various articles were received from Georges de Leener, Maurice Ansiaux and Serge Chlepner (from the University of Brussels), Fernand Baudhuin

and Gaston Eyskens (from Leuven / Louvain University), Raoul Miry (Ghent) and Hendrik de Man (Frankfurt-am-Main University), to name but a few.

Articles in the Bulletin, 1928-1940



Source: NBB.

In 1937, there was a major reform. Having been published exclusively in French up until then, the Bulletin went bilingual in July and published Dutch texts alongside the French articles. This mixed

formula did not last long. From July 1938 onwards, there was a full issue of the Bulletin in both of the national languages.

As mentioned, the Bulletin had from the outset a statistical section. Initially, this was quite short. The first issue comprised only the balance sheets of five central banks: the National Bank of Belgium, the Bank of England, the Banque de France, the Reichsbank and the Nederlandsche Bank. Later, occasional tables on other topics were included. So the fourth issue, dated 1 July 1926, also featured tables on Belgian foreign trade, industrial production, and prices of agricultural products.

However, the Economic Service quickly developed its statistical apparatus. This is clearly evident from the publication of a special issue of the Bulletin in April 1929, entitled *"Belgian economic statistics, 1919-1928"*, and containing a systematic and coherent overview of the most important economic data for the period 1919-1928. The last issue, with the Belgian economic statistics for the period 1980-1990, was published in 1994.

The failure of the stabilisation plan of Albert-Edouard Janssen

Meanwhile, different Belgian governments struggled to get the monetary chaos under control. In June 1925, there was a radical shift of power on the Belgian political scene with the Poullet-Vandervelde government. The new government was supported by the socialists and the labour wing of the Catholic Party. Albert-Edouard Janssen became Finance Minister, with the responsibility for drawing up a stabilisation plan. It was a very delicate operation, as Janssen himself said, he had to *"carry out surgery on a train travelling at 150 kilometres an hour"* (Vantemsche, 1978, p. 169).

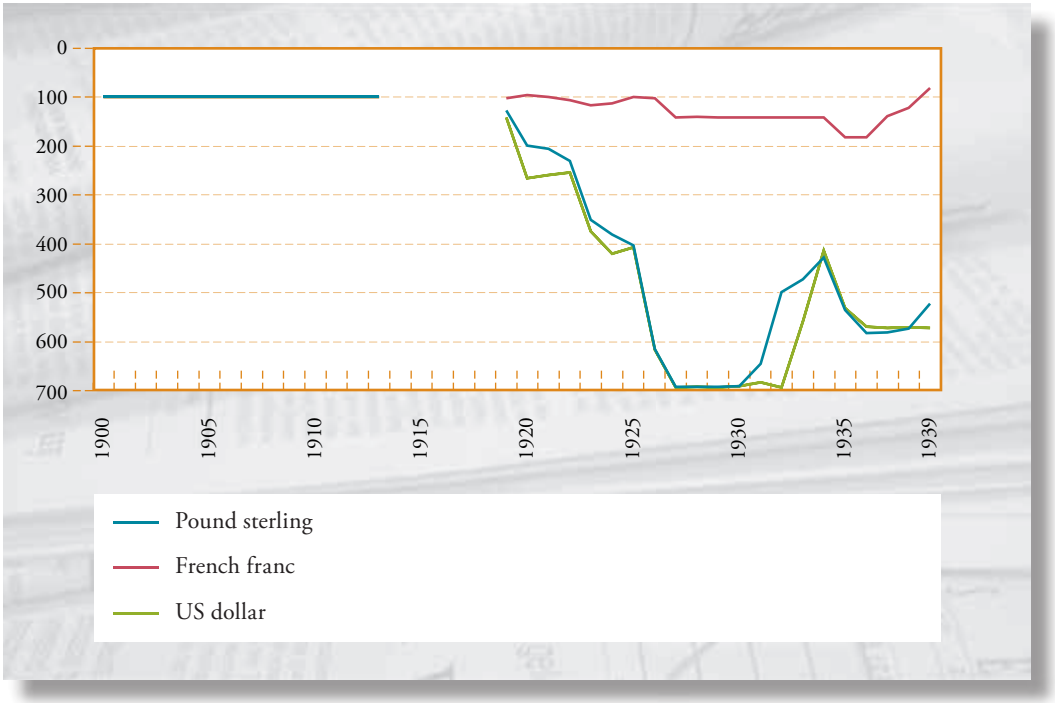
The National Bank played an important role in the preparation of the plan (Van der Wee and Tavernier, 1975). It spurred the government into action and there was a flurry of contacts between the Board of Directors and the Finance Minister. Moreover, its Economic Service, which had been set up in 1921 under the impetus of Janssen, was put at the disposal of the stabilisation project. The memoranda of the Economic Service formed a framework on the basis of which the National Bank and the Finance Minister could decide on the measures to be taken. Janssen's plan contained three key elements: stabilisation of the Belgian currency at a rate of 100 francs to the pound sterling, the issue of a long-term foreign loan of 150 million dollars and tax increases to cover the budget deficit. However, the consolidation of the floating debt would only be tackled after the stabilisation of the franc. It would prove to be a major weakness of the plan.

Janssen's stabilisation plan immediately ran into criticism from Belgian commercial bankers. Société Générale Vice-President Emile Francqui, for one, was in favour of a significantly lower exchange rate for the Belgian franc. He also wanted to give priority to tackling the public finances, including the floating debt. This criticism naturally induced foreign bankers to take a more cautious and reticent attitude towards the Belgian stabilisation plan. According to Janssens (1997, p. 96), wrote Lord Revelstoke of Baring Brothers to Georges Grahame, the English Ambassador in Brussels: *"You are just as aware as myself that there is a major financial group in Belgium trying to sink the measures proposed by the Government and it is obviously not fair to expect foreign bankers to be prepared to help a country whose own financial institutions refuse to cooperate"*.

In these circumstances, the government naturally failed to obtain a loan on the international financial markets. The stabilisation plan derailed and A.-E. Janssen had to resign in April 1926. Only in October 1926 did a new government of national union, with

Emile Francqui as the dominant force, succeed in stabilising the Belgian franc, albeit at a parity of 175 francs to the pound sterling, a much lower exchange rate than the Bank would have liked. The undervalued exchange rate led to a strong recovery, but also an upsurge in inflation, surpassing 25 % in 1927 (Heremans and Tavernier, 1980, p. 129).

The exchange rate of the Belgian franc, 1900-1939
(indices, 1900 parities = 100)



Note: a decrease in the curve means a reduction in the value of the Belgian franc.
Source: NBB.

The failure of Janssen's stabilisation plan was to become a major trauma for the centre left in Belgium. As remarked by Vice-Governor De Voghel, who was responsible for the Research Department from 1944 to 1971, *"Albert-Edouard Janssen kept a bitter memory of this serious set-back without, however, going as far as to make any precise accusations"* (De Voghel, 1976).

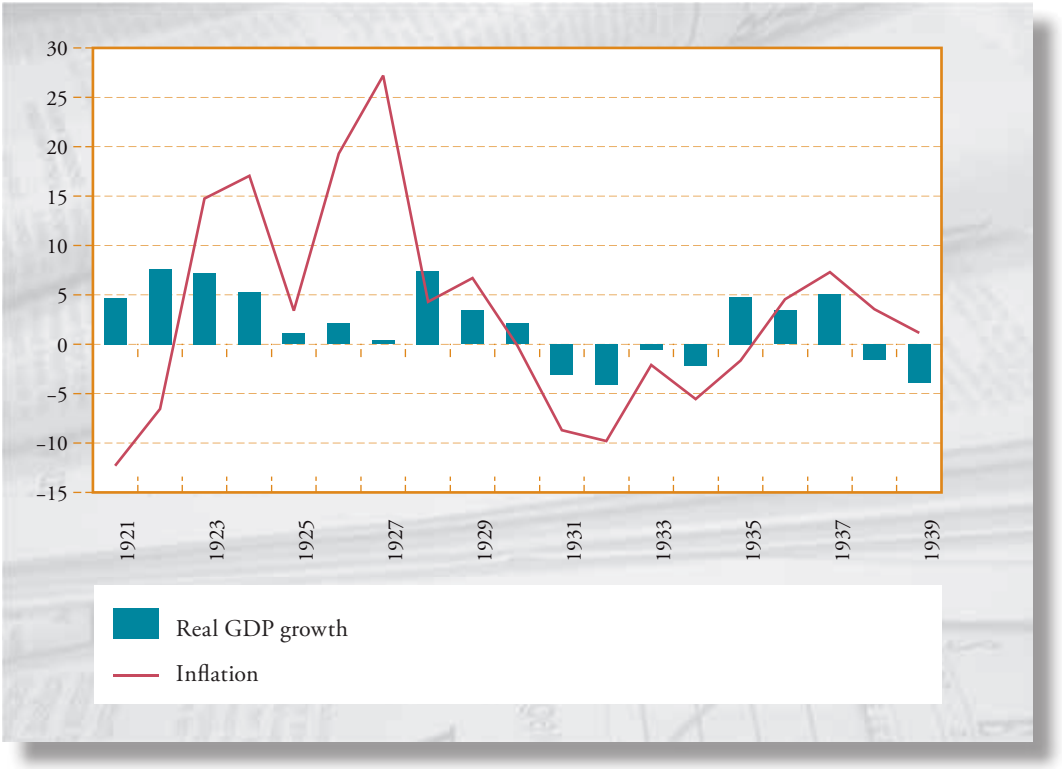
In his capacity as Finance Minister, Janssen was also closely involved in the Law which modernised the National Bank of Belgium (Frère, 1976, p. 36). Among its salient features were the inclusion of foreign currency, alongside gold, in the covering of banknotes and the strengthening of the public nature of the National Bank with the representation of the *"country's major interest groups"* in the central bank's organs. This was to lay the foundations for the National Bank's role in the social dialogue in Belgium.

The Economic Service and the Great Depression

As a small and open economy, Belgium was badly affected by the Great Depression in the 1930s and especially by the sharply contracting world trade and plummeting international prices. Yet, in Belgium, there was unanimous support for maintaining the existing gold parity, even after the devaluation of the British pound in September 1931. The difficulty in stabilising the franc in 1926 was still too fresh in everyone's memory. Nobody wanted to take the responsibility for another monetary adventure. Socialists politicians argued that *"le franc des riches est aussi celui des pauvres"* (the rich man's franc is also the poor man's franc) (Van der Wee and Tavernier, 1975, p. 258).

There was then no real alternative to a deflationary policy, under which domestic prices had to be adjusted to the lower world market price level by cutting costs. However, implementation of this deflationary policy was less evident. The fall in nominal wages came up against particularly stiff resistance. Company closures and restructuring led to a further rise in unemployment. The Belgian economy went straight into a downward spiral. The financial system was also hard hit and a few banks even went bankrupt.

Growth and inflation in Belgium, 1921-1939
(percentages)



Source: NBB.

The deflation prompted major debates within the Bank's Economic Service (Van der Wee and Tavernier, 1975). Dupriez wrote a memorandum, in the spring of 1934, in which he claimed that the Belgian position was not sustainable. In his view, a devaluation was the only solution possible. In response to this argument, Lemoine drafted a text in June 1934, in which he emphasised the disadvantages of a devaluation. Agricultural products would become more expensive as Belgium was heavily dependent on imported produce. And there would be no rise in exports of Belgian manufactures, given the ever-increasing impediments to trade throughout the world. Moreover, the renewal of the government debt would become extremely difficult after a devaluation. Governor Franck supported Lemoine's position. Vice-Governor van Zeeland, on the other hand, was not so strongly against a devaluation, as proposed by Dupriez (who was also one of his colleagues at the University of Leuven / Louvain).

Within the Economic Service, advocates of a devaluation gradually gained ground (Van der Wee and Tavernier, 1975, p. 279). So, in a memorandum dated 15 March 1935, Lemoine, who was earlier against a devaluation, put up a case for an immediate and official devaluation. However, the opinions of Vice-Governor van Zeeland and the Economic Service were rejected by Governor Franck. The 1926 gold franc remained his top priority and the National Bank's gold reserves were, in his view, amply sufficient to ward off an attack on the Belgian franc.

With bank crises and rising unemployment, the deflationary policy nevertheless lost all credibility in the eyes of the people. Capital flight took hold, which put the Belgian banking sector into an even more serious predicament. On the international currency markets, the Belgian franc soon fell victim to heavy speculative attacks.

In March 1935, the political cards in Belgium were radically reshuffled. Paul van Zeeland was instructed by King Leopold III to form a government of national unity. As soon as van Zeeland was appointed Prime Minister, he wanted to devalue the franc immediately. This led to an embarrassing confrontation between the former Vice-Governor of the Bank and Governor Franck. By Royal Decree dated 31 March 1935, the franc was devalued by 28 %. The devaluation percentage was calculated in a scientific way by a pupil of Dupriez at Leuven / Louvain university, Robert Triffin (1937).

The van Zeeland government also brought in important reform measures in the financial system (Buyst, Maes et al, 2005). Earlier, as a minister in the de Broqueville government in 1934, van Zeeland had played an active role in the preparation of the Royal Decrees concerning the splitting up of the mixed banks into deposit banks and holding companies (Van der Wee and Tavernier, 1975, p. 275). The van Zeeland government, of which Hendrik de Man was a member, took the view that the banking sector performed a function in the public interest. So it was perfectly reasonable for the State to have some control over the banks' activities. This was set out in the Royal Decree No. 185 of 9 July 1935. Preliminary drafts of this Royal Decree were prepared by Léon-H. Dupriez and Robert Lemoine, who were then detached from the NBB (Van der Wee and Tavernier, 1975, p. 297).

At the heart of the new financial system was the Banking Commission. This institution had the power, among other things, to require the banks to maintain certain ratios : a liquidity ratio – the ratio between the assets which can be readily realised and short-term deposits – and a solvency ratio – the ratio between equity capital and the total volume of deposits. In close consultation with the National Bank, the Banking Commission could also set maximum interest rates for certain categories of lending (Vantemsche, 1980, p. 420).

Paul van Zeeland had intended the Banking Commission to function under the aegis of the National Bank (Buyst, Maes et al, 2005). However, his hopes were dashed. After fierce lobbying by the major banks, fearing an excessive concentration of power, the Banking Commission was set up as an independent public institution. Nevertheless, the government aimed at close cooperation between the two: the National Bank would concentrate on credit policy and the Banking Commission would focus on protection for savers.

The Royal Decree of 9 July 1935 also led to the creation of a new service in the National Bank for the analysis of banks' financial statements, entitled *"Contrôle des Situations Bancaires"* (Control of Banks' Financial Statements) (Internal Rules of Procedure, 1940, NBBA B309). This service became responsible for activities relating to statistics, control and analysis of banks' accounts and balance sheets. In a major internal reform in 1948, the service would be put together with the Economic Service, thus creating a new *"Research Department"*.

III.

The second half of the 20th century

The slow rise of Keynesian economics in Belgium and at the NBB

In Belgium, the neo-classical tradition in economics remained strong, in the early postwar period as well (Maes and Buyst, 2005b). In the interwar period, the *"Institut des sciences économiques"* at Leuven / Louvain University became the first modern research centre specialising in economics in the Low Countries. Léon-H. Dupriez, who was at the time also working in the NBB's Economic Service, played a leading role here, together with Albert-Edouard Janssen and Paul van Zeeland. Dupriez's theoretical framework resembled that of Hayek's general equilibrium-oriented business cycle theories of the late 1920s (Hayek, 1928). Also after the war, business cycle analysis remained the top priority for Dupriez and his institute. Yet meanwhile, Keynesianism had conquered mainstream economics. Dupriez always resisted this trend as, in his opinion, the Keynesian approach lacked solid microeconomic foundations. Moreover, he favoured a general equilibrium approach, rejecting Keynes' partial equilibrium method. So, he continued to work in the tradition of the Austrian school (Löwenthal and Siaens, 1972). Dupriez's position

significantly slowed down the penetration of Keynesian ideas in Belgium.

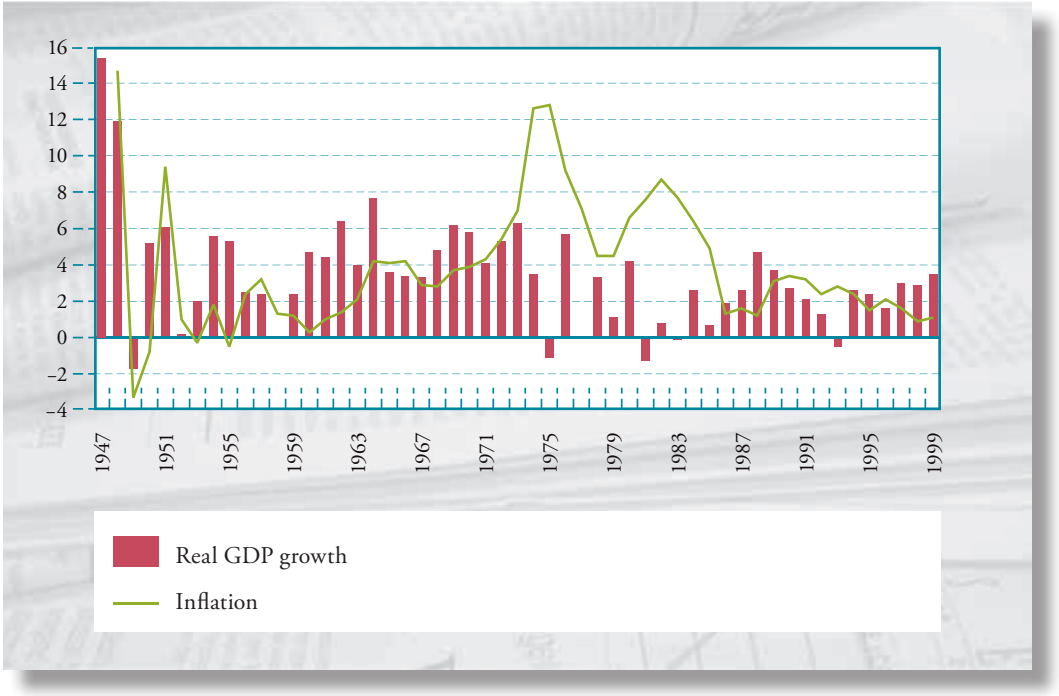
Postwar economic policy in Belgium was also very much in line with the classical orthodoxy (Cassiers and Ledent, 2005). At the heart of policy-making was the so-called *"Gutt operation"* of September 1944, named after the then Belgian Finance Minister Camille Gutt. The basic challenge was the enormous increase in the volume of banknotes in circulation, due to the war financing. The monetary and financial chaos after the First World War was a major trauma for policy-makers, both the Belgian government in London and the policy-makers in occupied Belgium. So, the crucial aim was to avoid a repetition of such monetary chaos.

At the beginning of 1941, the government in London established an advisory committee to investigate the problems associated with the postwar reconstruction. Finance Minister Camille Gutt and Adolphe Baudewyns, Director of the National Bank of Belgium in London, emphasised the monetary dimension of the reconstruction process. They advocated a drastic cut in the money supply, reducing it to the May 1940 level. That would cause domestic prices to fall, avoiding a sharp devaluation of the franc. A secret committee was also established in Brussels, in which several members of the Economic Service of the National Bank played an important role (Janssens, 1976, p. 306). This committee was very much responsible for the practical planning and implementation of the reform. It was one of the main activities of the Economic Service during the war.

Under the Gutt operation, the money supply was cut drastically (Van der Wee and Verbreyt, 2005). So, banknotes of 100 francs or more ceased to be legal tender. They had to be deposited and, above a certain minimum, these deposits were frozen. With the Gutt operation, the monetary overhang in the economy was wiped out. This also made it possible to abolish price controls and to restore

the mechanisms of the free market economy. In addition, Belgium played a pioneering role in breaking down barriers to international trade and international payments. Initially, this gave rise to the so-called *"Belgian miracle"*. However, during the 1950s, growth of the Belgian economy slowed down considerably.

Growth and inflation in Belgium, 1947-1999
(percentages)



Source: NBB.

In the Belgian academic world, Keynesianism came to the fore at the French-speaking University of Brussels, with Etienne-Sadi Kirschen. As a Belgian representative at the Organisation for European Economic Co-operation (OEEC), Kirschen had become familiar with basic Keynesian models (*"hydraulic Keynesianism"* as christened by Coddington, 1983). He used this experience and his background as an engineer to start up a quantitative and Keynesian-inspired research programme on the Belgian economy.

Kirschen's research immediately hit a serious problem: the lack of reliable Belgian national accounts. This was also a problem for the Belgian government, as the OEEC was asking Belgium for its official national accounts (Van der Wee and Dancet, 1986, p. 151). A National Accounts Commission had been officially established in 1949. However, it was not making much progress. Indeed, the National Statistics Institute lacked the necessary means, both financially and in terms of personnel. The almost total absence of Keynesian influences in Belgium in the early postwar period, as well as a lack of political will, were major reasons for this.

Kirschen, who was not a member of the National Accounts Commission, assembled his own team to set up a system of national accounts. This also comprised *"representatives"* of the main Belgian institutions (like the Research Department of the National Bank of Belgium for the balance of payments). With the help of the OEEC and the Dutch and British statistical offices, Kirschen's team succeeded in 1953 in providing a full set of Belgian national income estimates (comprising the three approaches of income, production and expenditure, Kirschen et al., 1953).

At the end of the 1950s, the Belgian government, under the leadership of the Flemish economists' standard-bearer Gaston Eyskens, switched over to a more Keynesian-type policy with a view to boosting economic growth. Then, in 1959, the Eyskens

government established the Economic Programming Bureau. Its main functions were to give the government professional advice in economic policy matters, to improve tools for policy-making and to prepare medium-term economic plans and projections. Moreover, the Eyskens government passed a successful Regional Development Act, closely based on the policy recommendations of the, more Keynesian, Flemish economists at the University of Leuven.

In the early postwar period, the National Bank of Belgium, under the governorship of Maurice Frère, strongly adhered to orthodox monetary views. Frère, a former President of the Banking Commission, was Governor from 1944 to 1957. He was convinced of the necessity of monetary stability, *"The varied experiences I have had during my career have led me to the very strong conviction that there can be no durable prosperity, no real economic expansion or political stability if monetary stability has not been previously assured, for when all is said and done, monetary stability is the basis on which the equilibrium of the economy, the formation of savings and the development of productive investments are founded"* (Conference given by Frère in Japan, April 1960, MFAA, 7114 IV). Among his experiences was not only the Belgian inflation of the 1920s, but also the German hyperinflation, as he was in Berlin in the early 1920s. In Frère's view, inflation was *"the most anti-social tax that could ever be imagined"* (Brion and Moreau, 2005). Frère knew that safeguarding monetary stability was not an easy task for a central bank:

"Practically, the only method of attaining this objective is for the Central Bank to increase the cost of – and if need be, restrict – short-term credit.

One must, however, not be blind to the fact that such measures are unpopular whenever they have to be taken and governors of Central Banks have in this respect a thankless task to accomplish.

They have experienced, during the execution of their mandate, how much trouble can be caused by excessive increases in prices subsequent to inflation and manipulations of exchange rates. …

Monetary stability is no more the result of good luck than monetary troubles, wherever they occur, are the consequence of bad luck".

Fundamentally, Frère was in favour of a return to the gold standard. He defended a strong franc and opposed any devaluation of the Belgian franc. In 1957, he succeeded in pushing through a law establishing a metallic status for the Belgian currency : the franc was defined as a certain quantity of gold and gold coverage of banknotes was re-established.

His ideas on the nature of monetary and budgetary policy were resumed in his remarks to Albert-Edouard Janssen, who was Finance Minister from 1952 to 1954, *"if you keep a firm hand on the State expenditure tap and I do the same for credit, nothing can go basically wrong"* (as quoted in Janssens 1997, p. 265). In his speech in Japan, he further elaborated on the relation between the Government and the central bank:

"The Bank and the Government should in no way be opposed to each other. Quite the contrary. The Bank is the Government's natural council with regard to credit problems, and its duty is to bring to the latter its fullest collaboration. …

I remember the comparison made a few years ago by Professor Einaudi, former President of the Italian Republic : he compared the position of the Central Bank with respect to the Government to that of the slave in Ancient Rome, whose task it was to remind the home-coming conqueror that the Tarpeian Rock was next to the Capitol".

However, Keynesian ideas were gaining influence at the National Bank of Belgium too. An important role here was played by Franz De Voghel, who became Director in November 1944 and responsible for economic research. He had studied Law and Economics at the Universities of Louvain and Paris, specialising in Finance. He was a pupil of Janssen and van Zeeland. With a recommendation from Paul van Zeeland, he went to the United States in 1935 to investigate the banking reforms there (Letter of 28 February 1935, BAEFA). In 1936, he obtained his doctorate at the School of Political and Social Sciences of the University of Louvain, with a dissertation entitled *"Contrôle des banques. Législations récentes"* (Recent legislation on banking control) (De Voghel, 1936).

From 1935 to 1944, De Voghel was at the Banking Commission, initially as the Secretary, later becoming a Director. Maurice Frère, then the President of the Banking Commission, clearly appreciated him, as he asked De Voghel to follow him to the National Bank of Belgium in 1944 (Brion and Moreau, 2005). He was Finance Minister from November 1944 to August 1945 and thus played an important role in the implementation of the Gutt operation.

De Voghel was also a professor at Louvain, teaching courses on financial legislation. Among his qualities was a great concern for policy relevance, as well as careful attention to the institutional framework, both the existing one and reforms to improve it. He also played an important role in the dialogue with the social partners, like the May 1960 central agreement (Pluym and Boehme, 2005, p. 303). He had very wide cultural interests and was a President of the Palais des Beaux-Arts as well as Founding President of Europalia and the King Baudouin Foundation.

A blueprint of De Voghel's ideas can be found in a presentation dating from December 1943, *"Les conditions préalables d'une politique du crédit en fonction d'une politique économique en Belgique"*

(Preconditions for a credit policy appropriate to economic policy in Belgium*)* (NBBA, E588). De Voghel's ideas were quite eclectic, combining very Keynesian and interventionist ideas with a pro found preoccupation for monetary stability. In his view, *"economic policy must aim to ensure stable prosperity for the country"*. He further elaborated on the notion of stability and stressed its importance: *"The notion of stability is an essential concept because we know that it is relatively easy to bring about short-lived prosperity. Devaluation is one of these extremely easy means which we have already used improperly. But stability is quite another thing. I would go even further to say that this is the real problem"*. The reference to the improper use of a devaluation probably referred to Francqui's choice of the stabilisation rate in 1926.

For De Voghel, an essential function of the State was the organisation of a structural economic policy. At the heart of this structural policy was the determination of investment, not only public investment but also private investment. In line with ideas on indicative planning, like in France in the postwar period, he considered that the State also had a role to play in the sectoral allocation of investment.

De Voghel had some scathing criticism of the way the capital markets functioned in Belgium. In his view, the State was heavily discriminated against in the capital market, describing the State as being *"in a situation of flagrant inferiority. It regularly comes up against a coalition of private interests formed notably by all too powerful financial corporations whose business is certainly less technical than political and which have the effective means of influencing if not public opinion, then at least the opinion of a minority of investment capital holders and that is enough in these circumstances"*. This criticism was probably related to the failure of Albert-Edouard Janssen's stabilisation plan in 1926, under pressure from the financial markets. For progressive Christian Democrats, like De Voghel, this was a profound trauma. In his view, the government *"is coming onto the*

capital market in direct competition with the private sector and humbly submits to the law of the jungle".

De Voghel argued for a strongly interventionist policy programme. So as not to be derailed under external pressure, he was in favour of restrictions on capital movements. On the domestic side, he proposed a three-pronged programme. The first element, in line with his ideas on planning, was the control of investment, not only public investment, but also *"private investment in terms of overall volume and allocation to certain sectors of the economy"*. Secondly, in terms of budgetary policy, he argued for a *"Fiscal policy with economic objectives and not only budgetary targets"*. This is a strongly Keynesian idea, as observed by Coddington (1983, p. 1-3), *"At the most fundamental level, what distinguishes Keynesian policies is that they take a utilitarian view of the public finances … Such a utilitarian perspective would be one in which the state of those public finances is not judged to be good or bad in accordance with an 'internal' criterion applying only to the finances themselves, but rather to a criterion involving the consequences for the whole economy ... A utilitarian perspective on the public finances may be contrasted with the idea that there may be precepts of 'sound finance' or financial 'propriety', 'rectitude', 'responsibility' and so on. This is the view that there is a direct parallel between the soundness of the finances of an individual household and the soundness of the finances of government"*. Thirdly, De Voghel wanted a credit policy *"aiming mainly at subjecting private firms to banking controls on the one hand, and controlling their recourse to the capital market on the other hand, and also to put banks under the control of semi-state credit institutions. Coordination between these institutions will in this way ensure the necessary conditions for having a genuine credit policy"*.

So, notwithstanding a different philosophical approach, in De Voghel's view, just as in Frère's opinion, credit policy had a crucial role to play in Belgian economic policy. In the decades following the war, times of limited capital mobility, monetary policy in

Belgium became to a large extent credit policy, whereby quantitative control instruments had a significant role to play (see below). Given the importance of credit policy, De Voghel radically reorganised the National Bank's economic research function. In 1948, a Research Department was established. Within it, there were three services: Studies and Documentation (the old Economic Service, but without the Statistics Division), Statistics, and Bank Credit. The establishment of an autonomous Statistics Service, earlier part of the Economic Service, pointed up the growing importance of statistical data. The Bank Credit Service was the Control of Banks' Financial Statements Service in charge of controlling banks' accounts. With this reform, De Voghel gave the Research Department an important role in the formulation of monetary and credit policy.

During the following decades, two main tendencies were to be noted in the development of the Research Department, namely a steady increase in the number of economists and transfers of some of its activities to other entities within the Bank. Three main transfers of responsibilities may be singled out (see also Annex 1). In 1965, the activities of the Risk Office were switched over to the Credit Department (they became a service in 1968, which formed the nucleus of the Microeconomic Information Department, which was set up in 2001). In 1969, the Electronics and Mechanography Service (which had been formed out of the Statistics Service in 1965) became a service within the Organisation and Training Department. In 1992, the Statistics Service left the Research Department, joining the newly-created General Statistics Department. The Research Department itself focused increasingly on its core activities, namely economic analysis and research, gradually stepping up the number of economists it employed. At the end of the 1940s, there were about ten economists in the Research Department. This figure rose to about thirty in 1980, forty-five in 1999 and fifty in 2010.

The launch of the business cycle surveys

As mentioned previously, as early as the interwar period, business cycle analysis was one of the strong points of economic research at the National Bank of Belgium. It became one of the focal points of the economics profession in the early postwar period. It was, moreover, an area in which Keynesian economists, like Alvin Hansen (1951) or John Hicks (1950), as well as neo-classical economists, like Dupriez, were active.

In a meeting of the Board of Directors of 16 September 1949, De Voghel complained that the data for economic analysis (balance sheet data of firms) were only available with significant time lags. Probably under the impulse of Pierre Kauch, the Research Department therefore intended to contact the most important firms directly to get better information on current economic developments : *"It seems that there is a clear interest in reporting on the latest developments in the situation of the country's major firms. To this end, the Research Department intends to request strictly confidential information from a number of firms regarded as the most representative of the various economic sectors. This information should not consist of accounting data."*

In 1950, the *Institut für Wirtschaftsforschung*, the Munich-based institute for economic research, launched a new system of business cycle surveys (Pluym and Boehme, 2005). The objective of these surveys was to trace out expectations about the economic situation on the basis of the answers from companies themselves to specific questions. This soon became known as the *"Schnelldienst"* (speedy service). It also attracted economists from the National Bank's Research Department, who travelled to the Institute in Munich to obtain more information on the subject. From 1952, the National Bank's Research Department started work on trial surveys. The results of this exploratory work were presented *inter*

alia to the Central Economic Council, in which both trade unions and employers are represented.

In the first half of 1954, the leading industry federations and trade unions asked the National Bank to set up similar business surveys in Belgium too. The surveys were organised in close cooperation with the industry federations. In late 1954 and early 1955, the first survey was carried out in the textiles sector. Questions were put to representatives of textile manufacturing and trade about the activity pursued, orders received, appraisal of stocks, order books and demand and price forecasts. The survey was soon extended to other sectors, such as manufacturing industry and construction in 1956. From 1958 onwards, surveys of investment in fixed capital by industrial firms were held and, as of 1962, they covered the degree of production capacity utilisation. Moreover, under the impetus of the European Commission, steps were taken as early as 1962 to harmonise the surveys carried out in European Community countries (Reynders, 1995, p. 4).

The De Voghel committees

In the 1960s, economists became less interested in the business cycle, while economic growth came at the centre of things. As noted by Van der Wee (1986, p. 35), *"the postwar period years were characterized not only by impressive growth but also by the social and political consensus which supported it ... Growth became a frontier, even an obsession. Moreover, the aim was not just to grow but to grow fast"*.

In the Golden Sixties then, economic growth, and also planning, took centre stage, in line with the dominant Keynesian ideas at the time. It also applied to the financial area, too. As in other countries, successive governments set up study groups to develop blueprints

for reforms of the financial system. Via these reforms, the key objective was to stimulate investment, and so economic growth. In Belgium, there were three important committees, which were all chaired by Vice-Governor Franz De Voghel. The Bank's Research Department played a crucial role in these committees and the reports that they prepared.


Franz De Voghel

In November 1960, the Eyskens-Lilar Catholic-Liberal government decided to set up a committee for the financial dimension of economic programming, under the chairmanship of Vice-Governor De Voghel (Pluym and Boehme, 2005, p. 314). In 1961, under the Lefèvre-Spaak Catholic-Socialist government, the committee's mandate was confirmed and broadened. It was known as the *"Government committee for the study of the financial problems of the economic expansion"*. Its task was to propose reform measures to improve the way the financial markets worked, to deploy the country's financial means to the full and to boost investment. At the same time, it had to come up with proposals for reform of certain advisory bodies, especially the High Council for Finance and the Council for Credit Institutions. On 31 March 1962, the committee delivered its report to the government (Commission Gouvernementale, 1962).

Pursuant to the Law of 31 March 1967, a number of recommendations from the first report were transposed into legislative acts. The new legislation concerned, *inter alia*, a more selective application

of the laws for economic expansion, reform of the statutes of the private savings banks, the reorganisation of the High Council for Finance and the remodelling of the Council for Credit Institutions into the Council for Public Credit Institutions.

Furthermore, in April 1966, the Vanden Boeynants-De Clercq Catholic-Liberal government had asked Vice-Governor De Voghel to start up a second committee in order to further develop some issues (Pluym and Boehme, 2005). The report from the new De Voghel Committee was published on 5 December 1967 (Commission Gouvernementale, 1967). Among other things, policy recommendations were made concerning the way in which the stock exchange operated and the status of stockbrokers, investment banks and the problems of risk capital, the capacity of the capital markets, and the involvement of the big holding companies in economic and financial planning.

From the 1960s, market forces gradually began to play an increasingly important role in the financial system. This also went hand in hand with a growing despecialisation and internationalisation of Belgian banking (Abraham, 1990).

In 1969, the Eyskens-Cools Catholic-Socialist government gave Vice-Governor De Voghel the job of chairing a new committee to look into these issues. It was given the name of *"Government committee for the study of proposals for the reform of the laws on banking and savings"*. The change of name showed that financial planning was no longer a core assignment. There were three central themes in the third De Voghel Committee: the autonomy of the banks, the despecialisation of financial institutions, and foreign banks and the internationalisation of banking (Commission Gouvernementale, 1970).

The report from the third De Voghel Committee laid the foundations for the Law of 30 June 1975, better known under the name of *"Mammoth Law"*, which accompanied the despecialisation of the financial sector (Maes and Buyst, 2009). This legislation widened the private savings banks' sphere of action and shifted responsibility for prudential control of these banks to the Banking Commission. It also gave the banks more freedom with regard to share and bond holdings.

The philosophy behind monetary policy

Some countries, like the Netherlands or Germany, have a fairly well-developed monetary philosophy, with a focus on money and the monetary aggregates. In the Netherlands, this tradition of *"Dutch monetarism"* had clear roots in the interwar monetary debates (Fase, 1994). In Belgium, on the contrary, monetary policy was conceived more pragmatically. As observed by Roland Beauvois, when he was the head of the NBB's Economic Service: *"In Belgium, there is no real dominant, clearly-formulated view, neither in academic circles, where very little has been published on that subject, nor with the authorities, which have not explicitly tackled the problem of the doctrine"* (Beauvois, 1964, p. 478).

Looking back at Belgian monetary policy, one might argue that the exchange rate was the crucial beacon. Belgium has a long historical tradition in promoting European monetary cooperation (Janssens, 1981, p. 345). In the nineteenth century, the Belgian Finance Minister and founder of the National Bank, Walthère Frère-Orban, was influential in the creation of the Latin Monetary Union. After the First World War, Belgian experts played a prominent role in monetary cooperation in the framework of the League of Nations and, later, in the establishment and functioning of the Bank for

International Settlements. Then, after the Second World War, Belgian experts were active in setting up the European Payments Union. They also developed ideas on exchange rate cooperation in their proposals for reforming the Bretton Woods system and European monetary integration.

Naturally, Belgian policy-makers were not blind to monetary developments. The Gutt operation was a clear example. However, monetarism never became popular in the country, except among a few economists, mainly from the University of Leuven. Even though Belgium adopted Keynesian economics rather late in the day, it remained influential there for a long period.

The British Radcliffe Report of 1959 was very influential in Belgium. For instance, the first De Voghel Report took a stance which was very close to the Radcliffe Report: *"There seems to be a fundamental concordance among the functions of the financial institutions … All financial institutions contribute to keeping up the flow of spending; while the banks create money, the other institutions set the existing funds in motion. ... all these institutions make it possible to implement investment or consumer decisions"* (Commission Gouvernementale, 1962). The De Voghel Report goes on to say: *"Owing to the huge development of quasi-money, effective action on the part of the monetary authorities should transcend the narrow framework of the banks, and cover a wider area of the financial system, in which the public holds quasi-monetary assets"*. As noted by Beauvois (1964), *"This standpoint is in accordance with that of the Radcliffe Report. To put it more precisely, it was actually inspired by it"*.

The popularity of the Radcliffe Report was not limited to the National Bank of Belgium. For instance, Alexandre Lamfalussy, then at the Banque de Bruxelles, Belgium's second largest commercial bank, and also a member of the three De Voghel Committees, published an article in *The Banker* defending the Radcliffe Report against

criticism from Dennis Robertson and Roy Harrod. They argued that the principle of *"loans create deposits"* only applies to banks, while all other financial institutions were pure intermediaries. Lamfalussy claimed that this argument breaks down if non-bank financial intermediaries provide near-money assets. Consequently, effective demand in the economy may grow although the supply of money and liquidity preference remain unchanged. Non-bank financial intermediaries then *"cease, of course, to be intermediaries: they become creators of near-money in just the same way as banks are creators of money"* (Lamfalussy, 1961b, p. 48).

The monetary authorities in Belgium have never set a quantitative target for growth in the money supply. During the periodic consultations with the International Monetary Fund in the 1970s, the IMF delegation proposed announcing a target for the money supply, as a reference point for the economy. The IMF believed that this would strengthen the credibility of monetary policy. This would have a moderating effect on inflation expectations, and hence also on the price- and wage-setting process. However, the National Bank of Belgium was not in favour: *"As far as Belgium is concerned, the adoption of this mode of action, where the course is marked by only a single beacon, gives rise to serious objections of principle and also runs up against practical difficulties"* (Annual Report, 1976, p. XVII). The Bank regarded the exchange rate target as central. It argued that a stable exchange rate was the best anchor for a small, open economy like Belgium. It stuck clearly to an eclectic Keynesian point of view and made no secret of its sharing of the Radcliffe Report view: *"Monetary measures can help, but that is all; this assertion, pertinent by its realism and wise in its modesty, remains true today, even if it is disputed by categorical maxims which are captivating in their simplicity"* (Annual Report, 1974, p. XIX).

These eclectic Keynesian ideas remained influential at the NBB in the following decades, too. For instance, they came clearly to the fore in Governor Quaden's speech on *"Central banking in an evolving environment"* for the SUERF colloquium in October 2001. Quaden took the opportunity to discuss the monetary pillar of the ECB's monetary policy strategy: *"It is based on the conviction that inflation is a monetary phenomenon in the long run and underlines the medium-term orientation of monetary policy and the inheritance in this respect from the Deutsche Bundesbank"* (Quaden, 2001, p. 12). However, he observed that technology and financial market changes were affecting the monetary pillar: *"They might increase the volatility of the income velocity of monetary aggregates and, as they are blurring the frontiers of 'moneyness', they complicate the definition of key aggregates. To paraphrase a former Governor of the Bank of Canada speaking about M1 twenty years ago, I would say that while the ECB is not planning to abandon M3, I cannot rule out that, some day, M3 could abandon us"* (Quaden, 2001, p. 12). However, the National Bank of Belgium's Governor also pointed out that the monetary analysis was much richer than the reference value of M3 only. Money and credit can play a useful role in monitoring financial imbalances and asset price developments (see also Quaden, 2009).

Monetary policy in the time of the Bretton Woods system

After the turbulent interwar period, the international monetary system moved into calmer waters again. For almost three whole decades, the Bretton Woods system was the main guideline for exchange rate policy in the Western world. For Belgium, too, the Bretton Woods Accords formed the linchpin of monetary and exchange rate policy.

Initially, intra-European payments were locked into a tight straight jacket of exchange controls and bilateral clearing agreements. It was not until 1958 that the Western European currencies became freely exchangeable on the international currency markets. Even after that, the movement of capital was still extremely limited. During the 1950s, Belgium introduced a dual foreign exchange market. In principle, the regulated market was intended for current payments, while capital transactions went through the free market. Although the dual foreign exchange market was initially introduced to promote the liberalisation of capital movements, it also made it easier for the National Bank to defend the Belgian franc in times of monetary upheaval. It was only on the regulated market that the Bank had to keep the franc within the agreed limits. On the free market, it did not have to intervene.

Until the 1970s, Belgium was not confronted with major external imbalances and the Belgian franc did not come under significant pressure. During the Bretton Woods period, the parity of the Belgian franc remained unchanged, with one exception. In September 1949, during a general realignment of parities, the franc was devalued by 12.345 % against the dollar, contrary to the ideas of Governor Frère. According to Gaston Eyskens (1993, p. 268), then Prime Minister, Frère was in favour of letting the Belgian franc float. However, there were certain divergences at the National Bank, as De Voghel was in favour of a significant devaluation (more than 20 %). In the end, as other currencies were devalued by much more, this realignment constituted an effective appreciation of the Belgian franc.

According to several authors, this effective appreciation of the Belgian franc was an (important) cause of the slow growth of the Belgian economy in the 1950s. For instance, Alexandre Lamfalussy, in his classic study on growth and investment in postwar Belgium, argued that Belgium was characterised by a weak development of domestic demand, leading to relative deflation. He also observed that income

per head and wage costs were among the highest in Europe, partly a result of the effective appreciation of the Belgian franc in 1949. In his view, several factors contributed to this relative deflation, especially a restrictive economic policy. In this respect, Lamfalussy raised the issue that *"internal demand could have been increased through higher Government spending, and a devaluation could have put an end to the competitive disadvantage of Belgian industry"* (Lamfalussy, 1961a, p. 29). However, in his policy conclusions, Lamfalussy was to reject a devaluation (see also Maes, 2009).

Lamfalussy's analysis was not very well received at the National Bank of Belgium. The essence of the analysis, based on a Keynesian income-expenditure model, was already set out in an earlier article (Lamfalussy, 1959a). At that time, Lamfalussy was still a young economist (thirty years old and had not yet obtained his Ph.D). In the Research Department of the NBB, a task force was set up consisting of seven persons *"et volontaires"* (and volonteers) to draft a reply (NBBA, B638). Lamfalussy's article was the main theme of two meetings of the Department. The Bank's reply was published in the name of Roland Beauvois, who was the acting head of the Economic Service at the time. He reproached Lamfalussy for not having traced the causes of the deflationary tendency: *"While the harm is real, its deep-seated causes are still not well elucidated. By relying on income theory, research into its causes all too often ends up getting stuck in one direction: deflation."* (Beauvois, 1959, p. 614). In a vivid reply, Lamfalussy (1959b) defended his views and his method of analysis, based on an economic model: *"The analysis in my article was in the form of a complete model, using no exogenous factors at all. I believe I have provided a logically coherent explanation in line with the observed facts. It does not contradict the explanatory elements given by Mr Beauvois; it is simply different. Here we have two methods of approach that may complement one another"* (Lamfalussy, 1959b, p. 621-622). He went on to argue that his way of analysis was more rigorous and more apt for economic policy conclusions than

Beauvois' emphasis on *"accidental"* factors. So, while the analyses of Beauvois and Lamfalussy were largely complementary, Lamfalussy's method of analysis was more in line with the evolution of the economics profession (see also below).

After the Second World War, the National Bank of Belgium was the first to resume use of the discount policy as an active instrument of economic policy (Conference given by Frère in Japan, April 1960, MFAA, 7114 IV). Soon after the liberation, in order to prevent short-term credit from being affected to long-term investments, the National Bank had endeavoured to reinstate the granting of credit to commercial banks by re-discounting commercial bills that had been discounted before by these banks. In November 1946, for the first time, the NBB raised the discount rate, which had remained fixed at 1.5 % since the liberation of Belgium in 1944.

However, during the postwar period, monetary and credit policy was also very heavily based on methods of quantitative liquidity management. 1946 saw the introduction, for the first time, of three banking ratios, namely a liquidity ratio, a solvency ratio and a cover ratio (Maes and Buyst, 2009). The liquidity ratio concerned the ratio between assets which can be readily realised and short-term deposits, while the solvency ratio imposed a ratio between equity capital and the total volume of deposits. With the cover ratio (a new ratio which was not mentioned in the 1935 Royal Decree), big banks were obliged to invest at least 65 % of their deposits predominantly in short-dated government paper. As these ratios came under the responsibility of the Banking Commission, their use led to some friction between the Banking Commission and the National Bank, as the latter regarded these ratios as essential instruments of monetary and credit policy. Inside the National Bank, the Research Department (and especially its Bank Credit Service) was closely involved in the application of these ratios.

The private commercial banks did not like these instruments of quantitative control, especially the cover ratio, whereby banks had to invest a significant part of their resources in government paper. Louis Camu, the President of the Banque de Bruxelles, even argued that it led to a paradoxal division of labour between private and public credit institutions: *"Just after the Second World War, financial intermediaries were specialised and markets fragmented. There was an abnormal overlap of remits: public institutions were developing their lending to private enterprises, often with the help of the State, while the banks were obliged to hand back two-thirds of their deposits to the State"* (Camu, 1977, p. 39).

During the 1960s and 1970s, there were several changes in the methods of quantitative liquidity management. The year 1962 brought a major reform which saw both the liquidity and cover ratios abolished. At the same time, however, a system of monetary reserve ratios was developed. This made it possible to require banks to hold an (interest-free) deposit with the National Bank. In 1965, the solvency ratio was replaced by an own funds ratio.

The monetary authorities used these quantitative instruments of liquidity control in times of tension and inflationary pressures. Thus, the requirement to hold a monetary reserve was applied in 1964-1965 and in 1974-1975. In 1969, a redeployment ratio was introduced, according to which financial institutions were obliged to invest a fixed share of their resources in Belgian government paper. In this way, the National Bank wanted to prevent financial institutions from financing an expansion of credit to the private sector by reducing their credit to the government (Smets, 1989). Furthermore, in 1974, direct credit controls were applied, under which the growth in effective lending for each credit institution was limited. In addition, these credit controls were accompanied by recommendations regarding the purpose of loans (qualitative credit policy).

In this period, the financial institutions closely followed the lead of the central bank. So, changes in the discount rate were transmitted, more or less mechanically, to the interest rates of the financial institutions, except naturally in periods when quantitative monetary policy instruments were used. This way of operating encouraged contacts between the National Bank and the financial institutions. The contacts were also institutionalised in the Study Centre for Finance (now the Belgian Financial Forum), in which the monetary authorities, financial institutions and academic world participate. The Research Department of the National Bank contributed significantly to the activities of these fora.

The Belgian franc under pressure

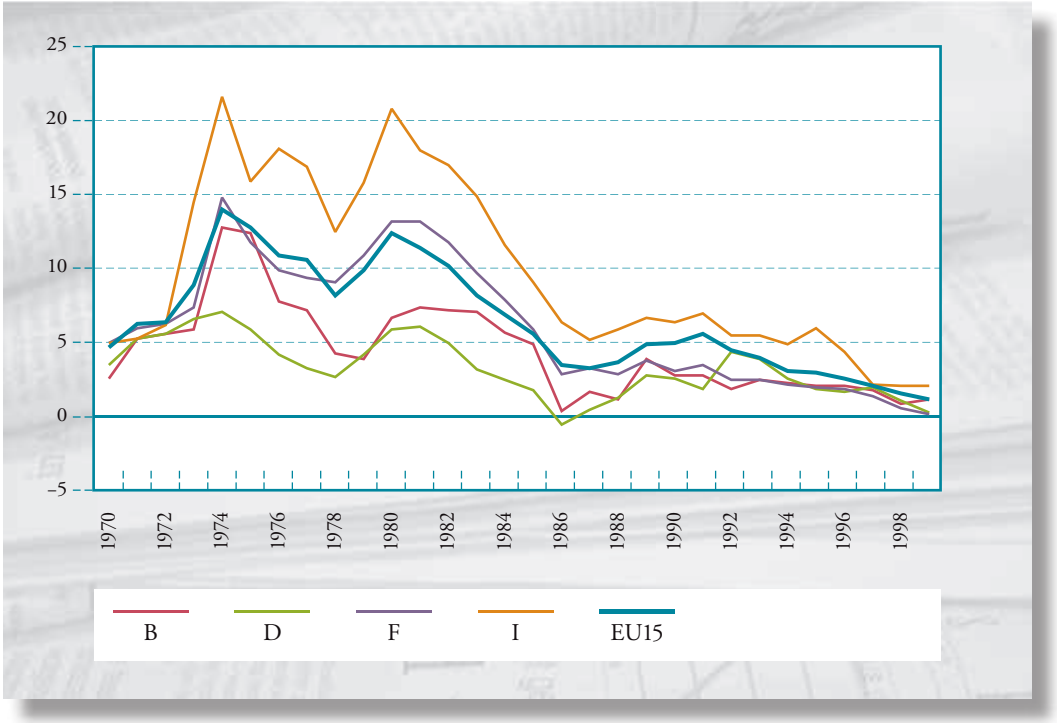
After the breakdown of the Bretton Woods system, in the period from 1970 to 1998, a stable exchange rate for the Belgian franc, first in the European currency snake and then in the European Monetary System, remained the primary objective of monetary policy.

The early 1970s were a turbulent period for the world economy, with rapidly rising inflation and turmoil on the foreign exchange markets. The end of the fixed exchange rate system and the first oil crisis in October 1973 created confusion and uncertainty. The oil shock not only drove up inflation, but also had repercussions on economic activity. The ensuing years were characterised by *"stagflation"*. As remarked by the Bank in its 1974 Annual Report: *"The myth of 'inflation as a factor of growth' has been destroyed"* (p. XXI).

The Belgian economy was harder hit by the international economic crisis than some other countries (Buyst, Maes et al., 2005, p. 216). By 1974, inflation in Belgium had reached almost 13 %, which was significantly higher than the rates at the time in the Netherlands and

Germany, namely 10 and 7 % respectively. The Bank was concerned about this, and in May 1975 its Bulletin contained a study devoted to the topic.

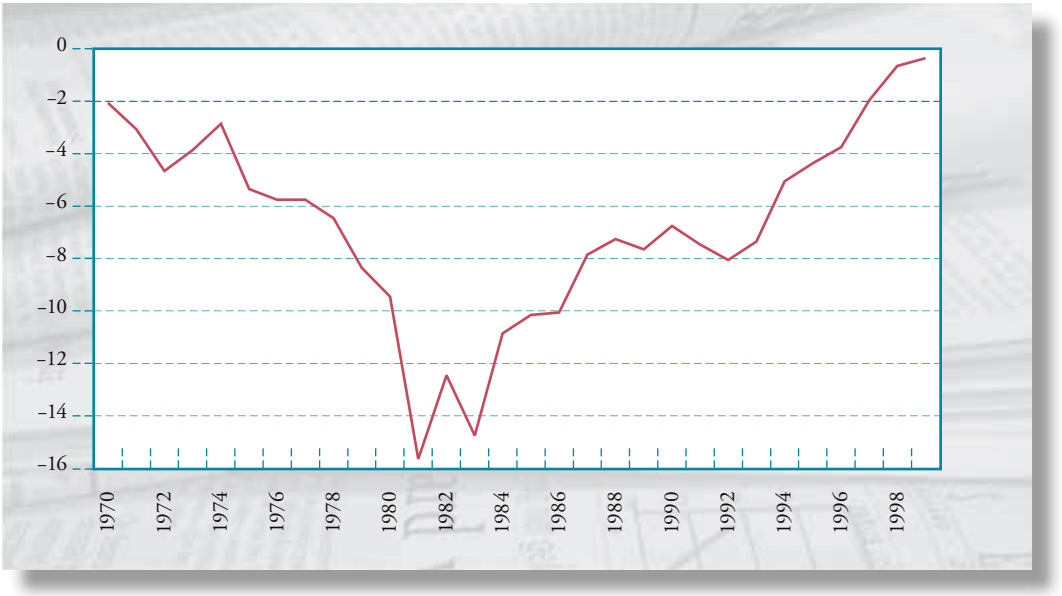
Inflation in Europe, 1970-1999
(change in the private consumption deflator, percentages)



Note: 1970-1991 – West Germany.
Source: European Commission.

The Bank considered that Belgium's higher inflation rate was due to certain structural characteristics of the Belgian economy combined with the failure of economic policy. Two features of the economy were important: Belgium's heavy external dependence, especially with regard to energy, and the close interaction between prices and wages. Belgium's weak structural position was further exacerbated by an inappropriate economic policy.

Budget balance in Belgium, 1970-1999
(percentage of GDP)



Source: National Accounts Institute.

Fiscal policy was getting out of hand. In 1975, the budget deficit increased to 5.4 %, against 2.9 % in 1974. In the light of this sharp deterioration in public finances, Finance Minister De Clercq set up

a working group *"to formulate proposals with a view to the immediate curtailment of the State's borrowing requirement"*. The group was chaired by the former Prime Minister Jean Van Houtte. Much of the analysis was done by the NBB's Research Department. The Van Houtte Report remarked that an excessive increase in public spending inhibited economic growth and fuelled inflation, *"which in turn inevitably leads to a crisis, ultimately also threatening employment"*. Unemployment will, in turn, lead to higher public spending and lower tax revenues, *"thus creating a vicious circle which is bound to spiral out of control"*.

However, the Van Houtte Report had little impact. In the 1970s, the political agenda was dominated by the problems concerning the various Regions and Communities in Belgium, which meant that the policy-makers were paying little attention to the economic challenges of the moment. Political instability also prevented an effective economic policy. Furthermore, interest rates were rising, placing further strain on public finances. In 1981, a disastrous year for the Belgian economy, the public deficit totalled more than 15 % of GDP.

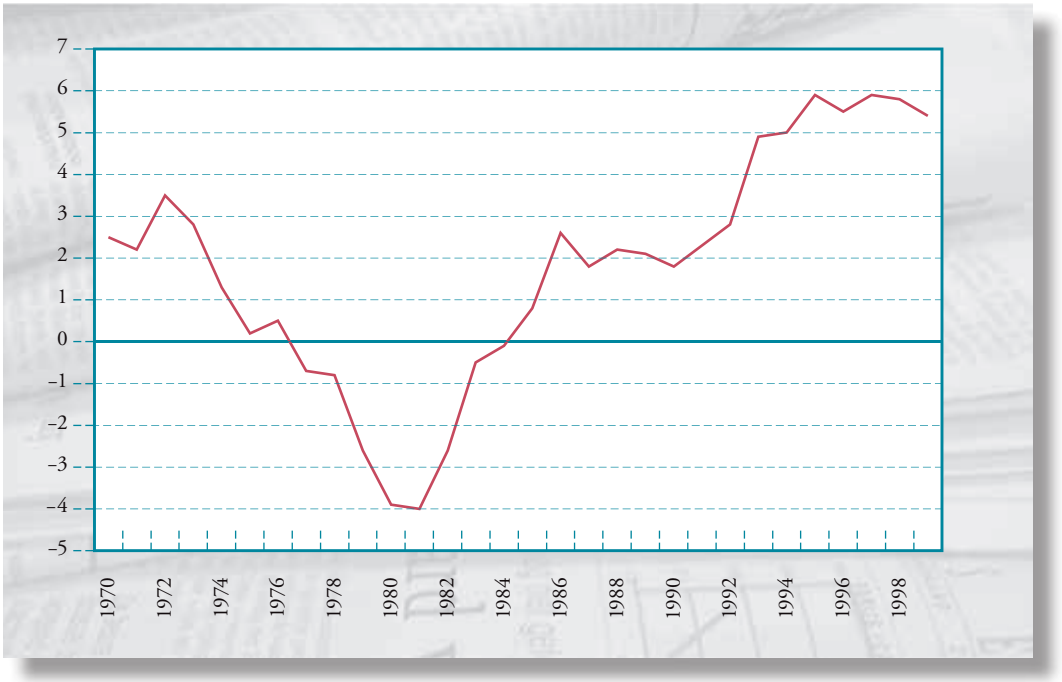
In the second half of the 1970s, Belgium's competitive position became a crucial concern for policy-makers (Buyst, Maes et al., 2005, p. 221). The National Bank was highly sceptical that a devaluation could improve competitiveness. It feared that the price advantage of a devaluation would soon be eroded, in view of the high degree of openness of the Belgian economy and of the indexation and price-setting processes. In the 1975 Annual Report, the Bank had already developed its arguments in detail: *"any rise in the rate of foreign currencies would immediately be reflected in an increase in the prices, in francs, of all those producer and consumer goods which have to be imported; in view of the actual price-formation mechanisms in Belgium, it was to be feared that this movement would spread to the consumer and that then, owing to the index-linking of many incomes*

and the conditions of formation of others, this rise in the cost of living would quickly lead to a new increase in costs" (p. XXI). The Bank was extremely afraid of a vicious circle, namely a devaluation followed by inflation and further devaluations, as had happened in the United Kingdom and Italy. It feared *"interactions between the exchange rate and inflation, which are 'vicious' when they move continuously towards depreciation and accelerate the rate of inflation"* (Annual Report 1978, p. XV). The Bank believed that a domestic policy aimed at regulating demand and incomes was of crucial importance.

The position of the Belgian franc became increasingly a topic of debate. For instance, in a confidential report dated June 1977, the IMF's Research Department expressed its doubts about the sustainability of the Belgian exchange rate policy in the absence of any adjustments to economic policy. The report also criticised the NBB's position that the competitive advantage of a devaluation would very soon be undermined by higher inflation.

In Belgium, two articles written by Professor Kirschen (from the Université Libre de Bruxelles) in March 1978 fuelled the devaluation debate. In his article, entitled *"300.000 chômeurs et trente-six raisons de ne rien faire"* (300 000 unemployed and 36 reasons for doing nothing), Kirschen proposed a plan for tackling unemployment, in which the key element was a devaluation of the franc. *"In the present circumstances, to deprive Belgium indefinitely of the powerful exchange rate instrument amounts to economic masochism"*, he wrote. According to the Bank, Kirschen greatly underestimated the inflationary effects of a depreciation of the franc. In its April 1978 Bulletin, the Bank published an article entitled *"Exchange rate policy – Choice and consequences"*, in which it vigorously defended its policy. It is further noteworthy that, contrary to the 1930s, there was no official debate inside the Research Department on the pros and cons of a devaluation.

Current account of the balance of payments of the Belgium-Luxembourg Economic Union, 1970-1999
(percentage of GDP)



Sources: National Accounts Institute, European Commission for Luxembourg's GDP.

In 1979, the Belgian economy was hit by the second oil shock. In a speech prepared by the Research Department, Governor de Strycker remarked: *"In accordance with the recommendations of the international institutions, we must not repeat the error committed in 1974-1975, which consisted in transferring from households to businesses, and also to the State, the inevitable impoverishment that results from higher prices of imported energy. Such an approach is bound to mean further excessive increases in the level of prices and costs, lower*

investment and yet more unemployment" (de Strycker, 1980). It was wishful thinking.

At the end of the 1970s, the balance of payments current account went deep into the red. The deficit grew from 1 % of GDP in 1978 to 4 % in 1980. Key factors here were, of course, the second oil shock and the increase in energy prices, but other elements also played a role.

In an all-important study entitled *"The Belgian economy's loss of vitality in the past decade"*, the NBB analysed the deterioration in the balance of payments on current account. This study, which ran to 272 pages, was published between September 1980 and July 1981 in four issues of the Bank's Bulletin. The Bank argued that Belgian industry had to contend with two major handicaps. The first concerned the structure of exports. Belgium was too highly specialised in *"regressive"* products, that is, products for which world demand was growing only slowly. Furthermore, in comparison with its competitors, Belgium had little presence in geographical regions producing strong growth. The second, even more serious handicap, was the weakening of industry's competitiveness. The primary reason for this was the increase in labour costs, which had compressed profit margins. As a result, manufacturing industry was obliged to drive up productivity, and that also entailed closing down plants. The outcome was a *"de-industrialisation"* of the Belgian economy. In addition, the erosion of profitability damaged investment and employment. The unemployment rate in Belgium rose from 2 % in the early 1970s to 11 % in 1982.

At the March 1981 European summit, the German Chancellor Helmut Schmidt raised the issue of the Belgian franc and asked Belgium to take action, especially in regard to the indexation mechanism (Buyst, Maes et al., 2005, p. 224).

Over the next few days, the foreign exchange markets were extremely turbulent and the National Bank was forced to provide strong support for the franc. The NBB prepared an economic adjustment plan, of which Roland Beauvois, the Director of the Research Department, was the architect. The main elements of the plan were:

"Measures to be taken immediately:

- *all incomes to be cut by 5 %, including replacement incomes (without going below the subsistence level);*
- *all index-linking to be suspended until 31 December 1981.*

Measures to be prepared:

- *abolish the thirteenth and fourteenth month of child benefit;*
- *cut holiday allowances by 50 %;*
- *reduce grants for all so-called cultural activities by 50 %;*
- *terminate foreign unemployed workers' residence permits;*
- *tighten up legislation and regulations on unemployment."*

Governor de Strycker discussed the adjustment plan on Saturday 28 March with Finance Minister Mark Eyskens. After hearing of these measures and the accompanying commentary, Eyskens is reported to have said, half jokingly, half seriously: *"To do something like this, special powers will not suffice, you will have to put tanks on all corners of the streets"* (De Ridder, 1986, p. 48).

The government negotiations on a recovery plan failed, and on 31 March 1981, Prime Minister Martens went to the King to tender the government's resignation. The Eyskens administration which followed only lasted until September of the same year.

On 17 December 1981, Wilfried Martens became Prime Minister once again, albeit with a new coalition of Christian Democrats and Liberals. Even before that, at the end of 1980, some Christian Democrats had already set up a small, confidential group to analyse the economic situation and work out recovery measures. They soon agreed on the need for a devaluation combined with accompanying measures, especially income moderation.

While the official line of the National Bank and its Research Department was strongly against any devaluation, there were also dissenters within the Bank. A key role was played by Alfons Verplaetse, then an advisor in the Bank's Research Department. He was a member of the confidential Christian Democratic group and was subsequently to become involved in implementing the new policy, including the devaluation, as assistant *chef de cabinet* to Prime Minister Martens.

Over the weekend of 20 February 1982, the Belgian franc was devalued by 8.5 %. The Government did not consult the National Bank of Belgium before taking the decision. The devaluation was clearly designed as a one-off operation. It was accompanied by a series of measures to prevent inflation from getting out of hand (Verplaetse, 2000). The spectre feared by Belgian policy-makers was a *"devaluation-inflation-devaluation"* spiral. For that reason, the government temporarily suspended the indexation mechanism and announced a price freeze. Measures were also taken to tackle the budget deficit. Together, these measures curbed imports and boosted exports, so that the recovery policy soon secured an improvement in the external position of the Belgian economy.

With the devaluation, the government provoked a psychological shock which enabled it to introduce tough measures, particularly the suspension of indexation. The NBB had always regarded the indexation mechanism as a reason to advocate a hard currency

policy. One might therefore argue that the devaluation was *"the measure accompanying the accompanying measures"*.

In the second half of the 1980s, European monetary union was back on the agenda (Padoa-Schioppa, 1994). This was clearly linked to the success of the Internal Market programme and stable exchange rates in the European Monetary System. At the European summit in Hanover, in June 1988, a committee chaired by Jacques Delors was set up. The central bank governors were all members of the committee, in a personal capacity. In subsequent debates, the Delors Report was to play a crucial role as a point of reference (Maes, 2007). Then, in December 1991, an agreement was reached on the Maastricht Treaty, in which the structure of EMU and the road towards it were mapped out. Monetary policy was to come under the responsibility of the European System of Central Banks.

In the periodic exchange rate realignments in the EMS in the mid-1980s, the Belgian franc generally took a middle-of-the-road position, in between the strong and the weaker currencies. Thanks to the better performance of the Belgian economy, especially as far as the balance of payments was concerned, a more ambitious exchange rate policy could gradually be pursued. So, the franc began to lose less and less ground against the German mark. In June 1990, the Belgian franc was officially anchored to the mark.

The liberalisation of capital flows, the integration of financial markets and the process of European integration also led to an adaptation of monetary and exchange rate policy instruments. The dual foreign exchange market was scrapped in March 1990 and, in January 1991, the Bank introduced a more market-conform set of monetary policy instruments.

During the European Monetary System crisis in 1992-1993, the NBB successfully defended the exchange rate of the Belgian franc, notwithstanding criticism of several academics, especially a manifesto of professors from the University of Leuven which pleaded for abolishing the Belgian franc's peg to the German mark. The NBB thus played its role in keeping the EMU project on track and contributing to Belgium's participation.

The publications of the National Bank of Belgium

After becoming Director at the National Bank of Belgium in November 1944, one of De Voghel's priorities was a reform of the Bank's publications policy. In a note he presented to the meeting of the Board of Directors on 8 January 1945, he called for a radical reform of the way in which external collaborators for the Bank's Bulletin were recruited.

De Voghel first stressed that he wanted to maintain the general set-up of the Bulletin and the work of the Economic Service staff: *"In principle, the plan followed throughout the last few years before the war could be kept on. Apart from statistics and regular series (of the monetary and banking situation, stock markets, prices, legislation, etc.), this scheme would involve one article from an outside contributor and one article from within the service per Bulletin".*

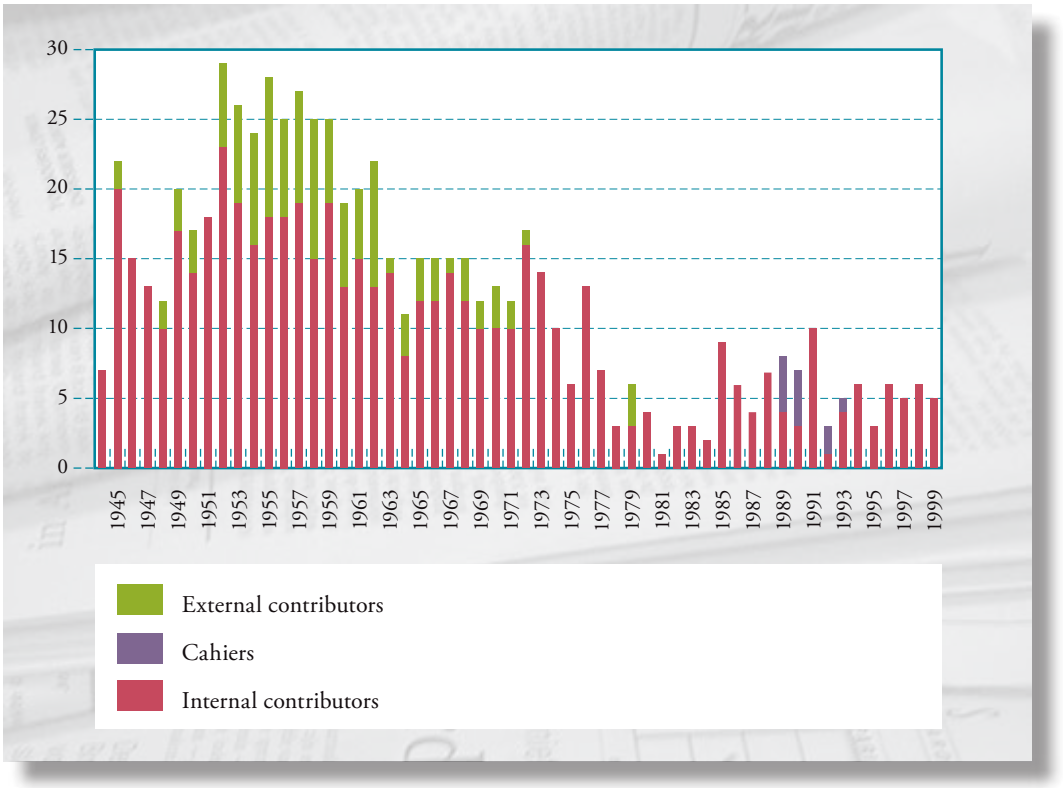
However, with respect to external contributors, De Voghel proposed a complete overhaul of the existing regime. A key idea was to open up the Bulletin to renowned foreign economists: *"As far as external contributors are concerned, it would be particularly interesting to regularly publish articles from foreign personalities. This kind of collaboration would have the advantage of raising the Bulletin's profile and widening the intellectual horizon of the readers".*

As for external Belgian contributors, De Voghel wanted to abolish the old system of regular writers and attract the best qualified people for the topics to be analysed: *"As regards Belgian contributors from outside the service, it is proposed to keep on the system of setting a subject under a master plan to be carried out over a fixed period (six months, for example). The subject should be set out very precisely. Putting a programme like this into practice assumes that the system of accredited contributors publishing an article on a regular basis will be scrapped. Contributors will from now on be chosen on the basis of the subject to be dealt with and each time the most highly-qualified expert on the matter should be contacted"*.

So, De Voghel clearly wanted to strengthen the intellectual reputation of the Bank and its Bulletin. As an academic himself who had studied both in France and the United States, De Voghel clearly realised the importance of high-quality contributions, both from academics and foreign policy-makers. The Bulletin of the National Bank was the first to take a clearly international approach in Belgium, in contrast to the journals of the Belgian universities. It therefore played a role in the internationalisation of economics in the postwar period and confirmed Belgium's position as a forerunner of this trend (Coats, 2000).

During the decades following the war, the Bulletin of the NBB played a key role in the propagation of foreign economic ideas in Belgium (Maes, Buyst and Bouchet, 2000). During the period from 1949 to 1972, ninety-three articles by foreign economists were published in the Bank's Bulletin. The peak period was 1953-1962, when, on average, more than six articles a year by foreign economists appeared, as De Voghel had put forward in his reform proposals in 1945. After 1972, only anonymous articles by NBB economists were published, with the exception of the papers and proceedings of a seminar on the European Monetary System in 1979.

Articles in the Bulletin and Cahiers, 1944-1999



Source: NBB.

Over three-quarters of the ninety-three articles by foreigners were written by academics, seventy-five in total (Maes, Buyst and Bouchet, 2000). Among these were many distinguished economists, such as Bela Balassa, Arthur Bloomfield, Richard Cooper, Jean Fourastié, Arthur Goldsmith, Roy Harrod, Nicholas Kaldor, Peter Kenen, Charles Kindleberger, Fritz Machlup, Alfred Sauvy, Richard Sayers, Robert Stern, Jan Tinbergen and Robert Triffin. Eighteen articles

were from policy-makers, in which category US Federal Reserve economists clearly dominated with nine papers.

When measured by country of residence of the foreign economists, the United States was predominant with thirty-one out of ninety-three articles. These articles came from both academic economists and policy-makers (especially from the Federal Reserve and the IMF). They were followed by contributions from the Netherlands, France and the United Kingdom with, respectively, sixteen, fourteen and thirteen publications. Initially, the Dutch and then the French contributions were relatively more numerous, while more British contributions appeared at the end of the period.

Most of the topics dealt with in these articles by foreign economists concerned, not unsurprisingly, monetary policy, the financial system and the international economy. However, other areas, such as fiscal policy, economic forecasting and economic development, were also covered. There were even a few articles on economic methodology and philosophy, such as *"Recent critiques of economic science"* by Pieter Hennipman and *"Searching for a humanist economy"* by André Piettre.

During the 1960s, the number of articles by foreign economists in the Bulletin gradually declined. Several factors played a role in this decline, like the increase in international contacts in the academic world, which reduced the need for this kind of article, and the waning enthusiasm of academics to publish, for a fee, in the Bulletin of the National Bank of Belgium. However, one can also ask the question to what extent this was a policy choice of the Bank.

It is further noteworthy that also the number of articles produced internally, by the Bank's own staff, declined dramatically. In 1981, only one article was published in the Bulletin, the last part of the series on the *"Belgian economy's loss of vitality"*. In his farewell

speech for the Research Department, Jacques Baudewyns, who was Head of the Department from 1972 to 1987, took a good part of the blame, stating: *"One thing I'm not proud of is the number of articles that appeared in the Bulletin while I was the Head of the Research Department and that is probably due to the fact that I was very reluctant to see an article published in the Bulletin if it had not duly been polished up or unless I had done the final work on it if I could"* (NBBA, M880/8).

There were also a few attempts at reforming the NBB's publications policy. In 1989, it was re-launched with the appearance of the Cahiers. They were brought into being for publishing reports whose nature or depth did not justify official publication in the Bulletin or for technical memoranda which were intended for a limited audience. One novelty was that they were no longer anonymous, but they mentioned the names of the authors. However, their number remained rather limited. In total, eleven Cahiers were published between 1989 and 1993. In the mid-1990s, it was decided to stop the publication of the (monthly) Bulletin of the National Bank of Belgium. The last issue appeared in December 1995. It was replaced by two new publications. There came a new *"Economic Review"*, with articles on the economic situation. This appears in principle three times a year, in May, August and September. Furthermore, a separate *"Statistical Bulletin"* was launched.

The widening gap with the academic world also extended to the methods of analysis used at the National Bank of Belgium. The academic world, along with other policy-making institutions, was moving over to the construction of econometric models. However, the Bank did not go in this direction, even if it was discussed. For instance, at a meeting of the Research Department on 22 October 1958, Georges Defrance (who was then at the Statistics Service) reported on the presentation of an econometric model for the Netherlands at a meeting of the Econometric Society. His

proposal that the Bank do the same for Belgium was well received : *"At the annual meeting of the Econometric Society, a presentation was given by a Dutch delegate about building an econometric model for this country. Mr Defrance proposes to do the same for Belgium. The Research Department approves of the Statistics Service taking on this task and is asking to be associated with it, notably when assumptions and interpretation of the model are being discussed. The Head of Department's agreement has been obtained and Mr Defrance will draw up a more precise plan"* (NBBA, B 638). However, nothing much happened during the following decades.

In the second half of the twentieth century, the Annual Report became, gradually, the main publication and policy document of the National Bank. The Annual Report also adopted a more analytic approach and offered a growing abundance of statistical data. From 1948 onwards, the Report began with an introduction intended for policy-makers and the media. In 1962, the report was significantly restructured. The first chapter became devoted to economic activity and, for the first time, it included some figures on gross national product, together with some sectoral information. This was followed by chapters dealing with prices and wages, foreign trade, monetary policy and the financial markets, a statistical annex and a technical commentary. The sections devoted to lending to companies and individuals, and the financial assets, increased in size. In the ensuing years, there was an increasing use of the national and financial accounts framework. From 1978 on, the reports gave the Research Department's estimates of the movement in the main categories of expenditure for the past year.

So, the Research Department paid a lot of attention to statistical methodology and the adoption of the system of national and financial accounts. This came very clearly to the fore in the articles published in the Bulletin during the period 1980-1988. Of the thirty-nine articles, fourteen concerned the methodology of

statistical data. In his farewell speech in 1987, Baudewyns also discussed his attention to statistics, as well as his attitude towards econometrics: *"I have also spent a lot of time, at least I think so, in developing statistics. Talking of statistics, I could perhaps share something that is on my mind with our young colleagues … (who) make much wider use of econometrics than their predecessors did … Use of these methods is of course progress in itself, but I believe it should never be forgotten that econometrics consists of applying a highly refined and extremely precise instrument to data that often leave much to be desired despite all the good efforts we have made in the past and still have to be made. We must be well aware that, at the end of the day, we depend on the data that we receive from banks and enterprises. What is going on in a particular bank or firm is basically what is said to some employee: … the National Bank is asking us to fill up such and such a form: get on with it and fill it in. We are rather at the mercy of the employee in question and his attention to detail or otherwise when filling up this form"* (NBBA, M880/8).

It was not until 1990 that a *"Model group"* was formed in the National Bank of Belgium's Research Department and that work on an econometric model started in earnest. The move was made under the impetus of Alfons Verplaetse, who had become a member of the Board of Directors in 1988, and was in charge of the Research Department. The NBB's reticence contrasted with developments in several other central banks. For instance, at the Banca d'Italia, an econometric model was created in the early 1960s (Modigliani, 1999). However, with a young and dynamic group, the NBB quickly acquired its place in the world of central bank model builders. It became especially known for its contributions to the new generation of dynamic stochastic general equilibrium (DSGE) models (see below).

IV.

Economic analysis and research in the new world of the Eurosystem

The NBB in the third phase of EMU

On 1 June 1998, the central banks of the then fifteen Member States of the European Union became members of the European System of Central Banks (ESCB), together with the newly-established Frankfurt-based European Central Bank (ECB).

Six months later, on 1 January 1999, eleven Member States of the European Union, including Belgium, adopted the euro as their single currency and began to conduct a common monetary policy. Together, these countries make up the euro area. Along with the ECB, their central banks form the Eurosystem. The "*irrevocably fixed exchange rates*" – the rates at which the national currencies were replaced by the euro – had been determined on 31 December 1998. Since then, Greece, Slovenia, Cyprus, Malta and Slovakia have joined the euro area.

The European Union and the euro area, as of 1 January 2010

Euro area countries

Non-euro area EU countries

The primary objective of the Eurosystem is to maintain price stability in the euro area. Decisions on the common monetary policy are centralised and most of them are taken by the Governing Council of the European Central Bank. The Governor of the National Bank of Belgium attends the meetings in a personal capacity. In performing those duties, the Governor is strictly independent. Yet it can be said that Belgium actually has more influence over monetary policy now than before the introduction of the euro, when the Belgian franc was pegged to the German mark and Belgium had no say in the interest rate decisions made by the Bundesbank. National autonomy was thus exchanged for a share in the supranational decision-making power. This is a practical illustration of how European integration can actually have the effect of restoring the power of decision, certainly for a small country like Belgium.

EMU naturally implies that some exchange rates no longer exist, like the rate of the Belgian franc against the German mark or the Italian lira, for instance. In the past, the volatility of these exchange rates was most harmful to the Belgian economy and the functioning of the European Single Market. With the introduction of the euro, this form of monetary instability has been entirely wiped out once and for all. One can only imagine the situation the Belgian economy would have been in if it had been hurt in 2008-2009 by a *"twin crisis"*, affecting not only the financial sector, but also the exchange rate of the Belgian franc.

Another important feature of economic and monetary union is its asymmetric nature (Maes, 2002). Monetary policy is centralised and falls under the responsibility of the Governing Council of the European Central Bank. Responsibility for other economic policy instruments, such as budgetary policy, remains basically decentralised, remaining in the hands of the national authorities. Member States are nevertheless required to view their economic

policies as a matter of common concern and to coordinate them accordingly.

EMU, together with a more general process of international convergence, also had a major impact on the national central banks of the Eurosystem countries. As noted by one eminent observer: *"Central banks look more alike – even if not exactly the same – on such dimensions as their independence, collective internal decision-making structures, monetary policy strategies that target inflation, stress on transparency, and 'knowledge-based' operation"* (Dyson, 2009, p. 18-19).

Central banks have therefore developed strategies to adapt to the new environment: *"NCBs were forced to consider their comparative advantage and build their own niches as the basis for leadership roles in pooling services through specialized cooperation activities in the Eurosystem. How they developed specialization, and responded to wider Eurosystem pressures, reflected the historical accidents of their competences and strengths; the constraints of their size; and their geographical location"* (Dyson, 2009, p. 42).

Economic and monetary union, and its asymmetric nature, has also had important consequences for the National Bank of Belgium and its Research Department. EMU made the National Bank a kind of a hybrid institution, with both a European and a Belgian dimension (Maes and Verdun, 2009). On the one hand, the National Bank and its Research Department are involved in preparation of the supranational, single monetary policy. On the other hand, the Bank and its Research Department have an important role to play in the coherence of the *"policy mix"*, to ensure that economic policy in Belgium is compatible with the single monetary policy. This is naturally even more important as a loss of competitiveness can no longer be offset by a devaluation within the euro area.

There are two channels through which the NBB's Research Department participates in the preparation of the single monetary policy. Firstly, there are the briefings for the Governor, before the meetings of the Governing Council. The Research Department will give its opinion on the documents sent by the ECB as well as its assessment of the economic situation in the euro area and the risks to price stability. Naturally, the Governor remains strictly independent in the position he takes in the Governing Council. Secondly, many documents for the Governing Council are prepared in close collaboration between the ECB and the national central banks. A key role is played here by the *Monetary Policy Committee* (MPC), with representatives of the ECB and the Eurosystem countries' national central banks. The NBB is represented by two members of the Research Department. Many documents for the Governing Council, especially ones concerning long-term and strategic issues, are first discussed in the MPC. They relate, *inter alia*, to monetary policy strategy and instruments, the economic projections, structural issues and international monetary developments. In extended composition, including representatives of all national central banks of the European Union, the Monetary Policy Committee deals, *inter alia*, with public finance and ERM II topics.

The MPC is assisted by three *Working Groups*, namely the Working Group on Forecasting, the Working Group on Econometric Modelling, and the Working Group on Public Finance. There can also be *Task Forces* on specific topics, especially on structural issues. They provide reports on various issues which are crucial for the functioning of the euro area economy, such as *"Labour market mismatches in the euro area countries"*, *"Competitiveness and the export performance of the euro area"* or *"Housing finance in the euro area"*.

For the National Bank of Belgium, the single monetary policy, with its medium-term orientation, implied a significant change of emphasis in the way monetary policy was being prepared. Before

EMU, Belgian monetary policy, with its focus on the exchange rate, was of a much shorter-term character. Now the focus of monetary policy is mainly on risks to price stability, which, in a relatively closed economy, are more of a medium-term nature.

Of particular importance for the preparation of monetary policy decisions, in this medium-term perspective, are the Broad Macroeconomic Projection Exercises (BMPE). They are the main product of the Working Group on Forecasting and are produced in time for the Governing Council's last monetary policy meeting in each half-year. The Governing Council will receive the projection results together with a detailed report that sets out the underlying technical assumptions, describes the risks to the projections and discusses alternative scenarios.

In the BMPE, the national central banks draw up forecasts for their country on the basis of common assumptions. This is followed by a discussion (peer review), bringing all the forecasts together and aggregating them for the euro area as a whole.

The projections for the euro area are published in the ECB's Monthly Bulletin in June and December. National forecasts can be published by the NCBs, as the National Bank of Belgium does in its Economic Review articles in June and December.

The NBB Research Departement's forecasts are the fruit of close collaboration between the Econometric group and the groups that closely follow the various aspects of the Belgian economy. This enables the results of the econometric model to be combined with the input from the specialised groups (on the wage norm, tax measures, employment measures, etc.), as well as corrections to be made ("*judgement*"). The dual-approach model / judgement has several advantages.

The most important aspect of the model lies in its overall consistency (GDP and its components, prices, employment, public finances, revenue, etc.), as well as being able to map out the trajectories of the different variables, along with their determinants. Moreover, starting out from a *"baseline"*, it enables alternative scenarios to be drawn up. It also makes it possible to identify the elements that explain upward or downward revisions in the projections (for instance, between two successive years or between different rounds of the same forecasting exercise).

The *"judgement"* element is also interesting since it involves an assessment of the findings of the model by the specialists within each group. This makes it possible to adjust the results, for instance to take account of recent developments or to incorporate exceptional elements known in advance.

As this study shows, the National Bank of Belgium has a long tradition in macroeconomic research and analysis of the Belgian economy. That is hardly surprising, since it is a monetary authority and plays a key role in the definition of macroeconomic policy in Belgium. With the introduction of the euro, this role has been further reinforced. Within the Eurosystem, the National Bank of Belgium is naturally the main specialist in the Belgian economy. Moreover, and, very fundamentally, it has a key role to play in the coherence of the policy mix, i.e. the compatibility of economic policy in Belgium with the single monetary policy.

The National Bank of Belgium's role as an adviser on economic policy has a clear institutional basis (Buyst, Maes et al., 2005). In the first instance, that role is expressed in the Council of Regency, where the social partners are also represented. The Council of Regency's discussions, based on reports prepared by the Bank on a broad range of macroeconomic topics, help to achieve a social consensus in Belgium. The Governor may also be heard by the

competent parliamentary committees in the Lower House and in the Senate. Indeed, the Governor can also request such a hearing himself. In addition, the National Bank performs an advisory role on many committees and consultative bodies, advising, in particular, on employment policy and fiscal policy. As far as fiscal policy is concerned, the Public Sector Borrowing Requirement section of the High Council of Finance plays an important advisory role, too. Various members of the Bank's Board of Directors are *ex officio* members of this Council. As regards employment policy, a member of the Bank's Board of Directors is the Vice-Chairman of the High Council for Employment.

To mark the Bank's 150th anniversary, in the year 2000, Governor Quaden launched a strategic exercise, with the intention of preparing for the Bank's future. This exercise was necessary in the light of monetary union and the fundamental changes brought about by the single currency, as well as the spread of new information and communication technologies. The four strategic goals were : to define priorities, to ensure a sound, positive image for the Bank, to improve cost control and to manage its human resources in a dynamic and stimulating way. Work on meeting these objectives began in 2000 : procedures were modernised and the National Bank's structures were adapted. Strengthening analysis and research was an important issue and not only concerned the Research Department. Two new departments were set up as well.

A Microeconomic Information Department was established in 2001. It aimed at expanding sectoral and regional studies. Those analyses were based partly on data that had been collected by the Central Balance Sheet Office since 1979. There was also the Central Credit Register, established in 1967, which collects data on lending in the Belgian economy.

In 2001, the National Bank also established a Financial Stability Department. In recent decades, financial stability has become an increasing concern for central banks. This is mainly because of the growing importance of *"macro-prudential"* aspects which relate to the stability of the financial system as a whole. Since 1 January 1999, the NBB has had an explicit legal basis for exercising macro-prudential supervision and, in 2002, the Bank's first Financial Stability Report was published.

Research in the new millennium

When the European Central Bank started operating in June 1998, Professor Otmar Issing, previously the chief economist of the Deutsche Bundesbank, became responsible for the ECB's Directorates General Economics and Research. From the outset, Issing was at pains to stress the importance of academic research for monetary policy-making. A crucial reason for this was that EMU presented an unprecedented challenge, a unique event without historical parallel. From an economic analysis perspective, the crucial issue was that EMU implied a *"regime shift"*. For an analysis of such fundamental changes in the economic policy framework, Issing referred to the work of Nobel laureate Robert Lucas (1976): *"His core finding is that individual economic agents' adjustment to policy changes can be associated with sizeable changes in macroeconomic variables … As a result, models based on historical data using empirical parameters become unreliable or simply useless. If policy ignores the influence of the regime shift and continues to rely on existing models or parameters, mistakes will inevitably result"* (Issing, 2008, p. 79). The awareness of the ensuing *"extreme degree of uncertainty"* became a crucial leitmotiv in preparations for the ECB's single monetary policy.

For Issing, economic research was crucial to handle this uncertainty: *"There was no blueprint for the introduction of a new currency under these special circumstances. The obvious first step was to take stock of current economic thinking. Zero hour for the ECB as a new central bank was the hour of economics. What insights were relevant, and had they been put to the test in central bank experience?"* (Issing, 2008, p. 184). However, Issing also pointed up the limits of academic research: *"In spite of all our diligence and all our efforts – including in-depth discussions with experts from other central banks and academia – we realised that, while being indispensable in designing a successful monetary policy, economics could not provide a clear, conclusive answer that would relieve the central bank of the need to decide for itself. So we had to discuss all the possible options and weigh up their respective advantages and drawbacks"* (Issing, 2007, p. 185).

So, right from the beginning, the ECB sought to keep in close contact with the academic world. It set up an intensive dialogue via a wide range of initiatives such as conferences, visitor programmes and seminars. Publications, especially in the Working Paper series of the ECB, were also stimulated. The establishment of the ECB, and the importance it attached to economic research, would soon become a spur to other central banks to reinforce their research capacities, too.

Furthermore, the academic world also became interested in the European central banks' research performance. In an early article entitled *"Central banks: from monopolists to competitors"*, Sylvester Eijffinger argued that: *"The national central banks in the ESCB will ultimately be given the same role as the regional Federal Reserve Banks within the American system of central banks. … they will start competing with each other in the quality of their policy analysis and applied scientific research. It is precisely this quality which, alongside the personal authority of the president or governor, is a key determinant of the influence of the national central bank in the Governing Council. … the national central banks within the ESCB will gradually start*

competing with one another in the field of policy analysis and research and, at the same time, enter into rivalry with the ECB's own research department. … They will have to find their own niche in this spectrum. This also means that they will have to make better use of their comparative advantages (geographical location, specific research experience, etc.)" (Eijffinger, 2001, p. 6-7). Moreover, Eijffinger provided a first comparison of the research performance of the European central banks in terms of their publications in refereed economic journals, and thus actually fuelled competition between central banks in the field of research. Since then, several articles have been published comparing central banks' research performances.

The importance attached to research at the European Central Bank also came to the fore in a speech by its President, Jean-Claude Trichet, in May 2007. He specifically discussed whether central banks should be producers or simply consumers of research, asking: *"Should central banks allocate resources to costly in-house research, rather than buying research output from universities and other research institutions?"*. He advanced four reasons why the ECB had decided to develop its own research capability:

"First, central banks need research-oriented economists to follow the latest developments in economics and to recognise their potential relevance for policy-making. …

A second reason … is that a major task of central bank research is to bridge the possible gap between academics and policy-makers and to create occasions for interactions with the academic community where the diversity of views can be expressed and discussed. …

A third argument … is that competition with the academic world ensures adequate monitoring of the quality of models and analytical tools used for policy. …

Finally, a fourth reason … is that the policy process sometimes requires research output not yet available at universities or other research institutes. The ECB has at times identified issues of fundamental importance for understanding the impact of monetary policy in the euro area, upon which limited information was available" (Trichet, 2007, p. 1-2).

In this new environment of growing interaction (and competition) between academics and researchers at central banks, the National Bank of Belgium also decided to strengthen its research capacity and its contacts with the academic world. Contrary to other central banks, like the ECB, which cover a very wide-ranging research agenda, the NBB is following a *"niche"* strategy, both from a geographical and thematic point of view. In geographical terms, the NBB's focus is largely on strengthening contacts with the Belgian academic world. In terms of themes, there is a focus on analysis of microeconomic databases concerning pricing, wage-setting and international trade, business cycle analysis and dynamic stochastic general equilibrium (DSGE) models.

The National Bank of Belgium and its Research Department take part in a number of networks involving research teams from the Eurosystem, as well as some external academics. The first one was the Monetary Transmission Network (Trichet, 2007). For three years, it worked on empirical analyses of the transmission of monetary policy in the newly-formed euro area. Macroeconomic time series data were used to estimate a variety of econometric models of the transmission at both euro area and national level, while microeconomic data were used to measure the effects of monetary policy on investment by non-financial firms and on commercial banks' lending behaviour. Thereafter came the Inflation Persistence Network (IPN). It worked for two years to gain a better understanding of the patterns and determinants of inflation persistence. The network was able to use an unprecedented dataset. The individual price records that served

to compile both consumer and producer price indices were made available in many euro area countries (see Dhyne et al., 2006). In addition, the network conducted surveys on price-setting behaviour in nine euro area countries. These databases made it possible to understand the behaviour of price-setters, to investigate the determinants of nominal rigidities and to empirically test alternative price-setting models for the euro area (see Angeloni, Aucremanne et al., 2006). The IPN was followed by the Wage Dynamics Network, in which non-Eurosystem EU central banks also participated. This aimed at identifying the sources and features of wage and labour cost dynamics that are most relevant for monetary policy. It aimed at clarifying the relationship between wages, labour costs and prices both at the firm and macroeconomic level. Finally, at the end of 2006, work began on the Household Finance and Consumption Network, which analyses the link between the financial situation of households and their consumption habits. There is furthermore the Euro Area Business Cycle Network, which involves not only the ECB and the national central banks of the euro area, but also the Bank of England and the Centre for Economic Policy Research. Its purpose is to achieve a better understanding of the euro area business cycle by fostering empirical analyses on this issue.

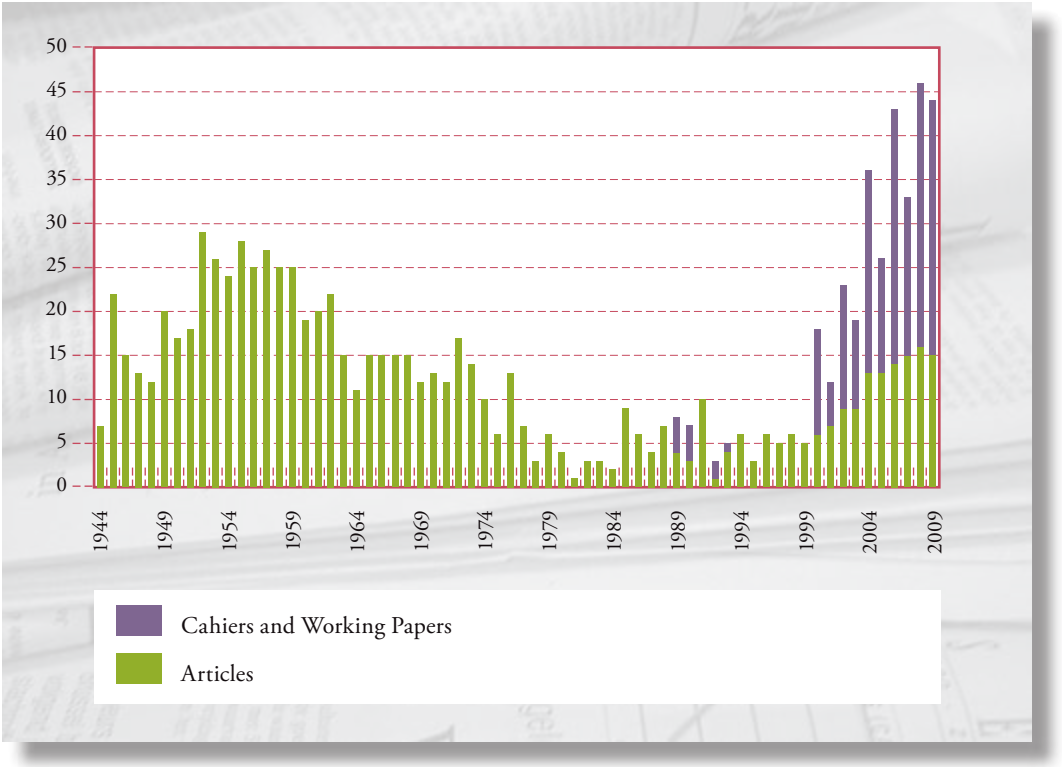
These networks are a clear example of the cooperation between the central banks in the Eurosystem in the field of economic research. One of their main advantages is the synergies which they deliver. However, every central bank is also faced with the issue of how much it will invest in a certain network. As a niche player, the NBB focuses on areas where it has comparative advantages. This is why its involvement in the Inflation Persistence Network and in the Wage Dynamics Network was particularly important. The NBB contributed to 14 papers out of a total of 72 issued by the Inflation Persistence Network and to 17 of 81 for the Wage Dynamics Network. This contrasted with a contribution to only one paper out of 23 for the Monetary Transmission Network.

An important niche of the NBB is the construction of dynamic stochastic general equilibrium (DSGE) models. The early generations of macro-models supposed, in the tradition of hydraulic Keynesianism, that there were stable relations between economic variables such as income and consumption. With the Lucas critique, namely that economic agents adapt their behaviour in the event of policy changes, the need for a new type of model became clear. These new DSGE models have a strong microeconomic basis. They take account of the behaviour and expectations of households and firms and thus of their reactions to changes in economic policy too. The word stochastic indicates that the models allow for the fact that economies can also be hit by shocks, such as technological progress.

Research on DSGE models at the NBB is receiving significant recognition. Articles have been published in leading economic journals, like the *American Economic Review* (Smets and Wouters, 2007). Two researchers, one from the ECB and one from the NBB, were awarded the 2004 Hicks-Tinbergen Medal by the European Economic Association for a paper entitled *"An Estimated Dynamic Stochastic General Equilibrium Model of the Euro Area"* (Smets and Wouters, 2003). According to this association, *"this door-opening paper … is the first to structurally estimate a fully specified, medium-scaled DSGE model using likelihood methods, showing that it fits the data as well as state of the art time-series models. Relying on Euro area data, it presents interesting substantive findings on the sources of European business cycles and the impact of various shocks. Smets and Wouters' contribution is already having a strong influence on applied macroeconomic analysis in a number of central banks and international organizations"*. In the light of the financial crisis, research is now directed at developing the financial sector in these DSGE models.

The National Bank's publications policy has also been revamped. On the occasion of its 150th anniversary in 2000, the Bank decided to target a wider audience with its economic publications.

Articles published in the Bulletin, Cahiers and Working Papers, 1944-2009

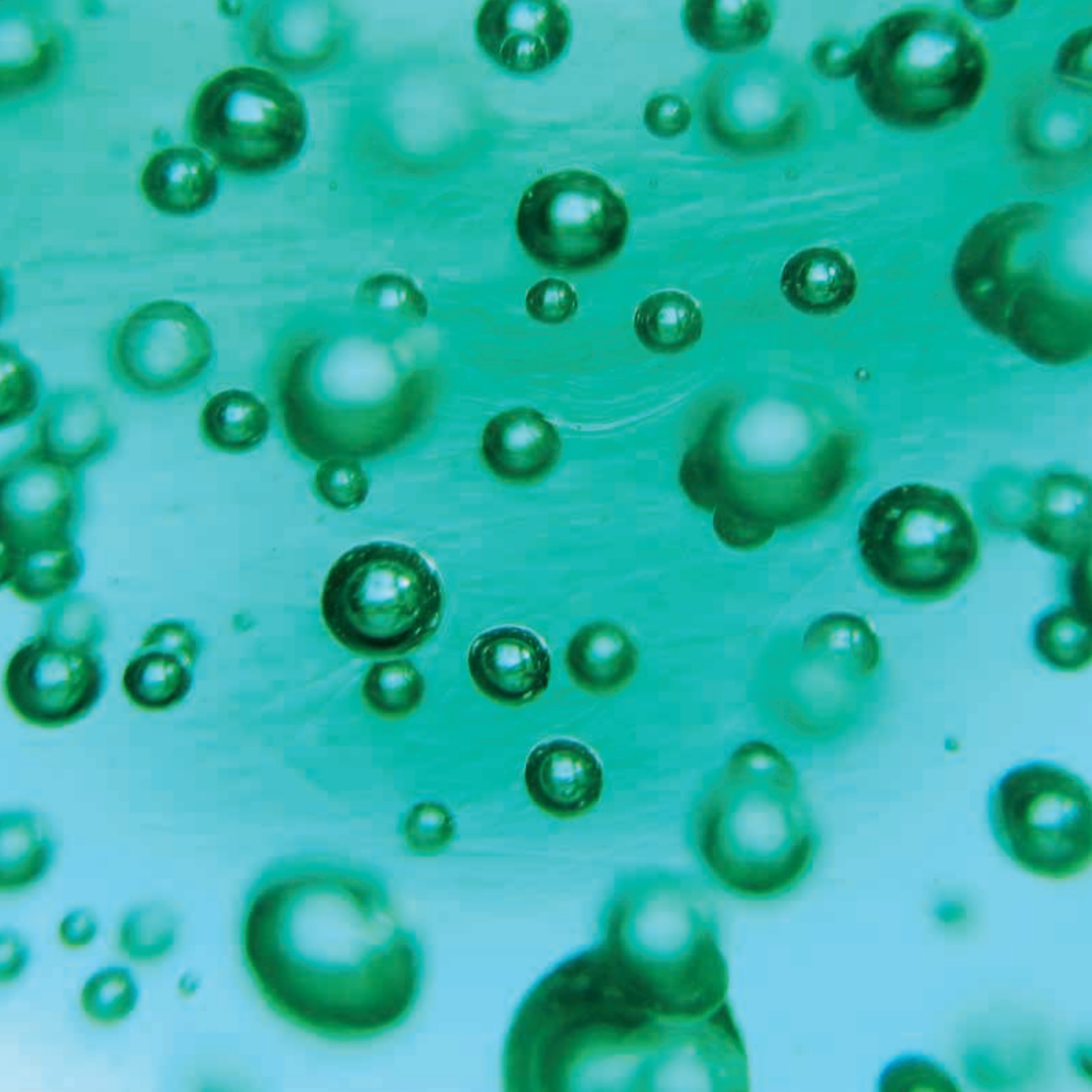


It started publishing the *"Working Papers"* series, while the *Cahiers* were abolished. Two series of Working Papers were launched, an *"Economic research"* series and a *"Documents"* series. The Working Papers are reserved for articles from the Bank's staff, written in their own name and under their own responsibility. Contributions put forward by third parties during seminars, conferences or study days organised under the patronage of the Bank, such as the 150th anniversary Colloquium (see below), can also be published.

Collective research papers, on which NBB economists work closely together with colleagues from other institutions, and work of third parties further to a research internship or secondment at the Bank, can also be included in Working Paper series. Moreover, publication of articles in the Bank's Economic Review has been stimulated. All in all, the publications of the NBB increased significantly in the first decade of the 21st century.

There were also other reforms at the NBB's Research Department, with a view to strengthening links with the academic world. The key objectives have always been to ensure that the NBB is kept constantly informed of the latest state of scientific research and to stimulate academic research in the monetary and financial area. The NBB therefore recruits Ph.D. economists for temporary jobs of up to two years and offers internships ranging from three to six months for young researchers working in its various areas of competence. These projects are also designed to offer researchers an opportunity to get acquainted with the NBB's research activities as well as with its policy-making work. This experience should enable them to gain new insight and provide them with an additional incentive to get involved in research activities in the public interest. Moreover, these programmes also give the National Bank's own economists a chance to follow the latest developments in scientific research at the universities. Furthermore, the NBB arranges periodic seminars, in collaboration with the Katholieke Universiteit Leuven, the Université catholique de Louvain and the Université Libre de Bruxelles, where prominent economists are invited to present their research work.

As mentioned above, the National Bank of Belgium celebrated its 150th anniversary in 2000. The various events which commemorated this anniversary were inaugurated by an international conference on the theme *"How to promote economic growth in the euro area?"* (Smets and Dombrecht, 2001). In his introduction to the conference, Governor Quaden emphasised that central bank independence also



implies greater accountability, and a key element of this is a strong dialogue with the academic community:

"In the Treaty of Maastricht, the States of the euro area in fact opted for the model of a European Central Bank and national central banks enjoying a high degree of independence …

However, this greater autonomy also entails more stringent obligations for central bankers: on the one hand, the obligation to preserve more strictly than ever the objectivity and absolute impartiality of our analyses, decisions and recommendations and, on the other, that of accounting for our actions, regularly and clearly, but also of explaining, discussing and, where appropriate, persuading because the ultimate foundation of the independence of a central bank is not a law, or even a treaty, but the acceptance by the populations concerned of the policy pursued" (Quaden, 2001a, p. XV-XVI).

Governor Quaden further stressed the importance of the theme of economic growth: *"Even though central bankers sometimes give the impression of being concerned only with the battle against inflation, this battle is justified only because price stability is essential for sustained economic growth, the ultimate objective of economic policy"* (Quaden, 2001a, p. XVI).

To enrich and stimulate the discussion at the conference, the Bank invited many representatives both from universities and from Belgian and foreign institutions, who contributed through their research to a better understanding of the determinants of growth. This conference contributed to establishing closer collaboration between universities and economists from central banks and international institutions.

International conferences organised by the NBB

2000	How to Promote Economic Growth in the Euro Area
2002	Firms' Investment and Finance Decisions
2004	Efficiency and Stability in an Evolving Financial System
2006	Price and Wage Rigidities in an Open Economy
2008	Towards an Integrated Macro-Finance Framework for Monetary Policy Analysis
2010	International Trade : Threats and Opportunities in a Globalized World

Since then, the National Bank has organised an international conference every two years. These conferences are now preceded by research projects as a key objective is to stimulate scientific cooperation between the NBB's research staff and the Belgian academic community. The NBB will first of all choose a research topic of relevance for the Belgian economy and for the academic community. A call for papers is then launched in order to invite Belgian researchers to team up with the NBB in the project. Research teams are selected and there will be regular meetings and discussions with the NBB Research Department. The aim of the international conferences is to present the results from the research projects and to help disseminate their findings internationally. The central objectives of these research projects are thus to improve understanding of how the Belgian economy works and to strengthen the research performance of both the Belgian academic world and the NBB itself.

Conclusion

A research department is now a core element of any modern central bank. This was not always the case. The growth of research departments in central banks is closely related to their transformation from issuing banks, with more commercial tasks mainly relating to discount credit, into modern monetary authorities. It is also related to the need for the management of the monetary system, especially after the demise of the gold standard. Moreover, the growth of research departments, not only in central banks, is also an expression of the growing importance of a more systematic and scientific approach in modern society.

At the beginning of the 20th century, the concept of an Economic Service was still vague. However, different elements may be observed at the National Bank of Belgium, like a library, statistical documentation and an eminent economist. It allowed Albert-Edouard Janssen, who was recruited by the National Bank to set up a library, to claim, as early as 1911, that the National Bank had created an *"Economic Service"*.

World War I led to the general collapse of the gold standard. The war destroyed the Belgian economy and led to a huge increase in the supply of money. Consequently, in the early interwar period, Belgium was confronted with severe problems of inflation, budget deficits and a large government debt. As there was no longer an automatic pilot, the need for economic analysis became paramount.

So, in 1921, under the initiative of A.-E. Janssen, the National Bank officially established an Economic Service to analyse the policy problems with which the country was confronted. This initiative further illustrates that economic analysis at policy-making institutions is mainly a demand-led process, and driven especially by concrete policy problems.

The National Bank's Economic Service gradually expanded over the years. In the early postwar period, it became one of the Bank's first two departments, under the name of *"Research Department"*. Over time, while certain activities, like statistics or the risk office, were transferred to other departments of the Bank, the number of economists in the Research Department steadily increased and the department increasingly focused on its core functions of economic analysis and research.

How can the performance of the NBB's Research Department be further assessed ? As a a central bank research department, it basically inhabits two worlds : the policy-making and academic ones. So, it is necessary to trace both its influence on policy-making and its reputation in the academic world.

The fundamental monetary policy objective of Belgium, as a small, open economy, vulnerable to external shocks, was the development of a stable and open international monetary system. This aim was fulfilled with the advent of European Economic and Monetary Union. When the National Bank of Belgium joined the Eurosystem as one of the founding members, it marked the start of a new era.

Before the arrival of the euro, the National Bank traditionally defended a stable exchange rate as an anchor and as a factor encouraging discipline in the Belgian economy. It was mainly when external shocks hit the Belgian economy and there was no coherent domestic policy that the exchange rate became the subject of debate

and controversy. Sometimes, devaluations proved unavoidable. These were painful times for the National Bank.

This attachment to monetary stability, especially exchange rate stability, was a constant feature in economic and monetary thinking at the National Bank of Belgium, not only in the more monetarist periods, like under Governor Frère in the immediate postwar period, but also in Keynesian periods, like the 1960s or 1970s. This is certainly not unnatural for a central bank, where safeguarding monetary stability is always a fundamental aim.

The interwar period was difficult because both the political and economic order had been shaken in their very foundations. However, with sharp economic analyses, the National Bank's Economic Service quickly acquired a strong reputation. Moreover, the Bank's Bulletin established itself as an authoritative economic review.

The influence of the Economic Service on economic policy-making in the interwar period is much more difficult to assess and varies significantly from one period to another. It played a major role in A.-E. Janssen's stabilisation project in 1926, yet the failure of this plan was a major trauma for the National Bank and its nascent economic research department.

The Great Depression led to major policy debates, also within the National Bank and its Economic Service. The 1935 devaluation of the Belgian franc was largely the work of van Zeeland (the first Head of the Economic Service and former Vice-Governor). However, it was very much against the conviction of Governor Franck. Paul van Zeeland also played a key role in the financial system reforms, like the splitting-up of the mixed banks and the setting-up of the Banking Commission, which would mark the Belgian financial landscape for decades. Dupriez and Lemoine, detached from the Economic Service, played a role here, too.

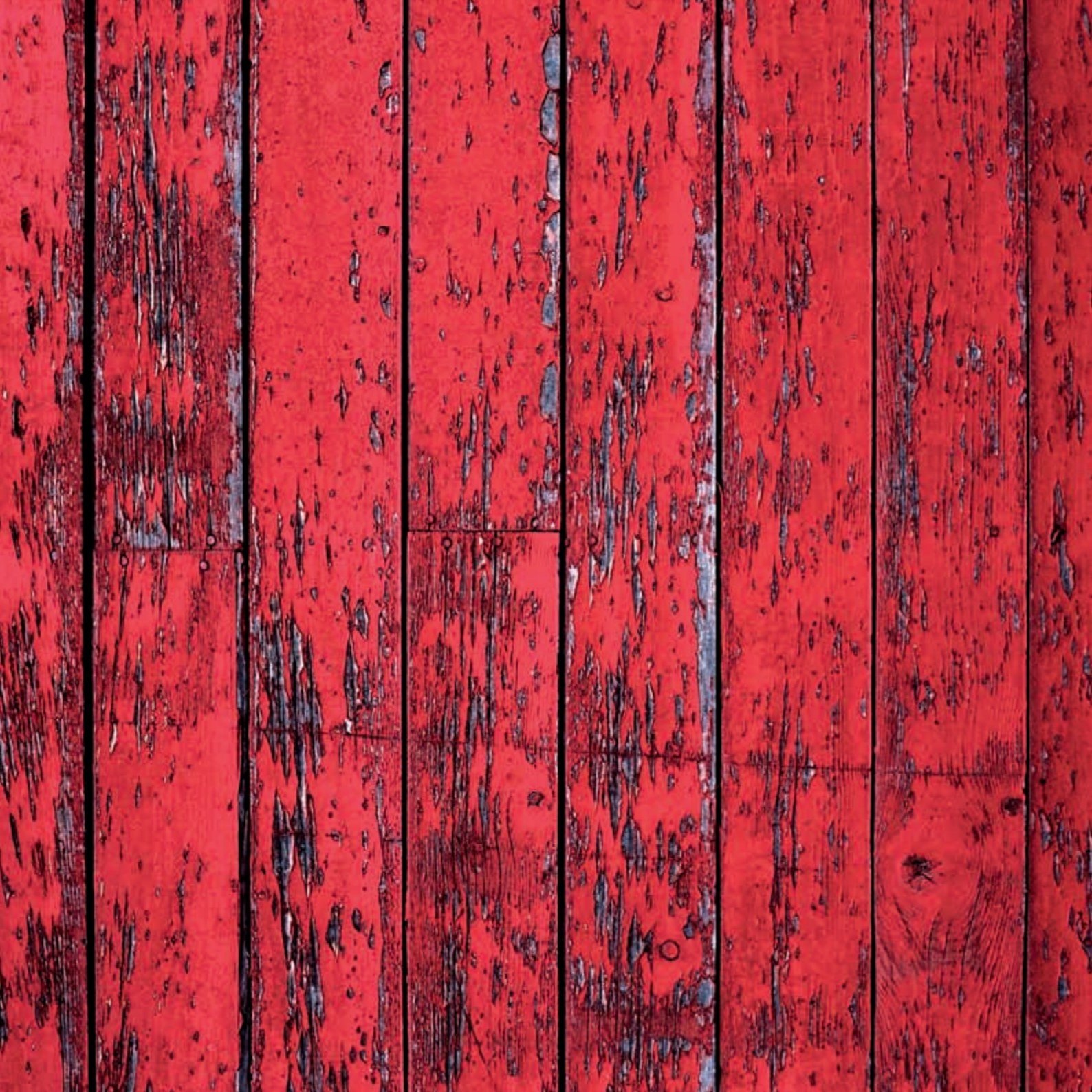
The decades after the Second World War were a golden age for the National Bank's Economic Service. Under the leadership of Franz De Voghel, it was merged with the Bank Credit Service and transformed into a fully-fledged Research Department. It took on a key role in monetary and credit policy and contributed significantly to economic policy-making in Belgium, especially when it came to the modernisation of the Belgian financial system in the 1960s and 1970s. The Bulletin of the National Bank, with contributions from many eminent foreign economists, also played a significant role in the propagation of new ideas in the economics profession in Belgium, both among policy-makers and academics.

The 1970s and 1980s were a more difficult period for the National Bank and its Research Department. The 1973 oil shock contributed significantly to a derailment of the Belgian economy. The analyses of the NBB did not succeed in bringing about the necessary policy adjustment. The NBB became more and more isolated in its defence of the exchange rate of the Belgian franc, which was finally devalued in 1982. Moreover, the Research Department also suffered in its relationship with the academic world from its rejection of modern economic methodologies, like econometric modelling, and from the decline in the publications of the NBB.

From the mid-1980s, the NBB and its Research Department gradually reinforced their reputation in economic policy-making. In time, a more ambitious exchange rate policy was pursued, which culminated in the Belgian franc being anchored to the German mark in June 1990. The advent of EMU was a crucial factor in this process. Moreover, EMU greatly contributed to a convergence in central banking practices. It encouraged the NBB to undertake a strategic exercise, in 2000, to position itself in the new world of the euro and the Eurosystem.

In terms of research strategy, the NBB and its Research Department developed a niche strategy, to affirm their presence both in the Eurosystem and in the academic world. There is a strong focus on analyses of microeconomic databases concerning pricing, wage-setting and international trade, business cycle analysis and dynamic stochastic general equilibrium models.

As regards economic policy-making, the NBB's Research Department basically has a twofold objective. On the one hand, it contributes to the single monetary policy, for instance in the briefings which it prepares for the Governor. On the other hand, it has to follow attentively the *"policy mix"*, to check whether policies in Belgium are compatible with the single monetary policy. The monetary history of Belgium has clearly shown that problems in the compatibility of the policy mix, like in the 1930s, 1950s or 1970s, can lead to periods of slow economic growth and rising unemployment. As a devaluation is no longer an option, preventive policy choices become ever more important. The financial crisis of 2008-2009, like that of the 1930s, has further illustrated the importance of the interrelationship between monetary and financial stability. Macro-prudential stability will in future become an increasingly important topic of analysis and research.



Annexes

Key Phases in the Development of the NBB's Research Function

1907 There were nine services in the Bank: Secretariat, Treasury, Discount, Portfolio, General Accounting, Inspectorate-General and State Cashier Accounting, Closed Deposits and Public Funds, Open Deposits, and Banknotes.

1908 Library established in the Secretariat Service.

1921 Economic Service set up.

1935 Establishment of Control of Banks' Financial Statements Service (will later become Bank Credit Service).

1948 The Economic Studies and Documentation Department (or Research Department) is set up with three services: Studies and Documentation (Economic Service), Statistics (earlier part of the Economic Service) and Bank Credit.

1959 Research Department scrapped and instead the separate services operate as autonomous units.

1965 Research Department returns with three services : Economic Service, Statistics, and Documentation.

Mechanography service established within the Statistics Service (which became Electronics and Mechanography in 1967 and then, in 1969, a service within the Organisation and Training Department).

Risk Office activities transferred from Research to Credit Department (the Risk Office becomes a separate service in 1968).

1979 Within the Research Department, the Economic Service is replaced by a more flexible structure, the Analysis and Research Activities Group.

1992 The Statistics Service leaves the Research Department and moves to a new General Statistics Department.

2001 Establishment of Financial Stability and Microeconomic Information Departments

The Bank's Governors

François-Philippe de Haussy	(1850-1869)
Eugène Prévinaire	(1870-1877)
André-Eugène Pirson	(1877-1881)
Alexandre Jamar	(1882-1888)
Eugène Anspach	(1888-1890)
Victor Van Hoegaerden	(1891-1905)
Théophile de Lantsheere	(1905-1918)
Léon Van der Rest	(1918-1923)
Fernand Hautain	(1923-1926)
Louis Franck	(1926-1937)
Georges Janssen	(1938-1941)
Albert Goffin	(July-November 1941)
Georges Theunis	(1941-1944)
Maurice Frère	(1944-1957)
Hubert Ansiaux	(1957-1971)
Robert Vandeputte	(1971-1975)
Cecil de Strycker	(1975-1982)
Jean Godeaux	(1982-1989)
Alfons Verplaetse	(1989-1999)
Guy Quaden	(since 1999)

Directors Responsible for the Economic Service or Research Department

Albert-Edouard Janssen	(1921-1925)
Paul van Zeeland	(1926-1934)
Georges Janssen	(1937-1941)
François Cracco	(1943)
Robert Vandeputte	(August 1943- September 1944)
Adolphe Baudewyns	(September 1944- November 1944)
Franz De Voghel	(November 1944- August 1945)
Adolphe Baudewyns	(August 1945- August 1946)
Franz De Voghel	(August 1946- May 1965)
Franz De Voghel and Roland Beauvois	(May 1965- March 1971)
Roland Beauvois	(March 1971- May 1987)
Jean Godeaux	(May 1987- January 1988)
Alfons Verplaetse	(January 1988-February 1999)
Jan Smets	(since March 1999)

Note: until 1943 the information is approximative.

Heads of Service or Department in the Economic Service

Paul van Zeeland	(1922-1926)
Jean-Jacques Vincent	(1926-1953)
Pierre Kauch	(1953-1959)
Roland Beauvois	(1960-1965)
Godelieve Van Poucke	(1965-1972)
Jacques Baudewyns	(1972-1987)
Marie-Henriette Lambert	(1987-1994)
Jan Smets	(1994-1999)
Anne-Marie Peeters	(1999-2002)
Serge Bertholomé	(since 2002)

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References

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AEJA : Papers A.-E. Janssen, Université catholique de Louvain, Louvain-la-Neuve

BAEFA : Belgian American Educational Foundation, Brussels

FRBNYA : Federal Reserve Bank of New York, New York

MFAA : Ministry of Foreign Affairs, Brussels

NBBA : National Bank of Belgium, Brussels

PUA : Princeton University, Princeton

PVZA : Papers Paul van Zeeland, Université catholique de Louvain, Louvain-la-Neuve

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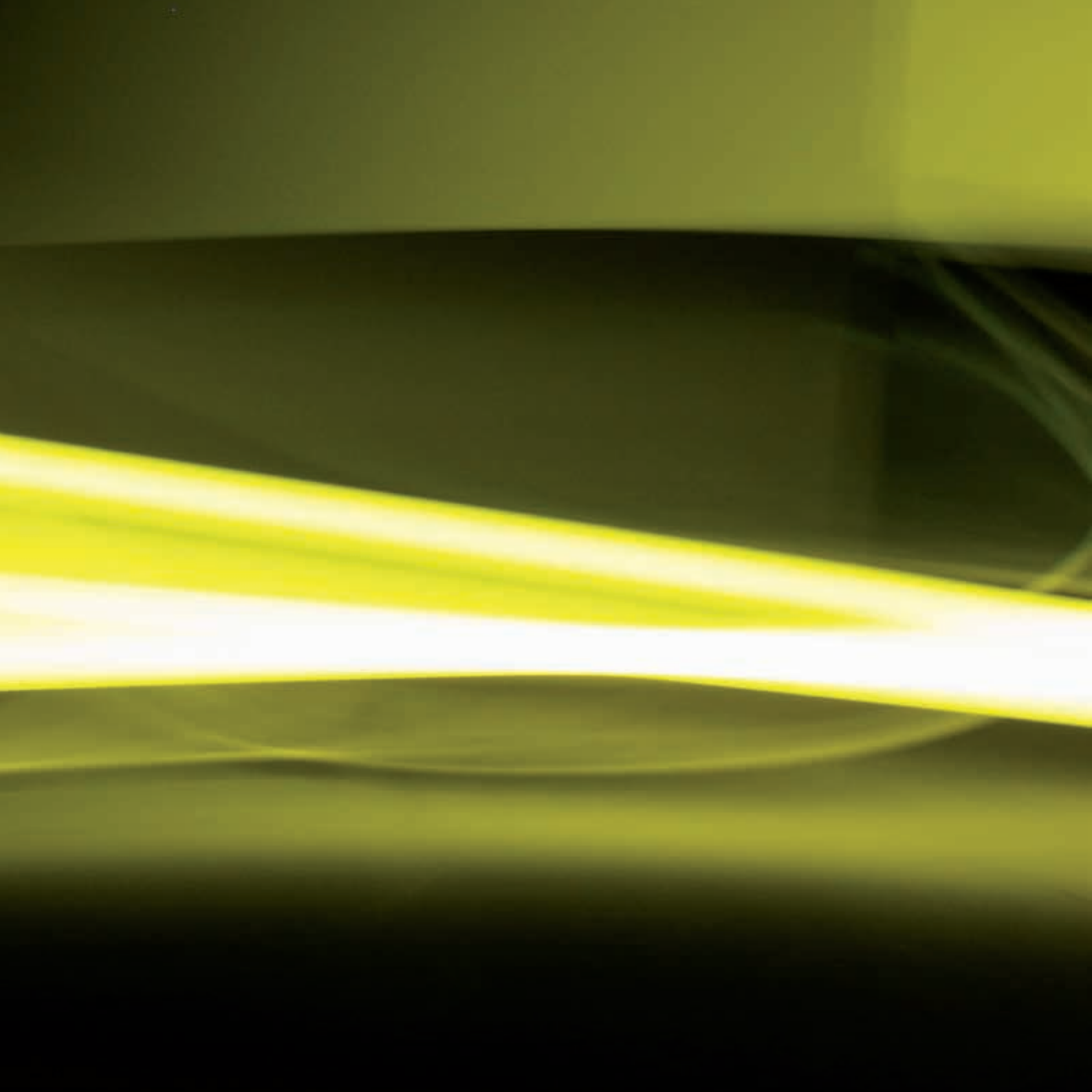

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"**A century of macroeconomic and monetary thought at the National Bank of Belgium**" traces the history of economic research at the National Bank of Belgium, from the early decades of the 20th century to its present functioning in the Eurosystem. The study also goes into the major economic policy debates, as well as the specific lines of macroeconomic and monetary thinking at the National Bank of Belgium. The focus is very much on the role of the Research Department in policy-making and its dialogue (and debates) with the academic community.

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