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# Central Banking in 19<sup>th</sup> Century Belgium: Was the NBB a Lender of Last Resort?<sup>1</sup>

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## Abstract

The creation of the National Bank of Belgium (NBB), in 1850, marked a fundamental reform of the Belgian financial system. It clearly aimed at rendering the financial system more crisis resistant, especially by restricting the leverage of the banking sector. The NBB, which received the privilege to issue banknotes, was subject to strict rules to grant only short-term credit against collateral. The NBB took up a key role in maintaining monetary stability, especially by safeguarding the convertibility of banknotes. The NBB also took part in certain rescue operations of financial institutions. However, this was mostly on explicit demand from the Finance Minister and for crises concerning discount banks. It would then be an exaggeration to consider it as a Lender of Last Resort, in the sense of taking responsibility for the stability of the financial system. This should be no surprise, given the limitations imposed by its statutes, especially the limitation to short-term credits and the strict rules on collateral, the role of the profit motive in its commercial activities and the priority for safeguarding the convertibility of banknotes.

**Key words:** National Bank of Belgium, financial stability, financial crisis, lender of last resort

**JEL codes:** E50, G28, N23

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## 1. Introduction

It is now commonly accepted that modern central banks have two main objectives: monetary stability and financial stability. There is further a broad consensus that the objective of monetary stability is better defined than the objective of financial stability. Moreover, also our historical knowledge, at least with regard to Belgium, is much better concerning the history of monetary stability and the role of the National Bank of Belgium hereby. So remarked Capie (1999, p. 130) on the creation of the NBB: *"The principal objective was the maintenance of convertibility, but of almost equal importance was its role as banker to banks, and it seems that an intention from an early point was that it should act as a lender of last resort. Evidence on how this worked remains limited"*. It is the aim of this paper to explore the role of the NBB in the financial crises of 19<sup>th</sup> century Belgium.

The paper starts with some observations on the notion of financial stability and 19<sup>th</sup> century Belgium. Thereafter, the analysis is strongly chronological, going through the different financial crises. It starts with the crises of 1838 and 1848, which led to the creation of the NBB, a fundamental reform of the Belgian financial system. The next section then analyses the role of the NBB in monetary stability, while the two following sections discuss the role of the issue bank in financial stability.

## 2. Some Observations on the Notion of Financial Stability and 19<sup>th</sup> Century Belgium

There is a broad consensus that financial stability is one of the more difficult and elusive concepts in economics<sup>2</sup>. The general impression is that the literature does not provide an unambiguous definition of financial stability (Oosterloo and de Haan, 2004). However, there is also a large consensus that there are reasons for caring more about stability in the financial sector, especially banking, than in any other industry (Lamfalussy, 1988). First, banks are highly leveraged institutions, with long-term assets and short-term liabilities. So they are more vulnerable institutions. Second, the failure of individual financial institutions can lead to chain reactions within the system because of the strong links tying institutions to each other. The speed at which funds can be shifted and the role of expectations are important elements hereby. Third, as a result of the central place of financial institutions in the mechanism of credit allocation and in the payments system, whatever happens within the banking world can have far-reaching consequences

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<sup>2</sup> Houben, Kakes and Schinasi, 2004, provide an overview of definitions of financial stability.

for the real economy. In this section, we would further like to highlight certain elements of financial stability which were relevant for 19<sup>th</sup> century Belgium.

It is generally accepted that monetary stability is a necessary condition for financial stability. Indeed, it is important that money fulfils its key functions, as disturbances on the monetary front generally lead to problems in the financial system. During most of the 19<sup>th</sup> century Belgium adhered to bimetallism. However, an assessment of the functioning (or disfunctioning) of the metallic monetary system falls outside the scope of this paper<sup>3</sup>. From our perspective it is important to point out that banknotes gradually became more and more accepted. The convertibility of banknotes became so an important element of monetary stability. In the 1830s and 1840s several banks obtained the right of issue. However, there were several banking crises whereby the convertibility of the banknotes was suspended. In 1850, the Finance Minister, Walthère Frère-Orban, succeeded in pushing through a major reform. The note issue was unified and it became the responsibility of the newly founded National Bank of Belgium. Also, in 1873, the notes of the NBB became legal tender. Safeguarding the convertibility of banknotes into specie was a key function of the NBB in 19<sup>th</sup> century Belgium. With the exception of one major crisis in July 1870, caused by the threat of war between France and Prussia, the NBB always accomplished this mission.

While monetary stability is generally considered to be a necessary condition for financial stability, it is certainly not a sufficient condition. Financial crises can occur also in periods when money is stable. Especially important hereby are banking crises. Banks can run into trouble both because of liquidity and of solvency problems. Liquidity shocks have typically their origin in the withdrawal of deposits by customers, while solvency shocks arise from losses on (long-term) investment of the banks.

Naturally, financial stability is an important concern for policy-makers (Maes and Périlleux, 1993). In the modern day literature, one distinguishes two main objectives: the protection of small depositors and the avoidance of a systemic crisis. However, defining a systemic crisis is not simple. Broadly speaking, one could characterize it as a situation whereby a crisis in the financial sector has a large scale impact on the real economy (Lamfalussy, 2004).

For safeguarding financial stability, typically, two types of activities are distinguished: (a) *ex ante* preventive actions, especially regulation and supervision, which make it less likely that crises will occur, and (b) crisis management, especially the identification and resolution of crises (EFC, 2001, Eichengreen, 2002, Mayes, 2004, Vaillant and Amouriaux, 1998). Naturally, 19<sup>th</sup> century Belgium did not know anything like the present-day regulatory and supervisory framework. However, Frère-Orban's reform of 1850, whereby the NBB was created, clearly aimed at rendering the financial system more crisis resistant,

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<sup>3</sup> For more details, see e.g. Kauch, 1950 or Janssens, 1976.

especially by restricting the leverage of the banking sector. The NBB, which received the privilege to issue banknotes, had strict rules to give only short-term credit against collateral. Also, the financing of the government was strictly limited. The Société Générale, the Banque de Belgique and other banks continued to have participations in industry, but their financing became less short-term based as they lost the privilege to issue banknotes. However, in the following decades, the investment banks developed new forms of short-term financing, increasing so again the leverage in the financial system.

Managing a crisis in a financial institution raises many issues. Crucial questions are: Who takes the lead in the crisis operations? Should the bank be saved or can it go bankrupt? What will be the role of bank mergers and restructurings in a long-term viable solution to the crisis? What kind of (temporary) construction will be set up? Who will be financing the rescue operations and paying for the losses? In this paper we will focus on the different institutions involved in dealing with banking crises in 19<sup>th</sup> century Belgium, especially the role which the NBB played in crisis management.

So, several institutions can have a role in dealing with banking crises: the government, the central bank, prudential authorities and private banks. Firstly, the government will be involved. Indeed, the government has the ultimate political responsibility for financial stability in a country. Moreover, many financial crises are solvability crises and only the government (the taxpayer) has the “deep pockets” which are often necessary to solve solvability problems. We will see that in 19<sup>th</sup> century Belgium, the government, especially the Finance Minister, often played a leading role in dealing with banking crises. Like in many other countries, specific prudential authorities were only created in Belgium in the 1930s, after the severe financial crises of the Great Depression.

Also private banks were often involved in the resolution of banking crises. This is especially so in so-called “lifeboat arrangements”, whereby a group of banks come to the rescue of a specific institution.<sup>4</sup> In 19<sup>th</sup> century Belgium, several times, consortia were created to help an ailing bank. In several instances the Société Générale, the biggest bank in Belgium, played an important role in these. Sometimes the NBB was a member of the consortia, but on several occasions it did not participate.

In the academic literature a lot of attention has been given to the “Lender of Last Resort” role of a central bank. According to the “classical” view, associated with Thornton and Bagehot, a central bank should be ready to supply credit to banks to stop a banking panic<sup>5</sup>. The so-called “Bagehot principle” has become

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<sup>4</sup> This becomes more difficult now, as competition is increasing and shareholders become more assertive.

<sup>5</sup> Following Goodhart (2002, p. 231), we consider a general liquidity shock as a monetary disturbance (cf. *supra*). It can be countered by the central bank by providing more (or less) liquidity to the market as a whole, presently typically by open market operations.

famous: *"lend freely at a high rate of interest against good collateral"*. In the present day literature one refers often to "emergency liquidity assistance (ELA)", which a central bank can give to a financial institution in difficulty.

Capie (1999, p. 118) defines the lender of last resort role of a central bank as *"the preservation of financial market stability"*. Taking this view, giving priority to the long-term interests of the financial system as a whole, implies also that the central bank cannot aim any more at the short-run maximization of its profits and has to stop being a rival of the commercial banks (Capie and Goodhart, 1995, Goodhart, 1988). Indeed, if a commercial bank would get into difficulty, a conflict of interest would arise for the central bank, as allowing the commercial bank to fail (or at least to suffer), would make it possible to capture more business for itself.

Naturally, in the academic literature, there have been many discussions on the concept of a Lender of Last Resort (see e.g. the contributions in Goodhart and Illing, 2002 or Humphrey, 1992). Many of these discussions centre on the problem of "moral hazard", which lending of last resort might entail, as banks might be induced to take more risks. An important issue is then how one should weigh the benefits of preventing a banking panic against the costs of inducing riskier activities. Another important problem is that the distinction between solvency and liquidity problems is less than clear-cut. This distinction between solvency and liquidity problems, is especially relevant for 19<sup>th</sup> century Belgium. Given the dominance of mixed (or universal) banks, with participations in industry, solvability problems were a typical source of banking crises in 19<sup>th</sup> century Belgium.

### **3. The Creation of the National Bank of Belgium as a Cornerstone of Financial Reform**

#### **3.1. The Crisis of 1838: the Government Comes to the Rescue**

In the early 1830s the Belgian Société Générale<sup>6</sup> became the first mixed (or universal) bank in Europe. It not only issued paper money, provided discount credit for commercial purposes and operated a savings bank, but it also participated intensively in the share capital of manufacturing corporations (Laureyssens, 1975; Kindleberger, 1993). Soon the Société Générale completely dominated the banking landscape in Belgium. This created a lot of animosity, the more so as the institution was suspected of favouring a return of the Dutch House of Orange. So, in 1835, Belgian patriots set up a rival institution the Banque de Belgique, which was

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<sup>6</sup> The official name was 'Société Générale pour favoriser l'industrie nationale'. It should not be confused with its French namesake. The Société Générale was founded in 1822 by King William I of the United Kingdom of the Netherlands, in 1830 Belgium became independent.

granted a range of functions comparable to that of the Société Générale, including the right of issue.

In the following years both universal banks competed fiercely and tried to gain as much control as possible over Belgian industry. Money poured abundantly into heavy manufacturing which gave the industrial revolution in the Walloon provinces a powerful impetus. But by doing so the two banks ran serious risks as their working capital became rapidly tied up in claims that were difficult to realize in crisis periods, such as shares and camouflaged long-term loans. Moreover, their liabilities – mainly banknotes and savings deposits – could be converted or withdrawn at short notice (see table 1).

By the end of 1838 military tensions between Belgium and the Netherlands flared up again. Panic broke out and the public demanded repayment of deposits and the conversion of banknotes into gold and silver coins. Both the Société Générale and the Banque de Belgique soon faced serious liquidity problems because of their imprudent investment policies. Share prices for instance plummeted, thereby slashing the value of the banks' participations in industrial corporations.

On 17 December 1838 the Banque de Belgique, the second largest financial institution of the country, was no longer able to redeem its banknotes. The bank called the government for financial aid, but in vain, and had to close its doors. Troops had to be deployed around the Banque de Belgique to prevent it from being plundered by angry depositors (Brion and Moreau, 1998). Of course, these dramatic events increased the pressure on the Société Générale. But the Société Générale managed to meet its obligations, as it was able – with the help of the Paris Rothschilds – to sell foreign assets on the French capital market (Gille, 1961).

Gradually it became clear that the suspension of payments by the Banque de Belgique would provoke a wave of bankruptcies among the manufacturing firms it controlled. Fear for social unrest in the industrial areas prompted the government to grant a loan of 4 million Belgian francs to the Banque de Belgique (*Moniteur belge*, 28 December 1838 and 2 January 1839). The government acted thus *de facto* as lender of last resort. In return, the manufacturing corporations controlled by the Banque de Belgique had to take up mortgages, which were handed over to the government as collateral. On 4 January 1839 the Banque de Belgique resumed its operations.

*Table 1: Balance Sheet of the Société Générale and the Banque de Belgique  
 (end of 1838, in millions of Belgian francs)*

Main items	Société Générale	Banque de Belgique
<i>Assets</i>		
1. Cash on hand <sup>a</sup>	24	1.2
2. Discounts	8	3
3. Loans and overdrafts	58	20
4. Government bonds	24	-
5. Loans on securities <sup>b</sup>	63	11
6. Corporate securities	40 <sup>c</sup>	3
<i>Liabilities</i>		
7. Bank notes <sup>d</sup>	27	3.5
8. Current accounts	30	12
9. Savings deposits	46	1
10. Bonds and notes	20	2
11. Capital	65 <sup>e</sup>	20
12. Surplus	24	-

- Notes: *a* Includes some bank notes issued by the banks themselves. See note *d*.  
*b* Collateral consisted almost exclusively of shares of industrial corporations promoted by the banks and, in what concerns the Société Générale, in shares of the bank itself.  
*c* Includes some shares of the Société Générale itself.  
*d* This item does not represent the notes in circulation; a part of the notes were held by the banks themselves and is included in "cash on hand". The actual circulation was less than 20 millions.  
*e* A part of the shares, included in the assets under item 6, has not been actually issued.

Source: Chlepner, 1943, p. 12.

The whole affair produced a shockwave through Belgium. What the Société Générale was concerned, the value of banknotes in circulation fell by more than 50 percent and the amount of savings deposits dropped by almost 40 percent (*Compte rendu de la Société Générale. Année 1838*). For obvious reasons the Banque de Belgique suffered even worse. At a certain moment its banknotes virtually disappeared from circulation.

But the effects of the crisis did not remain confined to the big banks and their depositors. The most dramatic event was undoubtedly the bankruptcy of John Cockerill's vast industrial empire (Lebrun et al., 1981). Moreover, in previous years many small bankers had become accustomed to rediscount bills of exchange at the Banque de Belgique or the Société Générale. At the peak of the crisis however this source of liquidity dried up. When the Banque de Belgique had to close its doors, the Société Générale also suspended its (re)discount operations. As a result, several local banks went bankrupt and a severe credit crunch paralyzed the



economy. Therefore the business community demanded the establishment of a specialist discount house, supervised by the government that would maintain (re)discount facilities in periods of financial turmoil (Chlepner, 1926).

Despite the catastrophic impact of the 1838 financial crisis few structural measures were taken. The government did not set up a specialist discount house and the system of universal banking was not changed dramatically. Probably the close ties between some top bankers and the Belgian political elite blocked serious reforms. Despite continuous lip service the Société Générale did not improve its liquidity position in a substantial way. The bank, for example, still used savings deposits to finance capital injections in industrial corporations. The battered Banque de Belgique drew some lessons from the crisis and stopped adding new firms to its investment portfolio. It decided to focus more on short-term operations.

### 3.2 The Crisis of 1848

The February Revolution in Paris provoked a new wave of panic in Belgium. To the great anger of the business community the (re)discount activities of the two big banks once again came to a halt. This time however it was the Société Générale that faced the most severe liquidity problems. In a few weeks time the value of its banknotes in circulation fell by more than one third (*Compte rendu de la Société Générale. Année 1848*).

When the French government suspended the conversion of banknotes in coins, the Société Générale requested the Belgian authorities to do the same<sup>7</sup>. But the bank realized that parliament would only approve such a drastic measure if action was taken to revitalize the (re)discount market. Therefore the Société Générale proposed the establishment of a specialist discount house, supervised by the government<sup>8</sup>. The bank's request did not mention that such a measure would also be beneficial to the Société Générale itself by giving it the opportunity to mobilize part of its illiquid assets.

By law of 20 March 1848 parliament accepted these proposals, but important restrictions were imposed. The State guaranteed the issue of paper money up to a maximum of 20 million Belgian francs for the Société Générale and up to 10 million Belgian francs for the Banque de Belgique. In return, both institutions had to pledge real estate, state bonds and other securities of at least the same value to the government as collateral. Moreover, the two banks had to publish at least every 15 days or *quinzaine* the total amount of banknotes in circulation.

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<sup>7</sup> Belgium and France *de facto* formed a monetary union. So there was indeed a serious danger that Belgian specie would be drained massively towards France (Janssens, 1976). In 1865 Belgium joined the Latin monetary union (Flandreau, 2004).

<sup>8</sup> Letter of 18 April 1848 from the Société Générale to the government (printed in *Annales parlementaires de Belgique*, 20 March 1848).

The law of 20 March 1848 also authorized each of the big banks to issue up to 2 million Belgian francs of supplementary notes for providing assistance to other financial institutions (*Moniteur belge*, 21 March 1848). Using these funds the Banque de Belgique and the Société Générale jointly granted loans to the Banque de Flandre and to the Banque Liégeoise, the two smaller Belgian issue banks. So, the government used the big banks as financial intermediary to assist the other ones.

Imposing the compulsory rate stopped the conversion of banknotes in coins, but the population increasingly withdrew savings deposits (see table 2). In contrast to the 1838 crisis the Paris Rothschilds were unable to help the bank as the French capital market was also paralyzed. In these circumstances the Société Générale once again had to call the Belgian authorities for help. But the government showed little enthusiasm to set up a new rescue operation only a few weeks after the first one. Moreover, a parliamentary inquiry clearly demonstrated that the bank's financial difficulties were primarily due to its imprudent investment policies. Finally, the raging financial crisis also hit the government badly as it was unable to sell treasury bills on the market (Houtman-De Smedt, 1997).

*Table 2: Amount of Savings Deposits at the Société Générale, 1847–1848 (end of month, in thousands of Belgian francs)*

		Stock	Received	Paid
<b>1847</b>	Marche	39 676		
	June	38 722		
	September	38 181		
	December	37 149	475	654
<b>1848</b>	January	36 853	649	945
	February	36 392	489	950
	March	34 896	98	1 594
	April	33 205	569	2 260
	May	25 790	98	7 514
	June	21 800	64	4 054
	July	17 634	88	4 253
	August	15 915	137	1 856
	September	15 151	172	936

*Notes: Deposits on public authorities excluded.*

*Source: Compte rendu de la Société Générale. Année 1848, pp. 44–45.*

The financial chaos also deepened the industrial slump – iron production, for instance, fell by 35 percent (Pluymers, 1992) – which again fuelled the fear for a social revolt. After sometimes passionate debates and pressure from King Leopold I, a shareholder of the Société Générale, Parliament voted the law of 22 May 1848 (Luyten, 1986). The bank was authorized to issue an additional quantity of notes with compulsory rate and state guarantee up to a limit of 20 million Belgian francs. In return, the Société Générale had to give extra securities in pledge, had to pay

4 percent interest on the notes issued, and was prohibited to pay out interest or dividends to shareholders as long as the extra paper money issued had not been redeemed. Finally, the bank was placed under supervision of three government auditors (*Moniteur belge*, 23 May 1848).

It is clear that the reimbursement of savings deposits was simply financed by printing more inconvertible paper money. Normally the value of such notes would have depreciated vis-à-vis coins, but this did not happen. The strict limitation of the amount of issue authorized played an important role. In addition, the penalties imposed gave the Société Générale a strong incentive to restrict the issue of extra notes as much as possible. So the bank never exhausted its quota. Besides that, the transparency of the rescue operation helped to maintain confidence in paper money. The big banks had to publish every *quinzaine* the total amount of notes in circulation for the time the compulsory rate was in effect.

The government was able to remedy both the banknote and the savings deposits crises, but what happened to the discount activities? The law of 20 March 1848, mentioned earlier, also created a specialist discount house in Brussels, supervised by the government. The Société Générale and the Banque de Belgique had to bring in the capital, 8 million Belgian francs, on a 50/50 basis. The discount house quickly started its operations and certainly helped to alleviate the crisis, but it never became a real success. After a rapid initial rise, its credit operations fell back again as the Société Générale and the Banque de Belgique resumed their (re)discount activities. Nevertheless, the operations of the Brussels discount house pinpointed to a structural weakness of the Belgian commercial credit market. The discount office mainly served small and medium-sized firms which were neglected by the big banks (Chlepner, 1926).

### 3.3 The Creation of the NBB

Two severe financial crises in a decade left deep scars. Public opinion and many politicians demanded substantial reforms of Belgium's shaky financial system. In July 1848 the young, dynamic Walthère Frère-Orban became Minister of Finance. He was the main leader of the "progressive liberals" in Belgium<sup>9</sup>. He was convinced of the merits of free trade, but, very much in line with French thinking, he also saw a role for the state in economic life, especially in the financial sector<sup>10</sup>.

Frère-Orban severely criticized the Belgian system of universal banking for several reasons. First, it was unacceptable that saving deposits were used to acquire shares of corporations. Such operations not only exposed savers to very high risks,

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<sup>9</sup> Walthère Frère-Orban was Finance Minister from 1848 to 1852 and from 1857 to 1867. He combined the positions of 'Prime' Minister and Finance in the years 1868–1870. In the period 1878–1884 he was again prime minister.

<sup>10</sup> Frère-Orban had also studied in Paris.

but also jeopardized the liquidity position of the financial institutions. Second, the Société Générale and the Banque de Belgique focused strongly on obtaining controlling participations in companies and therefore did very little to promote discount credit (see also table 1). The universal banks even distorted the normal functioning of the discount market as they gave preferential treatment to the companies they controlled. Therefore other firms often faced difficulties to find commercial credit. To solve this market failure Frère-Orban favoured the establishment of an institution that would grant discount facilities to any firm that provided the necessary guarantees. Third, the universal banks neglected the issuing of notes. On the eve of the 1848 crisis the amount of paper money in circulation was about 20 million Belgian francs, barely a quarter of the Dutch figure (Vanthoor, 2004). The fact that the Société Générale and the Banque de Belgique refused to accept one another's paper money certainly contributed to this striking difference. It also explains the increasing calls for unification of banknote circulation in Belgium.

What was Frère-Orban's alternative? Also inspired by the English financial system, he wanted to split up the various activities of the universal banks and assign them to specialized institutions. In several of them the state would have an important role. His project included the establishment of a separate discounting and issue institute, a separate savings bank (which would later become the Caisse Générale d'Épargne et de Retraite), a mortgage loan institution, etc. In this structure the Société Générale and the Banque de Belgique would confine themselves to industrial investment activities and become pure *banques d'affaires* or investment banks. In the Finance Minister's view such a segmented financial system would be less prone to liquidity crises, more transparent, and more amenable to effective government supervision (Van der Wee and Verbreyt, 1997; Brion and Moreau, 1998).

Of course, Frère-Orban realized that the big banks would fiercely resist his ambitious plans and therefore he decided to follow a gradual approach. His priority was to set up a national discounting and issue institute on the lines of the Banque de France. Circumstances were favourable as the 1848 financial crisis had made the big banks heavily dependent on the government. After tough negotiations the Société Générale and the Banque de Belgique renounced their right of issue and most of their discount activities to a new institution, named *Banque Nationale*<sup>11</sup>.

The law of 5 May 1850 and the statutes (confirmed by royal decree of 4 September 1850) define the principal tasks and structure of the National Bank of Belgium (NBB). Being a private joint-stock company the profit motive was present

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<sup>11</sup> Agreements of 15 and 18 December 1849 between the Finance Minister and respectively the Banque de Belgique and the Société Générale (printed in *Lois organiques, statuts...*, pp. 131–141). In 1900 the name was officially changed into Banque Nationale de Belgique/Nationale Bank van België. As the institution today still carries that name, we use the term National Bank of Belgium or NBB also for the 19<sup>th</sup> century.

in the NBB's commercial activities. At the same time however the NBB performed tasks in the public interest, i.e. issuing banknotes and being Government Cashier. Therefore it was not more than reasonable that the state supervised the NBB's activities. So the government appointed the governor and there was a government commissioner, something exceptional in those days.

In view of the 1838 and 1848 crises it comes as no surprise that the NBB's main objective was to maintain convertibility. In line with the theories of the Banking School the legal framework was fairly liberal concerning the amount of banknotes to be issued. The statutes only imposed that the NBB's metal stock had to represent at least one-third of its demand liabilities – the total value of banknotes in circulation plus the NBB's current account deposits. With the government's consent, the stock of gold and silver could even fall to one quarter of the NBB's demand liabilities.

However, the law of 5 May 1850 was very strict on the kind of activities the NBB could pursue. Heavily influenced by the so-called classical theory of banking – which was popularized by the writings of Adam Smith, Jean-Baptiste Say, and Count Mollien (Napoleon's Finance Minister) – the NBB's founders put particular stress on the limitation of banking assets to short-term self-liquidating bills. Therefore the law formally mentioned that the NBB could develop no other operations than those explicitly stipulated in the law. To ensure that banknotes always could be converted in coins, the NBB's activities were largely confined to discount operations linked to commercial operations. The bills of exchange normally had to bear three solvent signatures and reach maturity within 100 days.

The NBB was authorized to discount foreign bills of exchange. Officially Frère-Orban's intention was to stimulate the emergence of an international money market in Belgium (Kauch, 1950). But probably the experience of the 1838 crisis also played a role. In those days the Société Générale resisted successfully a domestic financial crisis because it could mobilize foreign assets.

The legislator clearly feared that the government could use the NBB to finance public spending<sup>12</sup>. Therefore the NBB was allowed to invest in government bonds but only to an amount not exceeding its own capital and reserves. In addition the amount of treasury notes to be discounted was strictly limited. Government securities were admitted as collateral but only for an amount not exceeding 80 percent of their market value. Finally the NBB was not permitted to grant loans against the collateral of shares or backed by mortgages. Nor could it acquire

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<sup>12</sup> Discussion du projet de loi relatif à l'institution d'une Banque Nationale. Chambre des Représentants, Session of 28 February 1850 (*Lois organiques, statuts...*, p. 198). The experience of the Société Générale in the 1820s also played a role. In that period the Société Générale became heavily involved in the public finances of the United Kingdom of the Netherlands which undermined confidence in its banknotes (Houtman-De Smedt, 1997).

property – except for its own use – or invest in industrial corporations (*Moniteur belge*, 16 May 1850 and 5 September 1850).

From the debates in Parliament it is clear that Frère-Orban aimed at a financial system with a pyramid structure, headed by the NBB<sup>13</sup>. Nevertheless neither the law nor the statutes refer to the NBB as *banker to banks* or contain articles that can be read as such. Similarly the Finance Minister nurtured the hope that, in times of financial turmoil, the NBB would maintain its discount activities in order to alleviate the impact of the crisis: “Elles [discounting and issue institutes] doivent enfin être organisées de manière à pouvoir venir au secours du pays dans les moments difficiles, atténuer les effets des crises, en escomptant à des taux raisonnables quand les capitaux deviennent rares. Loin d’être une cause d’embarras, elles doivent contribuer à diminuer l’intensité des crises”<sup>14</sup>. This pointed to the concept of *lender of last resort*. But again these ideas were in no way reflected in the law or statutes.

#### 4. The NBB and Monetary Stability

The NBB’s discount operations took off at a dazzling speed<sup>15</sup>. Already in 1852 the NBB provided more discount credit than the previous record set by the Banque de Belgique and the Société Générale combined. This success encouraged the NBB to set up a network of discount agencies across the country. Parallel with the expansion of the discount activities the value of banknotes in circulation rose rapidly. So, the NBB remedied several defects of the Belgian money market. However, the formation of deposits at the NBB remained rather negligible. The commercial banks were rapidly accustomed to rediscount freely with the issue bank, whose rediscount policy was very liberal. Consequently they did not feel any need to maintain important deposits at the NBB<sup>16</sup>.

But did the NBB meet expectations what the conversion of banknotes in specie was concerned? The NBB indeed managed to maintain convertibility during most

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<sup>13</sup> Exposé des motifs du projet de loi concernant l’institution d’une Banque Nationale (*Lois organiques, statuts...*, p. 78).

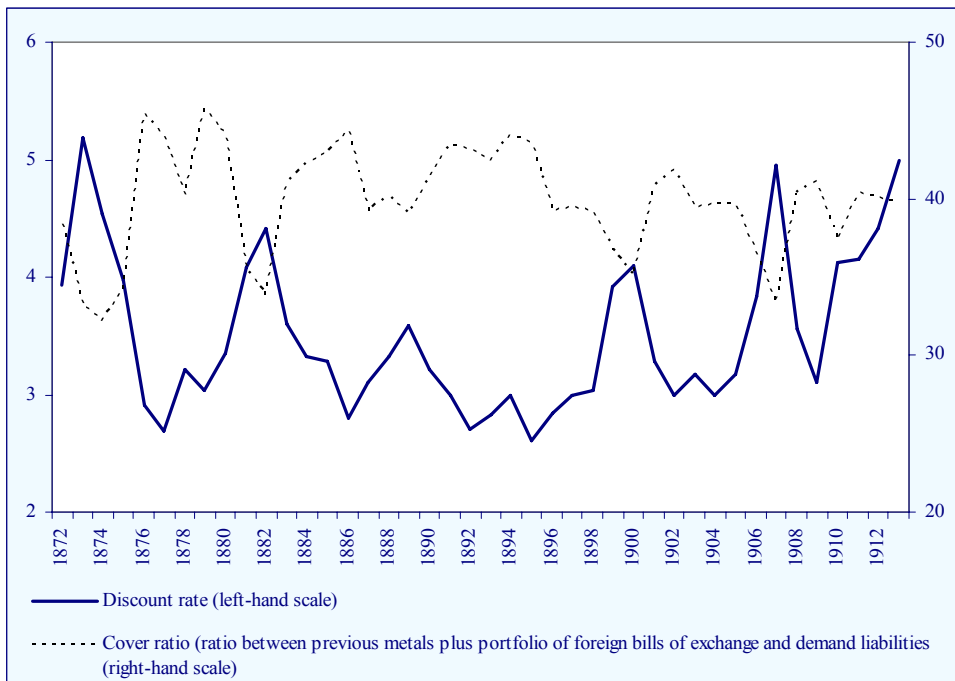
<sup>14</sup> Exposé des motifs... (*Lois organiques, statuts...*, p. 51).

<sup>15</sup> When the NBB opened its doors on 2 January 1851 the discount houses of Brussels, Tournai and Verviers stopped their activities.

<sup>16</sup> A clear difference with the Anglo Saxon countries. The Banking Act of 1844 in England created an inelastic system of note issue. As a result deposit currency became the principal medium of circulation. In Belgium, on the contrary, banknotes became the main medium of circulation. Few persons had deposit accounts, especially before the First World War. Even important commercial and industrial companies effected most of their payments by means of banknotes. Also operations between brokers on the Stock Exchange were liquidated through banknotes and not by the use of checks (Chlepnier, 1943).

international monetary-financial crises of the 19<sup>th</sup> century (1857, 1863–64, etc.). A deterioration of the cover ratio – the ratio between reserves and demand liabilities – was always fended off by using two instruments. The NBB sold its portfolio of foreign bills of exchange, and, if that did not help, it raised the discount rate (see figure 1).

*Chart 1: Discount Rate and Cover Ratio of the National Bank, 1872–1913  
 (annual averages, percentages)*



Source: NBB, *Bulletin d'information et de documentation*, vol. 25, n° II-3 (1950), pp. 126 and 160–164.

Only in the middle of July 1870 things went wrong. Frightened by the threat of war between France and Prussia the Belgian Finance Minister and the governor of the NBB lost their nerves. They ordered to evacuate immediately the metal reserves out of the capital. The removal happened with so much commotion that it sparked panic among the population. People besieged the NBB's head office to demand the conversion of notes in coins. To the population's outrage, the NBB simply decided

to close its counters, except for one. At the same time, the volume of discount transactions was reduced drastically<sup>17</sup>.

In order to resolve the confidence crisis, the government set up an emergency committee chaired by Jules Malou, director of the Société Générale. It urged the NBB to resume the conversion of notes as usual. By doing so, Malou took a calculated risk. In the meantime he had mobilized sterling assets, held by the Société Générale, to fetch gold from London to Belgium. Malou's tactics proved successful: as soon as convertibility seemed assured again, the panic faded away (Kauch, 1950; Kurgan-van Hentenryk, 1997). The NBB discount transactions also resumed. At first priority was given to the financing of commercial operations by industrial companies, but soon thereafter the NBB also revived its rediscount facilities<sup>18</sup>.

## 5. The NBB and the Financial Stability

### 5.1 The Period 1851–1870

By 1870 Frère-Orban's idea of a financial system with specialized financial institutions had largely been realized. With a market share of 68 percent the NBB dominated the discount market (Kauch, 1950). Moreover, in 1865 the government had set up the Caisse Générale d'Épargne et de Retraite which soon played a leading role on the savings market. Finally, the other two large financial institutions – the Banque de Belgique and the Société Générale – more than ever concentrated their activities on investment banking. Nevertheless several smaller institutions continued to operate as universal banks.

In the generally prosperous 1850s and 1860s (see chart 2) few banks of a certain size got into difficulties. Of course the relative absence of convertibility crises contributed to financial stability. But did the NBB take up a more active role during periods of financial turmoil as promised by Frère-Orban? From the annual reports and archival documents it is clear that the NBB never formally accepted such a responsibility<sup>19</sup>. This comes as no surprise: neither the law of 1850 nor the NBB's statutes refer to such a role.

Nevertheless the NBB sometimes operated *de facto* as a supplier of liquidity in case of financial distress. During the 1857 crisis several merchant houses in Antwerp were badly hit by the international collapse in commodity prices, such as coffee, sugar, etc. (Van Schoubroeck, 1951). In order to contain the crisis the main trading houses of the city temporarily set up a *Comptoir de prêts sur marchandises*, which discounted promissory notes and warrants guaranteed by commodities. The

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<sup>17</sup> Archives of the NBB, A589/14, Circulaire du 14 juillet 1870 aux comptoirs.

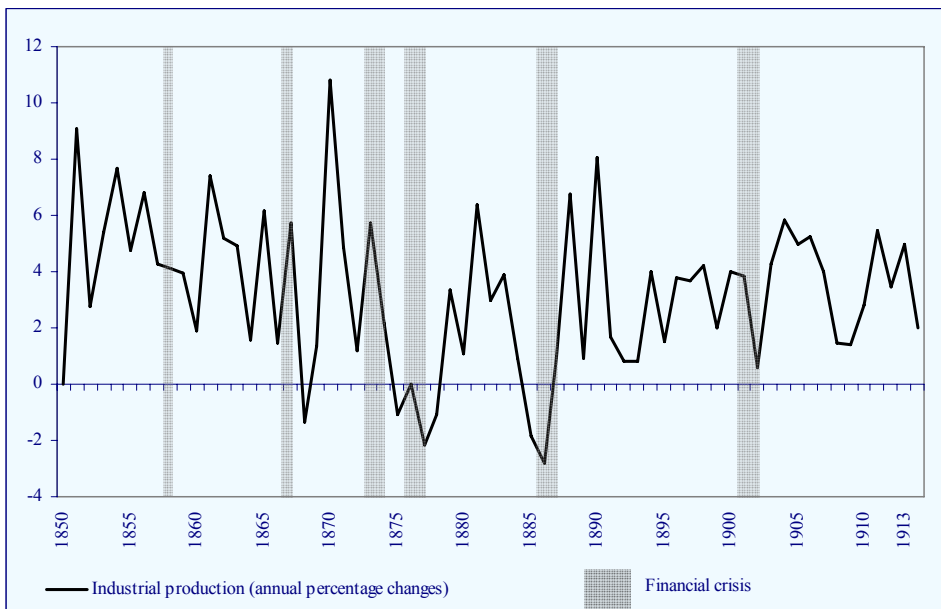
<sup>18</sup> Archives of the NBB, A589/14: Circulaires du 19 et du 29 juillet 1870 aux comptoirs.

<sup>19</sup> This was also true for the Bank of England until about 1870 (Collins, 1992).



NBB provided rediscount facilities (*Moniteur belge*, 14 December 1857). Moreover, the Antwerp branch of the NBB backed the operation by raising its advances on gold deposits to 1 million Belgian francs<sup>20</sup>. The total amounts involved in the effort were probably not very large and the NBB, as requested by its bylaws, always demanded sound collateral. Nevertheless, the very fact that the issue institute actively supported the rescue operation probably helped to alleviate the crisis.

Chart 2: Economic Slumps and Financial Crises, 1850–1913



Source: Annual percentage change in industrial production: *Gadisseur*, 1973.  
 Financial crises: *Chlepner*, 1930; *Durviaux*, 1947; *Van Schoubroeck*, 1951.

In 1866 the collapse of Overden, Gurney and Co. in Britain sent a shockwave through the European commodity and financial markets (Kindleberger, 2000). As in 1857 the main trading houses in Antwerp established a *Caisse d'avances sur marchandises*, but this time the NBB was not involved in the operation (*Moniteur belge*, 1 August 1866). However when the Banque de Cr dit commerciale d'Anvers went bankrupt Jonathan Bischoffsheim, director of the NBB, feared that the merchant house crisis would spill over to the Belgian financial sector<sup>21</sup>. Therefore he called a meeting of top bankers to investigate whether it was

<sup>20</sup> Archives of the NBB, Conseil d'administration, 12 December 1857.

<sup>21</sup> Echoes of the crisis are found in the archives of the NBB, see e.g. Conseil g n ral, 25 August and 29 September 1866.

necessary to establish a temporary discount house, similar to the 1848 initiative. Most financiers were convinced however that the crisis could be handled without emergency measures and they proved to be right (Chlepner, 1930).

## 5.2 Economic Malaise and the Resurgence of the Société Générale

The Société Générale had never really accepted Frère-Orban's aim that it should confine its activities to investment banking. In the late 1860s and early 1870s Belgium's largest financial institution found a way out of this straitjacket. Inspired by the English example, it introduced interest-bearing current accounts to stimulate the use of demand deposits, giro payment systems and cheques. Next, the Société Générale decided to set up a network of provincial joint-stock banks. From a legal perspective these provincial banks were separate entities but the Société Générale controlled a majority of their share capital. The controlled banks had two main tasks within the Générale Group: to attract deposits and to provide direct discount and other credit facilities, e.g. advances in current account, to small and medium-sized firms<sup>22</sup>. Soon the controlled banks became serious competitors for the discount agencies of the NBB (Buyst, Maes and Pluym, 2005).

Although the NBB lost market share in the direct discount business during the late 19<sup>th</sup> century, that was more than offset by the rapid growth of its rediscount activities (Kauch, 1950). In this capacity the NBB increasingly acquired the status of *banker to banks*. The availability of ample rediscount facilities changed the financial structure of most Belgian banks. They maintained minimal cash reserves, so that the NBB's interest rate policy became far more effective. Financial institutions usually passed on immediately a change in the official discount rate to their customers. Again the Générale Group was an important exception. The controlled banks usually went to the Société Générale for rediscounting purposes. So the Générale Group was able to adopt a more independent stance.

The rivalry between the NBB and the Générale Group went beyond the issue of discounting bills of exchange. As mentioned earlier, the Société Générale had played a crucial role in solving the 1870 convertibility crisis. The whole affaire increased the Société Générale's ambition to take up the leading role again in the Belgian banking world. Probably some nostalgia to the institution's prominent position in the pre-1848 period also played a role. Moreover, the year 1870 marked an important shift of power in the Belgian political landscape. The liberals – with Frère-Orban as the dominating figure – that had shaped Belgian politics for about twenty years lost the elections and were banished to the opposition benches. The

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<sup>22</sup> As the controlled banks were separate legal entities, the agreement of 18 December 1849 did not apply. For more information about the emergence and development of the system of controlled banks, see e.g. Kurgan-van Hentenryk, 1997; Van der Wee and Verbreyt, 1997. See also annex 1 for an overview of the Belgian financial system in 1913.

catholic party came into office and soon afterwards Jules Malou<sup>23</sup> was appointed Minister of Finance. Malou resigned as vice-governor of the Société Générale, but maintained good contacts with the institution.

The early 1870s were also an important turning point in Belgium's general economic climate. A long period of malaise ushered in which lasted until the early 1890s (see chart 2). This unfavourable context<sup>24</sup> together with the speculative investment policies of some Belgian banks were a breeding ground for financial storms. In 1875–1876 for instance, the collapse of Simon Philippart's railway empire plunged the Belgian banking system in its third major crisis since independence (Durviaux, 1947; Kurgan-van Hentenryk, 1982).<sup>25</sup>

Finance Minister Malou, an experienced banker, tried to tackle the crises of the 1870s actively and he gave the Société Générale an important role in the rescue operations (see table 3). Why did Malou favour the Société Générale over the NBB? Personal and political elements certainly played a role as many catholic politicians viewed the NBB as a club of Frère-Orban sympathizers (Kauch, 1950). But pragmatic considerations were probably more important. The NBB's statutes seriously constrained the issue bank in providing financial assistance during a crisis. Indeed, from the 1870s universal banking had become a typical feature again of Belgium's financial landscape. Most collateral of the universal banks consisted of shares and industrial loans, while bills of exchange and government securities made up only a modest part of their total assets (Durviaux, 1947). But the NBB was only allowed to provide liquidity against the last category of collateral. Moreover, the NBB's first duty was to maintain the convertibility of notes. So its financial capacity to participate in rescue operations was relatively limited, especially in cases where a banking crisis coincided with monetary unrest.

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<sup>23</sup> Jules Malou was Finance Minister from 1845 to 1847 and from 1871 to 1874. He combined the position of 'Prime' Minister and Finance Minister from 1874 to 1878 and in 1884. Between 1848 and 1870 he was director and in 1871 vice-governor of the Société Générale. In that capacity he was the driving force behind a broadening of the Société Générale's activities e.g. into the construction and exploitation of railways both in Belgium and abroad (Brion and Moreau, 1998; Kurgan-van Hentenryk, 1999).

<sup>24</sup> For the causes of these prolonged economic difficulties, see e.g. Buyst and van Meerten, 1997.

<sup>25</sup> As indicated earlier, the other crises of the banking system occurred in 1838–1839 and 1848.

*Table 3: Financial Crises in Belgium, 1851–1914*

Year	Institution in difficulty	Financial rescue operation?	NBB involved?	Société Générale involved?
1857	Several Antwerp merchant houses	Yes	X	
1866	Several Antwerp merchant houses	Yes		X
	Banque de Crédit commerciale d'Anvers	No	(X)	
1872-1873	Banque de l'Union	Yes	X	X
<b>1875-1876</b>	<b>Banque de Belgique</b>	<b>Yes</b>		<b>X</b>
	<b>Banque Centrale Anversoise</b>	<b>Yes</b>		<b>X</b>
	<b>Union du Crédit de Bruxelles</b>	<b>Yes</b>	<b>X</b>	<b>X</b>
<b>1885-1886</b>	<b>Several banks (among which Banque de Belgique and Banque des Travaux Publics)</b>	<b>No</b>		
1900-1901	Several banks	No		
1914	Banque de Reports, de Fonds Publiques et de Dépôts d'Anvers	Yes	?	X

*Notes: Major crises of the banking system are in bold.*

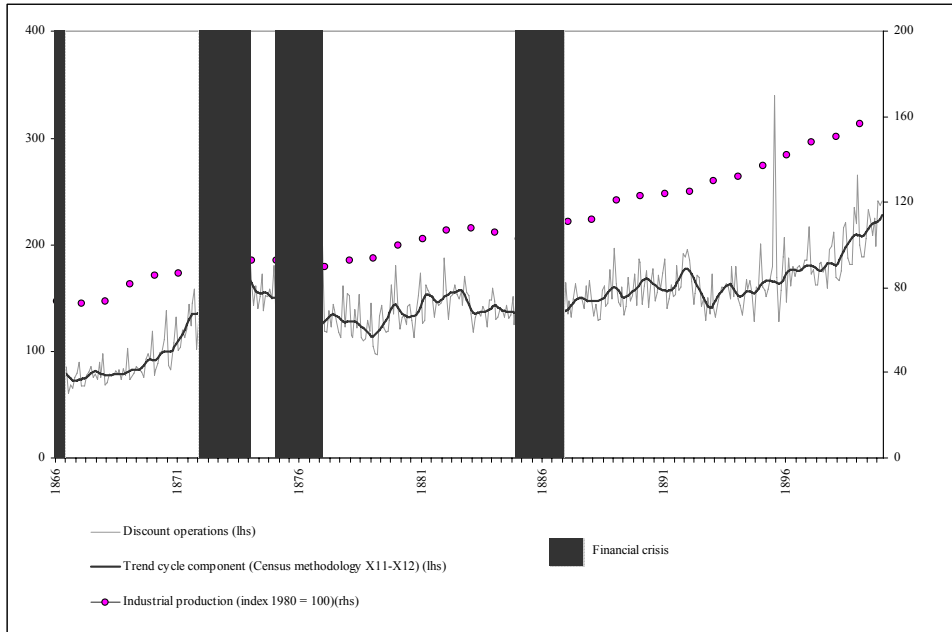
*In 1875–1876 also several smaller banks got into difficulties that were not helped out.*

*Sources: See in the text.*

During the crises of 1872–1873 and 1875–1876 Malou set up several consortia. When the bank in difficulty was specialized in supplying discount credit the Finance Minister asked the NBB to join the effort. The specific role of the NBB however varied considerably from case to case. In 1872 the Banque de l'Union, the country's third largest provider of discount credit, ran into difficulties. During the crisis the Société Générale and the Banque de Belgique, together with eleven other financial institutions participated in a temporary discount house. The NBB was not among them, but the issue institute pledged to pay 20 percent of the discount house's potential losses<sup>26</sup>. Moreover, chart 3 shows a substantial increase in the NBB's (re)discount operations in 1872 and 1873 which suggests that the issue institute also provided emergency liquidity assistance.

<sup>26</sup> Archives of the NBB, Conseil d'administration, 17 October 1872; Archives of the NBB, C827 "Banque de l'Union": agreement between the NBB and the Comptoir Spécial d'Escompte of 21 December 1872. For more details about the Société Générale's role, see Crombois, 1994–1995.

*Chart 3: Discount Operations of the National Bank and Financial Crises, 1866–1899*



*Note:* The peak in July 1895 is due to massive discount operations for the Belgian branches of the *Banque de Paris et des Pays-Bas* and *Crédit Lyonnais* on 19 July 1895 (*Archives of the NBB, Conseil d'administration, 21 July 1895*).

*Sources:* Discount operations: NBB, *Rapports annuels, 1867–1899*.  
 Industrial production: Gadisseur, 1973.

In December 1876 the NBB provided expertise for the rescue of the *Union du Crédit de Bruxelles*, but in contrast to e.g. the *Société Générale*, it was not involved in specific financial arrangements<sup>27</sup>. Of course, the NBB rediscounted the bills guaranteed by the temporary discount house, but the amounts involved were probably not very substantial. Chart 3 illustrates that in 1876 the NBB's total discount operations even declined due to the general slump in the economy.

When a crisis hit universal or investment banks the Finance Minister did not ask the NBB for assistance<sup>28</sup>. A clear case in point was the debacle of the *Banque de Belgique*, the country's second largest financial institution, in March 1876, due to the bankruptcy of the Philippart empire. To make matters worse, large-scale fraud

<sup>27</sup> Archives of the NBB, Conseil d'administration, 14 and 21 December 1876.

<sup>28</sup> Kauch (1950, p. 159) makes a comparison between Malou and Bagehot, criticizing also the old fashioned orthodoxy of the NBB.

by an employee of the bank came to the surface which immersed the affair in a tense atmosphere of scandal<sup>29</sup>. Therefore Malou feared that the collapse would trigger off a run on the banks. So he formed a consortium of Belgian and French financiers to keep the Banque de Belgique afloat. The NBB was not officially involved in this massive operation nor did it provide large amounts of additional liquidity to the market in a discrete way. In any case it is impossible to find traces of a sudden increase in the NBB's discount activities (see chart 3). Similarly, the NBB did not join the efforts to rescue the Banque Centrale Anversoise in April 1876.

In all rescue operations set up by Malou the Société Générale was clearly present (table 3). Nevertheless it would be too rash to state that Belgium's largest financial institution acted systematically as a kind of lender of last resort. Much depended on the personality of the Finance Minister. Malou's successors took a far less active stance when banks got into trouble. During the 1885–1886 and 1900–1901 financial crises no rescue operations were set up and several banks went bankrupt (see also chart 3). Especially in 1885–1886 the absence of a lender of last resort of some kind was felt in a painful way. The first banks hit were those already weakened by the turmoil of the 1870s. Most of them, among which the Banque de Belgique, definitively disappeared from the financial scene. But the crisis was allowed to rage on and to swallow other institutions such as the Banque des Travaux Publics, Belgium's third largest bank. It is estimated that more than 20 percent of total paid-up capital in the Belgian banking sector went up in smoke (Durviaux, 1947). Moreover, chart 2 illustrates that the 1885–1886 financial crises coincided with a deep industrial slump. Both phenomena have a clear tendency to reinforce each other, but even this danger could not convince the authorities to intervene.

How can we explain the rather passive attitude of the NBB during financial crises? We already emphasized that the bylaws of the issue institute seriously constrained the range of assets it could accept as collateral. Furthermore the NBB gave clear priority to safeguarding the convertibility of its banknotes. This objective is not always easy to reconcile with pumping substantial amounts of emergency liquidity into the banking system. Another element was undoubtedly the profit motive in the NBB's commercial transactions. In that context rescuing a (potential) competitor was not a straightforward action (see also Goodhart, 1985; Plessis, 2003). Finally, from the 1880s the NBB became a bureaucratic, inward looking institution with little attention for the new responsibilities in the public interest that an issue bank could take up (Kauch, 1950).

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<sup>29</sup> The estimated losses linked to fraud alone amounted to 24 million Belgian francs. This came on top of the huge losses incurred with the bankruptcy of the Philippart empire (Kurgan-van Henrenryk, 1982).

A somewhat particular case is the financial turmoil during the spring of 1914. The Banque de Reports, de Fonds Publiques et de Dépôts d'Anvers could no longer meet its commitments. In order to prevent a panic the Société Générale intervened: the bank was simply split up and integrated in the Générale Group. Archival documents of the Société Générale suggest that the NBB somehow assisted the operation<sup>30</sup>. It is however impossible to find confirmation of such an action in the NBB archives. In any case it seems rather unlikely that the NBB would have backed an operation, not integrated in a broader consortium, and that only reinforced the position of its main rival.

## 6. Conclusion

The creation of the NBB in 1850 marked a fundamental transformation of the Belgian financial system. Frère-Orban's reform clearly aimed at rendering the financial system more crisis resistant, especially by restricting the leverage of the banking sector. The NBB, which received the privilege to issue banknotes, could only grant short-term credit and had strict rules concerning collateral. Also, the financing of the government was strictly limited. The other banks, the Société Générale and the Banque de Belgique, continued to have participations in industry, but their financing became less short-term based as they lost the privilege to issue banknotes. It was all part of Frère-Orban's vision of a financial system with specialized financial institutions.

The NBB clearly took up a key role in maintaining monetary stability, especially by safeguarding the convertibility of banknotes. But did it also become a Lender of last resort, in the sense of taking on the responsibility for financial stability? This was certainly part of Frère-Orban's grand design. However, there seems to be a certain ambiguity in Frère-Orban's vision. On the one hand he wanted a special role for the NBB, at the top of a hierarchical financial system, but on the other hand he also envisaged a segmented and strongly specialized financial system. In this view the NBB had as its first objective to safeguard the convertibility of banknotes. It was this element which pervaded the statutes of the NBB, severely restricting the activities of the issue bank to short-term operations. Moreover, the NBB was set up as a limited liability company and was a rival for private banks in the discount market, even if it was clearly a bank with tasks in the public interest and the government had a special role in it.

In the second half of the 19<sup>th</sup> century the NBB, at certain moments, took part in rescue operations of financial institutions. However, this was mostly on explicit demand from the Finance Minister and concerned usually crises in which discount banks were in problems. So, it would be an exaggeration to consider it as a Lender of Last Resort, in the sense of taking responsibility for the stability of the financial

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<sup>30</sup> For more details see Crombois, 1994–1995 and Kurgan-van Hentenryk, 1997.

system. This should be no surprise, given the limitations imposed by its statutes, especially that it could grant only short-term credit and the strict rules on collateral, the role of the profit motive in its commercial operations and the priority for safeguarding the convertibility of banknotes. In 19<sup>th</sup> century Belgium, the government and the Société Générale played mostly a more important role in the resolution of financial crises. This can be explained by the leading role of the Société Générale in the Belgian economy and society and by the fundamental political responsibilities of the government, especially if a banking crisis could lead to bankruptcies and social unrest.

## References

- Archives NBB, Conseil d'administration, Conseil général, Assemblée générale des actionnaires, 1851–1914 and various other documents.
- R. Brion and J.-L. Moreau, *La Société Générale de Belgique, 1822–1997*, Antwerp: Mercatorfonds, 1998.
- E. Buyst and M.A. Van Meerten, The Société Générale and Belgian economic development, E. Buyst et al., *The Generale Bank, 1822–1997*, Tielt: Lannoo, 1997, pp. 533–595.
- E. Buyst, I. Maes and W. Pluym, *The Bank, the franc and the euro. A History of the National Bank of Belgium*, Tielt: Lannoo, 2005.
- F. Capie, Banking in Europe in the nineteenth century: the role of the central bank, in R. Silla, R. Tilly and G. Tortella (eds.), *The State, the Financial System and Economic Modernization*, Cambridge: University Press, 1999, pp. 118–133.
- F. Capie and C. Goodhart, Central banks, macro policy, and the financial system; the nineteenth and twentieth centuries, *Financial History Review*, vol. 1995, pp. 145–161.
- B.S. Chlepner, *La banque en Belgique. Étude historique et économique*, Brussels: Lamertin, 1926.
- B.S. Chlepner, *Le marché financier belge depuis cent ans*, Brussels: Falk, 1930.
- B.S. Chlepner, A propos d'un centenaire. La première crise bancaire en Belgique, in *Bulletin d'information et de documentation de la Banque Nationale de Belgique*, vol. XII-1 (1939).
- B.S. Chlepner, *Belgian Banking and Banking Theory*, Washington: Brookings Institution, 1943.
- M. Collins, The Bank of England as lender of last resort, 1857–1878, in *Economic History Review*, vol. 45 (1992), pp. 145–153.
- Compte rendu de la Société Générale. Années 1830–1913.*
- J.-F. Crombois, Les activités bancaires de la Société Générale de Belgique 1870-1914. Facteurs de développement d'une grande banque mixte belge, in *Revue belge d'histoire contemporaine*, vol. 25 (1994–1995), pp. 1–29.



- J. Drappier, La conjoncture du cours des valeurs mobilières, de leur dividendes et des taux d'intérêt en Belgique de 1830 à 1913, in *Bulletin de l'IREES*, vol. 8 (1937), pp. 391–449.
- R. Durviaux, *La banque mixte. Origine et soutien de l'expansion économique en Belgique*. (Collection de l'école des sciences économiques, nr. 33), Brussels: Bruylant, 1947.
- Economic and Financial Committee, Report on Financial Crisis Management, Economic Paper, No. 156, Brussels: European Commission, July 2001.
- B. Eichengreen, *Financial Crises. And what to do about them*, Oxford: Oxford University Press, 2002.
- M. Flandreau, *The Glitter of Gold: France, Bimetallism, and the Emergence of the International Gold Standard (1848–1873)*, Oxford: University Press, 2004.
- J. Gadisseur, Contribution à l'étude de la production agricole en Belgique de 1846 à 1913, *Revue belge d'histoire contemporaine*, vol. 4 (1973), pp. 1–48.
- B. Gille (ed.), *Lettres adressées à la Maison Rothschild de Paris par son représentant à Bruxelles*, vol. I: Crise Politique et Crise Financière en Belgique, 1838–1840. (Centre Interuniversitaire d'Histoire Contemporaine, Cahiers XIX), Leuven-Paris: Nauwelaerts, 1961.
- C. Goodhart, *The Evolution of Central Banks*, London: MIT Press, 1985 (2nd edition).
- C. Goodhart, Myths about the Lender of Last Resort, in C. Goodhart and G. Illing (eds), *Financial Crises, Contagion, and the Lender of Last Resort*, Oxford: University Press, 2002, pp. 227–245.
- C. Goodhart and G. Illing, (eds.), *Financial Crises, Contagion, and the Lender of Last Resort*, Oxford: University Press, 2002.
- A. Houben, J. Kakes and G. Schinasi, *Towards a Framework for Financial Stability*, Occasional Studies, vol. 2, n° 1, Amsterdam: De Nederlandsche Bank, 2004.
- H. Houtman-De Smedt, Société Générale from 1822 to 1848. From 'Bank of the Crown Lands' to 'Mixed-type Bank', in E. Buyst et al., *The Generale Bank, 1822-1997*, Tiel: Lannoo, 1997, pp. 13–63.
- T. M. Humphrey, Lender of last resort, in P. Newman, M. Milgate and J. Eatwell (eds.), *The New Palgrave Dictionary of Money and Finance*, London: Macmillan Press, 1992, pp. 571–573.
- V. Janssens, *Le franc belge: un siècle et demi d'histoire monétaire*, Brussels, éditions de services interbancaires, 1976.
- P. Kauch, *La Banque Nationale de Belgique, 1850-1918*, Brussels: Banque Nationale de Belgique, 1950.
- C.P. Kindleberger, *A Financial History of Western Europe*, New York-Oxford: Oxford University Press, 1993 (2nd edition).
- C.P. Kindleberger, *Manias, Panics and Crashes: A History of Financial Crises*, New York: Wiley, 2000 (4<sup>th</sup> edition).

- G. Kurgan-Van Hentenryk, *Rail, finance et politique. Les entreprises Philippart (1865–1890)*, Brussels, 1982.
- G. Kurgan-Van Hentenryk, Finance et politique: le ‘purgatoire’ de Jules Malou à la Société Générale, in J. ART and L. Francois (eds.), *Docendo discimus. Liber Amicorum Romain Van Eenoo*, Ghent: Academia Press, 1999, vol. II, pp. 1065–1082.
- G. Kurgan-Van Hentenryk, The Société Générale, 1850–1934, in E. Buyst et al., *The Generale Bank, 1822–1997*, Tielt: Lannoo, 1997, pp. 65–286.
- A. Lamfalussy, Globalization of Financial Markets: International Supervisory and Regulatory Issues, in *Financial Market Volatility*, Federal Reserve Bank of Kansas City, 1988, pp. 133–140.
- A. Lamfalussy, *Central Banks and Financial Stability*, 2nd Pierre Werner Lecture, Luxembourg: Banque Centrale de Luxembourg, 2003.
- J. Laureyssens, The Société Générale and the origin of industrial investment banking, in *Revue belge d’histoire contemporaine*, vol. 6 (1975), pp. 93–115.
- P. Lebrun et al., *Essai sur la révolution industrielle en Belgique, 1770–1847*, Brussels: Académie Royale de Belgique, 1981 (2nd edition).
- Lois organiques, statuts et règlement d’ordre intérieur. Recueil des documents et discussions parlementaires concernant l’institution de la Banque Nationale*, Brussels: Banque Nationale de Belgique, 1916.
- D. Luyten, Pressiegroepen in de eerste helft van de negentiende eeuw. Een concreet geval: de Société Générale tijdens de financiële crisis van 1848, in *Revue belge d’histoire contemporaine*, vol. 17 (1986), pp. 127–162.
- I. Maes and V. Périlleux, De prudentiële controle van de kredietinstellingen, in *Economisch en Sociaal Tijdschrift*, vol. 4 (1993), pp. 611–634.
- D. Mayes, Who pays for bank insolvency? in *Journal of International Money and Finance*, vol. 23 (2004), pp. 515–551.
- Moniteur belge, 1831–1914.*
- NBB, *Rapports annuels, 1851–1914.*
- S. Oosterlo and J. De Haan, Central Banks and Financial Stability: a Survey, in *Journal of Financial Stability*, vol. 1 (2004), pp. 257–273.
- A. Plessis, La création de la Banque de France et la genèse des banques nationales d’émission en Europe au XIX<sup>e</sup> siècle, in O. Feiertag and M. Margairaz (eds.), *Politiques et pratiques d’émission en Europe (XVII<sup>e</sup>-XX<sup>e</sup> siècle)*, Paris: Albin Michel, 2003, pp. 25–51.
- B. Pluymers, *De Belgische industriële revolutie. Reconstructie van een databank van de fysieke productie en de bruto-toegevoegde waarde.* (Workshop on Quantitative Economic History, Research Paper 92.01), Leuven, 1992.
- I. Vaillant and G. Amouriaux, La gestion des crises bancaires à l’étranger, *Revue de la Banque*, May 1996, n° 570, pp. 62–64.
- H. Van Der Wee and M. Verbreyt, *The Generale Bank, 1822–1997. A Continuing Challenge*, Tielt: Lannoo, 1997.

- E. Van Elewyck, *La Banque Nationale de Belgique. Les théories et les faits*, 2 vols., Brussels: Falk, 1913.
- A. Van Schoubroeck, *L'évolution des banques belges en fonction de la conjoncture de 1850 à 1872*, Gembloux: Duculot, 1951.
- W. Vanthoor, *De Nederlandsche Bank (1814–1998): van Amsterdamse kredietinstelling naar Europese stelselbank*, Amsterdam: Boom, 2004.

*Annex 1: The Belgian Banking System in 1913*

	Resources (million francs)
<b><i>Société Générale group</i></b>	
Société Générale	482
Banque d'Anvers	157
Subsidiaries of the Société Générale	535
Banque Belge pour l'Etranger	166
Banque Italo-Belge	89
Total	1429
<b><i>Universal banks</i></b>	
Crédit Général Liégeois	149
Banque Générale Belge	104
Banque de Bruxelles	101
Banque Internationale de Bruxelles	100
Banque d'Outremer	100
Banque Liégeoise	56
Comptoir d'Escompte de Bruxelles	22
Crédit Général de Belgique	20
Crédit National Industriel	17
Total	669
<b><i>Antwerp commercial and universal banks</i></b>	
Banque de Reports, de Fonds publics et de Dépôts	199
Crédit Anversois	140
Banque Centrale Anversoise	110
Banque de Crédit Commercial	66
Banque de Commerce	47
Total	563
<b><i>Deposit Bank</i></b>	
Caisse Générale de Reports et de Dépôts	423
<b><i>Grand total</i></b>	<b>3084</b>

Source: Durviaux, 1947, pp. 82–83.