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bank charters and regulations

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Abstract

In some recent studies, the question of the origins of central banking has been revisited, suggesting that beyond Swedish and British central banking, a number of earlier European continental institutions would also have played an important role. However, it has often been difficult to access the charters and regulations of these early central banks – in particular in English. This paper contributes to closing this gap by introducing and providing translations of some charters and regulations of six pre-1800 central banks in France and Germany. The six early public banks displayed varying levels of success and duration, and qualify to a different degree as central banks. An overview table maps the articles of the early central banks' charters and regulations into key central banking topics. The texts also provide evidence of the role of central banking legislation, and of the distinction between, on the one side, the statutes and charters of the banks, and on the other side the operational aspects which tend to be framed by separate rules and regulations. Finally, the texts provide evidence of the policy objectives of early central banks, including in particular those of a monetary nature. To put these documents into context, the objectives, balance sheet structure, achievements and closure of each central bank are briefly summarised.

JEL Code: E32, E5, N23

Keywords: origins of central banking, central bank mandates, central bank regulations, central bank operations, central bank governance

Non-technical summary

At present, a view on the origin and nature of central banks prevails, according to which: (1) the Riksbank and the Bank of England would have been the first central banks; (2) the basic first financial operation of central banks would have consisted in government financing; (3) the lender of last resort (LOLR) function, which from today's perspective would be a key characteristic of a central bank, would have developed only in the second half of the 19th century, or even later; (4) the orientation towards public objectives would also go back only to the second half of the 19th century, and therefore, overall, central banking could be regarded as a 19th or even 20th century phenomenon. These views have been challenged more recently by, for example, Roberts and Velde (2014), Ugolini (2017) and Bindseil (2019) who argue that there had been European continental central banks meriting this term in earlier centuries (see also Van Dillen, 1934). Bindseil (2019, chapter 1 and 2) explains in particular why the necessary and sufficient financial operation qualifying a financial institution as a central bank should be the issuance of central bank money, i.e. liabilities of that financial institution which are widely used as means of payment and which are more liquid and considered having a higher credit quality than any other financial liability in the economy. The present paper also provides further evidence supporting these studies.

One important common element of these early central banks is that they were established through public charters and based on laws establishing rules and regulations that determined their objectives, governance and financial operations.

While the public charters and regulations of early central banks all tend to be preserved, they are often neither easily accessible, nor have they been translated into English. This paper provides a contribution to filling this gap by presenting translations of charters and regulations of six early French and German central banks, namely of the Nurnberg Bank of 1498, the Hamburger Bank of 1619, the Leipzig Banco of 1698, the Banque Générale of John Law of 1716, the Prussian Royal Bank in Berlin of 1766, and the Caisse d'Escompte in Paris of 1776. In addition, the 1652 outline of Stockholms Banco by Johan Palmstruch has been included as a complementary text. Each section of the paper covers one central bank. Each institution is first introduced through a schematic description, including further references to literature.

The selection of the six central banks covered in this paper reflects their relevance in the history of central banking.

- Nurnberg Bank of 1498: Oldest German public bank charter.
- Hamburger Bank of 1619: Maybe one of the first, if not the first complete central bank with lending operations acknowledged and specified in the legal acts establishing the bank. It achieved convertibility and stability of central bank money for more than 250 years and was the oldest central bank in the world between 1815 and 1875 when it was absorbed by the Prussian Bank which itself was transformed into the Reichsbank. It conducted full-scale LOLR operations as

early as 1763. The Hamburger Bank may, moreover, be regarded as the oldest origin of the Eurosystem balance sheet.

- Leipzig Banco of 1698: No real success as a central bank and closed after less than a decade, but the most comprehensive and maybe the most modern legal documentation of any 17th century central bank, reportedly designed by an Italian adviser.
- Banque Générale of 1716: First central bank in France and first on the continent following initially the Bank of England template in terms of private ownership. After an initial solid and successful phase, it was nationalised (“Banque Royale”) and entered the domain of spectacular operations of refinancing the French public debt and integrating the French colonial trading companies of the time, ending in failure and ruining the reputation of central banking in France for 50 years. This failure does not call into question the solid foundations and operations of the bank over its first years.
- Prussian Royal Bank in Berlin of 1766: This bank, founded by Friedrich the Great, was the main predecessor of the Reichsbank and the Bundesbank (although, as mentioned above, it absorbed the Hamburger Bank in 1875). It provides an example of a badly designed charter which was not applied in practice. Its deposit business was significant, but deposits were not used for giro-payments (i.e. they were savings deposits) and banknote issuance remained limited.
- Caisse d’Escompte of 1776: After the failure of the Banque Royale in 1720, this institution was deliberately not called a bank although it was a modern and, as it would turn out, very successful central bank. Despite challenging times, it managed to avoid the fate of its predecessor. It has been argued convincingly that the Banque de France was essentially the reestablishment in 1800 of the Caisse d’Escompte, which had been closed in 1793 by the revolutionary regime of that time.

Obviously, Catalan, Italian and Dutch pre-1800 central banks are as important for the history of central banking, and a comprehensive collection of translations of central bank charters and regulations from these countries would be useful to complement the present text.

All texts in this paper, except the one of Palmstruch, are laws or other legal acts legislated in the respective jurisdiction, i.e. none of the texts is a delegated act, adopted for example by the central bank itself. The range of topics covered by the texts differs, not only because of the nature of the banks and of their operations, but also, presumably, because of different views on what aspects of central banking need specification in legal acts.

A table maps the various provisions in the charters and regulations of the six central banks across key central bank topics, providing evidence of the universality of central bank mandates and regulations over time. For the sake of illustration of this universality across time, the last column provides some (selective) references to the ESCB/ECB Statutes and ECB legal acts falling under the different themes.

1 Introduction

At present, a view on the origin and nature of central banks prevails, according to which: (1) the Riksbank and the Bank of England would have been the first central banks; (2) the basic first financial operation of central banks would have consisted in government financing; (3) the LOLR function, which from today's perspective would be the key characteristic constituting a central bank, would have developed only in the second half of the 19th century, or even later; (4) the orientation towards public objectives would also go back only to the second half of the 19th century, and therefore, overall, central banking could be regarded as a 19th or even 20th century phenomenon. These views have been challenged more recently by, for example, Roberts and Velde (2014), Ugolini (2017) and Bindseil (2019) who argue that there had been European continental central banks meriting this term in earlier centuries (see also Van Dillen, 1934). Bindseil (2019, Chapters 1 and 2) explains in particular why the necessary and sufficient financial operation qualifying a financial institution as a central bank should be the issuance of central bank money, i.e. liabilities of that financial institution which are widely used as means of payment and which are more liquid and considered having a higher credit quality than any other financial liability in the economy. The present paper also provides further evidence supporting these studies.

One important common element of these early central banks is that they were established through public charters, and often also based on laws establishing rules and regulations that determined their objectives, governance and financial operations. Actually, being based on a public charter has been a universal characteristic of central banks ever since the 15th century. For example, the rules and regulations of the Leipzig Banco of 1698 or of the Caisse d'Escompte of 1776 are similar in their coverage to modern central bank statutes and regulations, such as the ECB Statute¹ and the ECB's Guideline on the implementation of the monetary policy framework^{2,3}. Why is central banking universally based on public charters and regulations?

- Central bank money issuance is a natural monopoly, and therefore should be provided either by the public sector or be regulated by the public sector.
- The use of central bank money as means of payment should benefit from a clear and stable framework such as to allow payments to operate effectively and efficiently, allowing maximum network externalities to materialise. Stability also benefits the investments of merchants and banks in related private payment instruments and infrastructures.

¹ Protocol (No 4) on the Statute of the European System of Central Banks and of the ECB (OJ C 202, 7.6.2016, p. 230).

² Guideline (EU) 2019/1032 of the ECB of 10 May 2019 amending Guideline (EU) 2015/510 on the implementation of the Eurosystem monetary policy framework (ECB/2019/11) (OJ L 167, 24.6.2019, p. 64).

³ All modern central banks are based on specific legislation. The legal basis of the Federal Reserve System is the Federal Reserve Act of 23 December 1913 (amended on several occasions thereafter); the Bank of England's role is defined on the basis of the Bank of England Act of 23 April 1998 (also as amended afterwards); the Bank of Japan is based on the Bank of Japan Act of 18 June 1997; etc.

- Central banking relies on trust of the users of money, and this trust may be supported by constraining the operations of the central bank.
- The systemic importance of central banks implies that mismanagement of a central bank has potentially large negative externalities. Again, this justifies devoting particular public attention to the design and the constraints to be imposed on central banks.
- The funding liquidity and stability of the financial system benefits from a rule-based central bank lending framework on which private firms can rely (as long as they can provide eligible collateral), at least under stressed circumstances. Clear rules also ensure equal access and the ability of borrowers to prepare accordingly.

While the public charters and regulations of early central banks all tend to be preserved, they are often neither easily accessible, nor have they been translated into English. This paper provides a contribution to filling this gap by presenting translations of charters and regulations of six early French and German central banks, namely of the Nurnberg bank of 1498, the Hamburger Bank of 1619, the Leipzig Banco of 1698, the Banque Générale of John Law of 1716, the Prussian Royal Bank in Berlin of 1766, and the Caisse d' Escompte in Paris of 1776. In addition, the 1652 outline of Stockholms Banco by Johan Palmstruch has been included as a complementary text for three reasons: first, it is written in German, i.e. it falls from a language perspective within the scope of this paper. Second, it provides evidence of which continental central banks Palmstruch considered to be relevant examples. Third, it contains a rich discussion of the policy merits of establishing a central bank, as perceived in the middle of the 17th century. The translations will make it easier for researchers with general interests in central banking, and not necessarily mastering French or German, to read these charters and look for the relevant provisions they are interested in, helping to overcome the misunderstanding that central banking began in Sweden and England.

All texts in this paper, except the one of Palmstruch, are legal acts legislated in the respective jurisdiction, i.e. none of the texts is a delegated act, adopted for example by the central bank itself. The range of topics covered by the texts differs, not only because of the nature of the banks and of their operations, but also, presumably, because of different views on what aspects of central banking need specification in public legal acts.

Obviously, translating the texts raises questions about the precise interpretation of old vocabulary and about the financial and legal context of the times, and how to phrase the statements in modern English while not innovating on the content, but making the texts easily accessible for today's reader. Paragraph titles in brackets were added (i.e. they are not included in the original texts) to help the reader promptly identify the purpose of paragraphs and thereby facilitate the reading. Only in four cases is some original text in German provided, as the translation was more challenging and subject to ambiguities (Nurnberg bank charter of 1498; mandate of Hamburger Bank of 1619; preamble to regulation of 1619 of the lending arm of the Hamburger Bank; Palmstruch's outline of the Stockholms Banco).

The selection of the six central banks covered in this paper reflects their relevance in the history of central banking:

- Nurnberg Bank of 1498: Oldest German bank charter. As no evidence on actual operations of the bank has been preserved, and in view of the lack of information on its planned liabilities, it cannot be concluded that it was conceived as a central bank, i.e. that it would have intended to issue central bank money.
- Hamburger Bank of 1619: Maybe one of the first, if not the first complete central bank with lending operations acknowledged and specified in the legal acts establishing the bank. Remarkably, it achieved convertibility and stability of central bank money for a very long time. It was the oldest central bank in the world between 1815 and 1875 when it was absorbed by the Prussian Bank which itself was transformed into the Reichsbank. The Hamburger Bank conducted full-scale LOLR operations as early as 1763. The Hamburger Bank may moreover be regarded as the oldest origin of the current Eurosystem balance sheet: via the Prussian (1875) and Reichsbank (1876), it made it into the balance sheet of the Bank Deutscher Länder (1948), Bundesbank (1957), and Eurosystem (1999). The Eurosystem and the Bundesbank could thus have celebrated the 400th anniversary of their balance sheets in 2019 – in addition to the 20th anniversary of the euro.
- Leipzig Banco of 1698: No real success as central bank and closed after less than a decade, but the most comprehensive and maybe the most modern legal documentation of any 17th century central bank in the sense of following a clear structure along key themes of central bank operations, reportedly designed by an Italian adviser.
- Banque Générale of 1716: First central bank in France and first on the continent following initially the Bank of England template in terms of private ownership. After an initial solid and successful phase, it was nationalised (“Banque Royale”) and entered the domain of spectacular operations of refinancing the French public debt and integrating the French colonial trading companies of the time, ending in failure and ruining the reputation of central banking in France for 50 years. This failure does not call into question the solid foundations and operations of the bank over its first years, implying that the first episode of successful French central banking has to be dated to the second decade of the 18th century.
- Prussian Royal Bank in Berlin of 1766: This bank founded by Friedrich the Great was the main predecessor of the Reichsbank and the Bundesbank (although, as mentioned above, it absorbed the Hamburger Bank in 1875). Its deposit business was significant, but deposits were not used for giro-payments (i.e. they were savings deposits) and banknote issuance remained limited. The bank was subject to a long period of negative capital and inconvertibility after the defeat of Prussia in 1806.
- Caisse d'Escompte of 1776: After the failure of the Banque Royale in 1720, this institution was deliberately not called a bank although it was a modern and, as it

would turn out, very successful central bank. Despite challenging times, it managed to avoid the fate of its predecessor. It has been argued convincingly (Plessis, 1992) that the Banque de France was essentially the reestablishment in 1800 of the Caisse d'Escompte, which had been closed in 1793 by the revolutionary regime of that time. In this respect, both the Caisse d'Escompte and the Banque Générale of John Law (before its nationalisation), provide evidence of modern and successful French central banking preceding the foundation of the Banque de France.

The following sections each cover one bank. Each institution is first introduced through a schematic description, including further references to literature. As mentioned above, in addition to the six early central banks, a further key text helping to understand the genealogy of European central banks has been included, namely the first proposal of Johan Palmstruch to the King of Sweden on establishing his Stockholms Banco, dated January 1652 and written in (Early) German.

Obviously, Catalan, Italian and Dutch pre-1800 central banks are as important for the history of central banking, and a comprehensive collection of translations of central bank charters and regulations from these countries would be useful to complement the present text. Dunbar (1892) and Usher (1943) partially provide translations of the charters and regulations of the Banco del Giro of Venice and of the Taula di Canvi of Barcelona, respectively. But no important work relying also on archives has been published recently in English (such as, for example, the work in Catalan of Feliu, 2016 on the first books of the Taula di Canvi, or the work of Felloni on the archives of the Casa San Giorgio, see e.g. Boland, 2009). Recent works celebrating the 400th anniversary of the Bank of Amsterdam (Van Nieuwkerk, 2009), or the 350th anniversary of the Riksbank (Edvinsson et al., 2018), were taken as opportunities for English publications to review the history of these central banks, but not to eventually publish English translations of their early charters and regulations.

Table 1a maps the various provisions in the charters and regulations of the six central banks across key central bank topics, providing further evidence of the commonalities of central bank mandates and regulations over time. For illustration, the last column provides some (selective) references to the ESCB/ECB Statutes and ECB legal acts falling under the different themes. A more detailed comparison of the various provisions across themes and time would go beyond the scope of this paper. Table 1a covers more general topics, such as policy objectives, governance, staff rules, and privileges of the banks, while Table 1b covers their financial operations. The note below table 1 explains the abbreviations used in the table for the different legal texts.

Most of the dimensions of central banking covered by the legal provisions contained in the texts provided in this paper are discussed in more detail in Bindseil (2019). For example, as a sub-item of governance, issues of central bank ownership (private versus public), central bank independence, and prohibitions on lending to the Government are discussed in Chapter 3 of Bindseil (2019).

Table 1a

Mapping the provisions in the central bank charters and regulations into key topics

Central bank → Topic ↓	Nurnberg, 1498	Hamburg, 1619	Leipzig, 1698	Paris, 1716	Berlin, 1766	Paris, 1776	Eurosystem, 1999
Policy objectives	I-III	M.0 L.0	Reg. I.1	Charter 0.I, II Reg. Art. XV	Chart. I, II Reg. 28	Preamble Charter	Statute Art 2, 3
Governance, types of managers and staff		XXIX	Charter Art 3, 4, 7, 10 Reg.I.5, 6, 7, 8, 9, 12, 14, 16, II.2-8; III.6	Charter 0.IV, V, 1.IX Reg. Art VI, VIII, XXI		Charter I, IV, VI, IX, XXI, XII, XIII, XV Reg. VII, VIII, IX, X, XI, XII, XIV, XV, XVI, XXVIII-XLII	Statute Art 7-14
Scope, limits of bank, prohibitions and requirements	IV, V	XXXII		Charter 0.III, 1.I, X Reg. Art. XVIII, XIX		Charter II, III, XIX Regulation III, IV, XVII	e.g. Monetary financing prohibition in Statute, Art 21.1; MPFIG Parts Three and Four.
Capital, ownership, profit distribution	VII	L.IX.	Charter Art 1 Reg. I.2	Reg. Art I-III Art XIV	Chart. V	Charter IV, VIII, XIV, XVII Reg.II, XXIV, XXV, XXVI, XVII Internal Regime Ch. X	Statute, Art 28-29, 32-33
Accounting, Reporting		XXXV-XXXVII	Reg. I.15	Charter 1.V Reg. Art VII	Reg. 42,43		Statute, Art 15, 26, 27 Accounting Guideline
Staff rules		I, XVI, XVII, XXX, XXXI			Reg. 41,44	Charter XIV Regulation XIII	Statutes, Art 36-37
Opening hours		L.I		Charter 1.VI Reg. Art IV	Reg. 29	Regulation XX	e.g. Art 19.2 and Art 19.5 MPFIG
Privileges of bank		M4,M5,M7 XXVIII, XXVIII	Charter Art 9 Reg.I.10, 17, XI.4,7	Charter 1.II	Reg. 2, 3, 4, 6, 11, 27		Statute, 9, 34, 39

Notes: In the case of the Hamburger Bank, references starting with "L." refer to the charter of the Lending bank and "M" to the Mandate. No capital letter at the beginning means a reference to the regulation. For Leipzig, Paris (1716) and Berlin, the references are either to the "Charter" or to the "Reg.", i.e. regulation. For Paris (1776), the reference is either to the Charter, the Regulation, or to the Internal Regime ("Int.Reg."). In the case of the Eurosystem, the "Statute" refers to Protocol No 4) on the Statute of the European System of Central Banks and of the European Central Bank, C-326/230, 26.10.2012, Official Journal of the European Union. "MPFIG" refers to Guideline (EU) 2015/510 of the ECB of 19 December 2014 on the implementation of the Eurosystem monetary policy framework (ECB/2014/60), OJ L 91, 2.4.2015. The "Haircut Guideline" is the Guideline (EU) 2016/65 of the ECB of 18 November 2015 on the valuation haircuts applied in the implementation of the Eurosystem monetary policy framework (ECB/2015/35), OJ L 14, 21.1.2016. "Banknote Decision" is the Decision of the ECB of 19 April 2013 on the denominations, specifications, reproduction, exchange and withdrawal of euro banknotes (ECB/2013/10), OJ L 118, 30.4.2013. "Target2 Decision" is Decision of the ECB of 24 July 2007 concerning the terms and conditions of TARGET2-ECB (ECB/2007/7), OJ L 237, 8.9.2007. "Accounting Guideline" is the Guideline (EU) 2016/2249 of the ECB of 3 November 2016 on the legal framework for accounting and financial reporting in the European System of Central Banks (ECB/2016/34), OJ L 347, 20.12.2016.

Table 1b

Objective, governance, staff rules, privileges

Banking operations

Central bank → Topic↓	Nurnberg, 1498	Hamburg, 1619	Leipzig, 1698	Paris, 1716	Berlin, 1766	Paris, 1776	Eurosystem, 1999
Deposits and Giro-transfers		M7 II-XXV; XXIII-XXV, XXXIV	Charter Art 2,8 Reg. I.4, III1-4, V.1-2, VI.1-3, VII.1-6, XI.6	Reg. Art. XVI	Reg. 12, 13-26	Charter XVIII Internal Regime CH. IX	Statute, Article 22 Target2 Decision
Banknotes			Charter Art 5 Reg. I.13, IV.1-4	Chart. 1.III, VII, VIII Reg.Art. XI, XII, XIII	Reg. 7, 8, 9, 10	Internal Regime Charter VIII	Statutes, Article 16 Banknote Decision
Handling metal reserve		M5, XVIII, IX, XXVI	Charter Art. 6	Charter 1.IV Reg. Art IX, X, XX		Internal Regime Chapter VII	Statutes, Article 23, 30, 31
Financing of public sector						Charter IV, V, VI	Statutes, Article 21
Lending operations	VI	L.IV-L.VI	Charter Art. 6		Reg. 29, 32, 33, 35, 36, 38, 39		Statutes, Article 18 MPFIG, Parts Two and Three
Collateral	VI	XXXIII; L.II Act of 1641	Reg. IX.1-4		Reg. 32		Statutes, Article 18 MPFIG, Part Four
Collateral valuation and haircuts		L.III Act of 1638	Reg. X.1, 2, 3 XI1-3		Reg. 32		MPFIG, Part Four, Title VI Haircut Guideline
Collateral handling, liquidation		L.VII, L.VIII	Reg. VIII.5-6 X.6, XI.5		Reg. 33, 34, 37		NCB's national legal documentation
Discounting, guarantors			Reg. X.7	Reg. Art XVII	Reg. 29-31	Regulation XVIII-XX Internal Regime Ch. VI	Guarantors of collateral: MPFIG, Part Four, Title IV
Metal exchange, species		XX-XXII	Reg. III.5				Statutes, Article 23
Other operations			Reg. I.11		Reg. 12, 13-26	Regulation VI	Statutes, Article 24

2 Nurnberg exchange and lending bank of 1498

2.1 Schematic overview

- Genealogy: Probably partially inspired by Italian Monte di Pietas, initially charitable lending institutions, some of which in practice engaged in broader banking activities, including deposit banking (see e.g. Felloni, 2012, Section 3.2, and Arcelli, 2003, for a more detailed description of the banking activities of the Monte di Pietas of Rome established in 1539). Emperor Maximilian, who granted the charter, was exposed to Italian banking expertise not least because he was extensively financed and sponsored by Jakob Fugger (1459-1525), who had lived in Venice between 1473 and 1487. Nurnberg merchants also had extensive trading relationships with Italian cities and von Poschinger (1875, 5) notes that “in view of the close relationship between the two cities, there should be little doubt that Venice was the example that one had in mind”. On the other side, the Nurnberg banking project of 1498 seems less oriented towards charitable lending than the Monte di Pietas (Felloni, 2012, Section 3.2 emphasises the exclusive focus of the Monte di Pietas on consumption credit), and Venice did not yet have a public bank in the 15th century (the Banco di Rialto being founded in 1587 and the Banco del Giro in 1619), which makes the Nurnberg bank look like a rather innovative project. That Maximilian granted a bank specifically to Nurnberg may have had a number of reasons: (i) the outstanding role of the city in commerce in Europe in the late 15th century (e.g. Ammann, 1970) and the implied business case for a bank, (ii) the fact that it was an imperial city; (iii) as the emperor was highly indebted, it may also well be that the grant was linked to some payments by the city, or to the expectation that the bank would provide loans to Maximilian.
- Place in history of central banking: The first charter of a public bank in Germany, although evidence of its operations has not been preserved. Since the charter is silent regarding the liability side of the bank, there is no evidence that the bank was intended to issue central bank money. It is still relevant in order to understand the history of central banking as it illustrates that, for example, the Hamburg lending bank of 1619 (see Section 3) was in itself not particularly original, but that Hamburg’s contribution consisted in the explicit combination of central deposit banking with public lending bank activities. More generally, the focus of the Nurnberg bank on lending of a public bank to the private sector for the sake of developing commerce and industry seems very modern, and may appear to be the first such case since both the Taula di Canvi of Barcelona (founded in 1401) and the Casa San Giorgio of Genoa (founded in 1407) had no ambition to lend to the private sector for the sake of developing commerce and industry. Only the quasi-public Naples public banking system would, as of the 1580s, be extensively engaged in lending also for productive purposes. As noted by Felloni (2012, Sections 1.2 and 3.2), only the Papal bull of Leo X *Inter Multiplices* of 1690 changed “radically” the feasibility of productive credit by

softening the prohibition to impose interest (see also Arcelli, 2003, 4-5, and Kindleberger, 1984, 41-42).

- Policy objectives: According to the charter, support trade and industry by making available credit. As the bank is however called an exchange bank (Wechselbank), it must have had also other banking purposes, such as exchanging precious metals and coins, and presumably deposit banking (as the lending activities obviously required some funding source).
- Private or public ownership: Public, owned by the City of Nurnberg.
- Assets: Lending to craftsmen, merchants, manufacturers as well as to the poor. Presumably also a precious metal reserve was foreseen to ensure the liquidity of the bank – but this was not explicit in the charter.
- Liabilities: The charter is silent about the funding sources of the bank. If one considers the Monte di Pieta of Rome established in 1539 as an example to speculate about the intended funding sources of the Nurnberg bank of 1498, then, following Arcelli (2003, 22-23), one may expect donations, savings and giro-deposits as planned funding sources. As Nurnberg was a particularly rich city around 1500, it may also be that public funds were expected to be an important contributor to the funding of the bank. The lack of references to the funding of the Nurnberg bank might also be due to the fact that it was considered the uncontroversial part of banking, while lending against interest was delicate and easily in conflict with theological doctrines on usury. The relatively explicit economic justification of the lending activities in the charter, and the statement that the interest income would be used to cover administrative costs and any surplus after this would be used for the common good of the City of Nurnberg, may also be understood from this perspective.
- How and why the bank ceased operations: According to von Poschinger, no evidence for its actual establishment and operations has been preserved. However, 19th century German encyclopaedias (e.g. Brockhaus, 1831, term “Pfandhaus”) refer to the bank without questioning that it actually operated.

Sources: Von Poschinger (1875, 4-5, and Annex 1), Denzel (2012, Section 2.1).

2.2 Royal charter by Emperor Maximilian of 21 July 1498

The following royal charter is reported in Annex 1 of von Poschinger (1875). The separation into paragraphs and the titles and numbers of the paragraphs have been added.⁴

[I. Economic activity supported by external financing; problem of usury] as it has to be considered that much craft, industry and trade is not well feasible without borrowing and using other's people money and goods; that usury and dangerous conflict should be avoided and should not arise;

[II. Protection of poor from exploitation; social objective] also that the poor is not exploited by the rich, but that everyone can, next to each other, be as well off and nourish themselves;

[III. Relevance of trade and industry both in the City of Nurnberg itself and in the surrounding part of Germany] and that trade and industry is for themselves, and for the use and good of the general high-German lands, practised and exercised and known;

[IV. Grant for establishing a bank without time limitation; right to employ staff] for this purpose, we grant you the freedom, allow you by our Roman royal absolute authority, and make known through this letter, to establish an exchange bank in your town of Nurnberg..., and you and your successors can maintain it for all times, and equip it with clerks, officials, and other persons who are needed for such a project, depending on your need and will;

[V. Freedom to provide credit] in a way that you will, whenever you want, lend money to your co-citizens and inhabitants, who cannot conduct their crafts or trade without a credit...;

[VI. Modalities of lending: credit protection, repayment, interest] for that you will take collateral, guarantee and insurance; repayment will be required at a given date; you may beyond the principal payment, request and take interest;

⁴ As the German of 1498 is more challenging to translate, the original German text is provided in the following (von Poschinger, 1875, annex 1): "Königlicher Befehl... Item Wechselbanck auffzurichten. ... Unnd Nachdem Euer mittburger, wie obberürt werbend und Handtwercksleuth seind, der, als wol zu bedencken ist, etwo viel ihr Handwerckh, Handthierung und gewerb, ohn entlehen und gebrauch anderleuth geldt und gut nicht getreiben mügen; damit dann Wucherlich geverlich Henndel Vermitten bleiben und nicht erwachsen noch aufferstehen, auch der Arm durch den Reichen nicht ubersetzt, Sonder sich jeder neben dem andern desto bass behelffen und erhehren, und Handthierung und gewerb bey Ihnen selbss, und Gemeinen hochteutschen Lannden zu nutz und gutem, in Uebunge, gebrauch und wessen gehalten werde; So geben Wir Euch die fernner gnad und Freyheit, Gönnen und erlauben Euch auch von obberürter Römischer Königlicher macht Vollkommenheit, wissentlich in crafft diss brieffs, das Ihr Wechselbanckh bey Euch in der Statt Nürnberg an gelegenen enden auffrichten, und Ihr und Ewer Nachkommen die nun hinfüro in ewig Zeit haben, halten, und mit Schreibern, Amptleuthen und anderen persohnen die solchem Vorsein und nottürffiglichen ausswarten, nach Euere nottdürfften willen und wolgefallen, wie ihr zu Zeitten gelegenheit der sachen erfordert, besetzen, fürsehen und ordnen mögen, dermassen, das Ihr Euvern Mittburgern und Innwohnern, die Ihre Hanndtwerckh Handthierung und gewerb ausserhalbten ohne lehens und fürsetzen stattlich nit wohl getreiben oder gearbieten können, wann und so oft Ihr wollend, auff Ihr ansuchen und begehren nach gelegenheit Ihrer Handlung, und wessens zu Ihrer notturfft geldt leyhen und darumb pfand, pürgschaft und Versicherung nehmen, auff Zeit und Ziel zu betzahlen, und dann zu gesetzter Frist, uber bezahlung der Hauptsumma ein zimbluchs zu Zinnss erfordern und einnehmen, und von denselben Zinssen die obberürten Ampteuthen und auffrichter solcher Wechselbanckh ihres solds und arbeit entrichten, unnd ob alssdann derselben Zinssen dermass were, diesselben Ubermass zu gemeinen Nutz und gutem der Statt Nürnberg obgemelt wenden und kehren mügend, als andere derselben Statt gemeine gütter. Geben zu Freyburg im Briessgaw ..."

[VII. Use of interest income] with this interest income, pay the officials of the exchange bank for their work, and if the interest income goes beyond this, pay this excess for the general use and good of the City of Nurnberg.

Done in Freiburg im Breisgau on 21 July 1498

3 Hamburger Bank (1619-1875)

3.1 Schematic overview

- Antecedents: Inspired mainly by the Bank of Amsterdam but innovating in terms of simultaneous establishment of an integrated lending bank, and explicit inclusion of lending operations within the legal acts. The first depositors would have been, in particular Dutch, English, Portuguese, Spanish and local merchants (Sieveking, 1933, 30).
- Place in history of central banking: Successful early central bank in terms of stability, convertibility and longevity; first central bank which foresaw Lombard lending in its statutes (with some sort of separation between a deposit and a lending bank). Often praised for its commitment to stick to rules and for its implied exceptionally high credit. First central bank for which a full LOLR operation can be observed, and with the central bank having safe haven status. According to Roberds and Velde (2014, 78-82), the Hamburger Bank was, in terms of deposits, the second largest on the European continent in most of the 18th century, however clearly behind the Bank of Amsterdam, and only slightly larger than Venice. In the last decade of the century, it surpassed Amsterdam. In terms of balance sheet size, it was however surpassed already around 1770 by a number of note-issuing central banks (like the Caisse d'Escompte). Büsch (1801, 256-261) highlights the following key strength of the Hamburger Bank: (i) openness for all interested parties to open an account, including foreigners, and same rights for foreigners as for locals with regards to unconditional convertibility; (ii) absence of uncertainty regarding the value of deposits because of denomination in silver, and not in terms of any species (particularly after 1770); (iii) less risk for depositors because of better governance as more members of relevant committees see the annual accounts: in Amsterdam only 6 persons, elected for their lifetime would have known the accounts of the bank, while in Hamburg there would have been 55-90; (iv) absence of incentives for risky operations because of the lack of private ownership and the absence of a profit objective. As also Denzel (2014) highlights, the Hamburger Bank was the only early 17th central bank that survived the Napoleonic age and that operated successfully until the 1870s, and it maintained the same silver content of its currency (Mark Banco) over the 250 years of its existence. Another recent author noting the role of the Hamburger Bank in the evolution of central banking is Tarkka (2009, 40):

“As early as 1619, long before the British Bank Charter Act, the Bank of Hamburg was divided into two departments: the bank of exchange, creating the underlying bank money and operating the payment system, and the loan bank, which created credit against appropriate collateral security.”

Tarkka also considers that the Stockholms Banco seems to have been inspired even more by the Hamburger Bank than by the Bank of Amsterdam, as indeed

the Stockholms Banco foresaw the same separation into a deposit and a lending bank. In Amsterdam, loans from the deposit bank to the lending bank were made, but without a legal basis, and therefore in a secretive manner.

Finally, the Hamburger Bank as founded in 1619 may be considered to be the oldest origin of today's Eurosystem balance sheet. After continuous operations until 1875, the Hamburger Bank was transferred in that year into the Prussian Bank, which itself became on 1 January 1876 the Reichsbank (Levy von Halle, 1891). The Reichsbank balance sheet, although subject to rather extreme accounting operations and monetary reforms in 1924 and in 1948 (after, in both cases, years of extensive inflationary war financing) made its way to the balance sheet of the Bank Deutscher Länder (in 1948) and the Deutsche Bundesbank (in 1957), see for example Deutsche Bundesbank (1976). The balance sheet of the Deutsche Bundesbank became part of the Eurosystem balance sheet in 1999. In contrast, the early public giro-banks of Catalonia/Spain (Barcelona), Italy (Genoa, Venice), or Holland (Amsterdam) were closed before or shortly after 1800 and liquidated and therefore have no balance sheet continuity with the national central banks that emerged in the 19th century and still exist today.

- Policy objectives: Founded by the City of Hamburg in 1619, following the example of the Bank of Amsterdam in terms of aiming at overcoming the inefficiencies of specie payments in an environment of particularly bad and fragmented coinage. According to the bank's mandate of 1619 (see Section 3.2), its ultimate aim was to "develop commerce and trade". As Adam Smith noted, the problem of heterogeneous species was particularly acute in small free states such as Amsterdam or Hamburg, in which various foreign coins unavoidably circulated and any domestic coinage would not dominate. The Hamburger Bank also established its own currency unit, the Mark Banco. Initially the Mark Banco was defined as 1/3 Reichstaler, which, according to the 1566 German coinage convention consisted in 25.98 fine gram silver, implying that a Mark Banco would have a fine silver content of 8.66 gram (see also Pohl, 1986, 27). The changes over time of the Taler fine silver content created difficulties for the bank, which were eventually solved by the reform of 1770 in which the Marc Banco was no longer defined by reference to any species, but in terms of fine silver content only (8.40 gram). This reform made the Mark Banco the most important European unit of account in the last decades of the 18th century (see for example. Pohl, 1986, 27; Tarkka, 2009, 46).

Moreover, the lending bank had, according to its 1619 charter, the purpose to "help the deserving poor and anyone else" who would otherwise "have to borrow substantial amounts of money in emergency for their business" at "excessive interest rates" from "egoistic, advantage-seeking" lenders (see Section 3.4).

- Private or public ownership: Public bank; located in the city hall. Like the Bank of Amsterdam, the Hamburger Bank was governed by citizens and merchant users, and was not a profit-seeking entity maximising some return on investment.
- Assets: In contrast to Amsterdam, the Hamburger Bank had from the beginning an official asset side business arm, i.e. it provided collateralised credit to

merchants (“Lombard loans” or “advances”). The bank was separated (similarly to the 1657 Palmstruch Bank in Stockholm and the Bank of England in 1844), into two entities, a giro-bank and a lending (“Lehns”) bank. According to Sieveking (1933, 33-34), it provided parties credit against a wide range of collateral: gold and silver coins, later on jewels, gems, durable goods, municipal securities, or real estate. A minimum haircut of 25% was applied to the estimated collateral value. Sieveking (1933, 34) also reports about decisions to broaden the eligible collateral set. In 1638, it would have been decided to extend it to current goods and merchandise. A decree of the city of 1641 legalises ex post and for the future a broadened collateral set, also including obligations issued by the city of Hamburg (see Section 3.5). Various further changes to the collateral framework were made over subsequent years. The fact that bills of exchange were cleared with the bank does not mean that the bank was discounting bills. Actually, the bank never discounted bills, but always limited its lending to the private sector to Lombard operations (advances). Sieveking reports about debates on whether the Hamburger Bank should engage in the discounting of bills or not. For example, in 1729, a detailed proposal had been prepared with reference to the case of the Bank of England’s practice to discount bills, and also with a view to strengthen the position of Hamburg as a place for drawing bills of exchange, relative to Amsterdam. The proposal foresaw to dedicate up to 200 thousand Mark Banco to this business. The proposal was renewed in 1755, when, because of the earthquake of Lisbon, the discount rate in Hamburg reached exceptionally high levels. The Admiralty was foreseen to act as guarantor, and for that receive 2/3 of the interest rate earned. The maximum maturity should have been 6 months, and only bills with two good names should have been accepted. The issue was discussed further over several years, but eventually ended nowhere and the Hamburger Bank never engaged in the discounting of bills, i.e. its sole lending technique to the private sector remained Lombard credit. The bank also provided credit to the government, which however always remained relatively moderate. The precious metal reserves would have fluctuated in a range between 50% and 85% over the 120 years (1650-1770) for which Sieveking (1933) reports detailed balance sheet data, with an average of 67%. Lombard loans were on average 19% and loans to the city 14%.

- Liabilities: Deposits only, i.e. the bank never issued banknotes. At the beginning, all profits were disbursed to the city. After the crisis of the bank in 1673 (in which it suffered from considerable deposit outflows), a decision was taken that profits of the bank would no longer be paid out annually to the city, but that they could be kept to some extent as capital in the bank, i.e. as a buffer against future losses (Sieveking, 1933, 47). Sieveking reports capital figures for a number of years. In 1701, the bank would have had a capital shortfall of 1292 Mark, between 1704 and 1708 average capital would have been on average around 20,000 Mark. Between 1711 and 1725, the capital level was considerably higher, on average above 200,000 Mark, i.e. around 5% of the balance sheet.
- Special measures to support its role: The mandate of the Hamburger Bank of 1619 (Section 3.2) states that three functions are exclusively assigned to the bank as of the date of its establishment: (i) settlement of all bills of exchange of at

least 400 Mark Banco (i.e. around 3.4 kg of fine silver); (ii) species and precious metal exchange (a key business at the time of fragmented and poor-quality species); (iii) debt re-assignments and transfer orders (including giro-banking). Moreover, the bank benefited from a guarantee by the city of Hamburg.

- History of convertibility: According to Roberds and Velde (2014, 44-45), convertibility would have been interrupted between May 1672 and June 1673, from 1755 to 1761, and from 1766 to 1768. However, the bank always returned to the previous parity. Levy von Halle (1891, 5) notes that the bank had to be saved by city decrees freezing its deposits (i.e. preventing withdrawals) on 4 occasions: in 1672, 1734, 1755 and 1766.
- How and why the bank ceased operations: The bank continued to operate with its old business model until 31 December 1875, when it was closed in the context of the establishment of the Reichsbank, as it was considered obsolete in the new German monetary system. According to a contract of 7 October 1875, the Prussian Bank, which would itself become the Reichsbank, bought the land and the building of the Hamburger Bank including all equipment to establish in its place a Reichsbank branch (Levy von Halle, 1891, 80). Moreover, the Reichsbank would take over the “usable” bank officials of the bank (p. 81). A public announcement of 19 November 1875 specified the treatment of the deposit accounts and outstanding Lombard operations and pending bill settlements. Deposit that would not have been withdrawn by year-end would automatically become deposits with the Reichsbank (Levy von Halle, 1891, 82).

Sources: Marperger (1717, 142-160); Hamburg (1765); Büsch (1801, 251-298); Soetbeer, (1866); Levy von Halle (1891); Sieveking, K. (1818/1918); Sieveking, H. (1933), (1934b); Pohl (1986); Tarkka (2009); Roberds and Velde (2014, 43-46).

3.2 Mandate of 22 February 1619

The text translates the one provided by von Halle (1891, 99-100).⁵

M1. [Policy purpose and origin of initiative to establish a Banco] After the City Council considered recommendable to establish a Banco in this City to develop commerce and trade, and then, upon persistent requests of the traders and merchants residing here, has considered right to now proceed with such Banco.

M.2 [Guarantee of the City] Thus, and in order to make the Banco even more trusted, the Council of the City has declared itself that the City will cover for every damage that will arise to the Banco.

M.3 [The Banco will be established on 1 March]

M.4 [Obligations of settlement of all bills of exchange above 400 Mark at the Banco; penalty of 25 Mark in case of infringement] Accordingly, the Council of the City hereby orders and reminds all citizens, inhabitants and subjects and everyone that after this, all bills of exchange payable here [in Hamburg], maturing after this date, if the sum is 400 Mark Luebisch or more, are to be registered and paid in the said Banco, with the warning that, in case of non-obedience, each time bills of exchange are settled outside the Banco, 25 Mark are to be paid to the Banco, and will be requested by the masters who have been tasked to do so.

⁵ The German text as provided by von Halle is reproduced below, in view of the difficulties of interpreting some aspects of the mandate, such as the guarantee: "Nachdem E. E. Rath zu Beförderung der Commerzien und Handlung nöthig und ratsam befindet, daß ein Banco in dieser guten Stadt angerichtet werden möge, und dann, auf beschehenes inständiges Anfordern der allhier residierenden Kauf- und Handelsleute, mit allsolcher Banco nunmehr zu verfahren für gut angesehen wird; also, und damit gedachter Banco männiglich um so viel mehr und sicherer zu getrauen haben möge, so tuth E.E. Rath sich zuvorderst hiermit erklären, daß diese Stadt für bemeldte Banco und allen Schaden, so derselben zuwachsen möchte, wolle gehalten sein. Und sintemal mit allsolcher Banco der wirkliche Anfang über 8 Tage, am Montage nach Oculi, wird sein der Iste nächstkünftigen Monat März, gel. Gott, gemacht werden soll. Demnach will E.E. Rath allen dieser Stadt Bürgern, Einwohner und Unterthanen und männiglich hiermit erinnert, ermahnet und denselben geboten haben, nach allsolcher Zeit alle Wechsel, es sei im Geben und Nehmen, oder so auch allhier zu bezahlen von anderen Orten remittiert werden, und nach obbemeldter Zeit verfallen, wenn die Summe all solcher Wechsel 400 Mark Lüb. und darüber ist, in berührter Banco schreiben und bezahlen zu lassen, mit der Verwarnung, wo jemand dawieder handeln würde, daß von allsolchen außerhalb der Banco bezahlten Wechselgeldern jedesmal 25 Mark an bemeldte Banco verfallen, und von den dazu verordneten Herren eingefordert werden sollen. Es soll auch dieser Stadt Bürgern, Einwohnern und männighen hiermit verboten sein, nach gedachtem Termin einig gebrochen Gold, Silber, Grenoullien oder dergleichen an sich zu kaufen, noch auch Gelder, so allhier nicht gangbar, oder wieder umgemünzet werden müssen, wie denn auch einige allhier gangbare güldene oder silberne Münze an sich zu wechseln und zu bringen, sondern solches alleine, nebenst dieser Stadt Münze, der Wechsel-Banco reservieret und vorbehalten sein, und allda der billige Wert dafür gegeben werden. Wer auch hierwieder handeln und darüber betreten würde, der soll von jedem 100 Mark, so er dergestalt gekauft, gewechselt und an sich gebracht, 10 Mark Strafe gedachten verordneten Herren zu zahlen schuldig sein; Jedoch soll dem Amte der Goldschmiede allhier, was sie zu ihrer eigenen Arbeit von Gold und Silber bedürfen, wie denn auch dieser Stadt Bürgern, was sie selbst zu ihrer eigenen Notdurft vermachen lassen wollen, zu kaufen hiermit unbenommen, sondern denen solches, wie von Alters hergebracht, frei stehen. Und weil E.E. Rath die Assignationes vor diesem gänzlich verboten und abgeschafft, als tuth derselbe die wegen Verbietung allsolcher Assignationen hiebevör publicierte unterschiedliche Mandata hiermit repetieren und erwiedern, und wo jemand sich dagegen außerhalb der Banco einiges Assignierens anmaßen oder dieselbe annehmen würde, wider denselben soll mit der berührten Mandatis einverleibten Strafe verfahren werden. Damit auch ein jeder, wie es sonst bei berührter Banco gehalten werden soll, wissen möge, als sind zu allsolcher Notdurft gewisse Artikel beliebt und abgeschafft, so hiebenebenst ebenmäßig unter dieser Stadt Signet publicieret, auch männiglich darnach zu richten hiermit mandieret und auferleget wird, und hat nach obigen allen und jeden sich männiglich zu richten und für Schaden zu hüten. Urkundlich hat E.E. Rath dieser Stadt Signet hierunter zu drucken befohlen. Decretum in Senatu etc. publicatum am Tage Petri den 22. Febr. 1619."

M.5 [Prohibition on anyone except the Banco to engage in species and precious metal exchange; penalty of 10%]. It will be hereby prohibited that the citizens, inhabitants and everyone, after the said date, purchase broken gold, silver, ... or similar things, or exchange monies, which are not common here and need to be re-coined, or exchange gold and silver species which are common here. Instead, this is reserved, next to the city mint, for the Banco, which will also provide the right exchange rates. Whoever also acts against this and contravenes this rule should, for every 100 Mark purchased and exchanged, pay 10 Marks to the Masters designated for this.

M.6 [Exceptions to the latter rule]. However, this should not apply to what the appointed goldsmiths need in terms of gold and silver for their own work, nor to the citizens of this town for what they personally need to buy; this should remain free as it has been for a long time.

M.7 [Assignations (Transfer orders, re-assignments of debt) outside the Banco remain prohibited]. And as the City Council had completely prohibited and discontinued assignations, it hereby repeats and renews the previously published diverse decrees. And whoever dares to undertake or accept assignations outside the Banco will be subject to the punishments foreseen according to these decrees.

[Legal formula stating the applicability of these rules to everyone]

[Decided and published by the Council on 22 February 1619]

3.3 Regulation of 31 December 1639

The text was translated from the German text reported in Marperger, (1717, 144-150).

I. [Presence of managers and employees] The delegated Citizens and Masters should be available on a daily basis, when necessary. The accountant and cashier should be available every day, except on Sundays and public holidays. They should sit in the rooms of the Banco and be available, everyone at his place.

II. [Paying in cash] The money that is deposited in the Banco should be handed over to a cashier and be counted in the other room. The cashier should specify the sum twice on a note, once in plain letters, and once in numbers, and he should hand over this note on the same day to the accountant.

III. [Making transfers; relying on agents] All transfers of deposits in the Banco should be done in writing through the handing over of a note to the accountant (if he is available). The one who wants to make the transfer should come in person. If he cannot or does not want to, he needs to ask the ordered accountant to issue a power of attorney (with no more than the names of the authorised persons) valid for the year in which it is issued and which the authorised person should always bring with them.

IV. [Recording transfers in ledger] The transfers should be written first in letters and then in numbers. Everyone should sit and watch that his name is written on the page in the deposit ledger. The accountant should allow this to be verified any time. Whoever

does not fill in the notes in conformity with the rules and the does not correctly set the numbers and the folio should pay a penalty of 1%.

V. [Access of heirs to deposits of deceased depositor] If someone dies, his heirs should determine one authorised person, such that the widow and minor heirs can have access to the account. A widow without an attorney should not be allowed to access the accounts.

VI. [Deposit accounts of companies] If two or more have a company and have an account in the Banco in the name of the company, then the deposit orders of one should be treated as if the note had been signed by all of them.

VII. [Daily hours during which transfers can be ordered] Every morning from 7 to 8.30, the contra-accountant should be available in the first room with the rescontra-books. He should willingly provide information to everyone who asks regarding his accounts. And if someone desires to make a transaction this should be offered.

VIII. [Secrecy of account information] If someone asks about someone else's account sum or detail, the accountant must not say anything. The accountant and all others who work for the Banco are forbidden from revealing anything that is happening in the Banco and what is written there. They have been sworn in accordingly and would be severely punished.

IX. [Checking of transfer orders by accountants] The accountant, while sitting in the front, should accept the transfer notes in the order that they come in, without regard to the persons. He should carefully monitor whether the written sums or characters and numbers match and whether the transferee has enough funds. Then he should transmit the transfer notes to the other accountants who will write them down.

X. [Procedure in case of insufficient account coverage] If the accountant becomes aware that someone wants to transfer more than he has in deposits, then he should keep silent by his oath and notify immediately the citizens delegated to the Banco.

XI. [Penalty in case of insufficient account coverage] If someone orders a transfer exceeding his deposits in the Banco, he should owe a penalty of 3% to the Banco.

XII. [Cut-off time for transfer orders in morning] When the bell of St Nicolai strikes 10 o'clock, then neither the first nor the other accountants should accept further transfer orders nor cash notes, to avoid any misuse.

XIII. [Notification in case of errors in transfers] No transfer orders must be accepted in the afternoon. The accountant should notify the delegated citizens every morning of any errors possibly committed. If they do not do so, and it is found out later on, then they should pay a penalty of one Reichstaler for every such error.

XIV. [No intra-day re-transfer of deposits] It is not possible to transfer deposits before they have been in the transferee's account for one night.

XV. [Safe book-keeping rules] The accountants should ensure that in both the contract book and the deposit ledger all calculations have one and the same page number.

XVI. [Rotation of accountants] The accountants should be permuted as often as the Masters and Citizens consider it useful.

XVII. [Ethics rules: prohibition of own financial activities of staff] The cashiers, as long as they sit in the room of the Banco, must not change moneys from within or outside the Banco on their own account, nor should they benefit from the money in any way directly.

XVIII. [Closing and verifying content of cash boxes] The Masters and Citizens should have the right to close the cash boxes, to count their content and to settle the cashier's accounts.

XIX. [Maximum content of small cash boxes] The cashiers must not have more than 5000 Reichstaler in their small cash boxes; anything beyond this amount should be handed over to the Masters and Citizens, such that the counting and closing of the cash boxes can always be done quickly. Whoever does not comply should pay a penalty of 10 marks.

XX. [Acceptance of non-preferred species] If someone brings money in forms different from the species that the Banco prefers, and the money is to be transferred to someone else, then it may be accepted for the sake of expedient processing. However, the cashiers should record such money in their accounts as if they would have received such money themselves [i.e. at market prices].

XXI. [Maximum acceptance of small coins] No more than 5 Mark out of 100 Mark should be accepted in the form of small coinage, i.e. shillings and sextuplets. Pennies and other moneys should not be accepted at all.

XXII. [Paying out money in current species] The Banco should pay out everyone his deposits in current money, without any excuses. He who wants to have a particular specie has to accept what can be provided to him in an equitable manner.

XXIII. [Withdrawing cash from a deposit account] He who wants to withdraw money from the Banco should complete a printed cash-note as it should always be made available by the accountant. He should personally complete, execute and sign it and should then hand it over to the cashier. If the cashier confirms that the person has as many deposits as the cash-note states, then he should debit the account, sign the cash-note and pay out the money to the person.

XXIV. [Obligation to implement withdrawal on same day] He who withdraws cash should take the cash on the same day from the cashier. If he does not do so, he should pay for the first day half a percent, for the next day one percent, and for every further day the double as penalty.

XXV. [Latest pay-in for same-day giro-transfer] Whoever wants to make a payment in Banco money, should pay into the Banco the required money by 11 a.m.

XXVI. [Daily closing of vaults and reopening of cash operations] When the Masters and Citizens go home, they should close the relevant cash boxes with their keys so

that they are well kept. The cashiers may receive cash payments in the morning once the accountants are present.

XXVIII. [No deposit seizure] Deposits with the Banco cannot be blocked or confiscated in any way. If however someone publicly defaults, then his deposits should become due to the creditor's common claim book.

XXVIII. [Obligatory settlement of bills of exchange above 400 Mark] The previous regulation should continue to apply, according to which bills of exchanges with a value above 400 Mark must not be settled outside the Banco. The penalty should be 25 Mark out of 100 Mark. If some issues arise with the payment of the bill of exchange, the payment should be considered invalid. Also, the broker who allows himself to be used for such transactions should be punished.

XXIX. [Administration of the bank and rotation of administrators] Two Masters of the City Council, two persons deputised from the Finance Department, and two from the City Assembly should administrate the Banco. Every year, two of them should resign, one Master and one Citizen, and new ones should be chosen and be deputised.

XXX. [Ethics rules for Administrators: prohibition for Administrators to borrow from bank] These persons, whatever men they are, must not grant themselves credits or make payments or exchange money beyond what they have as deposits with the Banco.

XXXI. [Ethics rules for Administrators: acceptance of deposits subject to special consent] They should not accept deposits without the consent of one Council member and one delegate from the Finance Department.

XXXII. [Prohibition of grain trade other than on behalf of city] The Banco must not be involved in grain trade, other than what is purchased on behalf of the city.

XXXIII. [Credit provision – collateral and own liquidity restriction] The Banco must give credit only against collateral in the form of gold or silver, and only when the cash reserves of the Banco are good.

XXXIV. [Minimum size of transactions and minimum rounding] The minimum amount of 400 Mark for transfers or for crediting someone's account should be lowered from now on to 200 Mark. Pennies, except 6 penny pieces, must never be debited or credited.

XXXV. [Production of accounts every 8 days; once a quarter, and once a year] The accounts of the commercial Banco should correctly draw the accounts every eight days. Once a quarter they should make a rough calculation encompassing the lending and exchange Banco. Every year in December the Banco should be closed for drawing the final accounts. The money should be counted and the collateral should be reviewed. A report and a correct balance sheet should be submitted at the beginning of the next year to the City Council and to the Finance Department.

XXXVI. [Annual closing period] To ensure that everything is done correctly, the Banco should close every year in December for several days.

XXXVII. [Reconciliation of accounts after annual reopening] Every new year, when the Banco reopens, the depositors should appear in the Banco in front of the table, and the Masters and Citizens should be present, and the deposits should be reconciled before new transactions are undertaken.

The wise Council has reserved its right to amend this regime occasionally, to reduce or extend it. We the citizens-Master and the Council have instructed the town of Hamburg to apply these articles to avoid the specified penalties. We have ordered our Town Seal to be imprinted at the end of the charter. 31 December 1639.

3.4 Regulation of lending bank of 26 November 1619

Hamburg (1765, 564-566) covers the charter of the Lending Bank of 1619, which at this time was kept separate from the charter of the deposit and exchange bank.

Hamburg (1765, 575-590) also covers the bank charter of 1710, which is a consolidated version of the charters of the deposit and exchange bank and of the lending bank. The following is the translation of the separate 1619 version of the lending bank charter. In Table 1, the provisions from the lending bank regulation are numbered with an L at the beginning.

[Preamble and objectives] According to experience, which also has been reported bitterly to the City Council, people who need to borrow substantial amounts of money in emergency or for their business have to pay excessive interest rates, and pledge collateral, to egoistic, advantage-seeking individuals, in contradiction with Christian love. Therefore, the City Council, to help the deserving poor and anyone else, has decided to establish a lending bank (Lehn Banco) with the following specification, such that everyone can as of now get funding there at a fair interest rate.⁶

I. [Opening hours, and reporting duties to the main bank] The accountant who has been delegated to the lending bank, and the guardian [Wardein⁷] should be every day from 9 a.m. to 11 a.m. at the specified place of the bank, except on Sundays and public holidays. If anything happens that needs to be reported, this should be done without delay to the persons of the merchants' bank [the main Hamburger Bank].

⁶ The German text of the preamble reads: "Nachdem die Erfahrung bezeuget, auch E.E. Rath klagend vorgebracht worden, wasmaassen viele bedürftige Leute von etlichen eigennützigem vorteilhaften Personen, wider die christliche Liebe, beschweret, und wann sie etliche Gelder zu ihrer Nothdurft und sonsten zu ihrer Handlung bedürftig, grosse übermäßige Zinse, mit Darsetzung ihrer Pfänder, geben müssen; als hat E.E. Rath, gedachten dürftigen Personen und sonsten jedermänniglich zu gute, eine Lehn-Banco auf folgende Maaß und Weise beliebet, und vermittelst derselben Versehung gethan, dass ein jeder um leidliche Zinse sothane Gelder daselbst habhaft werden kann". The term "zu ihrer Nothdurft" is translated above as "in emergency", but could also be translated as "in distress" or "for their survival". The preamble puts emphasis on helping "the poor", while e.g. Sieveking (1933, 33-34) suggests that the pledged collateral in the first decades were typically precious metal coins and objects, and later merchandise, which one would rarely expect to be owned by poor people (but more by wealthy individuals in need of additional funding, be it for new projects or to close unplanned funding gaps). The insistence on charitable objectives of the lending bank may relate to the necessity to protect it from the allegation of practising usury itself (see also section 2.1 discussing the same issue for the Nürnberg bank of 1498).

⁷ The German term "Wardein" originates from French, "gardien", and was a term for the expert evaluating precious metals and coins, including their finesse and weight, so as to, for example, value them before they were used as collateral. See e.g. Schindler (1705).

II. [Initially only gold and silver as collateral] Unless the City Council decides something else, the bank should lend only against collateral in the form of gold and silver, and not below ten Mark Banco, to citizens of this town, for themselves and for others, and not for less than 6 months.

III. [Examination of collateral submitted; minimum haircut of 25%] All gold and silver collateral should be examined, weighted and taken into custody [wardiert] by the guardian, and if deemed to be appropriate, up to three-quarters of the value can be provided as credit. If jewels and pearls are part of the collateral, then only the gold should be counted.

IV. [Interest rate] For one Mark Banco Lübisch, borrowed from the bank, the monthly interest rate should be 1 [Shilling], or 6 Mark Banco and 4 [Shillings] for 100 Mark Banco.⁸

V. [Rollover of loans by not withdrawing collateral] If someone pays the interest in time, then he may leave the collateral for as long as he wants in the bank.

VI. [Automatic prolongation by one month after three days] If the collateral is left for three more days after the maturity date, then the interest has to be paid for one more month.

VII. [Returning collateral to borrower] The collateral which has been pledged will be returned to the borrower if the borrower returns the lending-note and if he has paid both the capital and the interest and if no obvious deceitfulness was noted.

VIII. [Conditions and process for collateral liquidation] If for one year and six months, no interest has been paid on a loan, and if no new agreement has been reached with the representatives of the bank, then, without a court submission, or without the debtor being summoned, the guardian will, through his oath, and taking into account the collateral evaluation [Wardierung], sell the collateral in a public auction against cash to others, or in the absence of other buyers, purchase it on behalf of the bank itself. What remains as surplus after deduction of interest and costs will be returned to the owner.

IX. [Possible surplus is donated after three years] If such surplus has not been collected within three years, be it for omission or obstruction, whatever one calls it, then the surplus is given to the poor, making the best use of it.

We have ordered, as documentary evidence, to put the town seal below. Decided by the Senate and published 26 November 1619.

3.5 Collateral-related additions to rules

The necessity of valuation (which is not totally clear in the 1619 charter of the lending bank) and the acceptance of the valuation by the collateral pledger was prescribed in a legal act of 11 April 1638 (see Hamburg, 1765, 570)

⁸ Implying according to Sieveking (1933) a 6.25% interest rate per annum.

“ ... the City Council has ordered that for preventing lengthy procedures and difficult objections, no collateral should be accepted and no credit should be provided without the collateral having been examined, assessed and valued, in the presence of both those who would pledge the collateral and of the Banco-guardian [Wardein]. An agreement should be established regarding the price at which the collateral would be liquidated or kept by the Banco in case of non-repayment [of the loan at maturity]. ...”

The broadening of the collateral set is made explicit in a legal act of the Senate of 14 October 1641 (Hamburg, 1765, 568), also recognising that an effective broadening of the collateral set had already occurred in practice:

“While Article 33 of the Banco charter specified that lending is only possible against silver and gold collateral, it has been a practice to lend many thousands against other things, such as jewels, obligations of the city, copper, saltpetre, and other merchandise. This requires a declaration. The City Council therefore declares that loans can be provided not only against silver and gold, but also, in a measured way, against transferable obligations issued by the City, and unperishable goods, as presumably this will not be detrimental to the bank. Act of the Senate, 14 October 1641.”

Hamburg (1765, 568-570) also contains the template for the form to be filled in for pledging collateral. The specifications on the lending bank in the consolidated version of the charter of 1710 (in Hamburg, 1765, 589) are rather similar to the ones in the 1619 charter, but the provision that only silver and gold collateral are eligible has been removed. A new Article 55 specifies that collateral has to be valued.

4 Proposal of Stockholms Banco (1658-1668) by Johan Palmstruch

As explained in Section 1, this text of 1652 has been included here because it is in German and because of its interest in terms of outlining the policy objectives of the Stockholms Banco and related references to European continental central banks. As for the other early central banks, a schematic overview of the institution is provided.

4.1 Schematic overview

- Antecedents: According to Heckscher (1934, 162), like “all banking activities in the 17th century, at least in the North of Italy, it was largely influenced by the Bank of Amsterdam, and this influence went even farther than usual in the case of the Swedish undertaking... Dutch immigrants dominated almost everything that was new in the economic life of Sweden at that time.” Palmstruch, a Riga-born Dutchman who had lived for some years in Amsterdam, “tried to copy his model even to minute particulars, though he took some elements of the Bank of Hamburg also. But his view of the Bank of Amsterdam differed widely from the official one”. Indeed, Stockholms Banco extensively lent to private borrowers, not only in the form of Lombard credit but also against real estate, going even beyond the lending activities of the Hamburger Bank (see also Van Dillen, 1934; Tarkka, 2009). In the 1652 text of Johan Palmstruch presented below, he refers explicitly to the examples of “Venice, Amsterdam and Hamburg” (point 3), but then more extensively refers to the case of Amsterdam (points 8 and 9), even though what he describes seems to be closer to the case of Hamburg.
- Place in the history of central banking: Palmstruch Invented modern banknotes in 1661, the most important form of central bank money since the 18th century. The text of 1652 reported below is already remarkably explicit on the role Palmstruch assigns to paper money. Stockholms Banco however also damaged the reputation of banknote issuance, as it went bankrupt after less than five years in operation. Finally, its assets and liabilities were partially transferred into the opening balance sheet of the Riksbank in 1668, which still operates today.
- Policy objectives: Stockholms Banco would (i) provide a more efficient means of payment in view of Sweden’s inconvenient copper standard (points 2, 3, 5, 6 and 12.3 in Palmstruch’s text of 1652, see Section 4.2); (ii) improve the availability of credit (points 8 and 12.4 in the text); (iii) generate profit for its owner and for the crown (points 9 and 12.5 in the text); (iv) improve the terms of trade and Swedish wealth by supporting the appreciation of copper (points 11 and 12.2 in the text).
- Private or public ownership: Based on a royal charter. “Formally and in accordance with the banking privileges granted to Palmstruch, the Bank was a

private enterprise, but through various measures taken by the Government, it acquired a character not unlike that of a government office.... One half of the net profits of the bank were to be delivered to the crown. The Chancellor of the Exchequer, Baron Gustaf Bonde, was appointed the Bank's Chief Inspector" (Platbarzdis, 1960, 223-224).

- **Assets:** As Palmstruch was profit-oriented, he allowed relatively aggressive credit provision, allowing reserve ratios to fall below those maintained by the banks of Amsterdam and Hamburg. The popularity of banknotes allowed him to pursue this for a while. As Heckscher (1934) reports, Palmstruch had convinced the Government that the Bank of Amsterdam was involved heavily in profitable Lombard lending and modelled his bank according to this distorted picture of the Bank of Amsterdam, which is also suggested in the text reported below. In contrast to Amsterdam, the Stockholms Banco would not hide its lending operations (following the example of Hamburg).
- **Liabilities:** Its major innovation was the issuance of modern banknotes, starting in 1661. Banknotes were created in the context of banks' lending operations and were a great success, also because of the inconvenient copper standard prevailing at that time in Sweden (point 2 in the 1652 text reproduced below). The bank also issued deposits, but it did not play an important role as a giro-bank, i.e. deposits were rarely transferred through giro-transfer instructions (Heckscher, 1934, 169). In the text reported below, Palmstruch refers to paper-based payments ("Bank brieflein"). According to Platbarzdis (1960, 225), the paper money outlined by Palmstruch in the text of 1652 would have been in the form of notes with round denominations "to be transferable from one bearer to another by means of endorsement", i.e. like bills of exchange. This means that they were still linked to an initial deposit recorded in the books of the bank until the note was returned to it. Once the note would return to the bank, depending on the wishes of its last bearer, there would either be a deposit transfer from the previous holder to the final bearer of the note, or the note would be paid out in copper money. Having to record every endorsement in the books of the bank, i.e. every change of bearer of the notes, would obviously have much reduced the convenience of the circulation of the notes and would have been inconsistent with the way Palmstruch describes payments with notes in the text below (namely in points 5 and 6 of the text of 1652). In this respect, it seems that the notes were relatively close to certificates of deposits (the *fede di credito*) as pioneered in Naples, which could be used for payments without each time returning to the bank and having the transaction be recorded immediately in the books of the bank.
- **How and why the bank ceased operations:** In 1663 doubts of banknote holders emerged, leading to a reflux of banknotes to the bank, which was unable to redeem them due to a lack of metal reserves. Loans provided were not sufficiently short-term, i.e. the bank had an unsustainable maturity mismatch. In 1664 the bank needed to be closed and put into liquidation, with Palmstruch being condemned to death (which was however not carried out and he was released from jail after around three years). The first issuance of banknotes by a central bank (i.e. actual to-the-bearer liabilities of the central bank) therefore

ended rapidly in a disaster, raising doubts about the sustainability of banknote issuance that would be reinforced some 50 years later by the bankruptcy of John Law's Banque Royale.

Sources: Brisman (1918), Heckscher (1934), Platbarzdis (1960), Wettenberg (2009), Roberds and Velde (2014, 51-52).

4.2 Outline and motivation of Stockholms Banco by J. Palmstruch (1652)

The following English translation is based on the transcription of the text provided by Brisman (1918, Annex 2 "Palmstruch's first proposal for establishing a bank"). The German text is shown subsequently (as taken from Brisman, 1918) since the Early German remains ambiguous on some occasions, such that the German-speaking reader can verify the translation. The German of Palmstruch may have been somewhat non-standard as he was a Riga-born Dutchman (although German anyway lacked at that time well-established rules of orthography). The numbering was added for easier reference.

[1. Seignorage from minting copper and hope expressed on appreciation of copper⁹] Since around one half of the annual copper production of 14 to 16 thousand is being coined into money, and remains in the Kingdom [of Sweden] and in the subordinated countries and towns, his Royal Majesty will not only benefit from the seignorage, but copper will in itself and also in Holland and elsewhere appreciate again, as a few years ago, to 50, 60 or 70 Reichstaler¹⁰ per ship-pound¹¹.

[2. Merchants consider it inconvenient to rely on copper money] It is true that the merchants here, both domestic and foreign, initially argued that it will be harmful for commerce, and will lead to an appreciation of the Reichstaler, if the country and in particular Stockholm is flooded with such large quantities of inconvenient [copper] money.

[3. Solution of this problem through the establishment of a bank and payments in bank notes] But soon everyone could be relieved from this wrong fear, namely by establishing an exchange bank and by paying each other with banknotes in the same way as done in Venice, Amsterdam Hamburg¹² etc.

⁹ It is not entirely clear how this paragraph on the seignorage from copper minting, and copper's perspectives to appreciate, relate to the establishment of the bank. The exchange rate between copper and silver was in any case an important issue at the time (see e.g. Platbarzdis, 1960, 224).

¹⁰ The Reichstaler was a silver coin of around 26 grams of fine silver.

¹¹ A ship-pound was a weight unit common in the Baltic sea, weighting around 136 kg. Platbarzdis (1960, 224) explains the exchange rate developments between the ship-pound of copper and the silver Reichstaler in the decade before 1652.

¹² Remarkably, none of these early central banks really issued banknotes. Either Palmstruch is downplaying here the innovative nature of his intentions in order to defuse possible worries of the King about establishing an untested scheme, or he has in mind some form of certificates of deposits, or paper instructions to the bank for giro-transfers. See also the discussion in Section 4.1 on the bank's liabilities and footnote 15 which may suggest that actually Palmstruch did not yet have modern banknotes in mind at this stage, i.e. banknotes which would no longer be assigned to individual holders in the books of the bank.

[4. Bank would be equipped with initial royal deposit of 100,000 Reichstaler in copper]. His Royal Majesty could start by depositing one hundred thousand Reichstaler in copper money in the bank, and pay out in the way mentioned¹³ to the royal officers, soldiers, as well as grocers and merchants.

[5. Banknotes can be used as means of payment and can circulate forever]. Anyone who receives in this way bank money can again pay the grocer, baker, brewer, shoemaker, tailor, etc. for sums of 1000-500 and 100 copper coins, and these can again pay someone else, and this someone else a third person, and so on in eternity¹⁴.

[6. Banknotes will be used substantially and facilitate payments]. In this way thousands of his Majesty's subjects, as well as foreign merchants operating here, will be invoiced in, and will receive payments in bank money and will hold it, ... until eternity, or for as long as trade and commerce do not end. In the meantime, it is unlikely that ... someone will again feel like carrying, counting, and re-counting [copper money¹⁵].

[7. The copper money withdrawn from the bank for use as means of payment will have a tendency to be re-deposited in the bank] The little copper money that some may want to take out of the bank for daily expenses relating to their household, or also what will be paid by some to the soldiers of the Admiralty, workers and day-labourers, will, if not in the 1st, then certainly in the 2nd, 3rd or 4th week be collected from bakers, brewers, hawkers, etc. and will return in sum to the bank, in a way that the bank will be a permanent and inexhaustible source of copper, silver and gold.

[8. Lombard lending by the Bank of Amsterdam; its advantages¹⁶] The regents of the City of Amsterdam, to support industry and commerce (the first pillar on which the welfare of a republic or kingdom rely) provide from the exchange bank to the Lombard or lending bank as much money as the latter lends against good silver, gold- or other collateral, even to total strangers, against a just interest rate... Otherwise, the money deposited in the exchange bank would lie silently and fruitlessly.

[9. Interest earned is used to cover costs of banks and allows profit disbursements to the city of Amsterdam] From the interest income received by the above-mentioned lending bank, not only all the employees of both banks are paid, but a significant profit remains, to the great benefit of the city.

[10. Bank's credit provision supports the development of industry and commerce]. And this can promote and support commerce and industrial development, as well as

¹³ "In the way mentioned" presumably means: in banknotes. In other words, the initial copper equipment of the bank would not be matched on the liability of the initial balance sheet with capital, but with banknotes as the King would, instead of making the usual payments to his employees and suppliers in copper money, make them in paper money, and use the saved copper to match in the bank's balance sheet the issued notes.

¹⁴ This does not seem to suggest that transfers of notes had to be registered in the folio of the bank. Moreover, it seems that Palmstruch has in mind some round denomination of the notes in terms of copper coin units.

¹⁵ This sentence is ambiguous.

¹⁶ What Palmstruch assigns here to the Bank of Amsterdam seems to be closer to the practice of the Hamburger Bank.

commerce in general, not only in Stockholm, but also in his Majesty's all other great commercial towns, at least to the extent that it is beneficially practised in Amsterdam.

[11. Bank will support royal specie imports and thereby exchange rates] When, through the above-mentioned device, the difficulty and inconvenience of copper money is addressed, and thereby the same would become in all royal territories as current as silver money, then good sums of Reichstaler coins earned by the royal export duties in Riga, Stettin, Stralsund, and other prime commercial towns, could be brought over and because of their quantity, the Ducats¹⁷ and Reichstaler could be exchanged on better terms.

[12. Summary of key advantages] Therefore, with god's blessing, the following advantages can certainly be hoped for:

1. Significant increase of his majesties' seignorage.
2. Appreciation of copper in Holland and everywhere in Europe, and therefore more money and wealth in the country.
3. Contracting and commerce will be done as conveniently in copper moneys, as in Ducats and Reichstaler.
4. [Convenient Lombard lending facility available to private economy; inscription of loan in bank folio] Excellent accommodation of craftsmen, merchants, and all sorts of people in all of his Royal Majesty's commercial towns; any day, whenever these persons see an advantage, they can borrow money from the lending bank against silver, gold, and other mobile collateral, as well as against ... stone houses and land estates, etc., at a just interest rate, whereby they will actually not receive money, but only a note to the exchange bank, ... and they will again satisfy their creditors with a banknote in the bank (i.e. the exchange bank), being named in the folio or page for example in the following way:¹⁸
5. Folio 260: The bank masters will pay to Jan Janson, the sum of two thousand five hundred copper coins. Dated: Stockholm, 12th January 1652.

D. 2500. Class Claeson

6. [Profits of the bank to be disbursed to public authorities] The municipal authorities in all commercial towns of his Royal Majesty, and in particular the distinguished commercial and royal residence town Stockholm, could have a profit of many thousand Reichstaler

¹⁷ Ducat: standard gold coin of a fine gold content of around 3.4 grams.

¹⁸ This paragraph raises the question of whether Palmstruch really had yet in mind modern banknotes (which are not earmarked to holders of the banknotes in the books of the bank), or some sort of certificates of deposits, which would have to be eventually registered in the giro-book of the central bank, closer to the examples of the Fede di Credito invented in Naples but then adopted by other Italian early deposit banks. Presumably, to be consistent with Palmstruch's vision of a simple payment with paper money, the inscription in the portfolio described here refers to the initial Lombard loan provided to a fictitious Jan Janson. The signer, an equally fictitious Claes Claeson, would be a Bank Master or a book keeper of the bank. Subsequent transfers of the banknote would either be through endorsement on the back of the banknote (like in the case of a bill of exchange), or even only through simple transfer. The truly modern banknotes of Stockholms Banco issued as of 1661 had no initial bearer name, and could be used without endorsement.

Stockholm, 12th January 1652 Johan Palmstruch

German text as taken from Brisman (1918, Annex 2)

[1] Da nemlich Von denen 14 a 16 Tausent Jährlich ausgehenden Schipfunden Kupfer etwan die helffte in gelt vermuntzet wurde, undt im Reich, wie auch in andern Ihr Königl: Majj:tz Untergebenen ländern undt Stetten bliebe, so wurden Ihr Königl: Majj:tz wegen des schlägschatzes, nicht allein guten nutzen haben, sondern dass Kupfer an sich selbstn wurde auch i[n] Hollandt undt anderswo unfehlbaer aufslagen undt im kurtzen alhie zu Stockholm wiederumb, wie vor wenig Jahren, auf 50., 60. a 70 Reichzthaler dass Schipfundt steigen

[2] Zwar die kaufleute alhier, so woll einheimische als frembde, wurden anfangz da für halten, das es der handelung schädlich sein, undt die Rthl: steirent machen wurde, wan dass landt undt vornemblich Stockholm mit so groser menge unbeqwemen geldtes solte überhauffet werden.

[3] Aber dieser wahn könnte einen jedweden bald werden benommen, nemblich mit oder durch anstell- undt einrichtung einer Wechsel Bancq, umb nach der Venetianer, Amsterdammer, Hamburger etc. gebrauch undt weise ein ander mit Banq brieflein zu bezahlen.

[4] Ihr Königl: Majj könnten strax zum ersten anfangz, Hundert tausendt Rthl: an Kupfergeldt in der Bancq deponiren, undt aufbesagte weise an dero Königl: bediente Officirer, Soldatesqva, als auch Krämer Kaufleute undt andere, die zu Königl: Majj:tz Hof Staats lieferung thuen, ausszahlen lassen.

[5] Ein jedweder Herr auch particulaer Persohn, der solcher massen, geldt in Banco bekompt könnte mit ein Banckbrieflein den krämer, Kaufman, Becker, Brauwer, Schuster, Schneider, etc. beij Summen vom 1000-500 undt 100 D:r Kupfermuntz wieder betzahlen, undt dieser wiederumb einen andern, der ander den dritten undt so fort an unendlich.

[6] Welcher gestalt in kurtzer zeit etzliche tausendt Ihr Königl: Majj:ten Untersasen, als frembde hieselbsten handelende Kaufleute, Rechnungen undt gelder in Banco überkommen werden, und nur unter Verenderunge der nahmen, biss in ewigkeit, oder solange Handel undt Wandel nicht aufhöret, behalten; Aldieweilen nicht leicht jemand der mühe undt beschwer kan über hoben seijn, om[!] den hin undt widerschleppen wie auch zehlen undt wiederzehlen plajsier undt lust wurde haben wollen.

[7] Dass wenige Kupfergeldt, so etwan dieser oder jener zur teglichen aussgabe zu seiner Hauss- oder Hoffhaltunge auss der Banck möchte nehmen, wie auch dassjenige, was der Admiralitet Soldatesqva, arbeitzeuten, taglönern etc. von diesem undt jenem, beij wenigen aussgezahlt solte werden, wurde doch, wo nicht in der ersten, doch gewiss in der 2. 3 oder 4:ten wochen, beij Beckern, Brauwern, Hökern etc. eingesamlet, beij Summen wiederumb in die Banco kommen undt dergestalt, diese Banco eine stetzwerende undt unerschöfliche Kupferne, ia auch Silberne undt Guldene fundt gruben sein und bleiben.

[8] Die Regenten der Stadt Amsterdam, umb daselbsten die Manufactur wärke undt Commercien (: 2. der fürnembsten stützen worauf einer Republic: oder Königreichs aufnehmen undt wohlfahrt beruhet:) zu befördern, fourniren auss der wechsel Bancq der Banc von lehninge oder lombart so viel geldt als daselbsten auf guth- Silber- Golt undt ander pfandt, auch von den alderwildfrembdesten für eine billiche Interesse erfördert wirdt; Aldieweil doch sonst die in der Wechsell Banck gedeponirten gelder stille undt fruchtloss liegen.

[9] Von denen in besagte Amsterdamsche Leen-Bancq einkommenden Interesse geldern, werden nicht allein alle die bedienten der beiden Bancqven gehalten undt bezahlet, sondern es schisset von denselben, zu. grosen nutzen der Stadt, Jährlich noch ein merchliches über.

[10] Undt solches könte zu beförderung undt sterckung Handels undt wandels in den Manufactur werken, als auch gantzen kauff Handels in gemein, nicht allein hie zu Stockholm, sondern auch in allen andern Ihr Königl: Maj:tz grose Kauff undt handel Stetten nicht unfüglicher, sondern fast füglicher, als zu Amsterdam in practiq undt nutzlichen gebrauch gebracht werden.

[11] Wan durch obgedachtes Hülfmittel, der schwerde undt unbeqwemligkeit des Kupfergeldes geholfen, undt daselbe solcher massen in alle Ihr Königl: Maj:tz Reiche undt landen den silbergelte gleich geeb- undt gangbaer werden so könten auch von denen zu Riga, Stettin, Stralsundt, etc. Vornehmen Handels Stetten in der Königl: Licent eingenommenen Specie Rthl: Jährlich guthe Summen herüber gebracht, undt durch derselben quantitet, die Ducaten undt Rthl: in etwas besser kauff eingewechselt werden.

[12] Welcher massen dan vermittelst Götlichen segens, diese nachfolgender Ava[n]tagen unfehlbaer zu hoffen.

1. Ihr Königl: Maj:tz Schlagschatz nutzens merchliche Vermehrung.
2. Aufschlag des Kupfers in Hollandt undt gantz Europa, undt daher mehr Geldt undt Reichtumb im Lande.
3. Dass eben so fueglich undt beqwem auf Kupfer geldt, als auf Ducaten undt Reichsthaler zu Contrahiren undt zu Handellen.
4. Vertrefliche Accommodation vor die Handtwerckzleute, kaufleute undt allerhandt Sort Menschen in alle Ihr Königl: Maj:tz kauf-und Handel Stetten, umb teglich, wan dieselbe etwa in der Handlung einen Vortheil ersehen auf Silber- Goldt oder Ander guth beweglich pfandt, ia auch auf guthe, unterfewer Contracten stehendhe steinerne heuser, lantguther etc: umb eine billiche Interesse auss der Bancq von leeninge geldt können bekommen, wie woll nicht in der that geldt sondern nur ein brieflein an die wechsel Bancq, dass so undt so viel diesem undt jenem in Credit auf seinen Rechnungen in Banco gestellet werde umb seinen Creditoren ebener massen wiederumb mit nur ein Bancq brieflein in der Bancq (: sage Wechsel Bancq:) zu Contentiren stellende dass Banck brieflein mit seinen im Buch, habenden folio oder bladt zu benennen etwa folgender gestalt:

Fol: 260 Die Herren in Bancen belieben zu gezahlen an Jan Janson, die Summa von zwetausendt funf Hundert thaler Kupper muntz. Dat: Stockholm d: 12 Januarij A:o 1652.

D. 2500. Class Claeson.

5. Könten die Magistraten in alle Ihr Königl: Maij:tz kauf- undt Handel-Städten, undt vornemblich Ihr Königl: Maij:tz Residents undt vornehmen Handels-Stadt Stockholm an dem überschuse der Interesse-Geldern auss der Leen Bancq Jährlich einen nutzen von etzlich tausendt Reichzthaler haben.

Stockholm Den 12 Januarij: Anno 1652. Johan Palmstruck

5 Banco di Depositi of Leipzig (1698-1706)

5.1 Schematic overview

- Genealogy: Von Poschinger (1876, 305) notes the Italian origins of the Leipzig Banco project and highlights its “well-thought out and intelligent” design:

“All of our oldest German banks are imitations of foreign institutions. This also holds for the oldest Saxonian bank, of which the father is an Italian named Theodor Franciscus Reyna... As an Italian he had in mind in particular Italian banks, and amongst those preferably the one that Pope Alexander had founded at that time... Reyna refers to this bank frequently in his reports, and even presents this bank as a template... One could bet that the plan of Pope Alexander regarding his bank was developed in the brain of a Jesuit, so well-thought out and intelligent the provisions and so subtle is everything towards attracting substantial funds into the bank”

Presumably, von Poschinger refers to the Banco del Santo Spirito of Rome, which would therefore have been the main template for the Leipzig Banco.

- Place in the history of central banking: a failed project with an initially plausible design but a prince that was eventually unable or unwilling to stick to the “well-thought out” rules. Instead, he took extensive credit recourse to the bank from the outset, such that the bank never gained the necessary credibility. The mandate is also interesting in terms of injecting public capital and constraining access of the sovereign to the resources of the bank. The rules and procedures are particularly detailed and well-structured, coming closest to today’s corresponding texts of central banks.
- Policy objectives: The bank represents the first attempt of a German prince (in contrast to a free town, such as Hamburg or Nurnberg) to establish a bank. In the preamble, the establishment of the bank is justified by the merits it has for the development of commerce, i.e. it was meant to pursue public policy objectives. Von Poschinger (1876) asserts that the bank was actually endorsed by the Arch-Elector as a means of solving his public finance issues, and indeed, the establishment of the bank suffered from the outset from a lack of willingness on his side to actually inject the promised capital, and his immediate wish to borrow from it.
- Private or public ownership: The bank was public and to be led by a director nominated by the Arch-Elector of Saxony. At the same time, merchants were to play a role in the Governance, as explicitly stated in the statutes. Article 4 of the Charter of 28 December 1698 specifies the governance of the Bank. Article 7 of the Charter of 28 December 1698 is aimed at ensuring the availability of sufficient expertise by stipulating that international merchants should be part of the council of the bank. Title 1 Art. 2 provides for what today would be equivalent to financial independence of a central bank i.e. financial independence of the Banco from the

Government in that the Banco is not obliged to transfer profits as long as the amount of its capital is not preserved.

- **Assets:** Article 1 of the Charter of 28 December 1698 contained a sort of “monetary financing prohibition”, at least with regards to the bank’s capital: The Arch-Elector declares, also in the entire name of his house and his successors, that he will never access the wealth and treasury of the Banco. It also provided guarantees for its financial independence by specifying the obligation of recapitalisation by his Majesty if the capital drops under a certain amount. Article 3 of the Charter of 28 December 1698 clarifies that the merchants will be involved in establishing the rules on the asset side activities of the bank, such as to ensure the liquidity of the bank. It also reveals the intention that the bank will provide credit to merchants. The Regulation of 10 May 1699 contains specifications on eligible collateral (title IX – the collateral set was broad and included common merchandise and real estate), valuation (title XI) and haircuts (title X: 25% haircut on precious metals, 50% on land and real estate, flexible, but not more than 50% for merchandise) applicable to collateral in Lombard lending, suggesting that the theoretical intention was to have the bank engage substantially in Lombard lending.
- **Liabilities:** Deposits, banknotes and capital. As the name also emphasises, the bank was in principle supposed to be a deposit bank. Article 8 establishes a long-term deposits segment of the bank, presumably to strengthen further its funding stability. Article 5 makes clear that the bank is also supposed to issue some sort of banknotes, by specifying, inter alia, who amongst the Bank’s managers need to sign them. Moreover, the bank was equipped with an initial capital, as specified in Article 1 of the statutes.
- **Special measures to support its functioning:** Article 9 of the statutes provides for the hardship exemption of the bank as well as for the immunity from enforcement, except for crimes against his Majesty. Title XI, Art. 4 of the rules and procedures specifies that in case of borrower default, the bank ranked always senior to any other creditor.
- **History of convertibility:** It never really took off as a central bank. However, depositors were fully reimbursed when the bank was closed, losses were covered by the Arch-Elector.
- **How and why the bank ceased operations:** The bank was not successful and was closed again after 8 years, i.e. in 1706, after cumulating losses of 11,276 Taler. Its main problem would have been the lack of willingness and credibility of the Arch-Elector in obeying the rules of the bank (Poschinger, 1876).

Source: Marperger (1717), von Poschinger (1876).

5.2 Charter of 28 December 1698

The English text below is the translation of the German text as provided in Marperger (1717, 257-261), which is identical to the texts provided in alternative sources, such as the print of the mandate of 1698 or the reproduction in Lünig (1724a).

His Royal Majesty in Poland and Arch-Elector Highness in Saxony most gracious declaration, how and in which way a Banco de Depositi should be established in the commercial town of Leipzig.

[Preamble] His Royal Majesty in Poland and Arch-Elector in Saxony, etc. considers it useful to establish, in the commercial town of Leipzig, with its famous fairs and established commercial rights for many centuries, a deposit bank [Banco de Depositi] and to grant it a considerable capital of 120,000 Reichstaler of annuities, being at 6% equal to a capital of 2,000,000 Reichstaler of [Regalien, Ämter] and goods. The Royal Majesty discussed the matter with the Prince of Fürstenberg and the foreign and local merchants at the last Michaelis-market and he will now make public his thoughts, so please note:

Article 1 [Capitalisation of the bank through assignment of royal prerogatives] For every creditor willing to deposit his money, the first question is what the security of his investment is. For that reason, his Majesty has established a capital of two million Reichstaler (each at 24 good Groschen Meissner currency) based on annual royal prerogatives consisting in:

- First 47350 Taler of the escorts
- Then 28125 Taler of the acquisitions
- Moreover 26250 Taler of the metallurgical industries, blue colours, ... and other mining revenues
- Finally, 21875 Taler of all the rafts

All of those actually are able to deliver more income, and all of them are fully assigned to the Banco, according to an irrevocable and eternal order. They are totally segregated from any disposal, order and from the supervision by the finance department. The Arch-Elector declares that he will not, in an irrevocable manner, forever and in the name of the entire Arch-house, either themselves, or through someone else, under no excuse or pretended special order, decree or violence, intervene in the above-mentioned prerogatives and incomes. If ever someone attempts to contradict this order, which should never happen, and would insinuate so towards the Directors or Administrators of the Bank, such insinuations should be void and must not be executed by the Directors and Administrators, who must not be made liable for this non-execution, and cannot fall into disgrace for it, or worse.

And although the capital has been determined in a way to be sufficient, if ever because of unavoidable coincidence the revenue would fall short of the 120,000 Taler, his Majesty will immediately contribute the difference and let the Banco be treated in a privileged manner relative to all other expenses.”

Article 2 [Remuneration of deposits] Depositors should expect an interest of six percent from their deposits, payable on two dates, or at the Eastern and Michaelis fairs.

Article 3 [Credit operations of the bank to be determined in consultation with merchant community] His Majesty will consult the domestic and foreign merchants on how to make use of the funds of the Banco, i.e. how the Banco will extend itself. There is no doubt that through secured credit provision to merchants, a good commercial advantage can be achieved whereby the cash reserves of the Banco can be used for this while at the same time the payment of the depositors can still be ensured in the event that some deposits are withdrawn.

Article 4 [Administrators of the bank] The persons who will administrate the bank under the highest authority of the Majesty and the oversight of the baronial Governor are a Director and six associates, amongst whom one highly qualified and experienced lawyer, a cashier, a secretary, and all of whom honest and established people.

Article 5 [Banknotes/Certificates of deposits] The banknotes, which the creditors of the bank need to receive as documentation and security, are to be identified by the symbol of the Banco, and are to be signed by the Governor or in his absence by the General Revision Council and the directors of the Banco.

Article 6 [Three keys to the vaults of the bank and their assignment] To ensure the highest security, three keys should be made to access the treasure of the Banco: one to be entrusted to one of the Directors, one to one of the assessors, and one to the cashier.

Article 7 [Contact group of foreign merchants to be established to advise the bank] To make sure that the Banco will have the occasion to have relations with foreign countries for the benefit of commerce, persons should be nominated to the Bank Council (Collegium) from Venice, Genoa, Florence, Bolzano, Amsterdam, London, Lyon, Hamburg, Frankfurt am Main, Augsburg, Nurnberg, Gdansk and similar famous trade places within and outside Germany, who should be committed to carefully observe and collect information that would be useful for supporting its affairs.

Article 8 [Minimum maturity of deposits; exceptional early withdrawal] In relation to the issue of notice of withdrawals of the paid-in deposits and capital, the proposal has been made that whoever pays in 10 to 30 thousand should leave the money in the Bank for at least one year and whoever pays in 30-60 thousand for two years, and beyond that, for three years. In case of need, an exceptional early withdrawal of one-third may also be possible; the desire to withdraw should be announced early and with a specification of the day and hour. The pay-out is done in an equitable way in coins as they are current at the time of the payment, or in coins of equivalent value.

Article 9 [Freedoms granted to the bank and no deposit seizure] As privileges make a place of commerce and a Bank convenient and practical, the freedoms which have been granted to other banks will also be given to the Leipzig Banco, and it will be exempt from all ordinary and extraordinary hardships. Everyone, regardless of his

religion and rank and nature should be free to deposit his money with the bank. No execution towards, or seizure of deposits will be permissible (with the exception of the case of crimes against his Majesty).

Article 10 [Further details on governance and operations to be provided in separate Regulation] Anything concerning the functions of the Directors, Assessors, Cashiers, and Secretary, such as the valuation, privileging, and custody of collateral securing the loans provided, as well as ... the place and time of the congregation and expedition, moreover the acceptance of the accounts, the cession of the Banco's capital and interest, and whatever else can and should be considered, taken into account, and prescribed to the advantage of the Banco's security and scope, should not be extensively reported here, but should await the Banco Regulation which will be printed and distributed.

Signed, Dresden on 28 December 1698, Egon Baron zu Fürstenberg.

5.3 Regulation of 10 May 1699

The English text below is the translation of the German text as provided in Marperger (1717, 265-288), which again is identical to the text provided by Lünig (1724b).

Accordingly, his Royal Majesty of Poland had most graciously decided to establish for the use of his faithful subjects a deposit bank in the commercial town of Leipzig. Subsequently the governor of his Royal Majesty and most highly esteemed Anton Egon Fürst zu Fürstenberg has done everything in a tireless, elaborate and eager manner to support this most fruitful project and has considered necessary to provide it with rules and procedures. Thus, he has, after considering the advice of the Congregation and the original expertise, assembled the following points for the composing of this work; and in the name of most honoured Royal Majesty has issued such rules and procedures as Law and has published it to make it known to everyone.

Title I. The establishment of the Banco and the nomination of the management.

The foundation-mandate of this Banco does contain the reasons for its establishment, what is to achieve its sufficient security, and what persons should be nominated to represent and manage the Banco. It has therefore been considered to cover these issues in the rules and procedures, to ensure that it is established in an adept manner.

[1. Establishing a public deposit bank in Leipzig] We Friedrich August, by grace of god King in Poland, [list of other titles] declare: We found useful to establish for our faithful subjects and merchants, in our commercial town of Leipzig which had for many hundreds of years fairs and special commercial rights, a Banco de Depositi based on the sum of two million Reichstaler, and our Governor, the Prince von Fürstenberg has discussed this so commendable project with the foreign and domestic merchants, and has considered their thoughts. After this, we want now, based on our royal and arch-electoral powers, to establish the bank in the best and durable way, and with all requisites that are necessary for the establishment, through this Diploma (being a Lex

fundamentalis aeternum valitura in vim sanctionis pragmaticae and a pact to be respected and applied) to establish, constitute and make it firm.

[2. Capitalisation of the bank to ensure its security] To make our will and opinion even more clear and obvious, and ensure that everyone who will deposit now or in the future in this Banco feels and enjoys the security, we have issued two instructions to our Arch-Electoral finance department under the date Terespol near Brest, 28 November 1698 and Warsaw, 14 April 1699, which assigns to the Capital of the deposit bank some annual incomes and prerogatives, [repeats list as already stated in the mandate of the bank, Article 1], which all generate a much higher income, fully assigned, forever devoted and committed. These incomes will be fully exempted from the orders and control of our finance department, and the administrators, tenants and officials are given order to not provide anything to the finance department as long as the Banco has not received in its entirety its annual 120,000 Reichstaler, and the finance department has no rights to request them.

[Repetition of last two paragraphs of Article 1 of the mandate]

[3. Own funds can be pledged if required for liquidity purposes] Sooner or later it may happen that some of the deposits made with the bank could be withdrawn, such that, against expectations, the bank may be short of funds to pay out these in cash. We allow for such cases that the Banco would sell or pledge the above-mentioned revenues which have not yet been received, such that the indispensable credit of the Banco is always fully conserved.

[4. Capital will support ability of bank to pay 6% interest on deposits] These annual, secure and certain incomes and privileges of 120,000 Taler will be used for paying interest of six percent to everyone depositing money with the Banco, for as long as he leaves his funds with the bank.

[5. Responsibilities of the Governor in overseeing and managing the bank] To ensure that our will is executed punctually, we have given the oversight and of our Banco to the Governor the Prince von Fürstenberg. We have instructed him to do everything suitable for the promotion and augmentation of this Banco. He is also instructed to carefully monitor it and have full power to issue the banknotes and promissory notes of the Banco which the creditors obtain for their security, which should be as obliging as if we would ourselves have executed them in the most solemn way, such that the Banco will preserve its credit.

[6. Members of the governing body of the bank] The persons who will have to administer the Banco under the oversight of our Governor, the Prince von Fürstenberg, will comprise two representatives of the Council of Leipzig, besides which stands the Directorate and five assessors, including a qualified person and the treasurer, to which in addition a Secretary is assigned – all being honest, accredited and autochthonic persons. These persons should obtain a honorary rank immediately after the members of the Council of Leipzig, if they do not have such honorary positions beforehand. They should be treated in Council, court, and other chambers with seating and plight in the same way as other dignitaries. This honorary rank applies also to their widows, and to themselves after they have resigned but would

have had their merits with regards to the Banco. We would like to mandate the Council of Leipzig to nominate its members of the Directorate, in the certain confidence that it will make keen efforts to let the Banco be led by skilled and able people from its midst. We will give the City Council and its delegates to the Directorate of the Banco, as well as to the other officials of the Banco certain instructions.

[7. Nomination of members of the governing body of the bank, the Congregation or Collegium] Therefore, the Congregation or Collegium of the Banco will be composed of the following persons: The [two] directors who have been designated by the Council of Leipzig; Franciscus Conradus Romanus, D. Counsel and Assessor; Friedrich Weiß, Treasurer and Assessor; Thomas Richter, Assessor; Leonard Zoller, Assessor; Johann Philipp Küstner, Assessor; and Johann Job, Secretarius.

[8. Limited liability of the members of the Congregation] We assume that the above Council delegates to the Directorate and the other Assessors will with effort and vigilance create and maintain the credit of the Banco perceived by externals. Despite their functions, they will neither be obliged to advance or invest in the Banco, nor are they liable to the creditors of the Banco with their own wealth, nor should they replace losses that have been arising to the Banco from its collateralised loans or for other reasons, if it was not through their fault or negligence.

[9. Jurisdiction applicable to members of the Congregation in execution of their functions] The persons who have been designated to manage the bank will remain under their authorities' jurisdiction. However, in everything which concerns the Banco, they should only answer to our Commercial Collegium, which we will establish, as well as in particular the Prince von Fürstenberg, and the General Revision Court in Dresden, and not on any other court in our land, be it a low or high court. However, none should be allowed to make any changes which would call into question the security and constitution of the Banco.

[10. Courts in Saxony should be supportive to bank] We would also like to instruct all our courts that they contribute to the increment of the Banco in all occurrences and no one should allow for obstacles.

[11. Further guidance on asset side activities of the bank to be given to Congregation] We would also like to devise a certain regulation and deliver it to the Congregation of the Banco such that it provides guidance with regard to how the funds deposited with, and raised by the Banco will be used to support commerce, and how the Banco is thus expanded. If it is not always possible to invest the funds in this manner and with security, then the Congregation should not be made responsible for it.

[12. Role of bank Regulation in providing further specifications] To ensure that everything with regard to the Banco will be orderly, and that everyone knows how funds are deposited, revoked, and paid out, a complete Banco regulation is composed and published.

[13. Signing of banknotes] We want to see respected what has already been instructed through the Banco-mandate of Dresden of 28 December 1698, namely that the banknotes which should be given to the creditors of the bank should be confirmed with

our graciously provided Banco-sign, and the signature of our Governor Prince von Fürstenberg, or in his absence the signatures and authorisations of the General Revision-Council next to one designated member of the Directorate of the Banco.

[14. Congregation invited to submit proposals to improve the bank further] If the Congregation were in the future to identify ways and means to further improve the utility of the Banco, it should note these down together with its thoughts, and submit them in obedience. If they are approved by the Governor the Prince von Fürstenberg and endorsed by our General Revision Council, then they should be as valid as if they were integrated into the present diploma and be executed by ourselves most graciously.

[Repetition of Article 6 of the initial mandate, regarding keys]

[15. Need for approval for expenses of Banco, semi-annual reporting of accounts, their approval and finality] Concerning the accounts of the Banco, and the payments of large sums, but also of ordinary expenses, nothing should be done without the written order of a City Council representative, Director or Assessor, or without the presence of the concerned persons, or should anything be taken out of the cash reserve. When the Congregation submits once every half year the drawn balance sheet, together with an obedient report, and the Governor, the Prince von Fürstenberg has approved, acknowledges and signed those, then this should be enough and they should be final, and nothing should be changed any longer, and the assessors and other officials must not make other commitments, nor should there be any separate bills. If after six months the approval has not been granted, and no issues have been raised, then any claims towards the Congregation relating to the balance sheet should expire, and no further objection can be raised. If within six months an error in the balance sheet is identified, then within six months from the discovery of the error the case should be investigated and clarified. The one who has been the source of the error has to provide damage compensation, while all the others should not be charged, provided they have, as soon as they became aware of the error, exercised enough care towards it.

[16. Replacement of members of Congregation in case of resignation or death] If an Assessor or the Secretary resign for important reasons and this is accepted, or in case of death, our Governor will without delay fill again the vacant position.

[Repeats Article 9 of the Mandate]

[17. Execution against deposits; case of default of depositor] The execution against a debtor's deposits with the Banco cannot take place before the execution against a debtor's other property, and this includes the interest on the deposits. Only when the insolvency proceedings have ended, and the distribution has been specified, can the claim be submitted to the Congregation. The implied segregation of the deposits will have no other effect than to create a right in rem.

[Repeats Article 10 of the Mandate]

[18. Issuance of this Regulation, distribution of copies] We have issued this founding diploma in two copies and provided one exemplar to our Governor the Prince von Fürstenberg, and the other to the Congregation. We have provided for their relieve and

custody, one copy with our royal seal to our friendly loved cousins of the Albertinian line, and one to our Finance Department in Dresden, because of the privileges and incomes establishing the Capital, as specified under the date Terespol near Brest, 28 November 1698 and Warsaw, the 14 (4) April 1699. This diploma and foundation-letter has been signed personally by us and has been confirmed by our royal seal. Done in Warsaw on 4 April 1699.

Title II. The tasks of the Directors, the Assessors, the Treasurer and the Secretary

1. [Purpose of this regulation] His Royal Majesty has clearly instructed all those to which the management of the Banco has been entrusted. This is to inform those who plan to deposit money with the Banco by providing them with a summary of it.

2. [Regular meetings of the Congregation] The Congregation should meet every Monday and Friday morning, during and outside the Fairs, and deliberate about the issues of interest for the Banco.

3. [Functions of the Directorate] The Directorate should convoke regular and extraordinary meetings and sets the agenda. The conclusions are based on the votes and are to be recorded in the protocol. It has one key to the cash reserve, and thereby to the documents and archive and the seal of the Banco: it co-signs the Banknotes; and it opens the instructions and other correspondence addressed to the Banco. It ensures with care that the balance sheet is drawn every half year correctly and submits it. It takes care that everything that serves the Banco is respected.

4. [Functions of the Legal Counsel] The tasks of the Assessors consist, as far as the Legal Counsel is concerned, in particular in the following: to prepare writings in the service of the Banco, or to carefully consider and revise writings prepared by the Secretary. To keep safe the key to the cash reserve and other repositories. Oversee carefully the archives and the writings, and ensure that the rules and procedures of the Banco are carefully observed.

5. [Functions of the Treasurer] The task of another Assessor, the Treasurer, is to raise the payments related to the Capital of the Banco, and to acknowledge them, to receive the deposits of the depositors, to pay out to depositors the due principals and interest, to pay out credits, to carefully maintain the cash account book that is entrusted to him according to the instructions, to safe-keep one of the three keys for the main cash treasure, and do support everything that helps the Banco's increment.

6. [Functions of the other Assessors] The other Assessors should relentlessly support the interests of the Banco and ensure that all employees, in particular the Accountant, do what they are supposed to. In particular they should be present when the collateral against which the bank lends is received or returned, such that, through their presence, all disorder is avoided, and the collateral is correctly valued and in custody. Moreover, they should ensure that on the specified dates the balance sheets are prepared and submitted.

7. [Functions of the Secretary] The Secretary should keep all the writings of the Congregation in good order and archive them; he should prepare the minutes of the meetings and describe there in the most precise manner all issues presented and

resolved. Moreover, he should maintain a journal of all relevant reports, and one with all correspondence, and he should collect there also all notes and evidence which serve the understanding of a report. He should also diligently undertake all the correspondence and he should prepare carefully and thoughtfully all writings and should submit them to the Congregation for their viewing and consideration. He should also sign everything that is issued by the Banco.

8. [Functions of the Accountant] The Accountant is required to execute everything that is suggested to him with diligence; he should maintain full confidentiality and should avoid forbidden correspondence. He should be present in the places necessary in the morning and afternoon to execute his tasks and to register everything orderly in the main and subsidiary books. He will submit the books monthly to the Congregation so that they can be compared with the protocols of the Directors and the Cash Reserve book of the Treasurer. He should also maintain a collateral book, in which the receipt and return of collateral is always correctly noted down. Finally, he will draw a correct balance sheet every time 14 days before the Eastern and Michaelis Fair and will submit them to the Congregation and will do everything else required in his instructions.

Title III: Depositing money with the Banco

1. [Depositing with the bank – procedure] He who intends to deposit with the Banco has first to register with the Congregation, and to signal the amount that he wants to entrust to the Banco. Then this is reported by the Congregation to the Governor such that the necessary banknotes are issued, in order to be able to hand them out to the creditor.

2. [Depositors to provide their signature and seal for future identification] Whoever makes a deposit with the Banco should leave with it his signature and seal; the domestic depositors should do so in a dedicated book for it, the foreign depositors should send them on a separate paper and send them in with the subject: for the recognition of my writing and signet. This is to prevent fraud to the detriment of the Banco or of the true owner through the submission of wrong signatures or seals at the time of repayment or interest.

3. [Custodian services provided by bank] It should be free to everyone to deposit something, as often as he wants, with the Banco. The City halls vault and the cellar under the stock exchange should be available for this anytime.

4. [Minimum deposit size] The minimum deposit one should be able to make with the Banco is 300 Reichstaler.

5. [The monetary standard and guarantee of its maintenance in future] Nobody should worry that someone's deposits would suffer sooner or later from a reduction of the monetary standard. Everyone should have the freedom to deposit his money with the Banco in the form of irreproachable entire Taler coined according to the Reich's raw and fine content ["Schrot und Korn"] of 14 Loth and 4 Grän [i.e. 88.889% finesse], or other sound and current species. It is promised with all force that when the deposits are repaid, those who paid in Reichstaler species should obtain such back, and

whoever deposited [other] current money should receive similar types of coins, as valid and usual at the time of the deposit, or coins equal in terms of value and proportion.

6. [Contact persons to promote the bank in other European commercial cities] So that everyone knows about the establishing of the Banco and about its entire constitution, it has been considered necessary to nominate in the most distinguished cities of Europe persons to which the Banco-constitution will be transmitted in a credible form, and whom those who consider depositing their funds with the Banco can contact to satisfy their needs to obtain necessary information. These persons are: [list of persons/firms, one each in Prague, Vienna, Bolzano, Venice, Florence, Genoa, Milano, Lyon, Paris, London, Amsterdam, Brussels, Cologne, Frankfurt, Nurnberg, Augsburg, Strasbourg, St. Gallen, Zürich, Hamburg, Copenhagen, Stockholm, Berlin, Gdansk, Warsaw, Breslau.

Title IV: About banknotes

1. [Format of banknotes] All banknotes should be written on parchment and be in accordance with the following single template:

“In the name of his Royal Majesty in Poland etc. We from God’s grace Anthon Egon Prince von Fürstenberg etc of the Arc-Princedom of Saxony, also Governor of other countries, I profess in virtue of his Royal Majesty’s otherwise identified pledge, that N on the below specified date has made a deposit in Species Reichstaler to the said Banco. Reichstaler which in total will bear an interest of 6%, with the same content as the deposited money, paid half at the Leipzig Easter fair, and half at the following Michaelis market. The deposit itself will be repaid in same value and sort after it becomes due and when the precisely specified conditions for termination have been respected.”

(L.S.) Egon Prince von Fürstenberg

(L.S.) N.N. The directors

N.N. Secretary

2. [Signing of banknotes, seal, referencing them in main ledger] And as the banknotes document the debt that his Royal Majesty as sponsor of this Banco assumes, they have to be signed by the high Governor and by the Directors from the Council of Leipzig; be stamped with the seal of the Banco; contain a reference to the place where in the Main Books the banknote is registered, with page number, and finally be signed by the Secretary.

4. [Case of loss of banknotes] The banknotes have to be preserved with particular care. If they were lost through unfortunate coincidence, such that one is no longer able to prove one’s claim through the banknote, and the Banco could not discharge itself by taking back the banknote, then the following should be done. The interested creditor, to allow him to obtain again what is his, should duly register with the Congregation, and have this being looked up in the debt-ledgers. If one can find there the stated facts, and everything is right, then he should receive, against the issuance of a

mortification-paper regarding the lost banknote, a new banknote of the usual above-described form. A detailed protocol should be made to register all the circumstances in a diligent and clear manner.

Title V: The payment of interest for the deposited money and the receipts to be issued

1. [Interest rate on deposits and their payment] The interest that arises to the depositors is 6% and is to be paid on two dates, every six months, namely at the Leipzig Easter and Michaelis fairs at the latest on Thursday in the payment week.

2. [Format of receipts for interest payments] For the receipts, the following template will be used and will be printed in German and Latin language: "I having signed below this document confirm that the Congregation of the Banco in Leipzig of his Royal Majesty in Poland has paid me in cash today for my deposits of == Reichstaler interest of == Reichstaler; I therefore give up the excuse of not having received the money, and have therefore issued this receipt."

Title VI: The transfer and reassignment of deposits

1. [Transfers of deposits as reflected by renewed banknote issuance] Whoever wants to transfer and reassign his deposits should be free to do so at any time, but it needs to be notified to the Congregation, so that afterwards this is respected. A decree has to be mandated in which the deposit and the person who benefits from the transfer is stated. Afterwards the Secretary prepares a new banknote, to be signed in the due manner and be registered in the books. Then the old banknote is returned and the new one is handed out, so that the creditors of the Banco are satisfied.

2. [Case of death of depositor / banknote holder] In case of the death of the owner of a banknote the re-assignment to the heirs is necessary. For this to happen, the heirs and in particular the guardians of minor heirs should legitimate themselves through the relevant official documents and afterwards, when being recognised as the legitimate and sole heirs, they should register at the Banco with regard to the interest payments to ensure that they can receive them.

3. [Case of dispute between heirs of depositor] In case of a dispute over who amongst several is the right heir, the money should remain with the Banco until the dispute has been clarified and all interest and deposits can be paid out at once.

Title VII. The repayment of deposited money

1. [Minimum duration of deposits and exceptional partial early repayment] With regard to the termination and recalling of deposits, the notification published on 28 December 1698 already ordered that whoever deposits a basis of 10 to 30 thousand Reichstaler should do so for at least one year, whoever deposits 30 to 60 thousand should do so for two years, and whoever deposits more, for three years. It is possible to exceptionally recall earlier up to one-third of the deposits.

2. [Notice period for withdrawing deposits] Whoever has deposited less than 10,000 Taler in the Banco should give notice 1/4th of a year in advance, whoever has

deposited below 30,000 Taler, half a year, and whoever has more, one year in advance.

3. [Duty to withdraw matured deposits, otherwise automatic prolongation] If the specified notice period has passed, the money should be paid out in a timely way. If however the money is not received and the creditor lets the maturity date pass, then it should be implicitly assumed that the money is deposited for another year with the Banco. A renewed notice would need to be given to withdraw the money, or otherwise a renewed prolongation will automatically take place. A new banknote will be issued to him and should be accepted by him wherever he is.

4. [Termination of deposits by bank] The Banco explicitly reserves its right to terminate the deposits of her creditors in a similar manner.

5. [Written acknowledgement of deposit termination notice] To avoid any confusion, he who wants to withdraw his deposits should obtain from the Congregation a recognition of his termination notice with day, hour and year.

6. [Payment of money by an authorised agent] If someone wants to receive his money or interest back and cannot himself be present, then the one to whom he gives order to receive the money should be sufficiently legitimated through the authorisation confirmed by a court and he should hand over a receipt that is signed by the principal.

Title VIII: About who can obtain loans from the Banco and provides collateral

1. [Eligible borrowers] Cities, municipalities, churches, schools, village and craftsmen associations, factories and such like, according to the legal prescriptions; domestic and foreign merchants; and everyone can be helped with money from the Banco, conditional on them giving protection to the Banco through sound collateral.

2. [Minors and women as borrowers] As also usual for other banks, minors and women without curator, sons still under the force of their father, regardless of the Macedonian Council decision, can borrow money against collateral, so it shall also be for this Banco.

3. [Legal guardians borrowing for their ward and with ward's collateral] Legal guardians may borrow for their ward against collateral, if necessity or utility requires it. If they want to provide as collateral real estate, they however need to obtain consent of the public authorities.

4. [Borrowing under covered name is possible] If someone wants to borrow against sound collateral money from the Banco, but for substantial reasons cannot reveal his name and rank and instead wants to borrow under a covered name, this may be allowed.

5. [Safeguard against pledge of stolen goods] To avoid that this is not misused by the submission of stolen goods being pledged as collateral with the Banco, persons from whom something has been stolen have the option to inform the Banco about it, such that he can be helped if his things surface.

6. [If collateral has been pledged by non-owner] If it materialises that collateral, on the basis of which someone has borrowed, was not owned by this borrower, and the real owner declares himself, then he should receive the collateral, but he should previously pay back the loan and the interest.

Title IX: About eligible collateral

1. [Eligible types of collateral] The Banco can provide advances against all jewellery, gold, silver-tableware, tin, copper, etc. and various current merchandise, however subject to the conditions below.

2. [Land property as collateral] Similarly one will lend against land property, if it is in the Electorate, the included countries or the other lands of his Royal Majesty, in a manner as prescribed below. The property can consist in entire estates or in segregated fields, grassland, woods, or similar.

3. [Discounting of bills of exchange] To make sure that the merchants will be helped even more by this Banco, one has found good that merchants can also obtain money without collateral but on bills of exchange, if such a letter has been endorsed by one further merchant, and if the borrowing merchant owns unpledged land property within the country.

4. [Deposits as collateral] As it can easily happen that someone who has deposited money and according to the amount cannot withdraw it before 1, 2 or 3 years, in the meantime however unavoidably needs a part of it, and would leave another part in the Banco, then a loan can be provided to him without additional collateral as he remains a net creditor to the Banco. The loan will be provided against an as high interest rate as possible, but at least 8%.

Title X: How much to lend on various types of collateral and about the repayment of money

1. [50% Haircut on land property] On land property, half of the value that they have at this place, and an official certificate must provide evidence that it is not yet encumbered with another mortgage.

2. [Haircuts on mobile goods between 2/3 and 1/4] On mobile goods the following loan values should be applied: for gold and silverware three-quarters of the correct value but excluding labour cost; on usual merchandise one half, or in case their quality is confirmed two-thirds; on non-usual merchandise and jewellery one-third. In the case that the jewels have good weight, the Banco may, depending on circumstances, grant him one half.

3. [Haircut on gallant object subject to discretion] What to lend against gallant objects and related merchandise is left to the assessment of the Congregation, because of the variability of fashion.

4. [Minimum loan size] The smallest loan amount should be 50 Taler.

5. [Maximum maturity of loan] The pledged collateral should be cashed in again after one year at the latest. The Congregation can allow an extension if it is duly requested, and the interest has always been paid.

6. [Collateral liquidation when loan is not repaid at maturity] If the repayment date approaches, and is not respected, then on a publicised date the collateral will be auctioned at the bourse if a mobile good, or in the case of land property the foreclosure will begin. No prior execution, nor valuation are required, but at the fixed date the proclaimed pieces will be directly attributed to the highest bidder. An explicit derogation applies to the requirement of valuation foreseen in the code of procedures. The surplus of the proceeds can be paid out, after subtraction of interest and costs, to the previous owner, or if in the context of an insolvency, according to the royal laws, also to the creditors.

7. [Recourse to guarantor if no collateral was provided and loan is not repaid] In case no collateral had been provided, one has to act as follows: if a merchant had submitted a bill of exchange that another third domestic person had endorsed, execution applies to the Principals according to the law of bills of exchange, towards the endorser, but in case of amicable payment with subsequent liability of the hypothecated land property, as necessary. The latter is also to be taken from the members of craftsmen unions and municipalities, if they have committed as guarantor jointly and separately.

Title XI: How the collateral is to be valued, and what to be done in case of unexpected failure

1. [Valuation to be done by sworn in experts] Every collateral needs to be valued by one or two persons that have been explicitly mandated to do so by the Banco and who have the best expertise and need to have been sworn in under the royal authority, and in particular for precious objects need to attest the value. The Congregation is not bound to any valuation other than this one. The statement of the valuers is to be made in the full assembly so that the Secretary can record duly the entire context. The ones who have submitted the collateral have to accept the diligent and final valuation.

2. [Collateral pledger to pay valuation costs] The one who submits the collateral has to pay the valuation and custody fees, the letter relating to the suitable separated place. The amount of the fee will be specified each time in an equitable manner by the Congregation, and the valuers must accept it.

3. [For pledged land property, Banco to seek confirmation from public authorities] To avoid that the Banco makes losses in case of unexpected failures and is even better protected, it will, when lending against land property, seek the consensus and confirmation of the relevant public authority, which should, without imposing fees, comply with the request.

4. [Claims of Banco senior to all other claims] All other creditors are junior to the Banco, whatever the other creditors may want to have as privileges.

5. [Pledging of fief] He who wants to borrow money from the Banco while pledging fief, had to receive and submit the consent of the liege lord and the co-feoffed.

6. [Case of depositor's default] If in case of a default, money remains as deposit with the Banco and fruitlessly remains there, then the creditors should be informed [and be given banknotes] and interest of 2 to 3 percent should be paid depending on the circumstances, but once the court's designation decision has become legally binding, the assigned money and interest is to be paid out immediately.

7. [Banco not subject to normal legal court proceedings] Finally, the Banco should not be involved in any lawsuits, nor should appeals be permitted in its affairs, which should proceed irrespectively. The protest should be considered to be solved outside legal proceedings and a subservient report on the matter and its development should be prepared. If someone believes that his complaint would still not be solved by that, he should be permitted to seek his relief obediently with the Council for General Revision [General-Revisions-Rath] and will have to see its rapid resolution there.

Title XII: What the Banco is allowed to take as interest

1. [Interest rate on loans] Since the Banco will remunerate deposits with six percent annually, his Royal Majesty has allowed the Banco to take 7, 8, and 9 percent or even more depending on things and circumstances and should not be concerned about being liable for having thereby committed usury.

His Royal Majesty's most gracious will and opinion is that this Banco regime is being applied in the highest obedience, in all points and articles, in terms of content and meaning, and that nothing is being done nor performed against it. Hence several copies have been issued and been given his Royal Majesty's highest General Revisions Council's seal and been signed by the highly esteemed Governor. Given in Leipzig, Pleissenburg Castle, the 10th (20th) May 1699.

Egon Prinz von Fürstenberg (L.S.); Bernhard Zech; Heinrich Dauderstadt/S.

6 Banque Générale (1716-1718/20)

6.1 Schematic overview

- Genealogy: Courtois (1875, 1) believed that there had been no trace of any attempt to found a central bank up till the end of the reign of Louis XIV, because in France “the arbitrariness in financial matters was too much the rule ... to allow for the possibility of an institution based on trust, order and equitableness.” The comprehensive study by Paul Harsin (1933) corrected this view, providing evidence of a number of projects of national public banks since the middle of the 16th century. A first project of a central state bank failed in 1548, mainly because of a negative assessment by theologians, who emphasised that the planned interest charged on loans would be usurious, and that the bank would likely accumulate excessive power in economic life (Harsin, 1933, 5-9). A second such project was rejected in 1566, again despite royal support (Harsin, 1933, 9). A third project, this time explicitly aimed at establishing a “Banque de France”, was even approved by the Conseil royal on 20 December 1608, but again did not reach the implementation stage (Harsin, 1933, 10-11). For all three of these state bank projects, there was however no evidence that they would have aimed at issuing central bank money in the form of either deposits or paper notes. The first true central bank project, namely a state giro-bank following the Venetian example, was proposed in 1644 (Harsin, 1933, 11-14), with a rather detailed document issued that year in French, outlining the project (provided by Harsin in an annex, p. 95-98). The bank would have had privileges similar to those of the successful central banks of that time (monopoly in settling bills of exchange, payment in bank money would be commanded and acceptance could not be refused, bank money could not be seized by authorities; Harsin, 1933, 95). The project document explains the strong efficiency advantages of giro-payments relative to the ones of specie payments and the positive impact on commerce (p. 96). Finally, the document of 1644 extensively describes the advantages of the project for the King, namely in terms of the regular profit that the bank would generate (such that the King could reduce taxes), and as source of credit for the King (p. 97-98). The bank would have been managed by an experienced banker from Venice who would have moved to Paris for this purpose (p. 98). Evidence on how the project was received, and why it did not reach the implementation stage is missing, although it would have been extensively debated (p. 13).

The next wave of projects for a Banque de France started in 1701 and continued almost without interruptions until John Law was eventually successful in launching the Banque Générale in 1716 (Harsin, 1933, 15-53). All were heavily inspired by the Bank of England, created in 1694. An outstanding project in terms of preserved documentation was the one promoted by a Frenchman from London, on the basis of a design by an unidentified non-French person. The Frenchman described the project in three letters dated January/February 1702, presumably addressed to Louis XIV's morganatic wife Madame de Maintenon, and in a detailed annex entitled the “Mémoire au sujet de l' établissement d'une

Banque de France”, covering all key aspects of the envisaged bank, such as its capital, governance, liabilities, assets, economic advantages, and benefits to the crown. Like the Bank of England, it would have issued banknotes and would have conducted both discount and collateralised lending operations, i.e. it would have been a complete and modern 18th century central bank. Harsin (1933, 26-30) believes that the non-French person behind the project to whom the French author of the letters refers to would likely have been no-one else than John Law, but e.g. Murphy (1997) does not take up this hypothesis.

Instead of implementing the “Banque de France” project of 1702, France issued between 1701 and 1711 non-convertible “billets de monnaie”, a form of state paper money to address the scarcity of specie and the poor financial situation of the crown (e.g. Murphy, 1997, 116-117). A number of further banking projects launched between 1702 and 1715 all did reach the implementation phase (Harsin, 1933, 37-53).

John Law, the intellectual father and founder of the first central bank of France in 1716 was a Scottish gambler, economist and banker who had spent, before coming to Paris, years of his life in London, but also had been for extensive periods in Amsterdam and Northern Italy, and was thus well aware of the central banks in those places (e.g. Murphy, 1997). In addition, Law was obviously an original thinker himself, and author of a book which is often regarded as the most advanced one on money and finance of the early 18th century (Law, 1705; Murphy, 1997, 77). In his first years as an economist, he was a prominent proponent of land-based central banking, but at the latest with his proposal for a bank in Turin (with similarities to the Banque Générale proposal) he had given up the land bank idea. As summarised in detail in Murphy (1997) or more concisely in Roberds and Velde (2014, 62), Law, after moving to Paris in 1713, submitted first a proposal for a public bank to the King in 1715, designed to be both the fiscal agent of the Government and issuing notes. Initially, this bank was conceived as a 100% reserve bank, but its eventual objective would presumably also have been to improve credit conditions and increase the money supply (Murphy, 1997, 138-148; Roberds and Velde, 2014, 62). The proposal was however rejected as premature (as 9 out of 13 bankers and merchants in a hearing opposed the scheme) and the Government solved its acute fiscal issues instead by a devaluation and debt conversion into perpetual bonds. Instead, in 1716, Law was granted the right to establish a private bank, close to the example of the Bank of England, with initial capital to be provided in the form of government debt. As Velde (2007, 276) notes, “the bank’s business was to discount merchant bills and bills of exchange and to issue notes”, which all resembles the Bank of England.

- Place in the history of central banking: It was effective as a note-issuing bank at the beginning and until sometime in 1719 a true success in terms of improved payments and credit conditions in France. According to contemporaneous reports, it “succeeded, inter alia, in increasing the money supply, reducing the interest rate, improving France’s exchange rate with other countries, and helping to re-animate a moribund commercial sector” (Murphy, 1997, 149). According to

Steuart (1767, Book IV, Part 2, chapter XXV) the bank “obtained great credit” and all relevant writers would have “abundantly” certified the “incredible advantage produced by the operations of Mr Law’s Bank”. The 1716 bank also was innovative in a number of details, such as that notes were denominated and payable on demand in silver coins of a specific weight, defining the unit of account of the bank, rather than in units of account established by the Government (see Steuart, 1767, Book IV, Part 2, Chapter XXV; Roberds and Velde, 2014, 63). This aimed at protecting the central bank money holders from the Government debasing the currency. Later on, the bank innovated in various aspects, although unfortunately ending in the “banqueroute de Law”. According to Velde (2007, 278) it would have been the first full-scale implementation of a fiat currency in Europe. It destroyed the reputation of banking and banknote issuance in France for at least 50 years. The note circulation in mid-1719 would have been 40 million livres, comparable to the one of the Bank of England (Roberds and Velde 2014, 64).

- Policy objectives: Initially the idea of the Banque Générale was to support the economic development of France by making it benefit from a central bank, as other commercial places had one, as described in detail and clarity in Law (1715a), (1715b) and briefly in the preamble of the charter itself: “The advantages that public banks have provided to several states in Europe, of which they have sustained the credit and re-established trade and supported the manufacturers have convinced us of the utility that our people will benefit from of such an institution”. Also Velde (2007, 278) considers that “the primary purpose was not deficit financing, but stimulating the economy by the provision of credit and an efficient payments system”. The miserable state of France in 1715, that Law wanted to redress through his bank, is described openly in Law (1715b):

“France is reduced to a weak and depressed state. The people are overloaded, the state debt has increased strongly, the crown is forced to fail on its promises, the navy is neglected, the species are exported, the industry and commerce are abandoned, the merchants reduced to bankruptcy, the population and royal revenues reduced, luxury expenses strongly increased, considerable economic inequality, on one side extreme wealth, while the others can hardly survive: eventually the state withered and neglected from the high rank which it should hold amongst the powers, while the other nations have augmented in strength and wealth, by supporting the public trust and the industry of their people.”

He also assesses the French fiscal system as bad (“mauvais”) while the English one would only be “mediocre” (1715b, 566) and notes that “the English understand money, credit and commerce better than the French” (1715b, 564). The remedy that Law proposes is the establishment of a bank that would, similarly to the Bank of England, eventually also lower the funding costs of the Government and thereby make it possible not only to redress commerce, but also the state, as “the experience of all commercial nations has confirmed the utility of banks” (1715b, 564) and as “money is for the state what blood is for the human body” (1715b, 567). The “fiscal” intentions of Law are already rather clear in

1715b although he is careful enough to acknowledge that the restoring of state credit will have to take place gradually (p. 568):

“It is possible to improve the state debt, and to carry it from a discount of 60% to one of 50% or 40%. If the project is built on good principles and implemented in order, it will carry it to parity in limited time. But one has to go step by step, as a child cannot carry the burden of a man”

Law (1715b) suggests that his project could lower interest rates as far as to 2%, which would:

“relieve the King by reducing the interest on debt and charges, etc.; ... would relieve the nobility owning indebted land; enrich the latter as the price of fruits would increase, enrich the merchants who will be able to borrow at lower cost, and would provide work for the people. ... millions of people who are now a burden to the state would find work, and could gain enough to live pleasantly.”

- Private or public ownership: While the rejected 1715 bank scheme was the one of a public bank, the actual Banque Générale of 1716 was established as a private company. However, the bank was then gradually nationalised: in mid-1718 the King held 90% of the shares, and in December the rest of the shares was absorbed at par value and the Bank was renamed the Banque Royale.
- Assets: Capital was paid in up to an amount of 75% in the form of government bonds, implying a corresponding asset position (the rest of the capital was to be paid in in the form of specie). According to Roberds and Velde (2014, 62), the Banque Générale was only allowed to hold precious metals (coins and bouillon) and to discount bills of exchange and commercial bills. Murphy (1997, 149) also considers that the bank was “constrained by its charter from lending money to the Government or to the private sector” but acknowledges that Law would have “interpreted the statutes differently involving the bank in credit creation” (p. 161). Murphy (1997, 161) also quotes Law as reporting that

“It advanced funds to restore and maintain the manufactures. It prevented bankruptcies. It lent to merchants to help sustain them, and after some months it reduced its interest rate from 6 to 4 percent.”

Consulting the charter and the regulation of the bank (see below) does not actually make it possible to ascertain a prohibition of Lombard lending, although it is true that only discounting is mentioned explicitly as an operation of the bank in Article XVII of the regulation. Article XVIII deals explicitly with prohibited activities, but does not refer to Lombard lending as being prohibited. Also, in view of the preamble to the charter of the bank, and the writings of Law (1715a), (1715b), there should be no doubt that Law was not aiming at a bank with tightly constrained asset activities. As of 1719, the bank engaged in large public debt refinancing and the funding of state-run corporates (see below).

- Liabilities: Deposits, banknotes, and capital. The issuance volumes of banknotes are reported in Murphy (1997, 159). Murphy (1997, 158) notes the rather low paid-in capital.

- Special measures to support its success: The bank was allowed to issue banknotes (bearer notes), and was the only entity exempted from a prohibition to do so, i.e. it had a monopoly to issue banknotes. The Government soon made it possible to pay taxes using the banknotes. In 1719, a series of laws deprived gold and silver of legal tender status but for small amounts and banknotes were practically declared to be the sole legal tender. The possession of gold and silver above a certain amount was made illegal, amounts beyond that had to be exchanged against banknotes.
- How and why the bank ceased operations: Steuart (1767, Book IV, Part 2, Chapter XXV) notes that a major step towards the eventual fall of the bank was that, in the context of its nationalisation in January 1719, the clause was abandoned that the banknotes had to be associated with a certain silver value, and could not lose silver value when coins were debased on the basis of a royal decree. By early 1720, the amounts of banknotes in circulation increased by a factor of 10. At the same time, Law, now Finance Minister, launched a scheme, involving the *Compagnie des Indes* (which he had founded in 1717) to convert the entire national debt into a new 3% debt, and merged the *Compagnie des Indes* with the *Banque Royale*. The scheme triggered a loss of confidence, inflation and exchange rate depreciation, which Law tried to halt by a reduction of the face value of banknotes, which however created additional panic. Banknotes were demonetised in 1720, and the bank's liabilities other than equity were converted into government debt. Various decrees changed the money regime in France in various directions in the course of 1720, also as an attempt to first push to the limit, and then to save the system, including radical measures such as the demonetisation of gold and silver on 11 March 1720 (Murphy, 1997, 220; more generally in the year 1720, e.g. Murphy, 213-311). After this decree was revoked, and various other decisions in the meantime, Banknotes lost legal tender status on 10 October 1720 and the pre-1716 regime without a central bank was fully restored (Murphy, 1997, 266). Banknotes became part of the debt restructuring of 1721 (described in detail by Velde, 2016).

Sources: Law (1715a), (1715b); Harsin (1934), Murphy (1997), Velde (2007), Roberds and Velde (2014, 61-66); Savary and Savary (1750).

6.2 Charter of 2 May 1716

The following is a translation of the “Lettres Patentes du Roy, portant privilege au Sieur Law & a sa Compagnie d’ établir une Banque generale & de en stipuler Escus de Banque du poids & titre de ce jour”, issued in Paris on 2 May 1716 (“Royal charter providing a privilege to Mr Law and his company to establish a general Bank and to stipulate in bank Ecus in the weight and title of this day”). It can be found online on the French banknote collector website multicollec.net.

[Article 0.]

[I. Recognised advantages of a public central bank, but conclusion not to launch one after hearings of stakeholders] Louis by God's grace King of France and of Navarre: to all who will see the following, be saluted. The advantages that public banks have provided to several states in Europe, of which they have sustained the credit and re-established trade and supported the manufacturers have convinced us of the utility that our people will benefit from of such an institution. Mr Law having proposed to us some months ago to establish one, of which the capital would be composed of our public funds and which would be administrated under our name and under our authority, the project has been examined in our Financial Council [Conseil des Finances], in which several bankers, merchants and delegates of the commercial towns have been called to provide their views, and all have agreed that nothing can be more advantageous for our Kingdom, which, due to its situation and fertility, together with the diligence of its inhabitants, would only have needed a solid credit to attract the most flourishing commerce. Nevertheless, they believed that the current conjuncture would not be favourable and that it would be better to establish such an institution on the basis of a company. These reasons linked to some particular conditions of the project have led us to refuse it.

[II. Alternative project of a private central bank, requested by Mr Law; its purposes] But the said Mr Law has invoked us to grant him the right to establish a different kind of bank, of which he would offer the capital, of his own funds and of those of his company, and with which he would propose to increase the circulation of money, stop usury, substitute the transport of species money between Paris and the provinces, provide the means to foreigners to invest without risk in our Kingdom, facilitate to our people the financing of their food and the payment of their taxes.

[III. Request of 20 years privilege; importance of invariant unit of account of bank] The grace he asks us for is to grant him a privilege for 20 years, to permit him to stipulate in bank ecus which will always be of the same weight and of the same title, cannot be subject to any variation, which is an essential and absolutely necessary condition to acquire and preserve the trust of our subjects and of the foreigners.

[IV. Necessity of qualification of bank management] We ask at the same time to nominate the persons of known honour and intelligence, to have supervision of the Bank, to check the banknotes, to check and sign off the books, such that the public is fully convinced that exactness and faithfulness will be observed.

[V. Conclusion to respond positively to request of Mr Law and to make the Duc d'Orléans its protector] And as it appears to us that this institution, in the way it is proposed, cannot cause any inconvenience, that on the contrary there is reason to expect that it will have an immediate and favourable success, and that it will produce advantageous effects, following the example of what happens in neighbouring states, we have thought that we should grant to the said Mr Law, of which the experience, brilliance, and ability are known to us, the privilege that he has asked us for, for him and his company. And our very dear Uncle, the Duc d'Orléans, Regent of our Kingdom, who is attentive to everything that which can relieve our people and achieve the good of our state, has thought that it is not unworthy of his rank and birth to be declared its protector.

For this reason and following the opinion of our very dear and much-loved cousin the Duc d'Orléans regent, of our very dear and much-loved uncle the Duque of Maine, of our very dear and much-loved uncle the Count of Toulouse, and other lords of France, great and official persons of our Kingdom; in our certain knowledge, full capacity, and royal authority, we have by the present, signed by our hand, stated and ordered, want and like.

First Article [1.]

I. [Exclusive privilege to run a central bank for 20 years; denomination of books/contracts in écus] That the said Mr Law and his company should have the exclusive right and privilege to establish at their own account a general bank in our Kingdom and to maintain and run it over 20 years, to count as of the day of registration; they are allowed to stipulate, maintain their account and issue their notes in species ecu, under the name of bank ecu, which will be understood as ecu of the weight and title of this day; we allow similarly to our subjects and to foreigners who will negotiate or enter contracts with them to stipulate in the same manner, such that the money is subject of no variation at all, with the sole derogation of ordonnances, edicts, declarations and arrests to the contrary.

II. [Tax exemption, protection of shares and deposits] We want that the said bank is free and exempted of any taxes and impositions, and that the shares of the bank and the sums that will be deposited with it by foreigners, cannot be subject of the right of devolution, of confiscation, of retaliation letters, even in case of war between us and the princes and states of which the said foreigners would be the subjects; we renounce explicitly to our rights.

III. [Template for banknotes] The notes of the bank will be done in the format according to the template attached to the present letters and they will be signed by the said Mr Law and by one of his associates, supervised by the Inspector who will be designated for this role.

IV. [Cash vaults] The general cash vault of the bank will be closed by three lockers and three different keys, one of which will be kept by the said Mr Law, another one by the Inspector, and the third one by the Treasurer.

V. [Accounts of bank] Mr Law and his company will maintain registers in good form and signed off and paraphed by the Inspector of the bank.

VI. [Location of office and opening hours] The main office of the said bank will be located in Paris in the house of the said Mr Law, or in some other quarter of the town which will be judged convenient and comfortable for the public; it will be open every day from 9 a.m. to noon, and from 3 p.m. to 6 p.m., with the exception of Sundays and on holidays.

VII. [Bank open to everyone] Every person will be free to deposit its funds with the bank, for which they will receive banknotes payable on sight.

VIII. [Prohibition to forge banknotes] It is prohibited under pain of death to fabricate or falsify the banknotes, or to duplicate the seal or the printing plate on which the said banknotes will be engraved.

IX. [Duke of Orléans the patron of bank] Our very dear and much-loved uncle the Duke of Orléans will be the protector of the bank, of which he will be presented the accounts or to those he will propose, as often as he will consider useful; he will also nominate the Inspector of the bank and will be able to replace or change him as he will judge it; The regulations, projects and operations of the said bank will be presented to him to obtain his approval, and as needed will be confirmed by us.

X. [General bank should not prevent normal banks to continue operating] We declare in addition that by granting the privilege to Mr Law and his company we do not have in mind in any way that the bankers of our Kingdom would be prevented from continuing their business as usual.

[Registered and signed in Paris on 4 May 1716, Dongois]

It follows as annex a template for banknotes of 10, 100 and 1000 ecus. The template for the 10 ecus banknotes is:

No.Ten Ecus in species

The Bank promises to pay to the bearer at sight ten Ecus in species of the weight and title of this day, amount received, in Paris the

of _____ 171_.

6.3 Regulation of 20 May 1716

The following is a translation of the „Lettres Patentes du Roy, contenant Reglement pour la Banque generale, accordée au Sieur Law, & à sa Compagnie, Données à Paris le 20. May 1716”, i.e. “Mandate of the King, containing a Regulation for the Banque generale, granted to Mr Law and his Company”, given in Paris on 20 May 1716. It can be found online on the French banknote collector website multicollec.net.

Preamble: Recalls the authorisation to establish the Banque Générale of 2 May 1716 and provides legal formulas similar to those in the preamble of this previous text.

Article I. [Capital of the bank] The capital of the bank will be composed of 1200 shares of 1000 Ecus each; thereby the capital will be 1.2 million bank ecus, i.e. 6 million of current species money.

Article II. [Subscription of shares] On 1 June, a register will be opened with the Director Mr Law (at Place Louis-le-Grand) to receive there the subscriptions of persons who will find interest in it, and who will buy the number of shares that they would like to.

Article III. [Register of share subscription] This register will be maintained and signed by the Director, and by Mr Fenelon, member of the Commercial Council, nominated by our very dear and very loved Uncle the Duc d'Orléans, Inspector of the said bank.

Article IV. [Location and opening times of bank] The bank will be held (awaiting that, one will be able to find a location that is more convenient for the public) in the house of the said Director Mr Law, and it will be opened every day from 9 a.m. to noon and from 3 p.m. to 6 p.m., with the exception of Sundays, holidays, and the days foreseen for drawing the balance sheet of the bank.

Article V: [When the bank will start operating] The bank will start operating as soon as it has received the subscriptions for the 1200 shares, and when the shareholders will meet in the house of the bank, to choose the officers who will be needed for the management and detail of the said bank, and to determine and order the payment of the shares.

Article VI: [Voting and voting rights in General Assembly] In this assembly, and in the other General Assemblies of the company, everything will be decided by majority vote, whereby the votes will be counted as follows: those who will have 5-10 shares will have one vote, those with 10-15 shares will have two votes, and so on every five shares. Those who have less than 5 shares will have no vote.

Article VII: [Drawing the balance sheet] The balance sheet of the bank will be made twice a year, and for this purpose the bank will be closed from 15-20 June and from 15-20 December.

Article VIII: [Regular General Assemblies] There will be two General Assemblies of the company, which will be held in the house of the bank, on 20 June and on 20 December at 10 am. One will discuss there the affairs of the company. The first one will be held on coming 20 December. In each of these assemblies one will specify the dividends or repartitions which will be paid to the shareholders.

Article IX: [Vaults of bank] The vault of the bank will be divided into the general vault and the ordinary vault. The general vault will be closed with three lockers and three different keys, of which one will be guarded by the Director one by the Inspector, and the third by the Treasurer, such that this vault can be opened only in the presence of the three persons.

Article X: [Ordinary vault] The ordinary vault will be entrusted to the Treasurer and cannot surpass 200,000 bank Écus. Each of the cashiers cannot have more than 20,000 Écus, and they will all give sufficient security for the amounts that will be entrusted to them.

Article XI. [Banknotes] The banknotes of the bank will be signed by the Director and by the Associates who will be nominated by the plurality of the votes in the first Assembly and are accepted by the Inspector. In one go, the quantity judged necessary will be produced, and will be registered by numbers, dates, amounts, in a book maintained for this purpose.

Article XII. [Security features of banknotes] The seal of the bank will be impressed on the banknotes, in the presence of the Director, the Inspector, and the Treasurer, after which the banknotes will be signed, accepted and locked, and be put in the general vault, together with the seal of the bank and the printing plates, on which the banknotes would have been engraved.

Article XIII. [Issuance procedures for banknotes] When the Cashiers need money, the Treasurer will furnish it to them and will withdraw at the same time [from them] the value in banknotes. He will also provide them banknotes and will withdraw from them the value in money. The same operation will take place between the vault of the Treasurer and the General vault, in a way that the vault entrusted to the Treasurer can never exceed 200,000 ecus.

Article XIV. [Book registering share transfers, related fee] The bank will maintain a book for the sale and transfer of shares and the seller will pay in bank ecu for every share he will transfer, and in this book he will sign the sale and transfer.

Article XV. [Cost efficiency of banknote use and universal access to them] To prevent the loss from the charges of species measurement, fees, and other inconveniences of payments in species, it will be free to all persons to bring their funds to the bank, for which they will receive banknotes payable on sight.

Article XVI. [Opening deposit accounts and related fees for transfers, deposit book] To facilitate commerce, the bank could task itself to be the depository of individuals, for earnings and expenses, and it will make at their choice payments or transfers, with on average five bank sold for 1000 Bank ecus. The company will nominate two Commissioners to maintain the books of transfers, and for earnings and expenses of individuals.

Article XVII. [Discounting of notes and bills] She [the bank] will discount notes or bills of exchange in the way it is specified by the company.

Article XVIII. [Prohibited activities] As this institution must not cause damage to individuals, merchants, bankers, and brokers, the bank will not be engaged, either in land- or in maritime trade, or in maritime insurance, and she will also not engage in brokerage against commission, either within or outside the Kingdom.

Article XIX. [Prohibited liabilities] The Bank will not issue any notes payable at term. Instead, all of the notes issued have to be payable on sight. She will not be allowed to borrow against interest, with whatever justification, and not in any imaginable way.

Article XX. [Inspection of vaults] The Director will visit the vaults at least once a week, or more often if he judges to do so, without having marked any day. The Inspector could attend these visits, and similarly the shareholders who will be chosen at the General Assembly as Commissioners for the management of the bank, jointly with the Director.

Article XXI [Power of Council of bank to appoint and regulate] The Council of the bank will have the power to order, with the plurality of votes, the appointments which it will

judge adequate and useful for the good of the bank, and to adopt the specific regulations concerning the administration of the bank.

[Final formula of formal endorsement of this regulation]

7 Royal Bank of Berlin (1766-1846)

7.1 Schematic overview

- Antecedents: It was King Frederic II (the Great) of Prussia's fourth attempt to set up a central bank. The pre-Napoleonic phase of the bank begins in 1767 with a revised statute and ends with Napoléon's invasion of Prussia in 1806. The chronology of events before 1768 is as follows:
 - September 1753, publication of a royal charter for a giro and exchange bank to be established in Berlin, designed by the Prussian Mint Master Graumann (Niebuhr, 1854, 16-19; 173-177). Opposition to this plan from merchants and estates would have been such that it was soon abandoned and no financial operations were ever launched to establish it.
 - October 1764: opening of a Banking Commission to design and launch a new private capital-based central bank project, subscription of capital starting on 19 October 1764. Publication of a document describing the plan on 13 November 1764 (reproduced in Niebuhr, 1854, 178-180). Private capital subscription failed.
 - June 1765: a new public bank plan is launched, as defined in the "Edict and Regulation of the royal giro and lending bank" of 17 June (reproduced in Niebuhr, 1854, 185-199). Financial operations start soon with a provision of a royal capital injection of 0.4 million Taler (out of 8 million promised). The bank attracted only limited deposits and was soon exploited for lending operations to the entourage of the financial advisers of the King. The bank had to suspend convertibility already on 19 October 1765, and trust in the bank was thereby already destroyed after three months (Niebuhr, 1854, 19-38).
 - October 1766: a revised charter is published which would in principle apply until 1846 (although with numerous deviations from it in the practice of the bank, see Niebuhr 1854, 80-81). Operations of the bank start in 1767, inheriting the balance sheet of the 1765 bank and its large negative capital. However, the King's readiness to fulfil his guarantee towards all depositors restored trust in the project, eventually leading to inflows of savings deposits and a gradually growing balance sheet for the coming decades.

Niebuhr (1854) emphasises the role of Italian and Dutch banking experts who were involved in setting up the schemes in 1764 and 1765, suggesting that existing central banks in the two countries also served as models. According to the charter, the bank would have been designed after a detailed investigation of the banks of "London, Amsterdam and Hamburg", while taking into account the specific properties of Prussia (Niebuhr, 1854, 185-196). The King also involved himself increasingly in the design of the bank (without much expertise), and the foreign advisers were ready to accommodate his ideas. The awkward wording of

the statutes of the bank probably also reflected both the greed of the advisers who themselves wanted to benefit from the bank (and exploit it for providing credit to enterprises that they would run), and the naïve ideas of the King. Temporarily, the idea was to launch the bank as a comprehensive financial conglomerate in the style of the system of Law in which the bank would run the major trading monopolies (Niebuhr, 1854, 179).

- Place in the history of central banking: An example of poor central bank design – working in practice only by ignoring most articles in its statutes, and eventually developing into a public savings bank. In 1806, the bank had a balance sheet sum equal to 42 million Taler, or around 700 tonnes of silver (by comparison, the Bank of England had in 1800 a balance sheet of 4658 tonnes of silver, and the Hamburger Bank 236 tonnes). The bank was more a public savings and mortgage bank, and it did not experience significant giro-payment activity on its liability side, nor did it issue banknotes on a very large scale (Niebuhr, 1854, 51). Also, the bank’s separation from the rest of the official sector became less and less clear. Official sector depositors were important, and the bank was considered a source of government income, government funding, and funding of politically desired development, such as mortgage loan provision to newly gained provinces that the state wanted to see catch up economically.

- Policy objectives: The King hoped, according to the statutes of the bank, “to stimulate the circulation of money and the diligence of our subjects, and eventually to prevent the excessive and outrageous usury which so far, despite the laws, has kept our nobility and all other subjects who needed cash, in a cruel and unbearable yoke”.

The King was also deeply unhappy that the Prussian currency was trading at a discount in Hamburg, relative to where he believed it should stand. Already in the preamble of the statutes of a Prussian central bank project of 1753, the Hamburger Bank had been blamed extensively for allegedly distorting the value of the Prussian currency by its “arbitrary” and “wrong” monetary constitution which would keep the Berlin merchants under permanent “uncertainty and danger” (Niebuhr, 1854, p. 172-173).

- Private or public ownership: Public ownership and supported by a public guarantee. The 1765 bank plan had foreseen a private capital structure like the Bank of England, which however failed due to a lack of interest of private investors.
- Assets: The rules and procedures of the bank, which were annexed to the statutes, foresaw both the conduct of discount (Articles 23-27) and Lombard operations (Articles 32-35). In practice, the bank engaged extensively in longer-term lending before 1800, including mortgage loans (Niebuhr, 1854). The result can be seen in the asset side composition of the 1806 balance sheet of the bank, shown in Niebuhr (1854, 214). Mortgage loans (13 million Taler) are the largest single asset, followed by Lombard lending (10 million) and precious metals (9 million). Credit to the public sector amounts to 6 million.

- Liabilities: Dominated by savings deposits. One provision in the rules and procedures regarding giro-deposits undermined the functioning of the bank from the beginning: deposits could be withdrawn only up to the amount a depositor had personally paid in and it was not possible to convert deposits into species if the deposits were obtained through a giro-transfer from another depositor. Unsurprisingly, the bank developed into a savings banks with essentially longer-term deposits on its liability side. With regard to interest rates applied on the various liabilities, Niebuhr (p. 77-78) notes that interest rates on private deposits (including deposits by charitable foundations) were initially 3% but were then gradually reduced to 2% since the initial 3% was too attractive in view of the state guarantee on deposits, and such a high rate led to disproportional deposit inflows. For government deposits, the approach was heterogeneous, with sometimes a zero-rate applying and sometimes up to 5%. There was a general feeling that it does not matter as anyway the money would stay within the state sector, illustrating a poor separation between the bank and the rest of the state. The highest level of banknotes in circulation was reached in 1798 with 1.6 million Taler. In 1806 Prussia decided to no longer issue any new banknotes, but to rely on state paper money. The bank had no initial capital.
- Special measures to support its success. A number of dubious obligations aimed at imposing the use of the bank on the Prussian merchants, but this did not help to make the bank a success because of their coercive nature and lack of realism. In particular: Article 2 – Universal unit of accounts in Prussia: “All public administrations and merchants in Prussia are to have their books as of now in Pound Banco”; Article 3 – compulsory settlement of bills through the bank: All bills of exchange of a value above 100 Taler are to be settled through the Bank; Article 6 – All commercial and financial transactions in Prussia are to be denominated in Pound Banco and have to be settled through the bank. For real estate transactions the reliance on bank settlement is voluntary; Article 7 – Deposits with the bank can be used to make any payments of taxes, duties and tariffs to public authorities, but there is no compulsion (i.e. such payments can also be made in precious metal currency). The statutes also provide a universal public deposit guarantee: “For the security of the bank and of all money deposited in it, we and our successors are fully liable, without exceptions in times or persons” (Article 5 of the Edict of 29 October 1766). This guarantee would become very relevant after the disastrous impact of the Napoleonic wars on the banks’ assets.
- History of convertibility: Article 14 of the bank regulation of 29 October 1766 contained the rather odd provision that it would not be possible to revert deposits into species if one had not previously paid in the species money oneself. No relevant giro-transfer system developed in practice, which may also have been an outcome of this provision (Niebuhr, 1854, 81). Convertibility was fully suspended in 1806 after the defeat of the Prussian army against Napoléon, and started to gradually resume only in the late 1820s.
- How and why the bank ceased operations: The bank had to stop convertibility with the Napoleonic conquest of Prussia in 1809, and convertibility could only be

fully re-established in the 1830s, as described in detail by Niebuhr (1854). In the meantime, the bank had to manage a huge negative capital resulting from the loss of foreign possessions and large-scale defaults of debtors due to the war with France. The bank was converted into the Prussian Bank in 1847, which itself became the basis of the Reichsbank in 1875.

Sources: Niebuhr (1854), von Poschinger (1876), Roberds and Velde (2014, 74-78).

7.2 Charter of 29 October 1766

The following is a translation of the first part, namely the “Edict”, of the text “Revidiertes und erweitertes Edict und Reglement der königlichen Giro- und Lehn-Banquen zu Berlin und Breslau. Berlin den 29sten October 1766” (“Revised and extended Edict and Regulation of the Royal Giro and Lending Banks in Berlin and Breslau. Berlin, 29 October 1766”) as provided by Niebuhr (1854, 200-201). It was applicable (together with the Regulation shown in Section 7.3) in principle from 1766 to 1846, although, as Niebuhr (1854, 79-80) notes, many of the provisions were systematically ignored in practice.

[I. Objectives of establishing a bank] We, Friedrich, etc. declare and make everyone know: We have always devoted privileged and serious attention to developing commerce, the flourishing and growth of industries, the convenience of bills of exchange, and the rapid and beneficial circulation of money in our countries. With this intention, and to facilitate commerce for the public, and in view of our responsibility as father of the country, we had established, at our own cost, last year a giro-Banco first in our residence Berlin, and afterwards in our Silesian capital Breslau. To our gracious satisfaction, our faithful mercantile community at both places made use of the bank.

[II. Banknote issuance and its objectives] As we however noted that the other towns and places of our countries, because of their remoteness, could not benefit from such giro-banks and from the activity they gave to commerce, we have decided, after careful consideration, to give new value to our banks, which will consist in the issuance of banknotes. The banknotes will be issued by the two existing banks, and by new discount desks to be established in our primary commercial centres. As of 1 January 1767, the banknotes will circulate in all our countries, they will be available to all our subjects without a difference to circulating species, thereby increasing the quantity of money, reduce the interest rate on money, facilitate commerce, and more generally provide to commerce an impeccable means to develop more and more, and to overcome as much as possible the obstacles which so far have hindered it from flourishing and developing.

[III. New regulation to replace previous regulation of bank] To this end, and to support the above-mentioned beneficial objectives, through a continuation of our banking institutions, we have not only revised the Giro- and Lending Banco regime of 17 June of the previous year, including the subsequent related specific announcements, but also have expressed our highest will by the present renewed Banco-Edict and the

attached regulation, with a complete revocation of the previous year's Edict. We bring it to the attention of everyone through a public printing.

[IV. Both branches to be led by the Directorate in Berlin] We accordingly order that the Giro-Banks of Berlin and Breslau, as well as the already existing discount and Lombard desks, and those still to be established, will all be reporting to the Directorate of the Bank in Berlin, and will all follow its facilities, ... and rules, and will deliver their accounts to this said Directorate.

[V. Guarantee by King for liabilities of the bank] We will continue to be liable for the security of both banks and of the moneys deposited there, and we declare so for ourselves and for the heirs of our throne, without exception in time or persons. We also declare that we will cover all costs for the establishment and administration of both banks, and related discount and Lombard desks.

[VI. Role of special Commissioner to oversee bank] We have furthermore assigned to the Banco Directorate a special Commissioner who should monitor that everything is done in an orderly manner and according to the intentions and that everyone is treated equally and lawfully. Naturally, in case of disputes between private counterparties relating to banking operations, the legal decision will be reserved to our legal experts.

Finally, it is our high and serious will that the other decrees and provisions, as contained in the following 45 articles, will be applied in the most precise manner and according to their proper and literal meaning.

7.3 Regulation of 29 October 1766

The following is the translation of the second part of the text (the Regulation) mentioned at the beginning of Section 7.2, as provided by Niebuhr (1854, 202-213).

1. [All books to be in "Banco-Pounds"; definition of this currency unit] All books of these banks and related discount and Lombard desks should be denominated in Banco-Pounds, of which each should be composed of 24 Banco Groschen, and the Groschen of 12 Banco-Pennies. The eternal value content of such Banco-Pound should be 25% more than our Friedrich's d'or, which are coined at 24 Karat 9 Grän, and of which 35 are equal to one Mark, such that 4 Pound Banco are unchangeably equal to 1 Friedrich's d'or.

2. [Banco-Pound also to become unit of account for all merchants in Berlin and Breslau] Similarly, we want all merchants located in Berlin and Breslau to also maintain their small and large commercial accounts in Banco-Pounds.

3. [Obligation to settle bills of exchange drawn in Berlin and Breslau above 100 Reichstaler through Royal Bank and to denominate them in Banco-Pound] All bills of exchange above 100 Reichstaler of our subjects or inhabitants in Berlin or Breslau, to the order of one of our subjects, drawn and drawn on a foreigner, should all be denominated in Banco-Pounds, and be settled through our banks. If someone does not comply, he should pay a penalty equal to the value of the bill of exchange that he

settled outside our banks. One half of the paid penalty should be received by the informer, and the other by our disabled persons fund.

4. [Similar requirement for foreign bills, but not regarding denomination] All foreign bills and payment orders which import at least 100 Reichstaler have to be denominated (by order of the domestic merchant) in Banco-Pounds, be accepted and settled in Banco-Pounds through the banks. If such bills or payment orders are not denominated in Banco-Pounds, then still the drawee must not accept payment other than in Banco-Pounds.

5. [Discontinuation of a previous requirement that outside Berlin and Breslau bills need to be payable in these cities] Article 4 of the previous Banco regulation stipulated that our merchants and subjects in places in which we do not establish a bank have to make payable bills of exchange in the places where we are establishing our banks. In the event this hampers the activities of our merchants, and as our only intention is to facilitate in all possible ways the commercial activities of our subjects, this Article is removed.

6. [All commercial transactions to be denominated in Banco-Pound and be settled via Royal Bank; transactions to which this does not apply] All transactions between merchants in Berlin and Breslau, buying and selling of merchandise, commercial contracts, relating debt instruments, interest rates, insurance contracts, stocks, assignments, etc., generally all instruments of commerce in which a value is specified, must be expressed in Banco-Pounds and must be paid through our banks. We order all notaries and brokers not to establish any such contracts in a different denomination than Banco-Pounds, by penalty of one quarter of the value to be paid to our disabled persons fund. Concerning the purchase of sales of real estate and private transactions, we leave it free to everyone to decide whether to transact in Banco-Pounds or in cash. It therefore remains free to our Nobility and Military class to make their payment in cash, and to adjust the sum stated in contracts in Banco-Pounds by the amount of the agio, and to thereby undertake transactions such as leases, sales of real property, sales of products, renting of houses, capital transfers, and other payments relating or not to court cases. If they however devote themselves to commercial activities, they need to comply with our Banco-regulation. If a subject, noble or civic, lends money to a merchant for the conduct of his business, then this does not necessarily need to be transacted through the banks. If however one merchant lends to another merchant, than this has to go, as already stated, through the banks. It is obvious that every subject, noble or civic, is free to open, whenever he wants, an account in our banks, and to conduct his operations thereby through the banks. It is not intended to embarrass anyone, but instead to convince solely through the convenience and solidity of the banking institutions.

7. [Banknotes will be issued but are not legal tender] We considered necessary and useful for the sake of convenience of commerce and the circulation of money, to create banknotes as specified in these Regulations, and in a certain, non-harmful proportion. We want and hereby order that, as of 1 January 1767, banknotes will circulate in all our countries in parallel to our silver and gold coins. But no creditor who legitimately requests payment in cash should be forced to accept banknotes.

8. [Key features of banknotes] These banknotes which should be initially issued solely in the bank in Berlin, and which from there on will circulate in all our countries, will be to the bearer and to who will present them. They will be numerated and under special precaution, be printed on paper specifically produced for that purpose, and via copper plate engraving, will have intertwined ornament, and a special stamp and seal, be signed also by the Royal Commissioner and the Banco-Directors, and be properly registered. They will have denominations of 10, 20, 50, 100, 500 and up to and including 1000 Pound.

9. [Safekeeping of stock of non-issued banknotes] The banknotes should be kept in the bank-vaults of the bank here in Berlin and will be safeguarded through five keys which will be assigned to the President of the bank, the Royal Commissioner, two Directors of the bank, and our Royal Banker. It will only be possible to take out the banknotes from the vault in the presence of these five persons, who will have to sign the relevant registrations each time, and which will be subject to counter-controls.

10. [Way the banknotes are issued] The banknotes which were taken in this way out of the vaults should then be distributed to the discount desks of the Berlin- and Breslau giro-banks, where they can be obtained either against cash payment of 125 Reichstaler Friedrich d'or, or 131.25 Reichtaler courant, for 100 Pound Banco, or through the discounting of good bills, or against a pledge of gold and silver in bars, grains, foreign gold- or silver coins, jewels, as specified in the following articles.

11. [All public pay-desks to accept banknotes and giro-payments] We want and we order that whenever it is requested, our pay-desks in Berlin and Breslau will accept inevitably payments above 100 Reichstaler in the form of giro-transfers or banknotes. The same should apply to all pay-desks in all places in our countries, where it should be free to everyone to pay in coined silver money or banknotes. None of our general or special pay-desks should ever refuse, under whatever pretext, to accept giro-payments or banknotes, according to their value of 131.25 Courant for 100 Pound Banco.

12. [Way to create giro-deposits through cash payment into bank] Those who need to establish bank deposits in our giro-banks in Berlin and Breslau, should be able to do so in the form of paying in Friedrichs d'or or Courant at the exchange rate stipulated in Article 10, or through banknotes which will be accepted without any deduction.

13. [Further details on how to create giro-deposits] If someone wants to obtain Banco-money in his account, against Friedrichs d'or or current silver money, he has to pay in such money at the cash desk of the bank. The paid-in money will be redenominated in Banco-Pounds and the depositor will receive from the General Cashier a receipt. With this receipt the depositor reports to the Banco Directorate which then orders that his account be credited accordingly. If someone wants instead to pay in banknotes for this purpose, then he should do so directly with the Directorate, who will then take care of the rest. Finally, it will be possible to obtain Banco-money through the Lending Bank, as the following articles will explain.

14. [Ability to withdraw cash only to the extent that account holder had paid it in] He who has paid cash into the cash desk of our banks, should be free to withdraw it again

completely or partially, although it has to stay in the bank for at least one night. He who has not paid in cash into the bank but has seen his account credited by the transfer from someone else, will not be able to withdraw this transferred money.

15. [How to withdraw cash from bank and related fee] He who, in the first case of the preceding article, wants to withdraw cash, has to submit a cash payment order for his own benefit to the giro-desk. They will return it to him with their signature, allowing him to hand it over to the General Cashier who will pay to him the stipulated sum, minus 0.25%.

16. [Opening hours of giro-desk] The giro-desk of our banks will be open every day, except Sundays and public holidays, starting at 7 a.m. Until 9 a.m. anyone can ask what transfers were made to his account. Between 9 a.m. and noon at the latest, anyone can make orders of transfers. After this, the Banco employees are no longer obliged to accept transfer orders. However, everyone is free to dispose of funds received per transfer in the morning, and to transfer them at the giro-desk which will reopen to others between 3 p.m. and 5 p.m.

17. [“Inter-depositor” lending of giro-deposits allowed only if Directors of bank informed] We forbid, to prevent misuse observed previously, that a merchant borrows Banco-money to another one through his account, without the Directors knowing about it. If it is done nevertheless, the lender should lose the entire sum, half of which will be given to the informer, the other half to our disabled persons fund.

18. [Giro-transfers must be recorded in accounts of merchants] All giro-transfers between merchants have to be recorded by the counterparties in their own commercial books according to the Italian accounting rules, and from there be transferred into the main books. Whenever the Banco Directorate requests it, merchants must show reliable excerpts of their main books, with page numbers and dates, so they and their accountants can produce them when needed. In case of infringement, the accountant will be subject to the same penalties as applied in the previous article to the counterparty.

19. [How to make a giro-transfer] He who wants to make a giro-transfer, should, during the period as specified in Article 16, personally appear at the giro-desk, and provide to the accountants a transfer order in the required format. It must contain clearly the first and second name of the receiver of the transfer, as well as the sum, both in letters and in numbers, moreover his account and the date, finally his own first and second name. He who makes a mistake should pay a fine of two Reichstaler to the Banco-writer. Every transfer order should not have more than one item. In the case of merchant companies, every companion should put his first and second name under the transfer order, but only one is allowed to hand it over to the accountant.

20. [Special requirement for multiple transfer orders] To address the case of double or multiple transfer orders within one post, we want and order that on such transfer orders it is always clearly stated if they are on his own behalf or if it is a payment on behalf of someone else. Otherwise, the payments will be regarded as void in the case of a default.

21. [Power of attorney to clerks for giro-transfer ordering] Those who cannot or do not want to appear themselves at the Banco to make giro-transfers, can instead give power of attorney to their clerk or to another acquaintance and be thereby substituted. They have to be equipped with an authorisation signed by the Banco-Directorate which they can present to the accountant at the giro-desk, such as to be able to make transfer payments or to dispose of the deposits of the principal. These transfer orders have to be signed by the principal to be valid. If the principal is absent or unable for other important reasons to sign the transfer order, then he has to designate [another] attorney who has been authorised by the principal in the presence of a notary, and who has to sign with his own name, but certainly not with the name of the principal.

22. [Fee for providing power of attorney] The authorisations of the attorneys should be subject to an initial fee of one Friedrichs d'or payable to the bank, and have to be renewed every year after the reopening of the banks against a fee of one half Friedrichs d'or.

23. [Option to have Banco-clerk to collect transfer order elsewhere from principal; related fee] If someone wants to order a transfer, who has not provided the authorisations according to Art. 21., but is prevented due to sickness to go to the Banco, then he can indicate so to the Banco-writer, who will send to him the Banco-clerk, to receive the transfer orders from his own hands, and for which the Banco-clerk needs to be paid with 6 Groschen per transfer order.

24. [Penalty in case of overdraft] He or they who order to transfer more than they have in their account should pay a penalty of one Pound Banco if the excess is below 50 Pound Banco; if the surplus exceeds 50 Pounds Banco, then in addition 3% of the excess.

25. [Fee to open bank account and transaction fee] He who wants to open an account in our Banco should pay one Friedrichs d'or once to cover the costs of our Banco, and afterwards for every account page, which consists of 20 positions, one Pound Banco. At the end of the year, one will count the last account page as a full one, even if it was just started.

26. [Confidentiality of deposit related information] We prohibit everyone to seek to find out what others have in their account. Also, none of the Banco-clerks should ever reveal such information, either through words, signs or writings, as otherwise they would lose their position and be punished as perjurers. With this in mind, they should take a special oath so that they take everything to the grave that comes to their hands as an employee of the Banco.

27. [Protection from seizure; case of default] All deposits in our bank should be protected from seizure. If, however someone defaults publicly, then his account balance should fall due to all creditors, as requested by the judges.

28. [Discount and Lombard desks] To facilitate the commerce of our subjects, a lending bank, consisting in a discount and a Lombard desk, has been associated with our two giro-banks in Berlin and Breslau. We will equip these with our own funds and will let them be managed by the Directorate of the banks.

29. [Opening hours of these desks] These two desks of the lending Banco should, except on Sundays and on public holidays, be open every day from 9 a.m. to 1 p.m.

30. [Eligibility criteria for bills of exchange and implication of failed payment; discount rate] The discount desk will discount only such bills of exchange which have a maximum maturity of two months, and which are guaranteed by three names. They can be drawn from domestic residents on foreigners, from foreigners on domestic residents, and from foreigners on foreigners. For prudence, and in line with practices of bankers, bills of exchange that have not been accepted yet will be sent for acceptance, and if the latter does not occur, then the one who has negotiated the bill should provide a bail to secure the payment. If the payment fails, and the bill is protested, then immediately, and without regard to the person, his standing and character, personal arrest should be legally imposed. Discounting will be offered for an interest rate of 1/3 percent per month.

31. [Rounding of day count in discounting] As the exact calculation of days creates excessive workload for the discount desk, calculation will be at the precision of 1/4 of a month. If the due date and the payment date falls only one day into the next 1/4 of the month, then this should be treated as including the full 1/4 month.

32. [Lombard loans against precious metal collateral; interest rate and minimum size; haircuts] Similarly, the discount and Lombard desks will, for a maturity of two months, against interest of 1/3 percent per month, advance money against gold and silver bars, gold grains, gold and silver dinner ware, and foreign silver and gold coins, but never below a value of 400 Pound Banco.

Against gold in bars of 21 to 24 carat, against every fine Mark, 150 Pound Banco; Against gold in bars of to 21 carat, against every fine Mark, 148 Pound Banco; Against gold of lower purity, against every fine Mark, 140 Pound Banco. For coined gold, one will assume the following purity: Portuguese, Guinées, Sovereigns: 22 carat; All species ducats, except the Turkish and Russian ones: 23 carat and 6 Grän; Louis neuf or Shield-Louis-d'or; old Louis d'or: 21 carat and 7 Grän; Braunschweigische 5 Reichstaler pieces: 21 carat, 8 Grän.

Against silver bars: From 12 to 16 Loth content for every fine Mark Nine Pound Banco 14 Groschen; From 6 to 12 Loth content for every fine Mark 8 $\frac{3}{4}$ Pound Banco 14 Groschen; For lower content for every fine Mark 8 Pound Banco 14 Groschen. The content of silver coins will be classified as follows: Fine 2/3 pieces, for every fine Mark 15 Loth 15 Grän; Species-Taler, for every fine Mark 14 Loth 2 Grän; Reichstaler according to the old standard, for every fine Mark 14 Loth 2 Grän; Ordinary old 2/3 pieces, for every fine Mark 11 Loth 17 Grän; Piasters, for every fine Mark 14 Loth 9 Grän; French [leaves] Taler, for every fine Mark 14 Loth 9 Grän, Old Louis blanc, for every fine Mark 14 Loth 11 Grän.

Similarly, one will provide two months loans against jewels for 1/3 percent interest per month.

33. [Exclusion of prolongation of loans: liquidation of collateral] The maturity of any credit provided by the discount and Lombard desks must not be prolonged, for

whatever reason provided. If after the passing of the stipulated deadline, the pledged collateral is not redeemed, then these will be publicly auctioned off, on the account of the collateral provider, and at his risks and costs.

34. [Receipt for pledged collateral] He who pledges gold, silver or jewels with our lending Banco will be given an adequate receipt, which he needs to return upon redemption of the collateral.

35. [All loans to be paid out in the form of banknotes and not in the form of giro-deposits] Every loan by the Discount and Lombard desks, be it through discounting of bills of exchange or collateralised loans, should not be paid out by crediting the giro-deposits of the borrower, but in the form of banknotes, whereby the interest is deducted in advance.

36. [Unrestricted counterparty set for lending] Under the stated conditions, all domestic and foreign persons can approach the Berlin and Breslau lending banks and their Discount and Lombard desks. Foreign persons can do so via agents.

37. [Sworn brokers can pledge for principal] If someone does want to pledge something but does not want to come personally to the Lombard desk, he can make use of the sworn brokers ordered by us.

38. [Lombard desks in other places] We reserve our right to establish Lombard desks also in our other provinces.

39. [Loan redemption either in the form of banknotes or species] When collateral is to be redeemed, it is left to the pledger, whether he wants to do so against banknotes or against species, applying the exchange rate stipulated in Article 10.

40. [Prohibition to export precious metal] We have now ensured with our royal court bankers in Berlin and Breslau, and the Directors of our Discount desks in the other commercial towns, as well as the other specialised money changers, that according to proportion and needs of the payees [beneficiaries] of bills of exchange, the bills of exchange of domestic residents on foreigners can constantly and sufficiently be rolled over. Therefore, we forbid as of 1 January 1767 that coins circulating on this side, namely good Friedrichs d'or, foreign gold coins, silver coins not minted according to the Leipzig or so-called Convention-standard, or better, moreover gold and silver bullion, gold grains, fractionary gold and silver, old and used gold- or silverware, are brought or sent out of the country. Punishment will not only consist in confiscation of what has been sent or brought outside, but, depending on the case, also in an additional heavy financial penalty, to be paid one half to the informer and one half to the disabled person fund (like in Article 17), or physical and jail sentences. Therefore, travelling merchants and other members of the civil class will be allowed as of now to bring with them when travelling abroad, for the sake of maintaining commerce and for their needs, up to 250 Reichstaler in gold. For noble man and members of the military class, 400 Reichstaler in gold can be brought with them.

41. [Prohibition for bank management and employees to do commercial and financial transactions] We forbid in the strictest way that any Director, Accountant, Cashier, and other officials of our banks in Berlin and Breslau do any form of commerce, to do

agiotage, brokerage, either within or outside of the banks. If anyone acts against this serious order, he will not only lose his position, but also will be subject to a fine of 500 Pound Banco.

42. [Closing period of bank in first half of June to settle accounts] The giro-banks and the related Discount and Lombard desks should all be closed every year at end May, and reopen 14 June of the same year. During this time everything should be put into correct order.

43. [Reconciliation of accounts before relaunching giro-transfers] When the Banco is reopened after this period, the creditors of the bank should appear in front of the Directors of the Banco and should ask for their balances, before they order new transfers.

44. [Brokers not allowed to delegate tasks] We prohibit all brokers to rely on their children or on non-sworn agents, subject to a penalty of 500 Reichstaler, the loss of their position, and our most fierce penalty, including, depending on circumstances, heavy physical punishment.

45. [Invitation to take careful note of Banco regulation] Finally we order everyone, and in particular our merchants, to inform themselves graciously and seriously and with most precision about our revised Banco Regulation.

Documented and personally signed and sealed with the royal seal in Berlin on 29 October 1766.

(L.S.)Friedrich

Count von Reuß, v. Jariges, v. Massow, v. Blumenthal, v. Hagen.

8 Caisse d'Escompte in Paris (1776-93)

8.1 Schematic overview

- Genealogy: Important elements inspired by the Bank of England (private capital; banknote issuance; discounting of bills). The main designer of the Caisse d'Escompte was Isaac Panchaud, a financier and speculator of Swiss origins born in 1737 in London and married to a Dutch citizen, who had moved to Paris in 1763 and who had in mind the successful model of the Bank of England when trying to establish a central bank in Paris. At the same time, the French Finance Minister Turgot supported the project, driven by the hope that it would provide a source of government financing. According to Marion (1934, 301-303, own translation):

“The disaster of the system of Law was making the term ‘Bank’ so unpopular that one had to wait for long before trying again something with the slightest resemblance to a bank. It was only in 1776, 56 years after the fall of the system that Turgot believed to be able to equip France with an establishment discounting bills of exchange...”

Harsin (1933, 64-82) discusses the debates on re-establishing a central bank in France in the period between the failure of the Banque Royale in 1720 and the Caisse d'Escompte in 1776, with a number of relatively concrete projects, such as the ones of Ceretti in 1750 (p. 73-75), Fortbonnais in 1755 (p. 75-79), and Faral in the 1760s (p. 79-80), as well as the first Caisse d'Escompte of 1767 (that operated only for one year and left little traces; p. 83-84).

As for example Duclos-Dufresnoy (1789, 12-13) notes, the bank's success during its first two years (1776-1778) was moderate, and only when in 1778 the major Parisian banking houses endorsed the project after encouragement by Necker, and acquired important share ownership and provided the administration of the bank (pushing out Panchaud and others), the bank really took off.

- Place in the history of central banking: According to Roberds and Velde (2014, 82) in 1788 it would have been in total balance sheet terms the second largest bank in Europe, after the Bank of England, with its banknote circulation at around 40% of the one of the Bank of England. In deposit terms, it would have ranked 6th place. Until 1788 it was, besides the Bank of England, one of the rare banknote issuing central banks that actually achieved sustainable convertibility. According to Marion (1934, 301-303, own translation):

“This Caisse d'Escompte... would conduct its operations with great success, and in 1777 obtained the right to issue banknotes of which the circulation was limited to Paris; such was the confidence it inspired that in 1783 the circulation of banknotes reached a total volume of 40 million. At the end of the Ancient Régime, as a contemporaneous author noted, ‘Paris is conducting banking operations of

an unbelievable extent, one can say that there is no town in the universe that is superior to it in this respect'."

Also, Courtois (1875, 68-79) notes the fast expansion of business and the sound economics of the institution, which would have continued, had there not been the fiscal difficulties of the Government and the eventual revolution. Indeed, its days were counted with the approaching French revolution. However, as noted for example by Plessis (1989, 1009-1010), the Banque de France closely followed the template of the Caisse d'Escompte, and its statutes would have been written by six banking houses of Paris who all had been engaged in the Caisse d'Escompte.

- Policy objectives: Finance Minister Turgot, appointed in 1774 by Louis XV, believed that both the financial market of Paris and the financing of the public debt would benefit from a note-issuing bank following the model of the Bank of England (Roberds and Velde, 2014, 66-67). Mirabeau (1785) explains the advantages of banks in general and of the Caisse d'Escompte in particular through its ability to stabilise and reduce the scarcity of money, and to reduce the rate of interest to a level below the one that would otherwise prevail:

"One is suffering from the scarcity of species money for a long time before realising the reason for this suffering. One regards the scarcity as something temporary, and only if one has suffered for a long time one seeks to find solutions. Discount banks have at least the ability to delay considerably the episodes of financial embarrassment, as they provide money in the form of trustworthy banknotes, which retain a stable value if the confidence in them has a sound basis. Moreover, they allow the interest rate to be maintained at a lower and more stable level, which is also favourable to agriculture, manufacturers, commerce and finance"

Government financing was not mentioned in the initial charter of the bank and in its objectives, which only refer to the bank being available to manage for free the public funds. Finance minister Turgot had a true interest in finance and banking as means of economic development, as documented by his own writings on the subject (e.g. "Mémoires sur les prêts à intérêt" of 1769).

- Private or public ownership: Private ownership. It was technically a limited partnership but ownership was vested in bearer shares (Roberds and Velde, 2014, 67). Initial capital was 12 million livres tournois in the form of 4000 stocks at 3000 livres each (fully paid in only in April 1778). Capital was further increased several times, also in the context of increased lending to the Government.
- Assets: On average it could maintain a significant share of its assets in the form of discounted bills (in line with its name) and also convertibility was most of the time maintained through sufficient precious metal reserves. Discount rates were subject to a maximum of 4% bills with maximum maturity of 30 days and of 4.5% for bills of maturity between 30 and 90 days (according to the rules and procedures of 1783, see Mirabeau, 1785, 128). Today one would argue that such constraints on interest rate-setting (common for pre-1800 central banks) made it

difficult for the bank to restrict its credit when needed – unless it would do so through (inefficient) rationing (surprisingly, from today's perspective, this problem does not come to the mind of Mirabeau when he criticises heavily the Caisse for not having restricted lending before her liquidity crisis of 1783). As Roberds and Velde (2014, 68) note, after 1778, the “bank increasingly discounted government paper, thus supporting the banking houses that were placing the huge loans issued to finance the war.” In the words of Marion (1934, 301-302):

“The cruel embarrassment under which the financial administration of the state operated inspired in it the natural temptation to make serve the prosperity of the Caisse d'Escompte a little bit to relieve its own misery: but the discredit of the public finance administration was such that the mere announcement of its recourse to the Caisse d'Escompte was sufficient to shake the public confidence. It was only a temporary shock, so strong was the situation of the Caisse. This is how it stayed during the coming years when the public finances continued to deteriorate During this cruel agony of the ancient regime, ... the Caisse d'Escompte was the grand recourse with which Necker provided to the Government, even though with some pain, the means to survive.”

The evolution of loans to the Government is described in Courtois (1875): as of 1788, it stood around or above 50%, while it had been zero at year-ends before 1787. Necker planned, after the start of the French revolution, to continue relying on the Caisse d'Escompte with some further innovative schemes to strengthen the Government's and the Caisse d'Escompte solvency through the sales of confiscated property of the church and allowing the Caisse to issue banknotes of up to 240 million. But (Marion, 1934, 302):

“the Constitutional Assembly was disgusted by the idea to rely on this Caisse d'Escompte...; it was more seduced to do great new things... a large emission of [state] paper money, secured by the sales of all nationalised properties, would furnish easily the required means, and would allow an eternal à Dieu to the narrow-minded approach of the past.... Necker's project was definitely rejected, he was forced to resign, and 1200 million money-assignats were created, a limit which was soon breached in view of ever increasing needs.”

After a short liquidity crisis of the bank in 1783, the by-laws were amended “providing for a retention of earnings above a certain level, an issue of new shares, and mandating a cover ratio between $\frac{1}{4}$ and $\frac{1}{3}$: if the ratio fell to below the upper limit, discounting was to be slowed, and it was to stop if it fell below the lower limit (Courtois, 1875, 73; Roberds and Velde, 2014, 68; legal texts below). Again in 1787 the Government requested a sizeable loan. In 1788 the Government defaulted on the bank but allowed the bank to pay back its banknotes with government bills (i.e. to suspend convertibility, see Courtois, 1875, 75). In 1790 the Bank was fully reimbursed by the Government and could resume convertibility. In 1792, it could still play an important role as LOLR in the Paris financial crises triggered by the revolution of enslaved workers in St. Domingo, and it would have saved in particular one major bank from illiquidity (Plessis, 1989, 1006), i.e. would have acted as LOLR.

- Liabilities: Deposits, banknotes and capital, following the example of the Bank of England. According to the balance sheet data of Courtois (1875), banknotes peaked in 1789 with 128 million livres Tournois. Capital had a high share of total liabilities, i.e. more than 50%, in the first three and last six years of the bank. During the last years, when the bank also provided large loans to the Government, this made its balance sheet resemble somewhat the one of the Bank of England. Deposits played a more minor role, with their share in total liabilities peaking at 20% in 1779 (see balance sheet data reported in section 7).
- Special measures to support its success. According to for example Plessis (1989, 1004-1005), the Government played an important role in both the initial creation of the bank and in its actual kick-off in 1778: it would have sponsored its establishment, and in 1778 Turgot “invited the principal banks of Paris to subscribe 1500 shares of 3000 pounds each, which had still not been subscribed. As of this moment, all big Paris bank names (...) are part of its Administrative Council, and she [the Caisse d'Escompte] becomes the ‘bank of the bankers’.”
- History of convertibility: Suspended in 1783 for around two months, and limited convertibility after 1788. On 18 August 1788, the Government had granted a general right to the bank to pay back banknote holders with government debt. The bank tried to avoid using this option to the extent possible.
- How and why the bank ceased operations: The radicalisation of the revolution led to the closure of the bank in August 1793 (Plessis, 1989, 1007). However, the Banque de France, created in 1800, followed the model of the Caisse d'Escompte and may be considered as its reestablishment under a new name.

Sources: Mirabeau (1785), Caisse d'Escompte (1789), Gaudot (1789), Duclos-Dufresnoy (1789), Say (1848), Courtois (1875, 68-79), Bigo (1927), Harsin (1933, 83-89), Marion (1934), Roberds and Velde (2014, 66-69). The general context of French banking in the years around the revolution is discussed for example in Plessis (1989).

8.2 Charter of 24 March 1776

This is a translation of the “Arrêt du Conseil d’État du Roi, portant Établissement d’une Caisse d’Escompte. Du 24 Mars 1776. Extrait des Registres du Conseil d’Etat” (“Decree of the State Council of the King regarding the creation of a discount bank. Of 24 March 1776. Excerpts of the Registers of the State Council”) as provided by Mirabeau (1785, 127-139).

Preamble. [Request at origin of establishment of the bank; objectives of the bank]
 Upon the request presented to the King in his council, by Jean-Babtiste-Gabriel Besnard, containing: that he desires to establish in the capital a discount bank, of which all operations will tend to lower the money rate of interest, and which will provide a means of security and economy to the public, by committing itself to receive and maintain free of charges the funds of individuals who will want to deposit them; for this

purpose he asks his Majesty to authorise him to establish a joint stock company, at the ... clauses and conditions listed below.

Article I: [Name and legal form of the company] The shareholders who will constitute the said company will be associated in limited partnership, under the name of Caisse d'Escompte.

Article II. [Type of operations of the bank] The operations of the Caisse d'Escompte will consist primarily in discounting bills of exchange and other commercially current securities, at the discretion of the administrators, and at an interest rate that could in no case exceed 4 percent per year; secondly, to deal in gold and silver; third, to be in charge of the receipts and payments of public funds, deposits and payments of interested individuals, without imposing any commissions, charges, or other payments of any kind.

Article III. [Prohibited operations] Under no circumstances and under no pretext, the company will borrow against interest, or contract any debt other than sight deposits; it forbids itself to undertake any trade in merchandise, maritime expedition, insurance and commerce whatever, outside what is explicitly mentioned in the preceding article.

Article IV. [Capital offer of 15 million pound; deposit of 10 million with Royal Treasury; repayment and interest]¹⁹ The said shareholders will collect a capital of fifteen million pounds, for which they will receive five thousand shares of three thousand pounds each, which they will pay in legitimate money [argent comptant], in one installment. Of the fifteen million, there will be five which will serve to launch the operations of the said Caisse d'Escompte, and the other ten million will be deposited with the Royal Treasury on 1 June 1776, as a security for the engagements of the said bank, in the way further explained by Article VI. His Majesty will be asked to accept the ten million as a loan, and to provide receipts [quittances de finance] by the Royal Treasury for thirteen million, payable in thirteen years, to repay the capital and interest of the said sum of ten million. The receipts will be divided and issued in 26 equal payments of 500,000 pounds each, of which the first will be due on 1 December 1776, and which will continue afterwards every six months, 1 June and 1 December every year, until including 1 June 1789.

Article V. [Securing of deposit with Royal Treasury by the income from the postal services] To secure these payments stipulated in the previous article, his Majesty will be asked to assign the income of the postal services and to instruct the managers of his Royal Treasure, every year, to deliver to the Treasurer of the said company, as due payment of the receipt of 500,000 pounds, a legal assignation of the income of the postal services.

Article VI. [Deposits with Royal Treasury must not be encumbered] The thirteen million pounds which constitute the total amount of receipts mentioned above, or what will remain of it after the payments already made, will remain earmarked for the security and general guarantee of the operations of the said bank. Under no circumstances the

¹⁹ It may be noted that the depositing of 10 million of the capital with the Royal Treasury was reversed through a decree on 22 September 1776. Two million which were already paid in were returned to the shareholders, and the total capital was reduced from 15 million to 12 million. (See Mirabeau, 1785, 136).

administrators of the company can sell, alienate, transport or pledge the receipts which have not yet been paid.

Article VII. [Opening date and place] The said discount bank will be opened on 1 June next year, at a place in Paris which the company of shareholders will choose.

Article VIII. [Template for share certificates] The said shares will be printed in line with the template attached to this request and be numbered starting with number one and up to including five thousand. They will be signed by the general treasurer and be controlled by two administrators of the said bank.

Article IX. [First general treasury; his role in capital subscription] Mr de Mory will be nominated temporarily as general treasurer of the said discount bank. He will therefore receive all the sums which will comprise the fifteen million capital of the said bank, and he will provide to those who desire receipts promising to deliver to them the number of shares corresponding to the money they paid, at three thousand pounds per share.

Article X. [First general assembly; minimum number of shares for access and voting right] Mr de Mory will announce to the shareholders at least 10 days in advance the day and place of the first general assembly in which every holder of twenty-five shares will be admitted and will have voting rights for the choice of the administrators or the said company.

Article XI. [Role of seven administrators] The operations of the said company will be directed by seven administrators who will be elected, by a simple majority, in the said first general assembly. They will be held, in their administration, to conform to the decisions in the general assembly. They will nominate the employees, specify the terms of appointments, can revoke their employment, all this in a way and as judged necessary for the good and advantage of the company.

Article XII. [Minimum shareholding by administrators] Every administrator of the company will be held to be owner of fifty shares of the said bank and will have to deposit them three days after their election as specified below. If they fail to deposit them, their election will be void.

Article XIII. [Dismissal of administrators] No administrator may be dismissed unless through the vote of two-thirds of the shareholders present in a general assembly, or through the vote of the six other administrators, or by no longer holding the fifty shares, as specified in the previous article.

Article XIV. [Remuneration of administrators] The remuneration of the administrators will be taken from the profits of the said bank, and in no case from the receipts or assignments representing the thirteen million mentioned above. They will not have any salary before the profits have reached one hundred and fifty pounds per semester or more. Only in this case they will take one tenth of these profits and share them in equal proportions.

Article XV. [Semi-annual general assembly of shareholders] Every year, two general assemblies of shareholders will be held in January and July, to deliberate on the operations of the company, to receive and examine the accounts of the semester

which precedes the assembly. The accounts will be certified and signed by the administrators, and the dividend to be paid to the shareholders for the last six months will be determined.

Article XVI. [Dividend calculation] To establish the dividend, the administrators will produce detailed accounts of the profits of the previous semester, after deduction of all administrative costs and losses, if any. From these net benefits, if they exceed one hundred and fifty thousand pounds, and only in this case, one tenth will be given to the administrators in similar parts, as mentioned above. After the deduction of this tenth, one will add to the remaining benefits the five hundred thousand pounds which will have been returned relating to the thirteen million, and for this total the shareholders will determine, by a simple majority vote, the sum that they will judge to distribute as dividend, on their shares for the past semester. The first fixation will be done in January 1777 for the rest of the present year, and afterwards for every six months.

Article XVII. [Share depository] A depository for shares will be opened at the said bank, for those shareholders who will prefer to protect them from accidents, theft, fire or other, and from where they will be able to withdraw them any time; also, for those who will want to deposit them for complying with some notary act, or if the deposit is ordered by the judiciary system.

Article XVIII. [Access of all individuals to use bank for depositing] The said discount bank will be mandated and expected to be the personal cash repository of every individual ... who will deposit his money. It will be accountable to these individuals...

[Article XIX Authorisation; unchanged rights of private bankers and brokers] In view of this request, the offer made and the proposed conditions; taking into account the report of Mr Turgot, regular counsellor to the Royal Council, general controller of finance, the King being counselled by him, has authorised and authorises the said Jean-Baptiste-Gabriel Besnard to establish the said discount bank, under the above-mentioned conditions, without however, through this authorisation, changing in any way the liberty from which bankers and brokers benefit and will continue to benefit, regarding their commerce in gold and silver, or to receive funds from individuals who wish to deposit with them. And his Majesty, accepting the offer to receive 10 million pounds to the royal treasure on 1 June, has ordered and orders Mr Savalete, guardian of his royal treasure, to issue as capital and interest, twenty-six receipts of five hundred thousand each, payable over 13 years, every six months, of which the first will be paid on 1 December 1776, the second on 1 June 1777, and so on, the receipts [quittances] will be transmitted to the profit of the company, to be paid with each maturity, by the guardian of the royal treasure...

Done in the King's state council, with the King's attendance, in Versaille on 24 March 1776. Signed de Lamoignon.

8.3 Regulation of 14 July 1784

This is a translation of an excerpt of the "Règlement général servant de Code à l'Administration de la Caisse d'Escompte" ("General Regulation serving as

administrative rulebook of the Caisse d'Escompte") as provided in Duclos Dufresnot (1789, 56-95). It is legally based on a "Regulation of the King's State Council of 18 September 1785 which endorsed the Regulation decided by the assembly of stock owners of the Caisse d'Escompte of 14 July 1784" (Duclos Dufresnot, 1789, 56).

General regulation which serves as administrative rulebook of the Caisse d'Escompte.

II. [Capital of the bank] The capital of the Caisse will be 15 million pounds, with five thousand stocks of three thousand pounds each, with possible further capital increases according to Article II of the regulation of the State Council of 26 June of this year.

III. [Operations of the bank] The operations of the Caisse d'Escompte will consist in:

- Discounting bills of exchange and other tradable securities
- Being in charge of the credit and debit payments and deposits of parties who will ask for it, without being allowed to take any fees whatsoever for this.

IV. [Explicit prohibition of bank on other funding and investment operations] The company will not be allowed, under any pretext, to borrow against interest, or fund in any way other than on sight deposits; moreover, she must not deal in merchandise, undertake maritime expeditions, insurance, or commerce of any kind.

V. [Liability of the bank towards depositors] The Caisse d'Escompte will be liable individually to all those who will deposit their money with it.

VI. [Bank to offer custody services] It will continue to offer custody services for stocks, for all those who want to put them there for safety reasons, and they will be allowed to withdraw them at any time.

VII. [Governance: Administrators elected by General Assembly] The operations of the Caisse d'Escompte will be led by thirteen administrators, elected by a majority of the General Assembly of Stockholders. To ensure access of all classes of citizens, no more than 10 persons can be elected from one class... The General Assembly will be convoked for this purpose during the first 15 days of each year. Four out the thirteen administrators need to be changed every year. Those who resign can be re-elected again one year later.

VIII. [Role of Administrators] The Administrators are expected, in their management, to comply with the guidance provided by the General Assembly. They will nominate the employees, set their salary, could dismiss them; in a way to serve the objectives of the company. They will not be allowed to set the salary of any employee above 3000 pounds. The Administration will continue to be free of charge.

IX. [Administrators to report to General Assembly; prohibition of unauthorised negotiation with State Council] The Administrators are not allowed, under any pretext, to ask for new orders of the State Council, without having previously explained the topic and its objectives to the General Assembly of the shareholders, and without having been authorised by them explicitly.

X. [Administrators must hold 15 shares] Every Administrator will have to hold 15 shares in custody with the Caisse, for as long as he is an Administrator.

XI. [Authorisation required for share withdrawal] An Administrator cannot withdraw his shares without an authorisation signed by the Administration.

XII. [Procedure for discharging an Administrator] An Administrator can be discharged only by the vote of 2/3s of the shareholders present in a General Assembly, or by the unanimous vote of the 12 other Administrators. In this case, he will also be allowed to withdraw his shares.

XIII. [Administrators must not default] Any Administrator who defaults will immediately cease his function.

XIV. [Nomination of two Directors] There will be two permanent Directors with fixed term appointments, nominated by the General Assembly, after being proposed by the Administrators. The General Assembly will be able to dismiss them with a 3/4 majority.

XV. [Role of Directors] The Directors will follow all the operations of the Caisse, under the orders and control of the Administrators, in conformity with the internal rules.

XVI. [Weekly rotation of Administrators and reporting by Directors] The Administrators will nominate every week two amongst themselves to supervise the daily operations. Every eight days the Directors will report to the Assembly of the Administrators.

XVII. [Liquidity requirements] Under no circumstances must the Caisse d'Escompte issue any banknotes of which the value is not covered either in species or in securities discounted. [Therefore,] the above-mentioned capital must not be earmarked to any specific operations but will cover all of them. Therefore, the entire equity will be more than sufficient to ensure the absolute solidity of the banknotes. To ensure that the Caisse will be permanently in a state to satisfy the strict obligation to redeem the banknotes presented to it, it will always keep a sufficient reserve of species, and as implied by the Regulation of the internal rules, as ordered by the General Assembly on 27 January 1784, according to which it must never be less than between a third and a quarter of the banknotes in circulation. Every eight days, a statement representing the specie reserves and the amount of banknotes in circulation will be signed by the Directors and Administrators, and will be submitted at the end of each semester to the General Assembly.

XVIII. [Eligibility criteria for bills of exchange] Only commercially current bills of exchange and securities will be accepted, according to the choices made by the Directors and Administrators. The securities recognised as good will be treated equally by the discount facility.

XIX. [Maximum maturity of discount operation; interest rate] The maximum maturity of discount operations is 90 days. The interest rate of the discount facility must not exceed 4% for all operations with maturity of no more than 30 days, and 4.5% for the operations with maturity above 30 and up to 90 days.

XX. [Opening days per week] The discount office will be open for three days every week, namely on Mondays, Wednesdays and Fridays. It must not close on these days. If there is a public holiday or a General Assembly, then the office should operate the day before or after, as indicated by the Administration.

XXI.-XXIII provide further details on nominating and electing Administrators by the General Assembly.

XXIV. [Dividend calculation] To determine the dividend to be paid in the subsequent semesters on the 5000 shares, one will first take from the profits, after deduction of costs and the non-returned bills of exchange in the portfolio, five percent, which will always serve as basis for the setting of the dividend. To this basis, one will add half of the remaining benefits, the other half being added to the reserve, and in addition what comes to less than 10 pounds from the other half per share.

XXV. [Reserve fund and transfer to capital] When the reserve fund exceeds 3.5 million, then 2.5 million will be added to the capital held by the shareholders, meaning that each share will represent 3500 Pounds. Each time in the future the reserve fund exceeds again 3.5 million, similarly 2.5 million will be assigned to the capital held by the shareholders, increasing each share by 500 Pounds.

XXVI. [Case of profits to be topped up by reserves] If the profits in a semester are insufficient for a dividend of 5% on the capital held in the form of shares, then the reserve will be used for this purpose.

XXVII. [Non-performing loans credits to be recognised in profit calculation] One will reflect in the profits of a semester the discovery of doubtful credits, even if having originated in previous semesters.

XXVIII. [Main agenda items to be covered by each of the two regular General Assemblies of the shareholders] Omitted here.

XXIX. [Requirement to be allowed to vote in General Assembly] To participate and vote in the General Assembly, one needs to own 15 shares and one needs to have had deposited them for at least the preceding 6 months.

XXX. [Shares owned and votes in General Assembly] Shareholders can only participate in voting in the General Assembly if they are present, whereby the above-mentioned minimum requirement applies. If the shareholder has deposited at least 30 shares, he will have two votes; three if he has deposited 60, and four if he has deposited at least 80, without any possibility to have more votes, regardless of the number of shares. This applies to all votes which are given in ballots, to all elections, and to any other matter when at least 12 shareholders request it.

XXXI-XLI [Specifications of further rules and procedures for decision-making in the General Assembly] Omitted here.

XLII. [Procedure to change this Regulation] The rules prescribed by this Regulation must not be changed in any point, except by the General Assembly of shareholders by

a qualified majority of $\frac{3}{4}$ of the votes. His Majesty would be implored to agree to them and to approve them via an order of his State Council...

Seen and approved by the State Council of the King, his Majesty being at Saint-Cloud, the 18 September 1785, signed by le Baron de Breteuil.

8.4 Regulation of the Internal Regime of 27 January 1784 – Excerpt

The following is a translation of excerpts of the “Rapport du Comité d’Actionnaires de la Caisse d’Escompte institué par l’Assemblée Générale, du 26 Novembre 1783, pour la confection d’un Règlement pour le Régime interieur” (Report of the committee of shareholders of the Caisse d’Escompte established in the General Assembly of 26 November 1783, for the design of a Regulation for the internal regime)”. The excerpts focusing on financial operations. Omitted: Preamble; Chapter I on the Administrators; Chapter II on the Assembly of Administrators; Chapter III on the Directors; Chapter IV on the Controller; Chapter V on the Secretary.

Chapter VI on discount operations

I. [Administrators of the week to decide on paper to be discounted] The Administrators of the week will make the choices of the paper which will be accepted for discounting, and the Cashier will be allowed to pay the nominal value only when the signatures of the Administrators of the week are on the border of the paper.

II. [Veto power of each Administrator of the week; Finality of rejection] It is sufficient that one Administrator of the week refuses to sign a border of a paper to reject it; such a rejection is final under all circumstances.

III: [Eligibility criteria for bills of exchange; equal treatment] No security will be accepted for discounting which does not have two good signatures and which is not presented by the last endorser directly. This condition implies that every person presenting a paper to the discount desk must sign the border of the submitted securities. However, all securities considered good and solid will be admitted equally for discounting, independently of whether they are presented by persons who received them directly from outside, or if they have already passed through several hands within Paris.

IV. [Minimum maturity of bills: exception for account holders] Nothing will be accepted for discounting with a residual maturity of less than 15 days. Those who have their current account with the Caisse will be exempted from this requirement.

V. [Unequal treatment of bills when needed] The permanent advantage of the Caisse d’Escompte can only arise from its more general utility. Therefore the Administrators of the week will represent the discount desk without regard to the persons [presenting securities]. However, they will prefer those who have their current account with the Caisse. In periods in which it is necessary to tighten the discounting of paper, one will

normally prefer small positions to large ones, and the positions with shorter residual maturity to those with long ones.

VI. [Discount volume to be determined every week; implications of reserve level falling below $\frac{1}{3}$ or $\frac{1}{4}$ of sum of banknotes and sight deposits] The sum devoted to discounting every week and the accompanying conditions need to be determined by the Assembly of Administrators, and the Administrators of the week must not deviate from this. However as soon as they discover that the cash reserve has fallen to below one third of the entire engagements, including both banknotes in circulation and sight deposits, they will markedly reduce the discounting, and will completely stop when the proportion falls to a quarter. This is independent of the instructions given by the Assembly of Administrators.

VII. [Prohibition to provide permanent loans] As permanent loans are one of the most common reasons for problems of banks, none such will be made.

VIII. [Discontinuation of loans collateralised with shares of bank and other securities] As the capital provided by the shares reflects the natural caution of our engagements, no new loans collateralised with deposited shares will be made after the next 30 June, and none will be renewed. Other loans collateralised with other public securities of whatever nature should also end in the same way; new ones will be made following principles which the shareholders will have to approve in the General Assembly.

Chapter VII: Cash vaults

I. [Role of a Committee of the cash vaults] The Administrators will form a Committee of the cash vaults, to determine related reporting, the numbers of cash vaults, the procedures and maintenance.

II. [Role of cashiers; Director of the cash vaults] The cashiers receive order of the Director of the cash vaults, will report to him on a daily basis on their operations of any kind, and will be subject to the surveillance and verification which he will decide upon and apply.

III. [Particular cash vault] As of next 15 March, there will be a particular cash vault subject to three keys, of which two will be guarded by the two Directors, and the other by the Administrator-President of the month. In the cash vault, one will deposit a number of millions of species, equal to at least one fifth of the engagements of the Caisse. One will add to it one million whenever the engagements will have augmented by five million. One will have recourse to this cash vault only if the other cash vaults are in need, or if it is made necessary by a marked reduction of the total engagements.

Chapter VIII: Banknotes

[...] [Rules regarding non-issued banknotes; denomination of banknotes] In the meantime, nothing will be changed regarding the current banknotes, nor with regard to their signature, but that the only instruction for the moment is to not create more banknotes than necessary for the celerity of the service, and to distribute them in a way avoiding any types of risks resulting from their concentration. With this purpose, there should be not more than banknotes of 10 million beyond those truly circulating in

public, and to be distributed as follows. Two million will be in the hands of the Cashiers, three in the distinct cash vault of the Directors and of the controller, five in the Cash vault of the Administration. The banknotes will only be denominated in 1000 Pounds and 600 Pounds in black characters, 300 and 200 Pounds in red characters.

Chapter IX: The current accounts (sight deposits)

I. [Regulation to prevent excessively early crediting of accounts] With regard to the current accounts, the Administrators will carefully establish a regulation regarding writing and accounting which ensures that the individual accounts will be credited only after the funds have actually been received.

II. [Availability of deposits only on T+1] With this purpose, money to be received by individuals to be put in current accounts will be available only the day after having been received. However, those funds which will have been submitted in the form of species and banknotes should be available on the same day.

III. [Immediate debit; avoidance of advances] The current accounts are debited immediately when a payment is made at their expense. It will be carefully avoided to make any advances. The payments to be made at the Caisse d'Escompte will never be settled before their actual due date. Bills of exchange due on any given day can serve as funds for same day payments, provided that the funds resulting from these bills of exchange have already been received in the current accounts.

IV. [Daily drawing of overall account balance] The current accounts will be added every evening, such that the Director of the current accounts receives the overall account balance.

V. [Oversight of current accounts] The Director in charge of the current accounts will strictly monitor the good order of all related registers, and all this under the oversight of the Committee for current accounts, and in compliance with the orders of the Administrators.

Chapter X: The custody of shareholdings

I. [Iron vault for shares in custody] An iron vault will be built immediately in the Palais, or in another secure place, where the papers will be perfectly protected from fire, and the keys will be held by the Directors.

II. [Keys to iron vault] The deposited shares will be held in this depot, in an iron vault, with three keys, one for the Administrator of the week, one for the Directors of the books, and one for the Secretary.

III. [Registers for deposited shares] The registries of the depots will be maintained in two copies. The main books will be closed by key. Every depot must be signed by the person making the deposit and must be paraphed by an Administrator. Nobody can discharge the registry of the deposited shares and their dividends, except the person in the name of which the depot has been made... It will be allowed to add to the custody account of any depositor clauses, restrictions and conditions, contained in the

dossiers of notaries which will accompany the depots and one will have to respect those.

IV. [Secrecy of depots] The depots will be maintained in absolute secrecy, and nobody outside the Administration will have recourse to them, except the owners of the deposited shares, or their authorised agents... Persons can be accompanied by a notary, with the purpose to verify the existence of their depot, whenever needed, with regards to the books of the company.

V. [Certification of share ownership for General Assembly] No certificates of share deposits will be provided, except with the purpose of allowing shareholders to enter General Assemblies. These certificates will mention the number of votes that shareholders will have in ballots, relative to their number of shares, following the regulation of 22 November 1783. They will be formulated in a way that they cannot serve as titles against the company, and to have no relevance any longer when the Assembly is over.

VI. [More on the registers] All books regarding the depots will be kept in two copies. Every operation is inscribed immediately into the books. One of the two copies will be brought every evening to the secure custody place mentioned in Article I of this chapter, and will be encased, and the key will remain with the Director of the books.

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