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Department of Economics
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Free Banking in Sweden: The Case of Private Bank Notes, 1831-1902

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The Case of Private Bank Notes, 1831-1902

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Abstract

This paper examines the Swedish record of competition in the supply of bank notes in the 19th century. Between 1831 and 1902, private commercial banks, organized as partnerships with unlimited liability for their owners, issued notes competing with the notes of the *Riksbank*, the bank owned by the *Riksdag*, the Swedish parliament. The private banks turned out to be competitive in this market despite several legal obstacles, most notably that private notes were never legal tender – only *Riksbank* notes were. The private note-issuing banks developed techniques to increase the distribution of their notes. No case of an overissue of notes or of runs by the public on private note banks occurred. No private bank failed to redeem its notes into *Riksbank* notes. Opinion in the *Riksdag* remained hostile to private bank notes, reflected in the gradual restriction of the denominations of the notes issued by private banks and in rising taxes on private notes. Eventually, the *Riksdag* gave its bank, the *Riksbank*, a monopoly of note issue in Sweden. The evidence from the Swedish experience of free banking suggests that the design of the legal system was the prime explanation for the successful performance of private notes.

Key words: Free banking, central banking, private bank notes, unlimited liability, currency competition, Riksbank, Sweden

JEL classification: E42, E51, E58, G21, K2, N13, N23

Free Banking in Sweden: The Case of Private Bank Notes, 1831-1902

1. Introduction¹

This paper examines the Swedish record of competition in the supply of bank notes in the 19th century. The following features of the Swedish system stand out. Between 1831 and 1902, a rising number of private commercial banks issued notes competing with the notes of the *Riksbank*, the bank owned by the *Riksdag*, the Swedish parliament. The private notes were denominated in the same currency unit, the *krona*, as the notes of the *Riksbank*.² The private banks turned out to be successful in this market despite various legal and political obstacles. Private notes were never legal tender – only *Riksbank* notes were. Public opinion as expressed in the *Riksdag* was generally hostile to private bank notes, reflected in legislative changes gradually restricting the size of the denominations of notes issued by private banks and in taxation levied on private notes. Eventually, the *Riksdag* gave its bank, the *Riksbank*, a monopoly of the note issue.

During the seven decades of private notes in circulation, no private bank failed to redeem its notes into *Riksbank* notes. The exchange rate between the two kinds of notes remained one to one. The note issuance was initially not regulated by any legal reserve requirements, nor by government inspection. The note-issuing banks were originally chartered under the explicit rule that the authorities would “under no circumstances” intervene to support a private bank in financial trouble. Nor could the banks expect to get any help from the *Riksbank*, since it was their main competitor. In view of these features, it is remarkable that no private banks failed to redeem its notes in Sweden, considering failures of note-issuing banks in Scotland, England, and the United States during the 19th century.³

¹ This paper has evolved over time since a first version was published as Jonung (1978). This version builds upon Jonung (1989) incorporating recent work, primarily by Klas Fregert and Anders Ögren. I have benefited from comments by Michael D. Bordo, Klas Fregert, Kurt Schuler, Roger Svensson and Anders Ögren as well as from participants at various seminars in Sweden and the United States. I am deeply indebted to Kurt Schuler for his advice. Dag Rydorff has skillfully prepared the charts.

² The currency unit of the *Riksbank* was changed from the *riksdaler* to the *krona* when Sweden moved from the silver standard to the gold standard in 1873. All data in the charts are expressed in *kronor*.

³ See for example White (1995).

The history of private bank notes in Sweden represents an episode of free banking, defined as a case where private bank in the 19th century competed with a rudimentary central bank, the *Riksbank*, in both the market for notes and for deposits. Entry into private banking was not free, although restrictions eased over time. The commercial banking system was subject to legal rules determining its performance. This period of free banking ended in 1903 when the *Riksbank* obtained a monopoly on the issuance of notes and accepted the role of a modern central bank, while the commercial banking system became the main supplier of deposits.

The plan of the paper is as follows. As empirical studies of the development of banking systems emphasize the importance of the legal framework, the Swedish banking legislation relevant to the issuance of private notes is first presented. Next, the economics of the private note issue is considered: the development of market shares, the role of the note supply to the private banks, various methods of spreading notes, the private clearing of notes and the profitability of and entry into the production of private notes. Finally, the Swedish record is summarized.

2. The legal framework of private note issue

The legal framework exercised a decisive influence on the development of Swedish commercial banking in the 19th century. It determined the types of banks that developed, the size and performance of the commercial banking system.⁴ Several other laws and government decisions influenced competition and profitability within the banking system, the most important being usury laws prior to 1864, restrictions on the note denominations banks could issue and taxes on private note issue. Private note-issuing banks had to apply for a charter to start business, so the government, that is the Crown, decided the rate of entry and thus the degree of competition in the market for notes.

Because private issuance of notes was a hotly disputed political issue, most of the legislative changes concerning commercial banking dealt with it. The Crown and the nobility were supportive of the private note-issuing banks, but as the influence of the nobility in the *Riksdag* and in the cabinet declined over time due to parliamentary reforms, the government eventually phased out private notes.⁵

⁴ For a comprehensive survey of the legal foundations of the Swedish financial system during the period 1772-1870, see Fregert (2021).

⁵ Ögren (2019) gives a detailed account of the political controversies surrounding the regulation of commercial banking in the period 1822-1921. See also Nilsson (1981).

2.1 The royal ordinance of 1824

At the end of the 18th century, several unlimited joint-stock banks (*diskonter*) were founded in Sweden. They acted as commercial banks, financing their lending mainly through the *Riksbank*, which was formally the bank of the *Riksdag*. Thus, they were generally subordinate to the *Riksbank* and dependent on loans from it. The *diskonter* failed during the years 1815-17 because of severe financial problems, including runs on them by the public. After these events, the *Riksbank* remained the sole bank in Sweden.

In the *Riksdag* of 1823, there was general unanimity that institutions other than the *Riksbank* should be allowed to carry out financial intermediation. As a result, a royal ordinance of 1824 authorized private banks. Its preamble stated that the aim was to facilitate the establishment of private companies acting as intermediaries between owners of capital and borrowers of capital. Furthermore, these companies should be independent of the *Riksbank* in their business.

The ordinance was only five paragraphs long. It became, however, the legal basis for the Swedish commercial banking system and, unintentionally, for the issuance of private notes. The main points were as follows:

1. Banks were prohibited from charging more than the maximum legal rate of interest on their lending.
2. Private persons intending to set up a bank had to apply to the Crown for a charter (*oktroj*). The charter ran at the most for ten years, then an application for a renewal could be made. The Crown had to approve the rules and regulations of the company.
3. The banks should be organized as a partnership (*handelsbolag*) with unlimited liability. Shareholders were responsible for the business of the bank "one for all and all for one" (*en för alla och alla för en*).
4. The names of the shareholders and the rules of the company as well as all major changes pertaining to the company and its shareholders should be published in newspapers and registered at a court of law.
5. Finally, bank charters should clearly state that banks "neither in the present nor at any time in the future should expect to receive any support from public funds, and that the government

authorities would under no circumstances be involved in or be contributing to the support of the activities of the banks.”

Three things are worth noting concerning the ordinance of 1824. First, private banks were to be organized as joint partnerships with unlimited liability. Throughout their existence, the organization of the note-issuing commercial banks remained based on the principle of the joint responsibility of their owners, i.e., on unlimited liability. This was termed the principle of *solidariskt ansvar*, literally “solidary responsibility.” For this reason, private note-issuing banks were called the *solidariska banker*. They were also classified as *privatbanker*, *sedelbanker* and *enskilda banker* in Swedish. In this text, they will be called *enskilda* (private) banks.

Joint stock banking based on limited liability was introduced later in the 19th century. However, joint stock banks were not allowed to issue notes. Instead, they based their activities on attracting deposits and on other methods of borrowing from the public. As these banks were joint stock companies, in Swedish *aktiebolag*, they were generally called *aktiebanker* as opposed to the *enskilda* banks.

Second, the involvement of the *Riksbank* with the *diskonter* was still fresh in memory, discouraging the government and the *Riksdag* from any financial engagement with the new banks. The new banks were supposed to compete with the *Riksbank*, not to cooperate with it. The public should thus not associate the new banks with the *diskonter*. For this reason, the ordinance of 1824 stated that the charters of the new banks should declare that no official support should be expected, clearly distinguishing them from their forerunners.

Third, the ordinance of 1824 did not mention the issuance of bank notes. The *Riksbank* was already issuing notes. The legal right to issue private notes was unclear. According to the constitution, only *Riksbank* notes were legal tender, thus private notes could be refused as payment for taxes. The thought that the new banks were potential suppliers of private notes apparently did not occur to the lawmakers. Still, the ordinance of 1824 became the legal foundation of the first note-issuing private banks.

More than seven years elapsed before an application for a bank charter was made. The main reason why no commercial bank was founded in the 1820s is probably the usury laws that applied to commercial banking. The maximum legal rate that a commercial bank could charge for its lending prevented it from paying competitive rates in the bidding for funds. A free informal capital market existed, specifically in Stockholm and Gothenburg, where wealthy private individuals, companies and various institutions acted as financial intermediaries,

attracting funds from surplus units and lending to borrowers.⁶ The usury laws did not apply to those active as lenders on the informal markets. Consequently, a bank faced difficulties in attracting funds from prospective depositors or lenders as long as the maximum legal rates were set below prevailing market rates.

As support for this explanation, one can point to the effects of the gradual liberalization and the final repeal of the usury laws in the 1850s and 1860s. The volume of interest-bearing bank deposits expanded rapidly compared with previous decades as well as in relation to the growth of the note issue. Prior to the 1860s, private banks had to rely almost solely on their note issues to obtain funds for their lending. In the 1860s, the first joint stock banks that did not issue notes were also founded. Initially they remained small compared to the size of the *enskilda* banks.

In 1830, three merchants from the town of Ystad in the southernmost part of Sweden applied for a bank charter. The privilege was secured and in 1831 the *Skånska Privatbanken*, later the *Skånes Enskilda Bank*, started business. The most striking feature of its operation was that it immediately began to issue notes. The rules of the company, given in the charter granted by the Crown, did not mention bank notes. However, the regulations of the bank were written in such a way that it could issue noninterest-bearing certificates of deposit with denominations lower than 20 *riksdaler*, payable on demand to the bearer. This paragraph in the regulations was likely written by a clergyman familiar with foreign banking systems and instrumental in the organization of the Ystad bank.⁷ Thus, the founders of the bank seemingly planned from the very beginning to supply the public with certificates that for all practical purposes were identical to bank notes.

The government granted a charter in 1832 to *Wermlands Provincialbank*, later *Wermlands Enskilda Bank*. This bank, too, started to supply the public with its own notes, although the rules of its charter made no mention of such an activity. Four new banks secured charters in 1836-1837 with explicit provisions in their charters for issuing notes. The commercial banking system expanded rapidly in the 1830s. The six private banks had between them founded three branch offices by 1840. (Table 1).

The notes of the private banks were quickly accepted by the public and became the major source of finance for these banks. Although, they competed with *Riksbank* notes, the government did not thwart the notes of the private banks. One reason why no steps were taken

⁶ For a survey of the informal credit markets in Sweden in the 19th century, see Fregert (2021).

⁷ Brisman (1924, p. 84) and Kock (1931, p. 63-64).

against private notes in the 1830s was that public opinion was positive towards private banks at this stage. Information about the Scottish banking system had spread to Sweden and there was a belief that private banks required the right to issue notes to stay in business.

2.2 The law of 1846

The charters of the six private banks elapsed in 1847. As sentiment was strong against the private notes at the *Riksdag* of 1844-1845, the *Riksdag* suggested legislation that was quite restrictive to the note-issuing banks. The Crown, however, put forth a new law in 1846 that was surprisingly favorable to the banks. This law summarized and codified the banking practices that had gradually evolved during the first charters of the private banks. The law of 1846 is an extension and development of the ordinance of 1824; it comprised 17 paragraphs, primarily dealing with note issue. Most important, the law contained rules concerning the assets required to back up the note circulation.

The main points of the new legislation in relation to the statutes of 1824 were as follows:

1. The subscribed capital (the *teckningssumma* or the *grundfond*) should be at least one million *kronor*. At least ten per cent of this capital should be paid in cash into the bank (that is, *Riksbank* notes or silver coins) before the bank could start its business, and then at least another 15 per cent within a year.
2. The rest of the subscribed capital, at the most 75 percent, could consist of *Riksbank* notes, coins, gold, and silver as well as real estate mortgages, shares (though not the shares of an *enskilda* bank), and bonds as approved by the bank. A representative of the Crown had the right to decide the collateral to be accepted. The collateral was to be deposited in a safe with a special lock requiring two keys, one held by the bank, the other by a representative of the Crown. The bank was not allowed to reduce the collateral as long as it was carrying out its business. In case the bank was dissolved, the collateral was first to be used to cover the liabilities of the bank.
3. Notes issued by an *enskilda* bank were payable on demand to the bearer. The minimum denomination was five *kronor*, and then ten *kronor* starting in 1851.
4. An *enskilda* bank was not entitled to issue notes greater than the sum of vault cash, that is *Riksbank* notes and coins, deposits with the *Riksbank*, and securities held by the bank for cash credits granted to the extent that the credits had been utilized, up to a maximum

corresponding to 50 percent of the entire subscribed capital of the bank. If a bank issued more notes than this sum, it should correct the situation within one month.

5. A shareholder of the bank or his heirs was not entitled during the term of the charter to sell his share unless the company gave its consent at a general meeting.

6. The bank was to send a financial statement at the end of each quarter to the Crown. A representative of the Crown had the right to inquire into the business of the bank at any time.

7. The bank was to send proofs of its notes to the Ministry of Finance as well as to publish in the press the names of those persons that were to sign the notes.

8. The main office and the branches of a bank were only to be in towns.

9. The Crown was entitled to repeal the charter during its term if a bank did not follow the law.

10. The joint responsibility of the shareholders, i.e., unlimited liability, was maintained.

All major changes introduced in the law of 1846 pertained to the note issue of the *enskilda* banks. They faced several new regulations aimed at guaranteeing the redeemability of their notes into *Riksbank* notes and coins. The rules in points 1 and 2 guaranteed that a bank did not start issuing notes without sufficient cash and secondary reserves. The reserve requirements in point 4 served as an additional protection against overissue. The compulsory consent by a meeting of the bank to any transfer of ownership of shares prevented speculation in bank shares and induced close monitoring of the management of the banks by shareholders.

The charters of the six existing banks were all renewed, and two new banks were chartered in 1847-48. As the law of 1846 was largely a codification of various rules found in the charters of the private banks that had developed prior to 1846, the law did not prevent the growth of commercial banking after 1846.

2.3 The legislation of 1855

In 1855, a few revisions in the law of 1846 were made. The number of shareholders should be at least 30, the minimum note denomination was reduced to five *kronor*, all the notes of *enskilda* banks were to be of the same denominations and of uniform size for a given denomination, *enskilda* banks were not allowed to trade in foreign and domestic bills and

interest-bearing securities, nor in gold and silver. Previously, the law of 1846 had forbidden banks to buy and sell anything but silver and gold.

These minor modifications did not change the legal framework of the *enskilda* banking system in any fundamental way. It continued to expand after 1855. Four new banks secured charters in 1856-1857. Several applications for charters were refused, however, because the authorities wanted to promote the growth of the *filial* banks, a new type of banks associated with the *Riksbank* and introduced by legislation in the *Riksdag* in 1851.⁸

In the 1850s, the combined note issue of the *enskilda* banks began to approach the volume of *Riksbank* notes in circulation (Chart 1). Consequently, the market share held by *enskilda* bank notes was rapidly getting as large as that of the *Riksbank* notes (Chart 2).

2.4 The legislation of 1864

The *Riksdag* of 1862-63 suggested several radical changes in the legislation pertaining to the banking system. First, the maximum limit on the rate of interest to be charged by banks was abolished. In Swedish, this was called *räntans frigivande*, literally the liberation of the rate of interest. This step proved to be a crucial prerequisite for the rise of deposit banking. Second, a new law permitted the establishment of commercial banks that did not issue notes. These banks could be organized either as joint stock companies with limited liability or as companies with unlimited liability. Third, the growth of the *filial* banks was effectively halted by a decision to reduce the financial support they received from the *Riksbank*. Fourth, a comprehensive collection of statutes was adopted to cover the *enskilda* banks. The law of 1864 replaced the legislation of 1824, 1846 and 1855, essentially by extending the earlier provisions and making them more detailed. No far-reaching alterations were introduced. The most notable changes were:

1. The denominations of *enskilda* bank notes were restricted to 5, 10, 50, 100, and 500 *kronor*. They were not to be “of the same design” as the notes of the *Riksbank*.

2. *Enskilda* bank notes were to be redeemed in coins or the notes of the *Riksbank* if presented at the main office of the *enskilda* bank. If payment was not received on demand, the holder of

⁸ The section below on *Countermeasures by the Riksdag* deals with the record of the *filial* banks.

the bank note was entitled to obtain principal and interest at 6 percent per year from the date payment had been refused until payment was obtained.

3. The capital of the bank should be fully paid-up in cash within a year of the bank opening its business. Then at least 60 and at the most 75 percent of the capital should be converted into public bonds.

4. The names of the shareholders with unlimited liability were to be published in the newspapers.

5. A shareholder who was a director of the bank was to deposit with the bank at least one of his shares. This share was to remain deposited with the bank as long as he remained in office.

The banking law of 1864 changed only to a minor extent the legal framework for the *enskilda* banks. The rules concerning the note issue were made slightly tighter. The changes pertaining to the usury laws and the joint stock banks had more profound effects on the growth of commercial banking. The first joint stock banks in Sweden were founded in the 1860s. Bank deposits became rapidly an attractive source of finance and the *enskilda* banks started to pay more attention to their deposit activities than hitherto. The growth in deposits had commenced at the end of the 1850s, when banks could pay higher rates on their deposits than previously because of the economic crisis of 1857.

The legislation of 1864 became the legal foundation of Swedish commercial banking for the rest of the 19th century. Because of Sweden's adoption of the gold standard in 1873, the law of 1864 was slightly revised in 1873. The reserve requirements of the *enskilda* banks were changed to include gold in their reserves. The banks were to redeem their notes in gold on demand at their main offices. This change should be regarded as an attempt at introducing the gold standard in Sweden by increasing the holdings of gold outside the *Riksbank*. However, as the Swedish public never held and used gold widely as a store of wealth or as a medium of exchange, this change in the law did not matter much except that it forced the *enskilda* banks to purchase minor volumes of gold.⁹

The other main modifications of the law of 1864 made in 1873 concerned the minimum note denominations of the *enskilda* banks. Permission to issue notes of five and ten *kronor* was granted only temporarily. Furthermore, a fine of 1000 *kronor* a day was to be paid by a bank that fell short of its reserve requirements. The banks were also requested to send a monthly report – previously it was quarterly – to the Ministry of Finance. All these changes tightened

⁹ See Jonung (1984) on the workings of the classical gold standard in Sweden.

the rules about note issue, although none of them became an effective hindrance to the growth of the *enskilda* banks, as seen from Chart 1.

In the 1860s and 1870s, the commercial banking system expanded rapidly, most noticeably in the first halves of these decades. Between 1864 and 1866, 13 new *enskilda* banks were chartered (Table 1). Starting in the 1860s, the *aktie* banks and the *enskilda* banks existed side by side, both competing in the market for deposits, while the *enskilda* banks competed with the *Riksbank* in the market for notes.

By the first half of the 1870s, practically all of Sweden was covered by note-issuing banks, competing with the *Riksbank*. By 1875, 25 banks were in operation. Only one new bank was chartered after 1875. It is indicative that this was an *enskilda* bank in the northernmost part of Sweden, starting business in 1893. This area of Sweden was financially underdeveloped by comparison with the rest of the country.

Banking legislation remained basically unchanged in the last quarter of the 19th century except for the prohibition of the private notes of 5 and 10 *kronor* around 1880. This step was detrimental to the expansion of the note issue of the *enskilda* banks, leaving the *Riksbank* as the sole supplier of notes of these denominations. Nevertheless, the stock of private notes continued to grow (Chart 1).

Opinion in the *Riksdag* remained, however, hostile to private bank notes. New proposals for legislation to give the *Riksbank* a monopoly of note issue were continuously presented. Eventually, the *Riksdag* adopted in 1897 a law that gave the *Riksbank* this privilege. Private notes were to be phased out of circulation by 1903, while the *enskilda* banks were to be compensated for the loss of their notes by loans and advances from the *Riksbank* to facilitate the transition. However, the terms offered were not attractive enough, so the volume of private notes continued to expand, reaching an all-time high in 1900. In response, the *Riksdag* changed the law in 1901, making its offer more attractive. Now *enskilda* banks started to reduce the volume of notes in circulation. By the end of 1903, private notes held by the public were negligible. In 1906, private notes were no longer legally a claim that the *enskilda* banks had to accept.

The elimination of the private notes went smoothly. The public was informed about the legislation through the newspapers and announcements in the churches. No banks experienced financial difficulties. Several *enskilda* banks reorganized as joint stock banks with limited liabilities for their owners. Their gold reserves, previously held as backing for the note issues,

were sold to the *Riksbank* to be used as reserves behind the growing volume of *Riksbank* notes in circulation.

3. The market for notes

The *Riksbank* and the *enskilda* banks competed in the market for notes for seventy years. During these years, the market shares of private and *Riksbank* notes underwent considerable changes. As displayed in Chart 1 and 2, the rapid growth of private bank notes from the early 1830s to the mid 1870s is striking. The volume of *enskilda* bank notes in circulation increased from 2 million *kronor* in 1834 to close to 70 million *kronor* in 1875.

Riksbank notes exhibited a different pattern. In the 1830s and 1840s, they fluctuated around 35 million *kronor*, then expanded in the 1850s, reaching a peak of 57 million *kronor* in 1857. After the crises of 1857-58, they declined, until the end of the 1860s. The volume of notes in circulation was below 25 million *kronor* in 1869 – an all-time low for *Riksbank* notes while the 1860s was a decade of rapid expansion of private notes.

The volume of *Riksbank* notes held by the public (total notes minus those commercial banks held as reserves) displays the same long-run pattern as the total circulation, although the difference between these two measures increased as the *enskilda* bank holdings of *Riksbank* notes expanded. *Riksbank* notes held by the public reached their lowest level in 1869.¹⁰ It is indicative that the *Riksbank* started in that year to accept the notes of the private banks. By then the public's holdings of private notes was roughly 2.5 times as large as its holdings of *Riksbank* notes. The holdings of private notes by commercial banks were not very large, at the most a few million *kronor*.¹¹

During the last half of the 1870s, the volume of *enskilda* and *Riksbank* notes declined sharply because of the depression following the boom of the early 1870s. It then remained roughly constant until the 1890s. The volume of notes expanded rapidly by the end of the century, the supply of private notes surpassing the level of 1874, reaching its highest level shortly before private notes were taken out of circulation. (Chart 1).

Between 1875 and 1880, market shares changed substantially. The share of *Riksbank* notes declined between 1875 and 1877, then expanded between 1878 and 1880. (Chart 2). These pronounced swings were caused by changes in the legislation concerning the denominations

¹⁰ See Jonung (1989).

¹¹ See Jonung (1989).

supplied. The *Riksdag* decided in 1875 that the *Riksbank* should withdraw its notes of one *krona*. At that time this was the smallest denomination in circulation. After this step, the *Riksbank* and the *enskilda* banks both supplied five *kronor* notes as the lowest denomination. The abolishment of the one-*krona* note caused a sharp decline in the market share of *Riksbank* notes. However, when the five-*kronor* notes of the *enskilda* banks were prohibited in 1878, the *Riksbank* became the sole supplier of this denomination. Consequently, it increased its market share considerably in 1878-80. The *enskilda* banks, however, were able to increase their issue of ten-*kronor* notes and compensate to a small extent for the loss of their five-*kronor* notes.

These sharp fluctuations in market shares indicate that the notes of the *Riksbank* and of the *enskilda* banks were close substitutes. The public chose the composition of denominations it found most attractive, paying hardly any attention to the origin of the notes. The fact that the *enskilda* banks were able to increase their issue of ten-*kronor* notes after 1880 can most readily be explained by the large number of offices of these banks compared to the offices of the *Riksbank*.

The increase in the market share of *Riksbank* notes in the 1880s and 1890s was due to two factors. First, the prohibition of five-*kronor* note for the *enskilda* banks was a severe blow to them. Second, the *Riksbank* founded branch offices in the last decades of the 19th century. Despite these adverse developments, the *enskilda* banks managed to expand their note issues from the end of the 1880s, albeit at a slower rate than the *Riksbank*.

After the disappearance of private notes at the turn of the century, the supply of *Riksbank* notes expanded rapidly, replacing private notes. However, the share of notes in the money stock declined after the *Riksbank* obtained the monopoly on issuing notes. This suggests that the *Riksbank* was not able to replace completely private notes by *Riksbank* notes.

4. The economics of the private bank notes

4.1. The importance of the note issue to the *enskilda* banks

The first *enskilda* banks based their existence solely on the issuance of notes. Notes were the major liability of the banks and the circulation of notes financed their lending. In fact, deposit-only commercial banks were not founded until the 1860s. Thus, banks derived their profits from issuing notes during the first four decades of Swedish commercial banking.

Deposits were initially very small compared to note circulation for the private banks, as seen from Table 2, which shows the volume of notes, demand, and time deposits of the note-issuing commercial banks for selected years 1835-1895. Deposits did not surpass note issue until 1867. After then their share continually increased. In the early stages of the *enskilda* banks, some even refused to accept deposits from the public. Generally, these facilities were subject to various restrictions. For example, there are reports that banks asked depositors to withdraw funds when the banks had difficulty finding profitable outlets for their deposits. Other banks charged their customers for the right to deposit money.

A major reason why the first banks relied to such an extent on notes at the expense of the development of deposits is found in the usury laws. They prevented banks from paying competitive interest rates on their deposits. Instead, the unregulated free market offered higher rates and attracted funds for which the banks could not compete. As long as the regulations on interest rates were effective, the issuance of notes remained the main source of revenue for banks.

Another reason why deposits did not surpass private notes until the 1860s is probably that the public was more accustomed to the use of notes than deposits. Notes of the *Riksbank* had been circulating in Sweden for a long time, at least since the early half of the 18th century. Apparently, it took more time for the commercial banking system to establish public confidence in its deposit facilities than in its notes.

After the abolition of usury ceilings at the end of the 1850s and early 1860s, deposits of commercial banks increased rapidly. The foundation of *Stockholms Enskilda Bank* in Stockholm in 1856 was a breakthrough for deposit banking. This bank was the first *enskilda* bank with its main office in the capital. A large capital market existed by then in Stockholm, from which the new bank could attract funds. The Stockholm bank had to rely on deposits to a larger extent than banks in the countryside because the *Riksbank* was a strong competitor in the market for notes in the capital. Instead, the *Stockholms Enskilda Bank* tried to spread its notes to other parts of Sweden.¹²

To sum up, the right to issue notes was the basis for commercial banking in Sweden in the 19th century. Without it, the development of banking would most likely have been delayed. Notes were a sizeable share of the liabilities of the note-issuing banks right up to the abolition of private bank notes (Table 2).

¹² See Nilsson (1981).

4.2 Methods for increasing the circulation of private bank notes

The issuance of notes was initially the most important activity of the private banks. As the profitability of the note issue was dependent on the volume of notes held in circulation, ignoring the costs of administering the note supply, the *enskilda* banks gradually developed techniques to increase the volume of notes held by the public. These methods aimed at bolstering public confidence in private notes as well as facilitating their use.

The *enskilda* banks also aimed at withdrawing *Riksbank* notes from private circulation by exchanging them for their notes. This latter activity was intimately connected with the cash management of the private banks, because *Riksbank* notes were their predominant reserve asset. By replacing *Riksbank* notes with their own notes, the *enskilda* banks could expand their note issues and simultaneously obtain reserves. According to Brisman, the “catching of legal tender” (*att uppfånga riksmünt*) was the favorite sport of the *enskilda* banks that they carried out *con amore*.¹³

The use of note-exchangers. That private bank notes were not legal tender was a major problem facing the *enskilda* banks. Their notes were not accepted as payment for taxes, customs duties, and other fees to the government. Private sellers could also legally refuse to accept private bank notes. Thus, in certain transactions, holders of private notes were forced to exchange them for *Riksbank* notes, which were legal tender. There were several complaints against the *enskilda* banks about this state of affairs.

The private banks developed ways of eliminating these obstacles. They supplied the proper government officials, specifically the tax collectors (the *landskamrer* and the *kronofogde*) with appropriate funds of *Riksbank* notes and coins to use in exchanging private bank notes for legal tender notes. This fund was termed the *växlingskassa*, literally the exchange fund. Private banks also paid government officials to exchange private notes and to manage the exchange funds. Other officials were also paid for similar services as *sedelväxlare*, literally note exchangers. Through such systems the private banks increased the attractiveness of their notes and thus the demand for them. Eventually, as mentioned above, the private note supply was so large that the *Riksbank* was forced to accept private notes at par with *Riksbank* notes. This happened in 1869.

Clearing of private notes. The first private note banks did not always accept the notes of other private banks at par. Gradually, however, they agreed to redeem each other's notes on demand at par. Furthermore, the note exchangers of the private banks exchanged the notes of other

¹³ Brisman (1934, p. 24).

private banks. In this way, the *enskilda* banks maintained collectively the full convertibility of their notes. This system developed spontaneously.

Counterfeits. Another method of maintaining the demand for private notes concerned the treatment of counterfeits. During the first decades of private circulation, a large number of notes of different sizes, designs, colors, and denominations existed, facilitating the rise of counterfeited notes. The public could hardly detect all the counterfeits. Private banks generally accepted and redeemed counterfeits that were well designed.¹⁴ In cases of badly designed counterfeits, banks refused to accept them, and holders had to incur the losses.

Denominations. A key method of increasing the demand for notes was to supply the public with notes of low denominations. In the 1840s, the *enskilda* banks supplied no less than seven denominations between 3 and 15 *kronor*, while the *Riksbank* had only one denomination in this range. Low-denomination private notes were more profitable than the higher-denomination notes because they tended to stay out longer in circulation. Banking legislation, however, eventually restricted the number of denominations as well as requiring standard sizes for private notes.

Note spreaders. Private banks employed various note spreaders (*sedelspridare* or *kommissionärer*). They were paid by a bank to disburse its notes. The basic idea was to disburse the notes as far as possible from the main area of circulation of the notes. In this way, they remained in the hands of the public longer before returning to the main office for redemption. There are several cases of this practice reported in the literature on the *enskilda* banks, although the system of note spreaders was apparently not itself widespread.

Most *enskilda* banks had two or three such employees.¹⁵ It is reported that the *Östergötlands Enskilda Bank* employed a private banking firm to circulate its notes in the district of Jämtland in northern Sweden, “from where they could not come back very soon”.¹⁶ The *Örebro Enskilda Bank*, with its main office in central Sweden, opened a small branch (*kommissionskontor*) in the town of Strömstad at the border with Norway, hoping to circulate its notes in Norway. The *Wermlands Enskilda Bank* tried the same policy. As the *Stockholms Enskilda Bank* – the first *enskilda* bank with its main office in Stockholm – met with strong competition from *Riksbank* notes in the capital, the new bank tried to use note spreaders to circulate its notes in northern Sweden, where hardly any *enskilda* banks were operating.

¹⁴ Brisman (1934, pp. 23–24).

¹⁵ Brisman (1934, p. 24).

¹⁶ Brisman (1934, p. 22).

Branch offices. The extension of branch offices contributed to the spread of private notes, as the branch offices extending loans were using the notes of the bank. Table 1 displays the number of branch offices of the *enskilda* banks and the joint stock banks. It is significant that the *enskilda* banks were guaranteed credit from the *Riksbank* when private notes were abolished at the turn of the century, provided they did not close any branches. Apparently, it was feared that some branch offices were going to be unprofitable and thus closed when the *enskilda* banks lost their right to issue notes.

Recall of cash credits. The *enskilda* banks supported the development of lending on cash credit, a system imported from Scotland, although it was unprofitable per se. Borrowers of cash credit were asked once a year to repay their full debt by a certain date. Then the *enskilda* bank obtained payment in *Riksbank* notes, coins, and various private bank notes. The next day the loan was extended again but now it was paid out only in the notes of the *enskilda* bank giving the cash credit. This was an effective method for a single bank to replace the notes of its competitors. The *Örebro Enskilda Bank* even required its borrowers of cash credit to repay their loans twice a year. This system of yearly payments of loans to extract the notes of other banks apparently declined after the 1850s.

4.3. Countermeasures by the Riksdag

The *Riksdag*, the owner of the *Riksbank*, did not accept the new entrants on the market for notes that threatened the profitability of the *Riksbank*. The parliament took several legislative steps to counteract the competition from the *enskilda* notes. These steps involved establishing the *filial* banks, founding *Riksbank* branch offices in every provincial capital, taxing private notes, prohibiting private notes of small denominations, and eventually prohibiting private notes outright. Among these measures, the establishment of *filial* banks turned out to be the least successful one.

Opposition to private notes was reflected in the *Riksdag* by continued proposals to impose various restrictions on the *enskilda* banks. The view that the *Riksbank* should be given the monopoly right on the issuance of notes was strong, in particular among farmers and clergy in the *Riksdag*. One result of this critical attitude was that in 1851 the *Riksdag* established subordinate institutions, the *filial* banks, literally branch banks. The *Riksbank* had by then besides the main office in Stockholm only two branches, one in Gothenburg and one in Malmö. These were the three biggest towns in Sweden at the time.

The *filial* banks were to be founded by private individuals and were to obtain credit from the *Riksbank*. They did not have the right to issue notes of their own and were thus similar to the

diskonter, as they were dependent on the *Riksbank* for the financing of their lending. The idea behind the filial banks was to prevent the growth of the *enskilda* banks by giving the *Riksbank* a large network of branch offices, spreading *Riksbank* notes and competing with the *enskilda* banks in the market for loans and advances. The filial banks represented a method of combining private capital with the activities of the *Riksbank*.

The *filial* banks received charters like those of the *enskilda* banks, except that they did not have the right to issue notes. Instead, they were supposed to deal in the notes of the *Riksbank*. The number of *filial* banks reached 22 by 1862.

The *Riksdag* in 1862 decided that the *Riksbank* should reduce its support to the *filial* banks, which had proved to be less profitable than initially expected. The number of *filial* banks declined, and the last one closed by June 30, 1875. They simply did not prove to be competitive with the private commercial banks. Many were merged or taken over by *enskilda* banks. A few reorganized as joint stock banks.

Although the *Riksdag* established the *filial* banks to be close competitors to the *enskilda* banks by spreading *Riksbank* notes, no rules forced the *filial* banks to deal exclusively in the notes of the *Riksbank*. They could issue certificates of claims on the *Riksbank* (*assignationer*) with a minimum denomination of 100 *kronor*. The certificates represented a new kind of note, but due to their high denomination they were not in great demand by the public. Instead, the *filial* banks turned to *enskilda* banks with their certificates and exchanged them for private notes of smaller denominations. This was advantageous for both types of banks. The *filial* bank obtained an interest-free loan from the *Riksbank* and the *enskilda* bank achieved a larger circulation for its notes, simultaneously receiving a claim on the *Riksbank* that was for all purpose identical with *Riksbank* notes and specie.

Some *filial* banks accepted payment from *enskilda* banks for circulating notes. This was specifically the case with the *Stockholms Enskilda Bank*, which circulated its notes in northern Sweden through an arrangement with some northern *filial* banks. Cooperation between the *filial* banks and the *enskilda* banks sometimes became quite close. In Örebro, the *filial* bank was regarded by the public as a branch of the *Örebro Enskilda Bank* and not as a branch of the *Riksbank*. The management of the two banks sometimes met and their interest rates were identical. The *filial* banks, initially organized to curtail the growth of the *enskilda* banks, thus turned out to do just the opposite.

To sum up, the *enskilda* banks displayed considerable ingenuity in promoting the circulation of their note issues. They were able to adjust or circumvent obstacles to the adoption of their

notes by the public. They were more efficient than the *Riksbank* in adapting to the demands of the public, most prominently in supplying notes of low denominations. Through many branch offices, the stock of private notes expanded rapidly and became larger than the volume of *Riksbank* notes within less than four decades after the establishment of the first *enskilda* bank.

4.3 Profitability and entry

Initially, there was no great demand to take part in founding note-issuing private banks. Apparently, there was uncertainty concerning the joint responsibility and the profitability of the new banks. The subscription to shares of new banks was sometimes slow and a few banks opened for business before the full subscribing of their share capital. The first *enskilda* banks turned out, however, to be highly profitable. The returns varied between 13 per cent for *Wermlands Bank* to 22 per cent for the *Smålands Bank*. The average was 18 per cent on the capital paid in by the owners during the years 1831-1847.¹⁷ High profitability became another subject of criticism against the private banks.

Even in the 1850s, the returns to the shareholders were sizeable. The average for the *enskilda* banks was about 16 percent per year. Losses remained extremely small. Between 1846 and 1855 the total losses of the eight *enskilda* banks were around 14,000 *kronor*. Brisman suggests that a safer banking business had probably not been carried out in any other country.¹⁸

The high profitability of the note-issuing banks attracted new entrants. However, the Crown restricted entry by not granting all applications new charters. In 1858, for example, eight applications to open new banks were refused with the argument that new entrants would be a threat to the *Riksbank*. One consequence was that the *enskilda* banks in business could continue paying high dividends to their shareholders as well as continuing to compete with the *Riksbank*.

As the shares of private banks became an attractive investment, the old shareholders were reluctant to let any new shareholders enter when the charters were renewed. Prospective new shareholders who tried to get shares in the *Östergötlands Enskilda Bank* when its charter was renewed after 1855 were prevented from so doing by the old owners. They applied and were given a charter for a new bank, but in the small town of Vadstena, a considerable distance

¹⁷ Brisman (1924, p. 221).

¹⁸ Brisman (1934, p. 22).

from the main office of the *Östergötlands Enskilda Bank*. None of the applicants lived in Vadstena.

Between 1865 and 1875, many new *enskilda* banks were established, specifically when various *filial* banks were reorganized as *enskilda* banks. The number of *enskilda* banks remained practically constant from 1875 to the turn of the century. During these years, the profitability of the note issue declined for various reasons. First, Sweden was now covered by the offices and thus by the notes of the private banks. The monopoly position of the original *enskilda* banks had thus been eroded. Second, the *Riksbank* founded several branch offices in the countryside. The aim was to have one office in every province, thus promoting the spread of *Riksbank* notes. Third, the *Riksdag* had started to tax the note issues of the private banks.

The first tax on notes was levied by the *Riksdag* of 1856-1860, at 0.2 percent of the maximum note circulation during the year. It was later raised to 0.5 percent in 1885 and in 1889 to 1 percent. Taxation made the note issue of the banks less profitable. Restrictions on the denominations of the *enskilda* bank notes had the same effect. The prohibition of five-*kronor* notes in 1879 was a severe setback for the *enskilda* banks. They were left with higher, denominations. Through the development of communications and transport, notes of high denomination could return quicker than previously. Furthermore, the banking law of 1874 obliged the banks to hold gold to redeem their notes. This represented an additional cost to the banks.

To sum up, the profitability of the note issue was high during the initial decades of operation of the *enskilda* banks. It was maintained primarily through the restricted entry policy of the Crown. However, profitability eventually declined because of the entry of new banks in the 1860s and 1870s, the introduction of taxes on the private notes, and restrictions on denomination size. When the private notes were taken out of circulation, the value of the privilege of issuing notes, the charter, had declined considerably since the early days of the *enskilda* banks.

5. Why did no private note bank fail?

A characteristic feature of the Swedish system of private note banks was its stability. During the seventy years of competition between private notes and *Riksbank* notes, no *enskilda* bank overissued and thus went bankrupt, causing holders of private notes to incur losses, nor was any bank forced to close, even temporarily, due to financial panics or runs by the public. This

is remarkable fact in view of the extent of the competition in the market for notes and of the legislative obstacles private notes faced.¹⁹

In the United States, England, Scotland, and other countries with private banks supplying notes to the public, there are many cases of banks failing to redeem their notes at par. Some banks overissued to such an extent that the public did not accept their notes at par with legal tender monies. Private banks went bankrupt for other reasons too, such as fraud. In Sweden, however, private notes maintained an exchange rate of one to one with *Riksbank* notes uninterruptedly.

Several factors explain the stability of the *enskilda* notes. The legal rules pertaining to the note issue of the *enskilda* banks appear to be the major reason why private notes were accepted at par with *Riksbank* notes and why there was no case of an overissue. The joint responsibility of the owners of the note-issuing banks was the most important of those rules. Other factors contributed as well.

The effects of unlimited liability. According to the law of 1824 and later banking laws, note-issuing commercial banks were organized as partnerships with unlimited liability. In case of financial problems, the owners of the bank risked not only the capital invested in the bank but their private wealth as well. As the founders of the *enskilda* banks generally were wealthy or prominent people, their incentives were strongly counter to any overissuing.

The incentives to supervise and monitor closely the activities of the bank directors were strong for the individual shareholders. This mitigated against any overissuing, risky lending or fraud. In fact, the requirement of joint responsibility may have invited too much prudence and caution by the owners of the *enskilda* banks. Losses on advances and loans remained surprisingly small during the first decades of operation of these banks, probably the result of a very careful screening of applicants for loans.

Other rules in the banking laws strengthened joint responsibility. An individual shareholder could not escape his joint responsibility during the term of the charter by selling his shares unless a general meeting of the bank gave its consent to the sale and to the new shareholder. In this way, the remaining shareholders could prevent the entry of a new partner with less wealth than the holder leaving the company. Bank shares were thus infrequently traded and could not be subject of short-run speculation that might have reduced public confidence in the solvency of the *enskilda* banks.

¹⁹ Two small *enskilda* banks facing financial problems were taken over by larger *enskilda* banks. This was the case of *Wadstena Enskilda Bank* in 1879 and *Oscarhamns Enskilda Bank* in 1889.

Public knowledge that the shareholders of the *enskilda* banks had unlimited liability fostered public confidence in the private banks and their liabilities. The registration of the names of the shareholders with joint responsibility at the court of law and in newspapers also had this effect. Thus, the belief in the solvency and stability of the *enskilda* banks made the public inclined to expect them always to redeem their notes, reducing the probability of runs on *enskilda* notes.

The role of reserve requirements and bank inspection. The reserve requirements of the note-issuing banks were apparently never an effective impediment to overissue. The *enskilda* banks had as a rule a large volume of unused rights to issue notes (*obegagnad sedelutgivningsrätt*). The reason was that legal reserves included assets other than cash, most notably bonds. Banks had considerable freedom to choose the composition of their legal reserves and thus their desired cash ratio. They maintained the ratios they found appropriate. Their choice was apparently never influenced by the requirements of the law, except for the requirements that the banks were to maintain the redeemability of their notes in gold when Sweden introduced a gold standard. This change in the law of 1873 forced a minor reallocation of the portfolios of the banks. Otherwise, reserve requirements were primarily a codification of the actual reserve policy of the banks.

In the 1870s, a bank inspection board was set up, headed by a bank inspector, and empowered to control the activities of the commercial banks. The effects of the bank inspection can be disregarded in the analysis of the behavior of the banks and the public. The inspector made infrequent inspections, supplementing the supervision available through the monthly reports.

Local monopoly power. The *enskilda* banks were generally local monopolies. The Crown only chartered new *enskilda* banks in towns where such banks did not exist. The local monopoly meant that a bank faced a stable demand in its home market for its notes. This was a source of stability. In the 1880s, when demand for notes fell due to the depression and deflation of that decade, banks closed several branch offices outside the geographic center of their note distribution, in this way reducing competition in the market for notes.

Denominations. The *enskilda* banks aimed at issuing low-denomination notes, as these notes tended to stay out in circulation longer than notes of higher denominations. Holders of low-denomination notes were less inclined to hedge against any loss from the notes, which would be small. In a panic, such holders would have less incentive to turn to the bank than holders of larger notes. Thus, the right of the banks to issue notes of low denominations prior to the 1880s had a stabilizing effect.

General economic and political stability. All bank runs in the history of Sweden have been the result of either wars or disturbances emanating from abroad. The last seven decades of the 19th century was a period of political and economic stability. Sweden was not engaged in any wars that might result in monetary and financial instability. This fostered stability in the banking sector. This stability was also cumulative: once the public got used to private notes and did not incur any financial losses on these notes, it created expectations of future stability.

Smallness of the economy. The Swedish economy was small, at least compared with countries such as the United States and the United Kingdom. In a small economy, information about the business activities spreads more rapidly than a large economy. As the *enskilda* banks generally conducted business within a limited local area, the public could easily obtain information about the banks, their dealings, owners, and customers. A rapid dissemination of information worked, *per se*, as prevention against any over-issues.

Government intervention. The preface to the proclamation of 1824 stated that the public should not expect the government authorities to give any support or help to a private bank in financial distress. There seem to be only two cases when they did do so. During the crisis of 1857, the government helped the *Skånes Enskilda Bank* when fear arose that the bank would fail. It similarly supported the *Stockholms Enskilda Bank* in 1878 during the banking crisis of that year. The monetary disturbances in 1857 and 1878 emanated from abroad. Thus, government intervention did not occur because of any domestic mismanagement by the banks.

Cooperation among the banks. The cooperation among the *enskilda* banks that gradually developed contributed in various ways to greater stability within the banking sector. For example, banks redeemed the notes of other *enskilda* banks.

In summary, many factors contributed to the stability of the note-issuing commercial banks. The main argument of this section is that the incentive structure created by the joint responsibility of the owners of the *enskilda* banks played the central role. Unlimited liability worked as a self-policing control mechanism that gave strong incentives against any overissue of notes or fraudulent behavior and thus maintained confidence in the notes. Most likely, the banking law could have been based solely on joint responsibility. It seems safe to conclude that all the other stipulations in the various banking laws were unnecessary from the point of view of guaranteeing the redeemability of private notes into *Riksbank* notes.

6. The record of free banking in Sweden

A common argument suggests that competition in the production of money gives rise to instabilities as well as inefficiencies in the banking sector, leading to the policy conclusion that the provision of money should be either a government monopoly or closely regulated by government authorities. The evidence from the Swedish experience of competition in the issuance of notes does not support such a view. The banking system was characterized by considerable stability, most noticeably by the absence of any bank failures.

The system of competition in private notes was efficient in the sense that private notes quickly established brand names having considerable goodwill and spread through Swedish society circumventing various obstacles raised by the *Riksdag*. The rapid spread of private notes, an essential part of the growth of the banking system, contributed to the monetization of the Swedish economy.²⁰ The private note issue became the foundation of a successful private commercial banking system, in this way contributing to the growth of the Swedish economy.²¹ Ögren (2006, p. 89) concludes that the *enskilda* bank notes “solved the problem of creating the necessary conditions for a financial system in a poor, under-monetized and geographically dispersed country”.

Many contemporary commentators held a positive view of the performance of *enskilda* notes as well. John Leffler, an expert on Swedish banking, praised the decentralized system of *enskilda* banks “as one of the best in Europe during the past 40 years” and heavily criticized the abolition of *enskilda* notes as an “unjustified” revolution”, claiming that the legislation of 1897 giving the *Riksbank* a monopoly on the note issue was “a step into the unknown”.²²

When evaluating the role of the private bank notes twenty years after their abolishment, Karl Langenskiöld, head of the *Riksbank* 1901-1912 and the driving intellectual force behind the design of the legislation of 1897, applauded the role of the *enskilda* notes in the economic development of Sweden. In his opinion, the *enskilda* banks contributed to a decentralized banking system covering all of Sweden, fostering economic progress.²³

²⁰ The Swedish monetization process in the second half of the 19th century is examined in Jonung (1983).

²¹ Relying on econometric evidence, Hansson and Jonung (1997) and Ögren (2009) conclude that the growth of the banking system in the 19th century contributed to economic growth in Sweden.

²² Leffler (1903, pp. 35-37).

²³ Langenskiöld (1923, p. 247). Langenskiöld (1923, p. 249) held the view that the *enskilda* notes were terminated “at the right time” because the *enskilda* banks would not have been able to survive the monetary upheaval of World War I.

The note supply is sometimes claimed to be characterized by increasing returns to scale, i.e., the production of notes is supposedly a case of a natural monopoly. This view is not consistent with the Swedish experience of 1831-1902. Banks were local monopolies early in the period, but as more banks entered, a more competitive situation developed. The fact that there was a queue of new entrants trying to obtain charters as well as the fact that Sweden had from 1876 to 1902 a roughly constant number of note-issuing banks suggests that the production of notes was *not* a natural monopoly.

It is possible that the legal framework based on unlimited liability made the private banks too cautious and prudent in their lending activities. Their note issue would then be smaller than “optimal” in the sense of traditional static welfare economics. The private revenue from the marginal unit of private notes was higher than the social marginal revenue, implying that an increase in the note supply would have been socially desirable.

This argument runs counter to the standard argument that private money producers would overissue. In Sweden, the *enskilda* banks, the private money producers, did the opposite; they engaged most likely in under-issuing. Two arguments should be raised against this view. First, this criticism should not be aimed at the behavior of the private banks per se. Their behavior was determined by the incentives given by the legal framework. A different design of the legal framework of private money production could have induced another outcome.

Second, traditional welfare analysis is not suitable for issues of the dynamic behavior of alternative institutional arrangements. Initially, the *Riksbank* was the sole commercial bank in Sweden as well as the bank of the parliament. The competitive process eventually induced changes in the behavior of the *Riksbank*, forcing it to reduce its bureaucratic behavior, a welfare gain commonly ignored in standard welfare analysis. Competition between the *Riksbank* and the commercial banks occurred both in the markets for notes and for deposits, with the privately owned firms being most successful in both markets.

Competition finally led the government to grant the *Riksbank* a monopoly on the note issuance while it stopped competing in the markets for deposits and adopted the functions of a modern central bank. Much suggests that the *Riksbank* would have been restricted to the role of another commercial bank in the Swedish setting had competition in the monetary sector been maintained. Several commercial banks acted as central banks to provincial banks in the later part of the 19th century. The main reason why the bank of the parliament was turned into a central bank was *not* that the *Riksbank* had any dominant competitive advantage in the markets for notes.

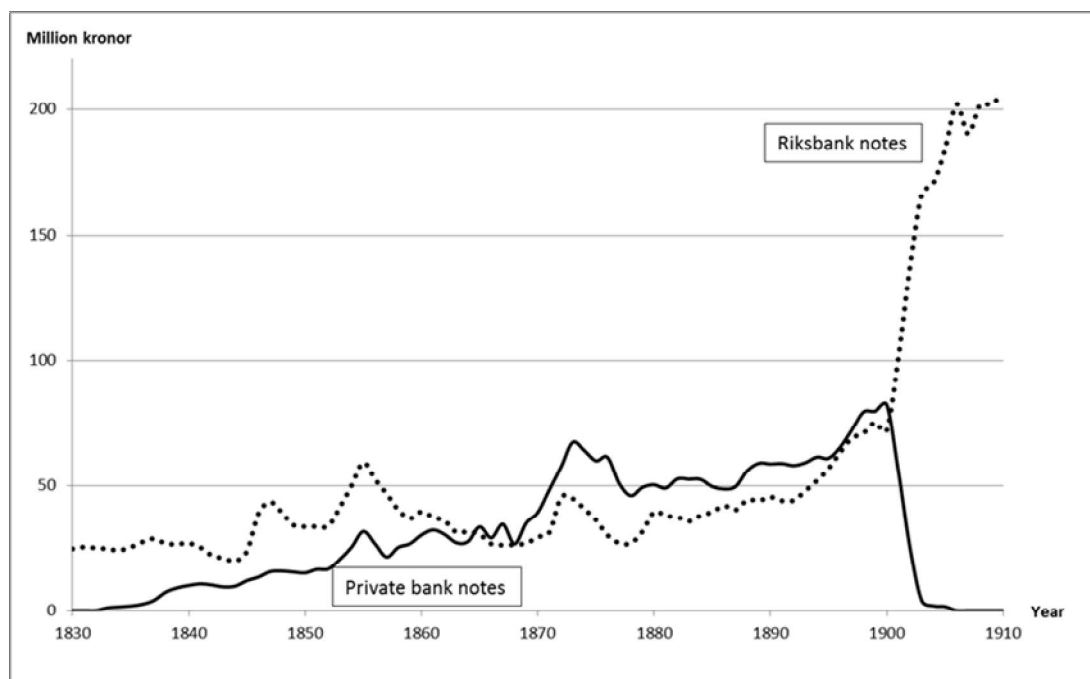
7. Summary

The history of private notes in Sweden in the 19th century represents a unique experience of free banking. The evidence from this episode is favorable to the competitive provision of private monies given a well-designed legal framework. There were clear gains to Swedish society emanating from the competition in the market for notes. Private note banks contributed to the monetization of the Swedish economy and fostered the growth of the financial system and thus the transformation of the Swedish economy in the 19th century.

During the seven decades of private note circulation, no private bank failed to redeem its notes into *Riksbank* notes. The exchange rate between the two kinds of notes remained one to one. Initially, private note issuance was not controlled by any legal reserve requirements nor by government inspection. The *enskilda* banks were chartered with the explicit rule that the authorities would “under no circumstances” intervene to support a private bank in financial trouble. Nor could the banks expect to get any help from the *Riksbank* since it was their main competitor. In view of this, it is remarkable that no private banks failed in Sweden, considering that failures of note-issuing banks in other free banking systems during the 19th century.

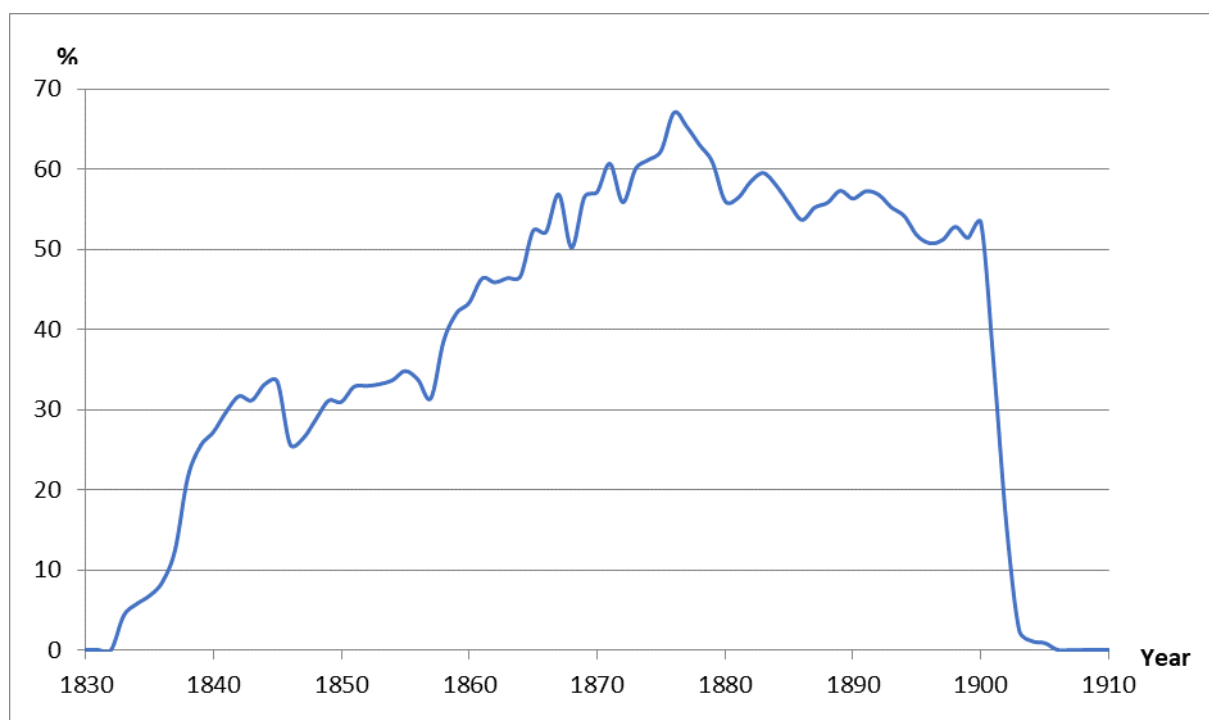
The legal framework determined the development of the Swedish commercial banking system in the 19th century. Banking laws for the most part had a positive impact on the growth of the note-issuing commercial banks as they generally codified practices that had developed in the market process. They did not restrict the expansion of the note issues except for the rules concerning minimum denominations. Most important, the rule of joint responsibility of the shareholders of *enskilda* banks gave rise to well-managed banks that effectively prevented overissues. As the *enskilda* banks gradually came to rely less on notes and more on deposits and as the profitability of the note issues declined due to competition, taxation and the prohibition of small denominations, the right to issue notes lost its value. Eventually the *Riksdag* abolished private notes altogether, giving the monopoly of notes to its bank, the *Riksbank*.

Chart 1. Volume of notes in circulation issued by the *Riksbank* and the *enskilda* banks (private note-issuing banks), 1830-1910 (million *kronor*, end-of-year data)



Source: Table A7.2 and A7.3 in Edvinson and Ögren (2014).

Chart 2. Market share of private notes, 1830-1910 (percent)



Source: Table A7.2 and A7.3 in Edvinson and Ögren (2014).

Comment: The market share is calculated as the ratio between private notes in circulation and the total volume of notes in circulation, i.e., as the sum of private and *Riksbank* notes.

Table 1. Bank offices in Sweden, 1840-1900: head offices, column (1); branch offices, column (2); total commercial bank offices, excluding *Riksbank* offices, column (3).

Year	<i>Riksbank</i>		<i>Enskilda</i> banks		<i>Aktie</i> banks		Commercial bank offices (3)
	(1)	(2)	(1)	(2)	(1)	(2)	
1840	1	2	6	3			9
1850	1	2	8	7			15
1860	1	3	11	13			24
1870	1	3	24	74	4	6	108
1880	1	6	25	114	12	11	162
1890	1	11	25	123	19	12	181
1900	1	18	26	157	40	56	279

Source: Sjöstedt (1901) and Jonung (1989).

Comment: The total commercial bank offices shown in column (3) is the sum of the head and the branch offices of the *enskilda* banks with unlimited liability and the *aktie* banks with limited liability. The table shows that the note-issuing *enskilda* banks had more branch offices than the *aktie* banks, which lacked the right to issue bank notes.

Table 2. Notes and deposits of the *enskilda* banks, selected years 1835-1895 (million *kronor*, end-of-year data): notes in circulation, column (1); demand deposits, column (2); time deposits, column (3).

Year	Notes (1)	Demand Deposits (2)	Time Deposits (3)
1835	1.5	0.1	0
1845	12.0	1.0	0.4
1855	31.6	3.5	1.2
1865	33.5	7.2	20.6
1875	59.8	21.4	130.8
1885	49.7	31.0	200.3
1895	60.9	50.3	246.1

Source: Jonung (1989).

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