Government Equity and Money: John Law's System in 1720 France

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Contents

List of Figures

List of Tables

Preface

Note 1: This manuscript is still work-in-progress. This preface justifies the book and outlines its planned structure.

Note 2: Throughout the manuscript notes and remarks (of the "memo to self" variety) in italics are scattered.

I am not the first to write about John Law; adding a book to a burdened shelf requires some justification. This book began as modest notes for a one-hour lecture in an economic history class. No existing account of John Law's experiment provided me a coherent picture of what the System was and how it worked. The modest task I initially envisaged was to pull together material from secondary sources and into a streamlined narrative. But I soon found myself going to the primary sources because I was not looking for the same information as my many predecessors. To cite just an example, the System is well-known as an early instance of a stock market bubble; but nowhere can one find a correct price series, let alone anything like a table of dividend announcements and payments (such as table 10.1) or a guess at what an appropriate price-dividend ratio for an 18th century trading company could be. Thus, neither price nor dividend, nor price-dividend ratio was on hand to perform even the crudest evaluation of the bubble claim. Similarly, the System is often described as a default, intended or not, but budget figures or estimates of debt burden before and after are hard to find and inconsistent.

The main reason this book differs from the others on that crowded shelf is that it is an economist's view of the System. Thus, it is not about John Law, but about his experiment. His personal life and his first career as an economic theorist interest me only to the extent that they shed light on the System's purpose and workings. Nor do I stop, as all others do, with John Law's dramatic departure from France, because the impact of Law's experiment cannot be understood without knowing how it was wound up, a task Law began but did not finish.

As an economist, I am interested in numbers, because many claims made about the System are quantitative in nature. This book is visibly different for the number of tables and graphs it contains, most of them original. When I conclude that the System was overvalued (and that it might have worked on the basis of a different valuation), that conclusion will be based on those numbers. I also plan to devote more attention to the different securities that were issued during the System, all of whom have been either ignored or misinterpreted.

I plan to organize the book into three parts.

1. Chapters 2–7 contain a roughly chronological account of the System; this is mostly written at present(November 2004).

2. Chapters 8–13 are a series of questions (and answers) about the System; this was formerly the concluding section of the paper and will be expanded.

3. an appendix about the market and the securities issued during the System (Chapters 14–17).

The narrative is necessary, but must be restrained, lest the complexity and profusion of details overwhelm the analysis (and the reader). The second part will present more historical evidence, but in a process guided by specific questions about the System. The third part is more in the nature of an extended appendix.

Acknowledgments

While all shortcomings of this work only reflect my own, I wish to thank for their comments Jeremy Attack, Ann Carlos, Jean Cartelier, Christophe Chamley, Loïc Charles, Guillaume Daudin, Pierre-Cyrille Hautcœur, Perry Mehrling, Jean-Stéphane Mésonnier, Antoin Murphy, Larry Neal, Pierre Sicsic, Tom Sargent, Chris Sleet, David Stasavage, Daniel Szpiro, Peter Temin, Joachim Voth, Eugene White, Randy Wright, audience members at the EHA 2001 and SED 2001 meetings, and at workshops in the Federal Reserve Banks of Chicago, Cleveland, Atlanta, and Kansas City, the Banque de France, and at the following universities: Paris X–Nanterre, Iowa, Georgia, NYU, Boston, British Columbia, Duke, Rutgers, University of Illinois Urbana-Champaign, and Pompeu Fabra. I also thank Anne-Laure Saint-Clair, curator at the Musée Carnavalet, for her help. Danielle Velde provided precious assistance with archival research.

While I acknowledge the Federal Reserve Bank of Chicago's unwavering support for this research, I must note that the views expressed herein do not necessarily represent those of the Federal Reserve Bank of Chicago or the Federal Reserve System.

The Earl J. Hamilton papers

Studying the life of Law has consumed a few other lives. Levasseur (1908) noted that he was ending his career where he had begun it with Levasseur (1854). Paul Harsin contributed a detailed bibliography to Faure (1977) more than fifty years after he began it. As Murphy (1997) noted, Earl J. Hamilton devoted decades to a biography of Law that never saw the light of day; nor did he leave even the trace of a manuscript. But he left thousands of index cards, the oldest ones (in Spanish!) written in Paris in 1937, and the most recent ones commenting on Faure (1977). They now reside, along with his papers, in the Duke University

Library. Murphy had examined the boxes full of unsorted cards, and found that he was too far advanced in his own work to make use of them. The library was extremely generous in lending me the note cards so that I could sort and use them. The vast majority of the cards consist of quotations from books or archives with material pertaining to Law. There are also some cards with his personal thoughts, which I did not use. I have used the archival material, tracking down as much as I could the original documents; but Hamilton was able to consult many more libraries and archives than I could, so I cannot personally vouch for the accuracy of all material and references. Hamilton could be sometimes careless, but he didn't invent anything. Nevertheless, I indicate in footnotes my (unverified) use of his material with the acronym EJH.

Abbreviations and Units

AD	Archives départementales
AAE	Archives des affaires étrangères, Paris
AN	Archives nationales, Paris
BA	Bibliothèque de l'Arsenal, Paris
BMaz	Bibliothèque Mazarine, Paris
BHVP	Bibliothèque historique de la Ville de Paris
BN	Bibliothèque nationale, Paris
EJH	Earl J. Hamilton papers, Duke University
MC	Minutier central (Archives nationales)
NA	National Archives, Kew
GA	*Gazette d'Amsterdam* references are of the form "year:issue"

AC	arrêt du conseil du Roi references are of the form "A<N>" where <N> is the catalog number in Antoine (1968–2003)
L	livre
ME	mint equivalent
MP	mint price

weight

marc	244.7g

fineness

standard	$\frac{22}{24}$

Chapter 1

Introduction

To do: expand the introduction; lay out more clearly what the lessons for today are, why we should care.

The government's budget constraint and the interplay between its components across time and states is at the core of many macroeconomic questions. The nature and timing of taxes, the ability to and advisability of borrowing, the proper structure of government liabilities, are all recurrent themes. The purpose of this book is to present a particular historical episode which uniquely illustrates them.

The episode takes place in the early eighteenth century in France. From 1716 to 1720, a Scotsman named John Law undertook a radical restructuring of French public finances. Because the entire operation appeared to be based on rational principles, it has been called "Law's System." The operation involved the floating of shares in a private company, the issue of paper money, and the conversion of government debt. The System ultimately unravelled with a coincident, and dramatic, fall in the market value of both the money and the equity.

Law's System, also known as the Mississippi Bubble, ranks as one of the mythical early bubbles (Garber 1990, 2000). It also represents a daring experiment in public finance, carried out by a man whom Schumpeter (1954, 295) placed in "the front ranks of monetary theorists of all time." Its story has been told many times,[1] but not (in my estimation) in a way that does full justice to the economic issues. This book seeks to do just that.

The System had two components, one involving an operation in public

[1] A fairly complete bibliography of the early writings on Law by Paul Harsin can be found in Faure (1977). Major recent works include Harsin (1928, 1933), Faure (1977), Neal (1990, ch. 4), and Murphy (1997).

finance, the other involving fiat money. The operation resulted in the conversion of the existing French public debt into a sort of government equity. Strictly speaking, a publicly traded company took over the collection of all taxes in France, ran the mints, monopolized all overseas trade and ran part of France's colonies. This company offered to government creditors the possibility of swapping their bonds for its equity, making itself the government's creditor. Since it was already collecting taxes, the government's annual payment was simply deducted from tax revenue by the company. Thus, bondholders became holders of a claim to the stochastic stream of fiscal revenues.

All the company offered was an *option* to convert, and visible capital gains provided a strong inducement for bondholders. As it happened, the System's other component was a plan to replace the existing commodity money with fiat money, at first on a voluntary basis, later relying on legal restrictions. This was the first full-scale attempt at replacing the metallic medium of exchange with paper in Europe (Bonney 2001). Law used money creation to support the price of shares, and legal restrictions to support the demand for money. Inflation did not follow immediately, but exchange rate depreciation did, leading Law to reverse course and seek ultimately fruitless ways to reduce the quantity of money. The end result was a reconversion of shares and money into bonds and a return to the pre-existing arrangements.

In retrospect, Law's System appears conceptually reasonable. Sims (2001) argues that government debt is like private debt in a fixed exchange rate regime, but like private equity in a flexible rate regime; he also thinks that the latter is preferable. France was notionally on a fixed exchange rate regime (with frequent departures); I interpret Law's System as an attempt to move government debt closer to equity without sacrificing price stability. As for replacing commodity money with fiat money, what incongruity the idea held for contemporaries has clearly dispelled.

Law's System has been called a bubble; it has also been called a default (Faure 1977, 521, Murphy 1997, 333, Hoffman et al. 2000). Quantitatively, I find that the share prices were overvalued at their peak by a factor of 2 to 5, but I attribute this to Law's systematic policy of price support. With fairly optimistic assumptions, a lower level of price support would have been feasible. As for the public debt, it was not significantly increased during the System, and it was restored by Law's successors at roughly its earlier level. In other words, France's first experiment in fiat money, as her second (Sargent and Velde 1995) was far from a default, perhaps surprisingly for a country otherwise prone to defaults.[2]

I proceed as follows. I first briefly describe the French fiscal system and practices in the late seventeenth and early eighteenth centuries, so as to know what Law was restructuring. I then describe the steps involved in the construction of Law's System and its collapse. I then conclude with an evaluation of the System. A separate appendix contains details on the securities issued during the System and their prices.

[2]See however Hoffman et al. (2000) for the impact of the System on private credit markets.

Events

Chapter 2

France in 1715

This chapter reviews the fiscal institutions in France.

2.1 Spending

A long tradition in macroeconomics takes as given the process governing the government's spending obligations, and theorizes about the best ways to finance them. This tradition focusses on a sub-problem, and does not explain the spending choices made by the government. I will use this framework to organize this review, because it seems like a reasonable approximation of the way finance ministers had to operate.

The main characteristics of the spending process faced by France in the early modern period (sixteenth to eighteenth centuries) can best be seen by dividing government spending into military and nonmilitary components (net of debt-related spending). The way accounts were kept distinguished spending in various ways: in some accounts, expenditures are divided by the treasurer who made the payments. More generally, the government distinguished between ordinary and extraordinary expenditures. The former were the recurrent, stable, and predictable items; the latter were temporary and unexpected items. Thus, my category of military spending includes ordinary items like peacetime garrisons and troops, upkeep of fortresses, horse-farms, and the like, as well as all extraordinary items related to wars. Nonmilitary spending net of debt-related items includes expenditures of the royal household (a quarter to a third of the total) and salaries and wages of government employees.

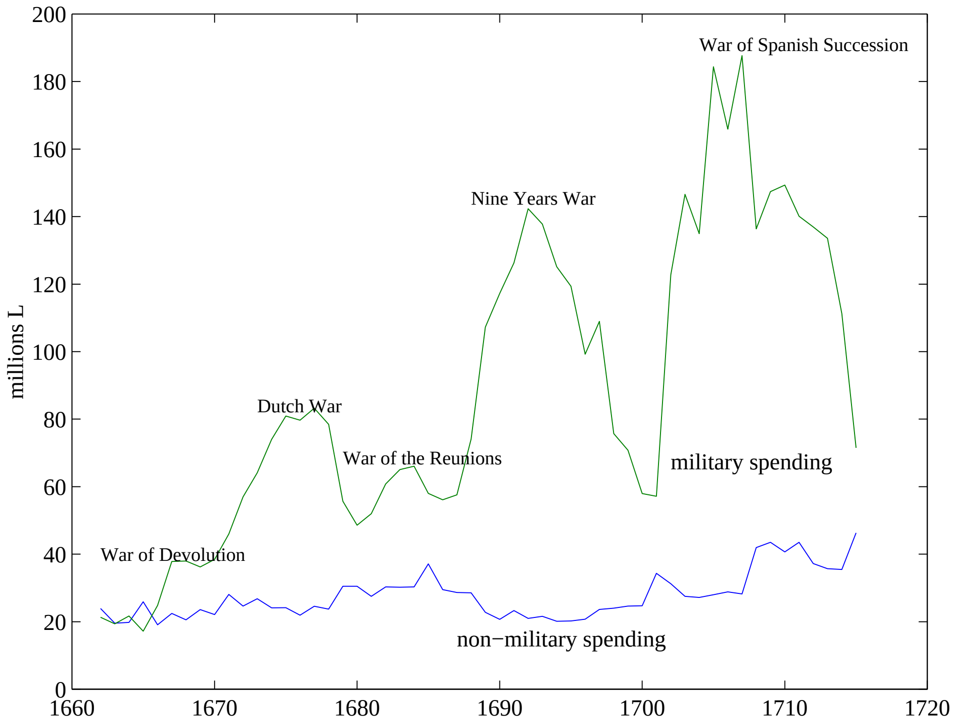

Figure 2.1: Military and non-military spending in France, 1662–1715 (debt service excluded).

The pattern is shown in figure 2.1.[1] The main source of variation in government spending comes from wars. Peacetime expenditures (standing army and non-war related expenditures, mostly labor costs of providing justice, police, etc) are stable, and small compared to wartime expenditures. The main wars of Louis XIV are easily spotted on the graph: the conflicts appear to become

[1]The numbers used in figure 2.1, 2.2, and 2.3 are based on series published by three historians whose coverage varies: Mallet (1662–95), Boislisle (1683–1707) and Forbonnais (1682–1716). The series themselves are available as part of the European State Finance Database of Richard J. Bonney (URL <`http://www.le.ac.uk/hi/bon/ESFDB/`> accessed June 2002, datasets `rjb/boislisl`, `rjb/forbon`, `rjb/frmalet`). Roughly, I use Mallet's numbers until 1695 and then Forbonnais's numbers, complemented with Boislisle's numbers.

both longer and more costly over time, culminating in the War of Spanish Succession.

Add a table on the cost of wars, their benefit?

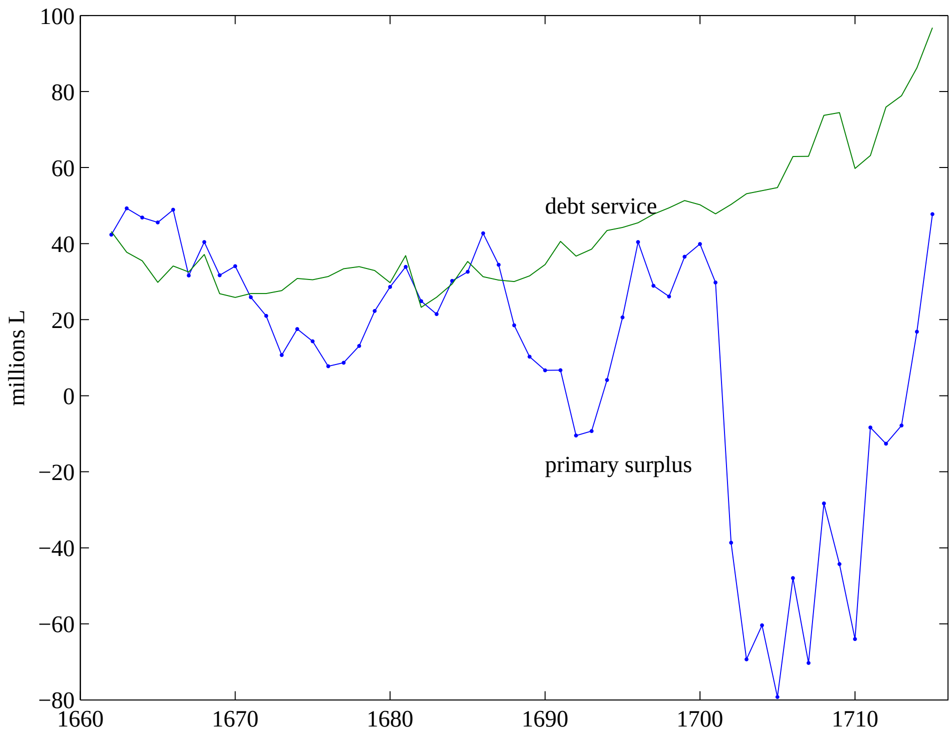

Figure 2.2: Primary surplus and debt service (interest payment) in France, 1662–1715.

Figure 2.2 shows the evolution of the primary surplus (revenues less non-debt spending), while figure 2.3 compares revenues with spending inclusive of debt service. The French government raised taxes to some extent in wartime (notably introducing an income tax at a critical moment in the last war of Louis XIV's reign, in 1710). It also resorted to a lot of borrowing.

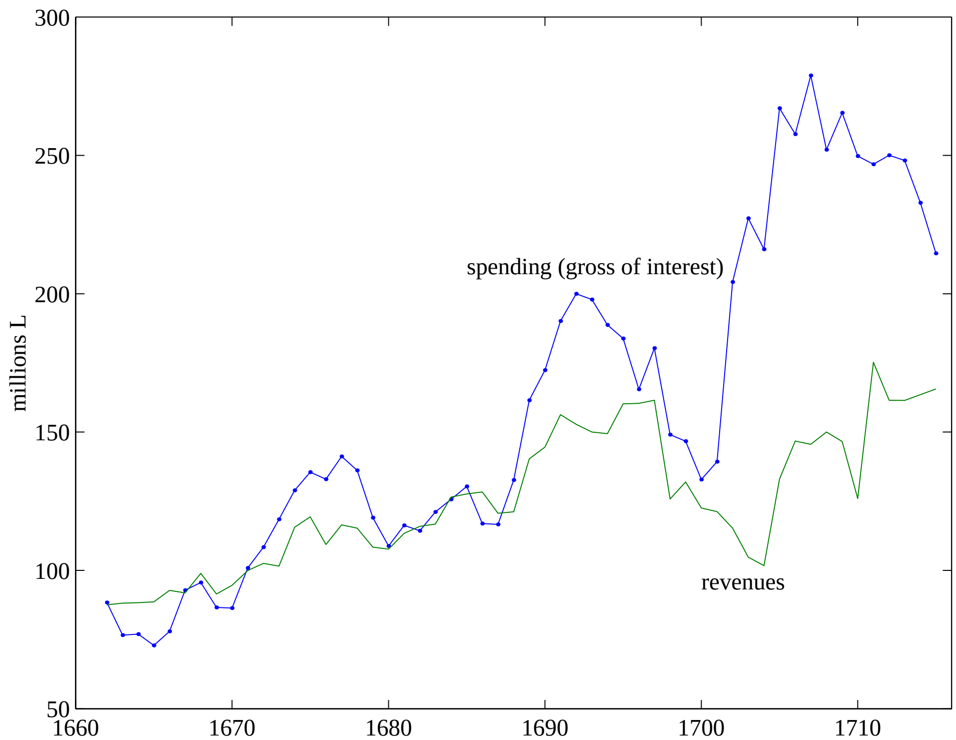

Figure 2.3: Revenues and spending, 1662–1715.

2.2 Taxes

Fiscal revenues consisted of a mixture of direct (income or wealth) taxes, indirect (consumption) taxes, and feudal dues arising from the royal demesne. The assessment and collection of these revenues was decentralized. For direct taxes, a global amount was set by the government, and then broken down into assessments for each province, where local authorities would proceed with the next level of assessment, and so on to the local level.

For indirect taxes, collection was carried out by tax farmers on behalf of the government. The procedure was much like the one in place since Medieval times for running the royal mints. The right to collect a given tax was auctioned to the highest bidder. The bidder offered a fixed annual payment to the king for the duration of the lease. Meanwhile, he took upon himself to collect the tax, hiring all the necessary employees. Any shortfall in revenues from the promised sum was made up by the entrepreneur; conversely, any revenue collected above and beyond the price of the lease was retained as profit by the entrepreneur. In the 1680s, most farming contracts were consolidated into a single 6-year contract called the "united" or "general farms." But new taxes were later created and usually farmed out separately.

Government monopolies, such as salt (which was part of the general farms) and recently introduced tobacco, were also farmed out in the same fashion. Indeed, the ability to create monopolies was one of the king's resources; one of the more outlandish examples being the exclusive right to sell snow and ice in the district of Paris, sold for 10,000L in 1701 (Forbonnais 1758, 4:193).

Table 2.1 presents fiscal revenues in selected peacetime years. The first is the year that Colbert died, the second falls in the brief interlude of peace between the two major wars of Louis XIV, and the last is the year of the king's death.

	1683	1700	1715
indirect taxes			
united farms	62.8	58.6	47.0
other farms	2.2	8.0	12.9
direct taxes			
taille and misc.	47.7	41.6	51.8
capitation	—	—	25.8
dixième	—	—	24.0
royal demesne			
woods, incidental		3.4	3.9
Total	116.0	112.1	165.6
livre index	1.05	1.08	1.00

Table 2.1: Revenues of the French state, 1683–1715. The livre index measures the silver content of the unit of account (1 in 1715). Sources: Mallet (1789), Boislisle (1874–97), Forbonnais (1758, 5:212).

Spending is decentralized as well to various treasurers. Each tax had an associated bureaucracy of collectors and treasurers, either government employees or officers (direct taxes) or employees of the tax farmer. The treasurers spent some of the monies they collected, upon presentation of payment orders emanating from the government, and turned over the remainder, if any, to the royal treasury in Paris.

2.3 Borrowing

Government borrowing at the time took several forms, depending on the maturity.

Given the decentralized nature of tax collecting and disbursement, payments often took the form of payment orders issued by the Treasury to treasurers: these orders would then be taken by the payees to the treasurers in order to collect cash. The orders were often made payable a year or more in the future, and were taken at a discount by the payee. Toward the end of the reign of Louis XIV, the finance ministers began to issue payment orders drawn on the tax collectors themselves. These anticipatory notes allowed the government to borrow against specific future revenues. At other times, it seems the government or its treasurers issued pure IOUs in exchange for goods and services, particularly in wartime.

Long-term borrowing took two forms. The first was in annuities (*rentes*), which were either life annuities (payment contingent upon the life of a particular individual) or perpetual annuities. Usually, annuities were assigned on a specific tax revenue, and the interest was paid by the tax collector either directly to the creditor or to a centralized paying office located in Paris. In this sense, the debt was called "funded." The annuity contract was a common instrument between private parties as well, and was medieval in origin. As a result of the Church's strictures against loans, annuities always carried a repayment option: the creditor could never demand repayment of the original capital, but the debtor had the option to extinguish the debt by repaying the capital in full.

The other form of long-term borrowing was through the sale of offices. An officer was someone who held a government position not on commission or at the king's leave, but as of right, and enjoyed various privileges attached to the position (in particular the collection of fees related to his activities). Offices were sold, and the king paid interest on the original sale price, which was called the wages of the office (*gages*). A wage increase was really a forced loan, requiring the officer to put up the additional capital. Officers could not be removed except for misconduct; however, the office itself could be abolished, as long as the king repaid the original sum. Thus, offices as a form of debt also carried the same repayment option as annuities. Creation of offices was a feature of wartime, and the War of Spanish Succession gave rise to extraordinary ingenuity in the invention of new offices. From 1689 to 1712 over 3,000 offices were created to supervise the markets of Paris in the minutest details, including "inspectors-gourmets of wines", inspectors of pig's tongues, and distinct officers in charge of respectively loading, unloading, and rolling barrels (Panckouke 1784–85, 2:49).

Offices and annuities (which I will generically call bonds, and whose owners I will call bondholders) could be transferred or sold, but with fairly high transaction costs. Both were considered forms of real estate, and could be mortgaged. In the late 17th century the French government, like others in Europe, had begun experimenting with life annuities, tontines, and lottery loans, but on a limited basis, and had not yet issued bearer bonds. Even the short-term debt described above was registered in the sense that the payee's name was on the instrument, and could be transferred only by endorsement.

A final form of borrowing combined tax creation and lending. The procedure consisted in creating a new tax for some limited time and immediately farming its collection in exchange for a single, lump-sum payment representing the tax's net present value.

2.4 Money

Money at the time is a system that involved two separate elements. The first was a set of standardized objects produced by government-operated factories (called “mints”), which people exchanged against goods and services. They were called coins, and were made of metals like gold and silver. The second element was a unit of account, called the *livre* (abbreviated L in this book). Numbers such as prices and monetary obligations were expressed in the unit of account. The king regulated the relation between the two elements, coins on one hand, unit of account on the other. He did so by naming two vectors. One assigned a number of units of account to each coin. The other set the price at which the mint was obligated to provide each coin in exchange for quantities of gold or silver (either in the form of foreign or domestic coins, or in the form of bullion or wrought metal). These vectors could change.

For a given coin, there are two numbers set by the king: its “face value” and the number of such coin that will be paid out for an amount of metal. Knowing the metal content of a coin, one can compute an index of the numbers of units of account per weight of metal, which is called mint equivalent (ME). Likewise, one can express the second number as a mint price (MP), also in units of account per weight of metal. I will track changes in the vectors assigned by the king to the main silver coin using the ME and MP.

The meaning of a face value X assigned to a coin was that the coin was legal tender for any debt or in any purchase up to the amount X livres. If X changed, the coin could discharge a greater or smaller debt. Sometimes X was set to 0, and the coin was demonetized.

It was always the case that $MP \leqslant ME$, the difference $1 - MP/ME$ being called the seigniorage rate which the king charged to convert metal into legal tender. The ME of silver had been constant since 1641, and in 1679 MP had been set equal to ME. However, from 1689 to 1726, the ME of silver changed 64 times, 8 times in the year 1720 alone (see table 9.3). It remained unchanged from 1726 to 1795.

One reason for changing the parameters of the monetary system was to engage in a monetary “reform,” to induce or coerce individuals into submitting to the seigniorage tax, which was usually increased at the same time. This was done by announcing the demonetization of an existing coin, and its replacement with a new coin of higher face value. Owners of the older coin who needed legal tender had to turn it in exchange for new coins, and thereby submit to seigniorage rates that ranged from 6 to 25%. This method was used in 1689, 1693, 1701, 1704, and 1709.

Chapter 3

The policy-making process

Describe the way decisions were made. The Conseils. Separation of finance from other matters of state, and implications of this separation. The position of contrôleur général, the people working under him: a stable group of specialized civil servants who were assigned particular areas, providing underlying continuity. The role of outside consultants such as the Paris brothers. Archives filled with anonymous memoranda and submitted projects, which were analyzed and reported upon at the conseil.

The first point to keep in mind is that France was an absolute monarchy. This did not mean that, in practice, the king's powers were unfettered. It did mean that, in theory, the powers that would soon be distinguished by Montesquieu (legislative, executive, judiciary) were all held by the king who could either exercise them himself, with the assistance of his Council, or else delegate them to outside bodies. The great courts (*Parlements, Cour des Aides, Chambres des Comptes, Cours des Monnaies*) were all examples of delegation of judicial power by the king, who nevertheless retained the ability to reassert his personal jurisdiction over any particular court case.

The French monarchy's equivalent of a cabinet or ministry can be found in the secretaries of State (*secrétaires d'État*), whose functions were originally clerical, but who acquired, in the mid-16th century, competences over various departments, which had stabilized by the late 17th century into war, foreign affairs, navy, and home affairs. The chancellor was the keeper of the royal seals and the highest judicial officer of the monarchy.[1] There was no secretary of

[1]As a high officer, he could not be removed. Rather than fire him, the king took away the seals and entrusted them to a Keeper of the Seals. Thus, from January 8, 1718, Henry François d'Aguesseau continued to be chancellor but Marc René de Voyer de Paulmy d'Argenson was keeper of the seals.

State for finance, however. The management of the king's revenues, organized in the mid-16th century, was led under Louis XIV by a comptroller (*contrôleur général*), originally in charge of controlling movements of funds in and out of the Treasury. He was assisted by three or four *intendants des finances*, who had responsibility for overseeing specific areas of revenues and expenditures.

The king exercised those of his executive, legislative and judiciary powers that he had not delegated through the King's Council (*Conseil du Roi*). The organization of the King's Council in the 18th century dates from 1661. Louis XIV created three sessions which he attended personally, leaving other meetings to be presided by the Chancellor. The three sessions were: the upper council (*Conseil d'en-haut*) or council of State, where the most important matters were debated, and which was attended by a small number of handpicked ministers, the ministers of State; the council of dispatches (*conseil des dépêches*) where internal affairs were handled, and the council of finance or royal council (*conseil royal des finances*). Decisions, whether of a legislative, executive or judiciary nature, took the form of an *arrêt du conseil*; a great many were of purely local or individual interest, but the more important ones were published and distributed.

The king worked outside of these councils. A tireless king, Louis XIV constantly met with his secretaries of State one on one; these private meetings could sometimes rival the sessions of the Council.

Laws and lawmaking; the difference between edicts and arrêts du conseil, the role of the Parlements in impeding legislation when it had to be registered (such as direct tax increases). Why could indirect taxes be changed at will?

How did ministers see their job? What was their role? The importance of the glory days of Colbert as a model.

Chapter 4

Government policy from 1715 to 1718

John Law arrives in Paris in April 1715, and is authorized to establish the first of his enterprises, a bank, in May 1716. Although his influence over the Regent grows quickly, he does not gain complete dominance until the summer of 1718. To a large extent, the new government dealt with the situation without help from Law.

4.1 The Regency

Minorities are dangerous periods in monarchies; they are also unavoidable. In France, they recurred once or twice a century in spite of a low majority age for kings (set at 13 in the 14th century). The minority of Charles IX in the 1560s saw the outbreak of a religious civil war that would end three decades later. The minority of Louis XIII in the 1610s was perhaps not as troubled as that of Louis XIV in the 1640s and 1650s which coincided with extended wars abroad (the Thirty Years War in Germany and war against Spain) and civil war within.

There was no set rule for government during a regency: either the mother or else the next-of-kin became regent. The king came of age at 13 but in practice continued to rely the former regent's advice until such time when (often abruptly and sometimes violently) he took over government.

Louis XIV died on September 1, 1715, leaving a five-year old great-grandson as successor. Louis XV had lost his mother, so the regency normally devolved to the next-of-kin,[1] Louis XIV's nephew the duc d'Orléans. The old king did not trust his nephew and, in his will, had set up various arrangements to shackle

[1] The next-of-kin was actually Louis XV's uncle the king of Spain. See below.

him. The duc d'Orléans got the Paris Parlement, with whom the will had been deposited, to simply void it and recognize him as Regent with unlimited powers. The Regent paid a price for this, by restoring to the Parlements the right to remonstrate that Louis XIV had taken away early in his reign.

The only major innovation that the Regent made to the governing institutions was to replace the secretaries of State with specialized councils, presided by a duke, and staffed with a mixture of courtiers and civil servants. These councils met separately, without the Regent, and prepared the work to be presented at the sessions of the King's Council (also known as Regency Council). This experiment, dubbed the *polysynodie*, only lasted in its full form until 1718. The council of finance was presided from September 1715 to January 1718 by the duc de Noailles, and from January 1718 by the marquis d'Argenson (who was also keeper of the seals). In September 1718 the Regent abandoned his experiment, but did not fill the position of contrôleur général again until January 1720, when he gave it to John Law.

4.2 France in 1715: the international context

The reign of Louis XIV had lasted 72 years: the first part, until he reached adulthood, had been dominated by internal strife and ongoing war with Spain over Catalonia. In 1659, peace was concluded with Spain and he married the Spanish king's daughter. In 1661 he took personal control of government, and much of his reign was dominated by a series of increasingly large and costly conflicts. The first wars (war of Devolution, Dutch war, war of the Reunions) were motivated by territorial acquisition and were successful for France, resulting in substantial gains: France's hold over Alsace, ambiguously conceded at the Treaty of Westphalia, was extended and consolidated; Lorraine fell under permanent French occupation, Franche-Comté and part of the Low Countries were annexed.

The last two wars were successful only to the extent that most of these gains were not reversed. France faced a broader and much stronger coalition, now intent on preventing her from permanently upsetting the balance of power in Europe. The Glorious Revolution in England had put William of Orange, the leading figure in the Netherlands, on the throne of Great Britain, and cemented the alliance of the two maritime powers, an alliance that would endure for nearly a century.

Both wars share many characteristics. The sets of allies are essentially the same, France against an alliance of Habsburg-led Germany, Britain and the Netherlands. Both wars were fought against French hegemony and either limiting or preventing it, on many fronts and with all sides devoting enormous resources. As we shall see, from the French perspective both wars were financed using the same methods (and methods very different from those of Louis XIV's earlier wars). Finally, both wars were long, and ultimately inconclusive. If anything, the War of Spanish Succession was something of a French victory, judged by the war aims of either side. France's war aim was to secure the Spanish throne for Louis XIV's grandson who had inherited it in 1700, at the cost (if necessary) of shedding some of the Spanish dominions elsewhere in Europe, and that is what came to pass. The Allies' war aims were to keep the whole Spanish inheritance out of French hands, reverse France's territorial gains of the previous century back to before the Peace of Westphalia, and prevent it from making further hegemonic attempts in the future; none of which (for good or bad) came to pass.

The Nine Years War, from 1688 to 1697, was provoked by Louis XIV on the basis of dubious inheritance claims on behalf of his German sister-in-law. He invaded the Palatinate, on the other side of the Rhine, but soon found himself facing a general coalition. The long war ended in a draw, with France returning occupied Lorraine to its duke, and not gaining much. Another conflict, however, was already looming. The childless king of Spain, Carlos II, was expected to die soon, the last male of the Spanish Habsburgs. The powers were unsuccessful in their attempts to reach a prior agreement among the potential heirs, which included Louis XIV's only son by his Spanish wife, and the German Emperor's younger son, archduke Karl.

When Carlos II died in November 1700, his will directed that all his realms pass to the French king's younger grandson, keeping the French and Spanish crowns separate; should the inheritance be refused, it would pass whole to the other competitor, archduke Karl. Louis XIV accepted the terms of the will, archduke Karl did not, and war immediately broke out France and the German Emperor over the Spanish dominions in Italy in 1701. The conflict was still contained, however, but several provocative actions by Louis XIV brought the Dutch and the English against France in 1703, and the war became a European conflict. France, most of Spain and a few German allies (such as Bavaria) on one hand, Britain, the Netherlands, the German Emperor (ruler of Austria) and Savoy–Piedmont on the other. The Franco-Spanish alliance suffered a number of devastating defeats from Blenheim to Oudenarde, but held on, after an attempt at negotiating peace failed in 1709. The tide turned when the Tories came to power in Britain in 1710, and when Archduke Karl became Emperor in 1711. His allies found themselves tired of war and disinclined to help him acquire the very dominance they were denying his rival.

Point out (here or elsewhere) the role played by the Dixième of 1710 in convincing the Allies of France's determination to fight.

The process of ending the war began with a sequence of bilateral treaties signed at Utrecht in 1713. The basis of the settlement included the acceptance that Louis XIV's grandson would reign as Felipe V over Spain and her colonies, but not over her possessions in the Low Countries and Italy which would pass to the Emperor, except Sicily and parts of the Milanese left as a prize for Piedmont's engagement. To Britain, Spain ceded Gibraltar and a number of commercial privileges, including the right to trade with her colonies in the South Sea (southern part of the Atlantic); this right would be the main asset of a commercial company known as the South Sea Company. France ceded Acadia (Nova Scotia) to Britain and a promise to dismantle the port of Dunkirk.

The Emperor was not a party to these treaties, and continued to fight until another series of treaties at Rastatt and Baden in 1714 brought peace between the Empire and France. But the main protagonists of the conflict, the Emperor and the king of Spain, did not sign a peace treaty. The Emperor still refused to recognize the king of Spain as such, while the latter did not accept the loss of his Italian dominions. Although war was over, the peace was fragile.

4.3 France in 1715: the political situation

Louis XIV died on September 1, 1715. The succession was undoubted and, according to the rule that the king never dies, immediate. His only son had died in 1711, leaving three sons, the dukes of Burgundy, Anjou (by then King Philip V of Spain) and Berry. Burgundy, his wife and their eldest surviving son died within days of each other in February 1712 of small pox. Their only surviving child was Louis, born in February 1710. By the French law of succession, this five-year old became Louis XV.

The legal age of majority for kings was thirteen, so a Regent was needed until February 1723. The choice of a Regent was a matter of custom: it usually fell on the mother of the underage child, as in the previous four instances (1560, 1610, 1643) but Louis XV was an orphan and the next of kin happened to be his uncle, the king of Spain. Berry had died without surviving issue, and the closest male-line relative residing in France was the nephew of the late king, the duke of Orléans.

Louis XIV did not trust his nephew much, and he had left a will in the care of the Parlement of Paris. On September 2, a solemn ceremony took place in the Parlement. The will was opened and read: it created a collegial Regency with the duke of Orléans as its nominal but powerless head; the Regent deftly had the will voided by the Parlement of Paris, in exchange for removing the muzzle which the previous king had placed on that troublesome institution, allowing it to publicly voice its objections to new legislation.

The king was under the duke's Regency until he officially came of age in February 1723, at which time he chose the former Regent's foreign affairs minister, cardinal Dubois, as prime minister, and, at the latter's death in August 1723, the former Regent himself. When the Regent himself died of a stroke in December 1723, the king chose the next prince of the blood, the duke of Bourbon, who had already played an important role in the Regency. Not until

1726, however, did Louis XV manage affairs himself.

Regencies are always difficult times for a monarchy: the regency of the 16th century had seen the beginnings of France's religious civil war, those of the 17th century (especially that of Louis XIV) had seen another civil war and much turmoil as the higher nobility and royal princes tried to reclaim power. The duke of Orléans' regency turned out to be relatively peaceful, but he had reasons to be concerned for the stability of his government.

4.4 France in 1715: the fiscal situation

At his death, Louis XIV left a very large debt (table 4.1).

Total debts of 2800mL can be broken down into 1068mL in perpetual annuities, 830mL in offices, and 920mL in floating debt. The interest payments amounted to 45mL for the annuities and 41.5mL for the offices. With revenues at 166mL and spending at 118mL, the primary surplus was only 48mL, to service at least 86.5mL in debt service, without even taking care of the floating debt which would add some 40mL at a 4% interest.

The debt was large, no matter by what measure. The interest alone amounted to two or three times the primary surplus. The face value was about the same as France's output at the time.[2] Britain's debt burden at the time was lower, both on the government's finances and on the country's resources. In 1715 the primary surplus was £2.5m, against a debt charge of £3.2m. Total debt of around £38m in 1716 compared to output of around £60m (Mitchell 1988, 575, 578, 600). [3]

[2]Riley and McCusker (1983, 281, Chart 1) give a population of 21.5m in 1700 and 130L per capita output in 1700, corresponding to a total 2800mL for output.

[3]£60m for national income (Brewer 1989, 41); £55m in 1688 for national income ((Mitchell 1988, 821, citing Lindert and Williamson)); I have computed GDP of £65m in 1700, £73m in 1725 using Crafts (1985) for growth rates and starting from nominal amounts in 1831 from Deane and Cole (1967, 166).

Date	Perpetual		Offices		Unfunded		Total		Revenues	Surplus	Livre index
	capital	interest	capital	interest	capital	interest	capital	interest			
1700	460.0	24.0	487.4	24.1			947.4	48.1	122.6	39.9	1.60
1707	642.7	35.7							145.6	-70.3	1.60
Feb 1708	672.7	37.7			482.8				150.0	-28.3	1.51
1710	757.6	42.2							126.0	-64.0	1.25
Oct 1710	757.6	37.9									1.25
Sep 1713	885.0	44.0							161.5	-7.8	1.25
Oct 1713	750.0	30.0									1.25
Sep 1715	1068.6	45.2	830.0	41.5	918.9		2817.5	86.7	165.6	47.7	1.78
Dec 1715	1044.1	42.0					2793.0	83.5			1.25
Jan 1716			830.0	39.5			2793.0	81.5	163.9	87.1	1.25
Jun 1717	933.6	41.3	830.0	39.5	558.1	13.0	2321.7	93.7	169.4	93.5	1.25
May 1720	1600.0	48.0	370.3	10.6	0.0	0.0	1970.3	58.6			0.60
Oct 1724	1800.0	51.5	741.4	35.2			2541.4	86.7	185.4	67.5	1.20
Nov 1726	1800.0	49.0	741.4	35.2			2541.4	84.2	199.4	92.1	1.00

Table 4.1: The debt in France, 1700–26. Sources: BN Fr. 7740, fol. 39, 43; Vührer (1886, 1:129–30, 139); Clamageran (1867–76, 3:45–46, 107–114); Forbonnais (1758, 4:307); Marion (1914, 1:63–69, 121, 149); État géneral des dettes (1720); Riley (1987). *: imputed from the interest payment, assuming the same average rate as in 1717. The livre index measures the silver content of the unit of account (1 in 1726).

The wars of Louis XIV: costs and benefits

XXX A table of the cost of Louis XIV's wars and their benefit (in terms of additional tax revenue).

4.5 The Noailles Ministry (Sept. 1715–Jan. 1718)

Louis XIV died on September 1, 1715. His great-grandson and successor Louis XV was five years old, and a regency was put in place, with the late king's nephew, the duke of Orléans, as regent. It was during this regency (which lasted until the king reached the age of thirteen) that Law's System would unfold.[4] Before this took place, however, the regent's government took a number of measures to address the fiscal situation.

Noailles' own history of his ministry in Fr 7769.

The beginnings of the Regency

The late king was not overly fond of his nephew who, by the traditions of the French monarchy, could naturally claim the regency for himself (the young king was an orphan, and the duke of Orléans his nearest relative living in France). In his will, Louis XIV had set up a Regency council to be presided by his old friend the duke of Villeroy; moreover, the education of the young king was placed in the hands of the duke of Maine, a legitimated son of the king.

The first order of business at the beginning of the new reign was a meeting of the Paris parlement, to which the will had been entrusted. The contents of the will were not known, and they were revealed on September 2. After the reading of the will, the duke of Orléans asked to speak: he expressed surprise at the dispositions, declaring them incompatible with the traditions of the monarchy and with what the king had told him in person a few weeks earlier. The parlement made no difficulty in declaring the will void and giving full

[4] Throughout this book, the phrase "the king" will refer to the Crown or its government, rather than literally to the 10-year old whose face appeared on the coins of the realm.

powers to the duke, now Regent. The duke of Maine was stripped of his position as guardian of the young king. Explain the bargain.

Regencies were difficult: France had known two in the previous century, and both had been periods of instability and even civil war. The Regent needed all the political support he could get, knowing that his position was insecure, both because of the now voided will and because the king of Spain, who was a closer relative of Louis XV, could at any time start to make his own claims. For this reason, the Regent decided on a new structure for the cabinet. Instead of the traditional council made up of the secretaries of State for the main departments (war, navy, foreign affairs, home affairs, and finance), he created separate councils for each portfolio, each with its chief and its president. He took care to fill the councils with a mix of great lords and prominent generals to enlist the support of the upper nobility, and with senior officials for their expertise.

The council of finances was headed by the duke of Villeroy, and presided by the duke of Noailles, who was in effect the finance minister. The other members were the marquis of Effiat as vice-president, and several senior members of the finance ministry: Le Pelletier des Forts, Rouillé du Coudray, Lefebvre d'Ormesson, Fagon, Gilbert de Voisins, Gaumont, Tachereau de Baudry, and Dodun. Louis XIV's long-serving finance minister, Desmarets, retired. The council met for the first time on September 20 and immediately set to work.

Present a few characters: Regent, Noailles, d'Argenson. Typical backgrounds of the policymakers. Introduce the Paris brothers.

Financial policy

A moratorium on private debts

atermoiements pour les commercans: AE M&D 2000.

Monetary policy

An AC of 12 Oct 1715 confirmed an earlier declaration of 13 August, before the late king's death, fixing the price of specie forever. Cite Noailles's correspondence on this point.

Financial policy

atermoiements pour les commercans: AE M&D 2000.

One of the first measures was monetary reform of the livre on December 23, 1715, followed by another reform on May 31, 1718. The two reforms cumulatively increased the ME of the livre from 28 to 60, diminishing nominal expenses (such as debt service) but many revenues as well, at least in the short to medium term. The main advantage, in the short-term, was to force coin holders to submit to a seigniorage rate of 20% in 1715, 33% in 1718. The devaluation of December 1715 brought in 62.8mL in 1716 and 12.7mL in 1717, while that of May 1718 brought in 29.9mL over one year.[5]

The Billets d'État

They were never intended to circulate as money, but were issued "a pledge and security for the debts that the State acknowledged and accepted," which is why they bore interest until their redemption (Noailles to Basville, BN Fr 6633, fol. 21-22).

The Regent's government, headed by the duke of Noailles until January 1718, carried out partial defaults and reductions in October 1715 (on perpetual bonds), January 1716 (on wages of offices), April 1716 (on the floating debt), and in June 1717 (on the perpetual bonds). As a result it cut 7mL from the debt service and brought the debt down to 2bn. Moreover, the floating debt was shrunk from over 900mL to 200mL through a variety of more or less forcible means, and converted into bearer notes called *billets d'État* bearing 4% and with no definite redemption date or assigned backing. These notes traded at a 37% discount soon after their issue began, in the middle of 1716 (Dutot [1738] 1935, 2:241). Although there was still some 240mL in unfunded arrears and floating debt, debt service was now at 92.5mL. A special levy on "profiteers" was assessed through an ad-hoc court, mostly payable in government debt (see White 2001). The wartime levy on incomes was ended in August 1717 because of political pressures, resulting in a loss of 25mL in revenues (BN Fr 7766, fol. 250–55), but

[5]Bibliothèque nationale manuscripts (hereafter BN), Fr. 11159, fol. 287 and Joly de Fleury 566, fol. 199.

collection of indirect taxes improved by 5mL. Spending cuts, particularly in the military, brought the primary surplus to 93.5mL. By 1718, after the second devaluation, French finances were not too far from balance, although 40mL remained in unpaid arrears.

Account of the policy as given in Noailles' own report, BN Fr 7769. Collect in one footnote all the references to Noailles' materials.

The Regent's cabinet was fairly successful at using the most traditional methods of French public finances, of which they were not proud: monetary manipulations, disguised or overt defaults, arbitrary fines levied through rigged courts. They put an end to the emergency, but left the State militarily diminished and unable to face an eventual conflict. The European political situation, however, was still unsettled. The War of Spanish Succession had ended in 1714 without a peace treaty between the principal antagonists, Spain and Austria, leaving those powers unhappy with and uncommitted to the settlement which had been imposed on them. In 1717, Spain retook some of the Italian possessions it had lost or ceded. The Regent was allied with Britain and wanted to force Spain to accept a compromise, but this could require another war. It is no surprise, then, that the Regent's mind was open to someone who would propose a radically new and rational way to manage public finances based on credit.

4.6 Overview

John Law's origins and early career as son of a Scottish goldsmith and man-about-town in London is recounted in Murphy (1997). He fled England after killing a man in duel in 1695 and spent the next twenty years moving around Europe, writing on economics and proposing to various sovereigns a plan to found a Bank, more or less influenced by the Bank of England (founded in 1694). He came to France in early 1715 and submitted his proposals to the government, emphasizing the help that it might receive from his proposed State bank. He ultimately convinced the Regent, but opposition in the cabinet forced him to settle for a smaller and purely private Bank. Law's beginnings were modest, but progressively the various companies he created merged into a gigantic conglomerate that took over most of the fiscal activities of the French state.

Law's experiment in public finance lasted from the creation of his General Bank in May 1716 to his escape from France in December 1720. Whether or not he was following a coherent plan inspired by his theoretical writings, or whether he was improvising as he went along, his scheme became known as a "System."[6] There are four stages in the history of the System. The first stage, from 1716 to 1718, established a privately owned bank that successfully issued bank notes. The second stage, from 1717 to 1719, saw the parallel formation of a trading company, whose shares were publicly traded, and whose purpose shifted from colonial development and overseas trading to management of public funds. At the same time, Law's influence on the Regent and government grows. In the third stage, from 1719 to 1720, the bank and the company merged, Law became finance minister, the company reimbursed the whole national debt, and its notes became the sole currency. The final stage, the year 1720, is the period of collapse, followed by a complex cleaning-up operation. My presentation will follow these four stages.

4.7 Appendix: French debt and finances

The numbers presented are approximate. It is necessary to assemble them from a variety of sources that do not use consistent categories. This appendix provides more details on my sources and how I treat them.

A major difficulty is in the treatment of offices, which are usually counted as debt for the 17th century, but much less frequently for the 18th century.

To be continued.

[6] The phrase "le nouveau Système des finances" appears in a defense of his policies, written or inspired by him, and published in newspapers in February 1720 (Law 1934, 3:98).

Chapter 5

Law's early career

John Law was baptized in Edinburgh on April 21, 1671, the son of William Law, a goldsmith and burgess of Edinburgh, and Jean Campbell, from a family of merchants. He was their fourth child, but would be the eldest surviving son. Law's family origins were in the West Lowlands, near Glasgow.[1] In 1595 Andrew Law, from Waterfoot, who had studied at Glasgow, became minister in Neilston where he would preach for 37 years. His son John succeeded him but was "deprived for inefficiency" in 1649. Soon after he apprenticed two of his sons, John and William, to goldsmiths in Edinburgh. They both became freemen in 1662 and that year William married the daughter of a goldsmith, but she died in childbirth. William soon remarried to Jean Campbell. William Law was evidently a prosperous craftsman and served as deacon of the guild. In 1683, he purchased the estate of Lauriston near Edinburgh, probably as an investment and a place to retire, and settled it in remainder to his wife and eldest son. Soon after he left for Paris to be operated of a stone, but died there and was buried in the chapel of the Scots College.

According to Gray (1721), an unreliable source,[2] William Law raised his younger son to follow him in his trade, but his eldest he raised as a gentleman. He did apprentice his younger sons Andrew and William to become goldsmiths (in 1686 and 1694 respectively), and there is no evidence that John was ever involved in the family trade. John is said to have studied at the High School

[1]The most carefully researched account of the Law family is Fairley (1925). The descendants of Law's brother William, settled in France, secured from the deputy Lyon king of arms in Scotland a pedigree making them direct descendants of James Law, archbishop of Glasgow, but this line of descent has been disproved.

[2]The pamphlet, published in 1721 in London by a self-styled "Scots gentleman" and long acquaintance of Law, contains many inaccuracies, but it is one of the rare contemporary sources on the early part of Law's career.

in Edinburgh, and around the time of his father's death was removed from the temptations of the big city to a grammar school in Eaglesham, where he studied under the presbyterian preacher James Wodrow. We find him next residing in the parish of St. Giles in the Fields of London, in February 1693, when he conveys his rights to Lauriston to his mother (Fairley 1925) in exchange for a sum of money.

Gray (1721, 4–5) says that Law arrived in London at the time of the Revolution, around 1689, "to push his fortune; he was handsome, tall, with a good address, and had a particular talent of pleasing the ladies," but to maintain his expense in the fashionable places he turned to gambling. Many contemporaries remarked on Law's intellectual abilities, and his skill at computation. He was good at understanding odds, and earned the respect of gamesters. Thus he carried on for a few years, earning the nickname of "Beau Law."[3] Then, he killed a man.

5.1 The Duel

The facts, as declared at the trial, are these.[4] On April 9, 1694, Law went to Edward Wilson's house, drank a pint of sack, or dry white wine, in the parlor, after which Wilson was heard to express surprise at something Law said. They met again at a tavern in the Strand, after which Wilson, accompanied by his

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[3]There is no contemporary evidence for the appellation of "Jessamy Law," a designation for dandies that appears in the mid-18th century.

[4]The published proceedings are available online: *Old Bailey Proceedings Online* (www.oldbaileyonline.org, version 6.0, 08 July 2011), April 1694, trial of John Lawe (t16940418-28), and reproduced exactly in Nichols (1795–1815, 3:1:487). The duel generated much commentary in the diaries, correspondences and news letters of the time. The main sources are the diary of Narcissus Luttrell (1857, 3:291) a letter from Peregrine Bertie dated April 10 in (Commission 1907, 436); the letter of Charles Hatton to his father the viscount Hatton dated April 10 (maunde Thompson 1878, 2:202); the Greenwich Hospital News Letters in Hardy and Bateson (1895–1937, 6:252); the entry in the diary of Evelyn (1955, 5:175) dated April 22. In addition, a pamphlet summarizing the gossip was published as *The Plot Discover'd, or Captain Wilson's Intreigues laid Open* (London, 1694: Ed. Goldin).

second Captain Whightman,[5] took a carriage to Bloomsbury square where Law was waiting. Wilson stepped out of the coach and as he approached Law he drew his sword and stood upon his guard; Law drew as well, they made one pass, and Wilson was killed on the spot of a deep wound to the abdomen.[6]

The duel was "the subject of much discourse" because Edward Wilson, another Beau, was altogether more prominent. While Gray sets the duelling beaux as rivals, the contemporaries knew nothing of Law except that he was Scots. Wilson was a celebrity and a mystery: not only was he the "mirror of the town" who "made a great figure," but no one could account for his expensive lifestyle: he had no debts, did not gamble, nor was he kept by women. His annual expenditure was estimated at £4,000 or 5,000 (Gray goes as high as £6,000), and it was said that he had enough money to redeem his father's estate and provide for his sisters. He did not seem worried about running out of money, and those who kept him company could not discover the source of his wealth.

Theories about the duel

The cause of the duel remains shrouded in mystery. Gray (1721) alleges jealousy on the part of Law, and a stroke of bad luck at the gaming table that left him in need of money. He decided to challenge Wilson to a duel, hoping that the cowardly Wilson would rather pay him than fight; but Wilson concluded that, if he didn't stand his grounds, other challenges would follow. At the trial, the cause was alleged to be a dispute over a woman, a Mrs. Lawrence; "aggravating letters" had been exchanged, making the dispute on ongoing one. This point was critical for the trial: death in a spontaneous quarrel could be deemed manslaughter, but the jury was instructed that a such a "malicious quarrel" implied premeditated murder. Bertie claims that the woman who kept Wilson instigated the duel to be rid of him. Evelyn wrote that Wilson had taken

[5]Possibly Joseph Wightman (d. 1722), then a lieutenant in the First regiment of Foot Guards with rank of captain; he would rise to the rank of major-general in 1710.

[6]Evelyn wrote that Wilson was killed "not fairly," and, according to Hatton, it was "generally reported that Laws gave Wilson his mortal wound before he had drawn his sword," but the evidence at the trial contradicts these claims.

his sister out of the lodgings where Law kept his mistress, and the lodger pushed Law to take revenge. A similar story is told in much greater detail by Charles Hatton: Wilson had recently brought his sister[7] from the country and lodged her in Berkeley Street with a gentlewoman he thought very devout; he was then told that she was in fact "a wench kept by one Laws," whereupon Wilson removed her to his aunt's house in Twickenham. Law, at the instigation of the lodger, challenged Wilson, who thought he needed to accept it to purge himself of his reputation as a coward. Common elements running through several of these sources are Wilson's reputation as a coward, supposedly earned in his brief service in the army in Flanders,[8] and the role of a woman as instigating the quarrel. As we shall see, the possibility that Law challenged Wilson with some hope of financial gain was also evoked by the best and closest source.

Much later, stranger explanations appeared. Manley (1708) expanded on Bertie's story, naming the woman as Elizabeth Villiers, mistress of King William III. The text purports to relate the confidences of a gentlewoman once in the service of Mrs. Villiers, and in fact Manley did serve her for a few months in 1694, at the time of the duel. But this credential is undermined by Manley herself, who says of the gentlewoman that "there is nothing she would not attempt for her revenge." An even more elaborate story appeared almost 30 years after the fact. In 1723, a pamphlet was published containing amorous letters between an unnamed nobleman and "Willy" Wilson, followed by a convoluted explanatory narrative, replete with secret assignations and cross-dressing, to describe Mrs. Villiers' attempts at discovering the identity of the nobleman's male lover, and Law's role in her service; the duel was alluded to, but neither described nor explained. The pamphlet has proved of great interest to cultural historians of early 18th c. homosexuality, but a biographer of Law would find nothing of use in this work of fiction.

[7]Catherine Wilson died in 1747 at age 81; she married late, some time after 1708.

[8]The pamphlet *The Plot Discover'd* states that Wilson served briefly as ensign in his uncle's regiment. No trace of a commission for Wilson can be found in the surviving records, but Wilson's maternal uncle Simon Packe was in fact a lieutenant-colonel in Princess Anne's Regiment of Foot citep[3:107]Dalton:1892-96 which briefly served in Flanders from September 1692 to February 1693, without seeing any action (Cannon 1844, 21).

The Trial and the Escape

Whatever the cause of the duel, it was Law's misfortune that he killed an extremely well-connected man.[9] The Wilsons, originally from Leicestershire, were a family of London drapers. Robert Wilson died prematurely in 1638, leaving his widow Katherine Rudd with three sons and three daughters, all young. She promptly remarried with Zachary Highlord, a merchant and alderman of London, and managed her affairs well enough to leave at her death in 1648 all sons well endowed and all daughters eventualy well married. The eldest son Robert married the daughter of James Ashe, a rich clothier from Somerset, having purchased a number of estates (Didlington and Colveston in Norfolk, Knighthorpe in Leicestershire) which passed to his three sons. The younger son Thomas received the estate of Keythorpe in Leicestershire from his mother and married in February 1661 Ann Packe, the daughter of a prosperous merchant and former Lord Mayor of London, excluded from office at the Restoration but rich enough to give his daughter a dowry of £3500 and leave her some landed estates at his death in 1682. Beau Wilson, a younger son of this marriage, was born around 1668.[10]

The extensive connections of the Wilson family come from the three paternal aunts of Beau Wilson. The eldest, Katherine, married a barrister.[11] The youngest Martha married a baronet, Sir Edward Cropley, whose sister Susan was the wife of the Lord Chief Justice, Sir John Holt; she remarried with Sir Edmund Bowyer, and her stepson Anthony Bowyer was MP at the time of the duel. Beau Wilson's third aunt, Mary, was the widow of Sir Joseph Ashe,

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[9]Nichols (1795–1815, 3:1:487) correctly identified him as a younger son of a Robert Wilson of Keythorpe, Leicestershire, which subsequent writers have dismissed as an obscure and impoverished family; but James Johnston's mention of "the Townshends and Ash, and the Windham's interest, who were all cousin germans to Willson" (TNA, SP 35/18, no. 118) provides a clear clue that Wilson's relations were far from negligible. Robert Wilson received the estate of Keythorpe from his mother Katherine Rudd, widow of Robert Wilson, a draper of London (New England historical and genealogical register, vol 48, p. 132), whose pedigree can be found in Visitation of London, Harleian Society, 17:355.

[10]The family monument, still visible in the church of Tugby, lists the children of Thomas Wilson and Anne Packe in order of birth. I have not found where Beau Wilson was buried.

[11]She is known as Katherine Austen, a diarist and poet.

another MP of the Restoration, and brother of Robert Wilson's wife. The Ashe family was not only rich, but also politically very active. Four sons of the clothier James Ashe had sat in parliament, and nine grandchildren were MPs or spouses of MPs. A niece of Sir Joseph Ashe had married Thomas Foley, from a wealthy family of ironmasters and MPs, and one daughter of that marriage had married Robert Harley, the future earl of Oxford but in Parliament at the time of the duel. Mary Wilson's daughters also married well: Mary Ashe was the first viscountess Townshend, and Catherine Ashe, who married William Windham of a prominent Norfolk family: their son Ashe Windham, who became MP in 1708, was said to possess "as great estate as any commoner in the county."

Law was arrested soon after the fact, taken to Newgate Prison, and indicted for murder the same day. The trial took place shortly at Old Bailey. Besides the testimony of Wilson's manservant and of his second at the duel, the jury heard the content of the letters from Law and Wilson, as well as two letters from Wilson to Law and to Mrs. Lawrence. Law pleaded that the meeting in Bloomsbury Square was accidental and that he fought in self-defense; persons of "good quality" testified on his behalf that he "was not given to quarrelling, not a person of ill behaviour." Wilson's death at the hand of Law was uncontested: the whole issue turned on murder versus manslaughter. The jury, following the instructions of the court, found Law guilty of murder on April 19, and the court passed a sentence of death the next day.

Execution normally followed sentencing within days, but Law was reprieved by the King.[12] Meanwhile, however, Wilson's older brother and heir, Robert, availed himself of a procedure of medieval origin and infrequently used, the appeal of murder. This was not an appeal in the modern sense, but a procedure by which an aggrieved private party could bring a suit and demand punishment, independently of the king's suit; and, while the king could have pardoned Law for his conviction on indictment of murder at the Old Bailey, he could have done nothing about the appeal of murder.[13] Robert Wilson sued a writ, issued

[12] There is no evidence of a pardon, in spite of the assertion by Nichols (1795–1815, 3:1:487) that Law appeared to have received one. An entry in the Domestic State Papers warns: "Caveat that nothing pass relating to a pardon for John Laws" until notice be given to Wilson's brother.

[13] 4 Comm 316. The procedure, described in Hawkins (1824, 2:223–281), was abolished in 1819.

on April 19 (before the conclusion of the trial in Old Bailey), returnable to the King's Bench in the Easter term. Law was brought from Newgate to court on May 10, with three prominent barristers, Sir William Thompson, Sir Creswell Levinz and Thomas Carthew, speaking for him.[14] They asked to hear the writ of appeal and then for a few days to consider what to plead, whereupon Law was committed to the King's Bench Prison and returned to court on June 25. The barristers put in a demurrer, pleading that the writ of appeal, the sheriff's return to the writ, and the appellant's declaration were defective in form. They raised several objections, all on points of pure form (for example, the declaration stated that the murder had taken place around one o'clock in the afternoon in the parish of St. Giles in the Fields, which was too vague at to time and place). These were nothing more than stalling tactics, but they were subtle enough as to require serious consideration, and the judges (Sir John Holt, Sir Gilbert Eyre and Sir Samuel Eyre), although not inclined to accept them, delayed their judgment to the next term, giving Law five months' respite Hardy and Bateson (1895–1937, 6:262, 265). Law returned to court on November 6 (Luttrell 1857, 395, 400) to hear the judges overrule all the exceptions raised and forward the case to trial; but the trial was put off the the following term, in January.

Meanwhile, influential Scots in London were doing their best to save Law. Many years later, James Johnston, who was secretary of state for Scotland at the time, wrote several letters to Stanhope recollecting the case.[15] Johnston and the earl of Selkirk pleaded with the king for Law's life, Johnston arguing that Law should not suffer for his "ingenuity": he had confessed, even though no witness had positively identified him. The king replied: "What, Scotchmen suffer for their ingenuity: was ever such a thing known?" a remark which offended the Scots and was soon regretted by the king. But William III was "mightily possessed" against Law, for two reasons: he believed that Law had

[14]Carthew reported the case Wilson v Law (Carth. 331); it also appears in a number of other 18th century collection of reports: 1 Salk 59, Comb 293, Skinner 443 and 551, 1 Ld Raym 20, 3 Ld Raym 70, 4 Mod Rep 287.

[15]TNA, SP 35/18, n. 118; SP 35/20, n. 1 [EJH]; translated in French in Faure (1977, 632–635). Johsnton was trying to curry favor with Law, in the hope of finding some profitable investment opportunity.

initiated the quarrel to extort money from Wilson, and the relatives of Wilson, intent on revenge, formed a powerful a party in the House of Commons. Johnston then turned to Charles Talbot, duke of Shrewsbury, who had recently become secretary of State and had much influence on the king. As it happened, Shrewsbury owed Johnston a favor, and accepted to help, but he needed to convince the king that the duel was not a matter of money. Johnston found a man who was able to "make it appear" that Law had recently received £400, with the help of a banker who offered to bring his books. Johnston was a little skeptical, but Shrewsbury was able to convince the king, who assented to let Law be saved. But neither the king nor Shrewsbury could be implicated: Johnston suggested getting an under-keeper of the King's Bench prison to offer his services to Law. This was acceptable, and a few days later Shrewsbury told Johnston that Law was free.

5.2 Wanderings around Europe (1695–1713)

The next twenty years of Law's life remain shrouded in mystery. What we do know is that he traveled around Europe: his presence is attested in Paris, the Netherlands, Scotland, Paris again, Genoa, the Netherlands again, until his return to Paris in 1713, where he would stay seven years. He had first-hand experience with the major banking institutions of the time: the Bank of Scotland, the Amsterdam Wisselbank, the Banco di San Giorgio in Genoa. He studied banking and thought about money and economic activity, and from about 1704, he formulated several plans to establish banking institutions, premised on the notion that metallic money could be replaced with a better instrument to improve financial and economic activity. In 1705, he published his only book, *Money and Trade Considered*, in support of his proposal to the Scottish parliament for a bank. His thinking continued to evolve in successive writings that were sent to governments in Turin and Paris. What else he did during that time, and how he sustained himself, is largely a matter of conjecture and rumor.

The two major sources for his early life are contemporary biographies that were published, one in London in 1720 and the other in the Netherlands in 1722, the latter a more detailed version of the former. While the motivations of the anonymous authors are suspect (the English biography is signed by an otherwise unknown Gray, who claimed to have known Law personally), and some details are demonstrably false, they provide a general background.

Paris and Italy, late 1690s to early 1702

Gray says he went to France after his escape, met with the Jacobites at Saint-Germain, met his wife. Massillon (1792, 99) says that Law came a first time soon after the peace of Riswick (1697) and met the future Regent, then called duc de Chartres, several times, met Chamillart and Rouillé du Coudray.

It was in Paris, according to Gray, that Law met the woman who would become his companion and the mother of his children. Lady Katherine Knowles[16] was from a distinguished family: Francis Knowles, who had married a niece of Ann Boleyn, was treasurer of the household of Queen Elizabeth (his wife's first cousin), and was made knight of the Garter in 1593. His son William, who followed him in the same office, was made Earl of Banbury in 1626. His second wife, a daughter of the Earl of Suffolk, had two sons whose paternity was disputed. The first earl's descendants styled themselves as earls, and repeatedly petitioned to be seated in the House of Lords, without success. Lady Katherine was the daughter of the third earl, born in 1669,[17] had lost both parents by the age of eleven. Her brother Charles, the third earl, lived a turbulent life in London at about the same time as Law. He killed his brother-in-law in a duel in 1692, but avoided the charges on the grounds that the indictment did not give him his proper title of earl of Banbury.[18] He married secretly in 1689, but was

[16]The family name is now spelled Knollys; I use the contemporary spelling.

[17]This date is given by Wood (1824, 194), citing a pedigree given to him by the 7th earl. Almost all of the children of the 3d earl appear in the parish register of Boughton, Northamptonshire, between 1662 and 1671, except for Katherine and Anna Maria.

[18]The removal of the indictment was upheld unanimously by the judges of the King's Bench, but the House of Lords continued to refuse him his seat. The matter was not settled until 1813, when the House resolved that he was not entitled to the earldom, and the family ceased to claim the title.

later sued for bigamy by a woman who claimed to have been married with him in Italy. Lady Katherine married in July 1695 in London George Seignior, of St. Andrew, Holborn, a gentleman aged 24 (Foster et al. 1887, 210). This is very likely to be the son of Robert Seignior, a prominent watchmaker of Exchange Alley, and his wife Sarah, born on December 23, 1670 and baptized a few days later in St. Mary Woolnoth (Brooke and Hallen 1886, 60, Britten 1899, 464). Nothing else is known about George Seignior, although a late report indicates that he died in 1719 (excerpt from the Mercure, in AN, K884, No 9bis).

Lady Katherine's names on her French passports of 1702 and 1706 is her married name of Seignior. She never married John Law, a fact well known at the time (Hautchamp 1739, 2:18) and confirmed by the fact Law did not make a will but left his estate to her by an inter-vivos donation (Murphy 1997, 36).

Corresponding to these trips we have the following indications: arrested on order of the marshals of France, April 7, 1701; freed on order of Choiseul on April 13 (AAE, M & D, France 1093, f. 117 [EJH]). Passports delivered for Law, leaving the country with two servants, June 19, 1702, valid a fortnight; another for Catherine Sennior, returning to England with one servant, same day (AAE, M & D, France 1100, f. 211 [EJH]).

Law then moved to Genoa where he began to study gambling, then on to Venice, by which time his net worth was £20,000. In Venice he carefully studied the operation of the Rialto bank and the foreign exchange markets.

Netherlands, 1702–05

In October 1702 he was granted citizenship in The Hague and took the oath (Huijs 1978, 235). His son William was born in The Hague, probably in 1705, no later than April 1706 (Huijs 1978, 23).

Scotland, 1704–05

Law was in Scotland when the Bank suspended payments on December 18, 1704.

Date on copy of Money and Trade in the Library in Edinburgh is April 16, 1705.

Support of the duke of Argyll, commissioner, and the Earl of Islay.

Debate in Parliament in July 1705. Court party, Country party, Squadrone. Fletcher and his duel with Roxburgh.

Paris, 1706–07

Massillon (1792, 99) mentions a second trip to Paris, during which the abbé de Thesut introduced Law to Desmarets, they met several times without result.

EJH found nothing in 1703–05. Then a passport issued on 28 July 1706 for Law with one servant, valid 6 weeks, handed to Me Mahault, notaire rue Montmartre [et. XX; check] who requested the passport and provided a bond. Catherine Seigneur issued a passport on Nov 10, 1706 to come from Holland with 2 servants. Permission to stay 6 months in Paris, sent to him at the hotel d'Antragues rue de Tournon, 29 Sep 1706. Passport leave France issued 6 May 1707, leaving by way of Lyon, another for her, but they were renewed twice, the last 31 July with permission to export 60 marcs of silverware (AAE, M & D, France 1139, f. 48, 61, 56v, 86, 93, 98 [EJH]).

The story of Conti and Neufchatel. Law himself (Law 1934, 2:295) says that he sent memoirs to the prince de Conti from Genoa 8 years earlier (=1707-08), which were sent to Desmarets.

Several years later, Law met the prince de Conti in Neufchâtel, sent through him his plans to the duc de Bourgogne, who examined them, but did not approve. He came a third time, with no intention of staying, but the duc d'Orléans convinced him to stay, and Louis XIV died.

Italy, 1709–12

Account in San Giorgio of Genoa from March 1709 to March 1712, when he closes it. Moves to Holland, although stops in Milan and Turin to discuss his project.

It was during his time in Genoa that Law established the first contacts with nearby Piedmont. In mid-1711 he sent a project for establishing a bank in Turin to Vittorio Amadeo II, duke of Savoy and ruler of Piedmont. Vittorio Amadeo referred it to three of his advisors for examination: the president

Garagno, Francesco Giacinto Gallinati, and Gropello. Each separately produced a memorandum on the project. Garagno was the most hostile, and probably the one who understood it less. For him, credit was important to trade, but it was a consequence of trade, not a cause. Piedmont didn't need a bank, to increase prosperity it needed more free trade. As for the specific project, he could not understand where the profits would come from. nor how potential losses would be absorbed; and if the notes were to be the sole means of payment in and out of the Treasury, where would the funds necessary to sustain convertibility come from? Gallinati and Gropello were both more sympathetic to the project, but both saw it as needing further work.

It seems that there were two drafts of the project: compare Perrero (1874) and Prato (1914). The second project was slightly more explicit about the Bank's sources of revenues: it would engage in banking (and foreign exchange?) and hold 3/4 reserves. That project was sent from Milan in February 1712, and the response was rapid: Law was invited to meet with Fontana to discuss ways to implement the project. Law had already been planning to go to Amsterdam on business: he differed his departure and met with Fontana. We do not know the details of that meeting: two days later, he was in Genoa again, and proceeded to withdraw all his balances from the Banco di San Giorgio.

Netherlands, 1712–13

In May 1712 Law moved from Italy to the Netherlands.[19] He opened an account at the Amsterdam Wisselbank, but the records are preserved only from February 1713. We know that he used Andrew Henderson as cashier, since his name appears on the latter's account on May 28, 1712. On July 21 he buys a house in The Hague, located on the south side of the Noortcai of the Nieuwe Uitleg, a neighborhood where many Portuguese Jews lived (Van Dillen 1925b). The price was 4000 florins.

During his stay in the Netherlands, Law involved himself in providing "lottery insurance." This paradoxical notion deserves explanation. Lottery loans

[19] In July 1712 he protested a bill drawn in Venice on May 6 by William and Smith on Van der Heiden and Drummond (Van Dillen 1925a, 162).

had come in vogue as a means of floating loans: the prototype was the so-called "million adventure" loan in 1694 England; six more lottery loans were issued in Britain between 1711 and 1714. The States-General of the Netherlands launched one in 1709, followed by several others. The Province of Holland also issued three lottery loans between 1711 and 1713.

The common feature of these loans was the following. The investor bought a numbered ticket for a fixed sum. A draw took place, as a result of which each ticket was assigned a claim to a government bond. The size of the bond was determined by the lottery. Most tickets turned into "blanks" (*nieten* in Dutch), entitling the bearer to a modest return on the investment. Some tickets received potentially very large prizes. In the first four lottery loans floated by the States-General in 1709 and 1710, the blanks received a life annuity bearing 6% of the ticket price (a 15f annuity). The prizes were also life annuities, ranging from 30f to 3000f in the first lottery. The first lottery was a great success, and another one soon followed, with a tighter range of prizes: it proved less successful, and only half was subscribed. The States-General launched a third one, with greater dispersion of prizes, but it too was not fully subscribed, so the terms were altered, the blanks receiving a 7% annuity, and the size was doubled. Another loan was issued in late 1710, with 20-year bonds as prizes instead of life annuities. The last lotteries of 1712 and 1713 added a new feature, borrowed from the Holland lottery of 1711: the tickets were now randomly sorted into classes with a redemption date ranging from one to twenty-five (in 1712) or thirty years (in 1713) depending on the class. The 1712 loan, initially planned to raise 6 million florins on 30,000 tickets at 200f each, was not successful, and only half was drawn in December 1712. The remaining half was reconfigured with more generous terms, and increased to 6 millions in tickets of 200f each: the draw took place in March 1713.

Law, even while he was still in Genoa, had invested in the Holland lottery of 1711, since his name appears on the ledger of prizes. After he arrived in the Netherlands, he associated himself with a Portuguese Jew of Amsterdam named Isaac Abrabanel. He advertised his scheme in the *Amsterdamsche Courant* in December 1712 for the first half of the Generality's lottery and in January 1713 for the second half.[20]

The proposition was as follows. A holder of ten tickets in the lottery could buy a contract from Law, whereby Law received 100f, and paid out 300f if none of the tickets won a prize. Fifteen tickets could be insured for the same price of 100f, in exchange for 500f if all turned blank. Law proposed other forms of insurance. He offered to buy the risk on a ticket for 20% of its face value. He also proposed to insure a return of 25% on a group of 100 tickets, with the condition that any aggregate gain above 25% would be shared equally with Law. For the second half of the lottery, the terms were altered slightly. A 100f premium insured a 200f return if none of the 10 tickets won a prize: to insure 15, 20, or 25 tickets Law asked for a 200f premium and paid out 600f, 800f and 1000f respectively. He also proposed to guarantee a 20% return on 50 tickets, sharing the gain above 20% in the same fashion.[21]

Knowing the exact structure of the lotteries, it is possible to compute the profitability of the scheme for Law, and the gains it presented to the ticket-holders. The first insurance scheme on the December 1712 scheme made him an expected gain of 24f on each group of 10 tickets, and 36f on each group of 15. In the second lottery, his offer returned him 15f on 10 tickets, and between 123f and 168f on the larger groups of tickets. The second scheme earned him 1.3f per ticket in the first lottery, and 8.8f per ticket in the second one.

The second scheme has an interesting feature from the perspective of the ticket-holder. To understand this, it is necessary to compute the present values of the various prizes, because they were not redeemed in cash immediately, but over time; Law's scheme was in cash only. The rate of return I use for the computation are those of the loans themselves, from the perspective of the issuer, who faces no risk: the internal rate of return was 7.1% on the first half and 7.4% on the second half. From the structure of the first lottery, the risk

[20] Van Dillen (1935). The first advertisement, on December 3, makes no sense, and the copy may have been garbled. The next one, on December 6, repeated on December 8, 10, and 13, corrected the mistakes. The advertisements also appear in the French version, the *Gazette d'Amsterdam*.

[21] In the first half of the lottery, the blanks received a bond with 200f face value. In the second half, the blanks received either 240f or 260f, but for the purpose of computing the gain, Law offered to count them at 200f each.

that the ticket-holder (willingly) bears is asymmetrical: net of the price of the ticket, the return on the blanks (which made up 87% of the tickets) was -50f, whereas it ranged from 133f to 59,593f for the prizes. In the second lottery, the net loss was either 17f or 62f on the blanks (which made up 91.8% of the tickets), whereas the gain ranged from 79f to 57,729f on the prizes.

The effect of Law's gain-sharing scheme was to neutralize the risk on the blanks, and shift it to some of the prizes. This is shown in the following table.

Law's expected profits, on a per-ticket basis, were not very large, recalling that each ticket was sold for 200f. On the December 1712 lottery, the first insurance netted him 2.4f per ticket, the second yielded 1.3f. On the March 1713 lottery, the first insurance yielded between 1.5 and 8.2f per ticket, while the gain-sharing arrangement yielded 7.8f. Supposing that he had insured every single ticket in each lottery with the most profitable insurance scheme, his gain would have been 270,000f, the equivalent of 150,000 livres or £27,000 at current exchange rates: a tidy sum to be sure, but far short of the 1.3m livres he later claimed to have with him when he arrived in Paris later that year.

We also know that Law took positions in the lotteries; his 500f prize in the Holland lottery of 1711 has already been mentioned. In January 1713 he used a total of 5 tickets of the first half and 60 tickets of the second half of the Generality lottery as collateral for two loans, and he sold 22 blanks of the Holland lottery of 1711 a few weeks later (Van Dillen 1925a). Most striking is his delivery in May 1713 of a ticket in the second half of the lottery to an Amsterdam merchant named Frans Verrijn, in fulfillment of a contract of February 24: the ticket had won a 25,000f prize redeemable in 1713: this was one of the highest prizes in the lottery. Finally, in early May 1713 he advertised a last time in the *Gazeete d'Amsterdam*, offering to trade tickets that had not yet been drawn in exchange for drawn tickets, and blanks with different redemption dates for blanks of the same redemption date. This indicates that he acted as a broker, and he probably held inventories of tickets. The following month Isaac Abrabanel transferred nearly 19,000f to Law's account. The same day Law spent the sum in transfers to various individuals, leaving a small balance of 217f which remained untouched for years. Law was moving on.

Back to Paris, 1713

Purchase of a rente in 1713.

Arrives in Paris Dec 1713, moves his furniture May 1714. D'Argenson notices his arrival in July (!), remembers a 16 Nov 1708 letter from Torcy about Law a professional gambler returned without passport and suspected of evil intents, but not found at the time; now gets in touch with Torcy, is told that he is not suspect and can be left in peace (AAE Corr Politique, Angleterre, 262, fol. 286-7. [EJH])

Further correspondence with Vittorio Emanuele. Law wrote to him from Paris on March 26, 1714 to tell him that his poor health prevented him from going to Sicily. He wrote further on June 14 to excuse himself again, and Vittorio Emanuele told him to wait until he returned to Turin and sent for him before embarking on the journey.

While Law remained unfailingly polite, the tone of his letter oscillates between kindly patience and a touch of condescendence. One can almost hear the deep sigh: Vittorio Emanuele was asking him about setting up a lottery loan, a subject on which Law was an expert, but which afforded only desperate means for a desperate sovereign. Law could sketch out a plan for a lottery loan, but he warned the king that such loans were onerous, and that the state of finances of Piedmont would not allow to launch one at a good rate. For Law, a lottery loan should be an obsolete tool of public finance, in the light of the innovations that Law was proposing. and whose import Vittorio Emanuele clearly failed to grasp. But, in his position, Law needed to keep his options open: should the French government fail to let him start his bank, he could fall back on Turin. And so Law sketched out a plan for a lottery loan, but at the same time he also sent to the king the memoranda that he had written for the Regent.

Chapter 6

Law's economic theories

Chapter 7

The Bank

(Kaiser 1991) on banks only feasible in republics or limited monarchies.

7.1 Summary

XXX to integrate in the rest of the chapter.

The first component of the system was a bank, as one could have expected of him. The texts he wrote between 1700 and 1715, all more or less in support of his banking projects, placed a note-issuing or money-creating bank at the center. Whether in Scotland, in Turin or in Paris, the plan's basic structure was the same: the bank, by creating money, would stimulate the economy and enrich its owners as well as the sovereign enlightened enough to charter it. But the plans varied in their details, both reflecting the peculiarities of the country for which they were proposed, as well as the evolution of Law's own thinking away from land-based credit.

The bank Law initially proposed to create in France fit in with the existing financial network of tax collectors and royal cashiers. The liabilities of Law's bank would be, in his scheme, the privileged medium for the financial flows from the provinces to Paris and from taxpayers to the State, as well as the reverse flows out of Paris and to State debtors, employees, and contractors. Law's proposal was thus intended to resolve a rather technical payments problem. The proposal was rejected by the Regent's cabinet in October 1715 because the French government was facing at the time a major crisis. It had neither cash nor credit left. This meant that the niceties of the payments system were far from the most urgent matters, and making a government-sponsored paper compulsory for anything would only make the crisis of confidence worse.

It took more time for Law to implement his initial plan. In May 1716, after a series of operations (partial debt default, emergency loans from financiers, a major recoinage) had gained some breathing space, the cabinet approved a revised plan. The only thing Law asked for now was a charter for a privately-owned note-issuing bank. The bank was given an effective monopoly on note issue because, at the same time as it was chartered, a royal edict prohibited privately issued bearer bills Antonetti (1978) Other than that, it initially received no special treatment.

To raise the bank's capital, Law made a public offering of 1200 shares at 5,000L each. Subscribers could purchase shares with a mix of cash and a certain type of government bonds (*billets d'État*). The Bank was private, but from the start Law bought a quarter of the shares and the king almost as much. The Bank was structured similarly to a modern limited liability company. A general assembly was to be held twice a year, at which shareholders voted in proportion to their shareholdings, management reported profits and dividend payments were announced. The Bank's main activities were to discount bills, sell foreign exchange, take deposits and manage current accounts, and issue notes payable in specific silver coins (écus) on demand to the bearer. It was not allowed to engage in trade or to borrow.

Several features of Law's System are already apparent from the start. Although the bank was ostensibly a private company, the government was involved from the start through the king's shareholdings. The offering was also a hybrid of private and public: capital was raised from the public, but the bank's initial asset was government debt. The bank's shareholders were government creditors who were given a chance to convert their (risky) bonds into a chartered commercial venture.

Getting the notes to circulate and not return constantly to the Bank for redemption was critical to the Bank's profitability. Three factors played in their favor. The first is that the Regent and several influential and wealthy backers deposited large sums at the very early stages; so the first note issues were made against deposits, not discounting, and the depositors were willing to hold the notes they received and not redeem them. The second is that the notes were given partial protection from the seigniorage tax levied on the whole money stock when a general recoinage was ordered in 1718. Finally, the elements of Law's original bank proposal were introduced one by one. In October 1716 tax collectors were obligated to redeem the bank notes into cash on demand. In April 1717 the notes became legal tender in the payment of taxes. In September 1717 the government's tax accountants and cashiers were ordered to keep accounts and make receipts and payments in notes.

The bank was rapidly successful, in spite of initial doubts and rumors. It issued a fairly large amount of notes, 40 to 50mL per year on average, while maintaining a reasonable specie reserve (about 50%). The notes circulated at par. Law claimed to have lowered the commercial paper rate in Paris, because his bank discounted at rates from 4 to 6%. It provided valuable foreign exchange services to the government, and to private clients as well. The Bank's total dividend payments (three half-yearly payments from 1716 to 1718) amounted to a respectable 15% rate of return on the cash price of the initial shares, though perhaps not as high as one would expect given the note circulation. The returns to shareholders included a sizeable capital gain. The only indication for the price of its shares is that they were 3% above par in cash in January 1718: this represents almost 90% appreciation over the purchase price a year and a half before (assuming a share fully paid with 1/4 cash and 3/4 billets d'Etat at a 60% discount).

Having succeeded in creating a solid note-issuing institution, Law made a puzzling move: he had it nationalized in December 1718. He had made the suggestion even earlier, in May 1718, after barely two years' activity. The Crown bought out all the existing shareholders in cash at the face value of the shares (5,000L). The Bank would henceforth be managed by Law on behalf of the king, and all profits turned over to the Royal Treasury. This nationalization had two consequences: it shows the gains to be made by investing early in a company launched by Law, and it gave the king a functioning printing press for the first time.[1] How did the bank's credit survive nationalization? Three years

[1]The earlier instruments issued in France with the name of "billets," such as the *billets de monnoye* and *billets d'État*, were interest-bearing bonds with no convertibility and no redemption date,

earlier, such a takeover would have been the kiss of death for its reputation. The difference was that the Regent's government in December 1718 was in a different position. Led until January 1718 by the duc de Noailles, it had succeeded in bringing some order to public finances with an array of traditional means (defaults, punitive taxation on war profiteers, seigniorage, tax increases) as well as introducing better accounting practices. Also, the Regent's power more secure. He had won a showdown with the Paris Parlement over the recoinage of May 1718, and dispensed with a cumbersome system of committees filled with the dominant figures of the court and the army. The Regent, and Law, were poised for bolder action.

7.2 THE GENERAL BANK, MAY 1716

The first step was the creation of the General Bank in May 1716. Law had initially proposed a 100%-reserve public bank that would handle the government's financial transactions, but the plan was rejected in October 1715. The Regent, sympathetic to Law, allowed him to set up a purely private bank.

The rejection in October 1715

Describe the first approaches (how he was introduced, EJH notes).

See also memoires du duc d'Antin Fr 23934.

The rejection in October 1715. Composition of the conseil du commerce in November 1715 (AE, M&D 2000).

Noailles informed Villeroy on October 14 that he had met with Amelot, d'Argenson, the prevot des marchands (?), Fagon, Baudry et Saint-Contest to listen to Law's proposition, and that all had been satisfied that there were no problems foreseen with the plan. He intended to meet the next day with Fenellon, Tourton, Guigues and Piou (the same bankers who approved on Oct 24) with Law with Fagon and Baudry to further discuss the project (Fr 6931, f. 70).

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rather than non-interest bearing bearer demand notes.

Rouillé's memorandum given to the Regent the morning of October 24 (Mazarine 2342, p. 255-262). Rouillé thought that the freedom for individuals to accept or reject the notes was specious. Since the plan was for all the king's revenues to flow through the Bank, the king's expenditures would also be made in notes, and any employee or creditor of the State would be forced to accept them. The backing that Law proposed was not 100%, otherwise there would be no profits to share. Instead, it could be expected that some notes would remain in circulation, and the cash backing those notes would then be invested, exposing the Bank to liquidity risk (if holders of notes demanded early redemption) and to investment risk (if the creditors of the Bank failed). These risks would not be transparent for the note-holders as they are to holders of Dutch India Company shares who are well informed of that company's commercial activities.

Rouillé also objected to the denomination of the notes: since many tax payments as well as salary payments would be smaller than the 30L limit, the tax collectors would have constantly to exchange notes for cash and cash for notes. Past experience with the billets de monnaie showed how difficult for paper to compete with cash.

Rouillé foresaw other risks. Since the investments the Bank would make would be risky, who would bear the risk? The king was to receive 75% of the profits, but would he also accept the same share of losses? Another risk was that the Bank would be forced to make loans to the king, and Rouillé cited examples of the king seizing funds without regard to legality.

Law cited the examples of other European banks, but Rouillé was not convinced: "In republics the debtor and the creditor are one and the same, in monarchies the debtor king imposes his law on the creditors; the king must be able to give guarantees to the public." In France certain provincial estates had been able to borrow on behalf of the king because they could be sued. Admittedly the French government (under the enlightened rule of the Regent) was not despotic anymore, but it remained monarchical and since the 15th century knew no checks to its power from parliaments and great feudal lords. In Sweden the constitution had become monarchical and the Bank of Sweden had recently failed under the weight of Charles XII's war expenses. Naples was different because the king did not reside there and his power was not firmly established; as for the bank in Vienna, it was too recently established to be judged.

On October 24 a special meeting was called by the Regent to examine Law's proposal.[2] In addition to the regular members of the council of finance, were present Pelletier, Daguesseau [twice?], Amelot, Bignon (prévôt des marchands, or mayor of Paris), d'Argenson, Le Blanc, de Saint Contest, and d'Aguesseau (the king's procurator general at the Parlement, for the legal aspects). Fagon was the rapporteur (XXX look up translation) of the project. The Regent then called in Law and thirteen businessmen who had been asked to examine the project. Four were in favor (Fénelon, Tourton, Guyguier or Quinquet of Guigues, Piou), one thought it might be useful but not in the present circumstances (Anisson) and the rest (Bernard, Heusch, Mouras, Le Couteux and four others: Chauvin, Philippe, Mouchard, Helissan Mazarine 2342) were opposed. The businessmen withdrew and the Regent then asked for everyone's opinion.

Le Pelletier was in favor, but thought that the notes should bear interest, and did not think the time was suitable. Dodun also approved, but thought that interest on notes would burden the State unnecessarily, and preferred postponing. Saint Contest did not believe a bank would succeed in France where "authority always reigned." Gilbert, Gaumont, Baudry, and the marquis d'Effiat thought the bank was a good idea and could increase circulation of money, but in present circumstances it might not gain enough trust and its possible failure would do more harm than good. D'Argenson thought the bank was harmless and could do good. The marquis d'Effiat also thought the bank useful but not presently, as it would make money even scarcer.

Noailles then spoke and noted the business community's opposition: the bank was useful, but the time was not ripe, finances had to be put in order first by cutting spending and paying off the debt, and it was important to announce immediately that the bank would not take place. The next to speak all expressed agreement with Noailles: the public seemed opposed, the government should

[2]The account of the meeting is in BN Fr 6930, p. 46–49.

continue on its course and pay the troops and the debt first.

The Regent concluded by saying that he had come to the meeting convinced that the bank should be founded, but was now persuaded by Noailles, and decided to announce publicly that the proposal had failed.

Heusch's memo received by Noailles (Fr 6929 34r).

Fr7799 a discussion of Law's memo "Quoique la monnaie soit..."

Fr7768 memoirs on the Bank, Law's responses. Do Harsin OC. 1-7 is just a summary of Law's proposal.

The approval in May 1716

How did it happen? What did Law do between October and May?

The Bank's capital was raised by an IPO: 1200 shares were offered at 5,000L each, payable partly in billets d'État at face value (which stood at a 30 to 35% market discount to their face value at the time) and the rest in cash.[3] Law himself bought a quarter of the shares (Law 1934, 3:245), and the king owned 380 shares (GA 1718:30).Moreover, only 1/4 of the purchase price was required immediately, the rest payable at some unspecified future date. Thus, it took only 920 to 970L in cash to initially buy a share. The Bank's assets consisted initially of 375,000L in cash and 1.125mL in billets d'État, the interest on which was used by the Bank as working capital (which only amounted to 45,000L per year). It seems that the remainder of the subscription price was ultimately paid by shareholders.[4]

[3]The share of billets in the purchase price was not specified by the letters patent creating the bank. Dutot ([1738] 1935, 2:135), Harsin (1928, 159), Murphy (1997, 158), and the *Oprechte Haarlemse Courant*, 1716, n. 27, state 75% billets and 25% cash; this was true of the initial down payment, but in June 1717 a general assembly resolved to call the remaining three quarters in billets d'Etat, then going at a 50 to 55% discount (AE, M&D 137, fol. 65–66). Thus, only 1/16 was paid in cash (see BN NAF 22245, fol. 293); the cash price paid by shareholders thus amounted to between 2600L and 2850L. Dutot (2000, 76) mistakenly states that it was all in billets.

[4]Harsin (1928, 159), Dutot ([1738] 1935, 2:135) and Murphy (1997, 158) say it was not, but the declaration of Dec. 4, 1718 which nationalized the Bank states (art. 2) that the 6mL in billets d'État had been invested in shares of the Company of the West, and the Bank's account of 1723 lists dividend payments on 12,000 such shares (Harsin 1928, 309). Hence the subscriptions must have been paid in full. According to a contemporary diary (Arsenal 3431, fol. 201), the

The Bank was structured similarly to a modern limited liability company. A general assembly was to be held twice a year with dividend distribution. Shareholders voted in proportion to their shareholdings, management was responsible to them, etc.

The Bank's main activities were to discount bills, sell foreign exchange, take deposits and manage current accounts (charging a fee of 0.025% on transfers between accounts and on cash payment orders), and issue notes payable in specific silver coins (écus) on demand to the bearer. It was not allowed to engage in trade or to borrow.

7.3 The Bank's operations (1716–18)

Fantet de Lagny in Arsenal mss. AE M&D 137, fol. 61–66, also 5-10. Ledran, AE M&D 139.

criticisms of the Bank's operations in Fr 7768.

The Bank notes

Getting the notes to circulate, and not return constantly to the Bank for redemption, was critical to the Bank's profitability. The Regent and several influential and wealthy backers seemed to have played a role in this, by depositing large sums at the very early stages; so the first note issues were made against deposits, not discounting, and the depositors were willing to hold the notes they received and not redeem them.

Antonetti (1978) points out that the Edict of May 1716 made illegal the use of privately issued bearer bills (*billets au porteur*), which were allowed again on Jan 21, 1721.

More importantly, various measures were taken by the government to enhance the attractiveness of the notes. A decree of Oct. 7, 1716 ordered that the various tax collectors redeem the bank notes into cash on demand. The

remaining half of the shareholders' capital was called in at the general assembly of June 1717 (confirmed by AE, M&D 137, fol. 65–66).

government was implicitly undertaking to accept these notes at face value from the tax collectors. This enrolled the vast network of hundreds of tax collectors and tax accountants throughout France into unpaid branches of the General Bank, and also made the notes close to legal tender for taxes. On April 10, 1717, a decree made the bank notes explicit legal tender in the payment of taxes by individuals. On Sept. 12, the government's tax accountants and cashiers were ordered to keep accounts and make receipts and payments in notes.

The notes, denominated in écus, provided protection against a particular type of monetary manipulation, namely devaluation of the silver coinage. It worked as follows.

The bank issued notes in denominations of 10 écus, 100 écus and 1,000 écus. The écu was the standard silver coin, roughly the size of a thaler or Spanish dollar. In 1718, 8 écus were minted out of a marc of standard silver, and the face value of each écu was 5L. A 100 écus note was therefore a claim to 100/8 marcs of coined silver, and had a legal tender value of 500L. The bank notes had the following promise written on it: "the Bank promises to pay on sight to the bearer 100 écus of the weight and fineness of this day" (see figure 25.1).

In other words, the bank notes were claims to a determinate number of coins of a determinate type. *Compare with contemporary banking practice abroad.*

On Law's role in the May 1718 reform: (Faure 1977, 142–43) and (Lévy 1980, 3:18).

When new silver écus were issued in June 1718 of lighter weight (10 to a marc) and higher face value (6L), the old écus were given a new legal tender value of 6L until August 1 and 0 afterward. The new mint price was set at 40 per marc. Hence, after demonetization, the old écu would fetch 5L at the mint. The holder of 100 écus had 500L in coins before May 1718, but suddenly found himself owning a pile of silver which was temporarily worth 600L, but would soon have no legal tender value. It would still retain value as bullion, and could be sold to the mint. The mint, with that pile of coins, would make 750L in new coins and return 500L legal tender to the owner: same number of units of account but one third less metal.

A decree soon clarified that, since the old écus were circulating at 6L like the new ones, the existing 100 écus notes of the Bank would be taken at 600L by tax collectors and at the royal mints ("les billets de la Banque seront pris en paiement et acquittés [...] sur le pied de 6 livres l'écu").[5] The holder of a 100 écus note, then, saw his holdings in units of account increased from 500L to 600L, and his note was legal tender for taxes at 600L, or convertible at the mints or the tax collectors' offices into 600L of the new legal tender containing as much silver as 80 old écus. He was thus clearly better off than the holder of coins, since he had 20% more units of account and only lost 20% in terms of metal. This essentially waived part of the seigniorage tax for all holders of notes, and was a subsidy, in the form of a tax credit.[6] It made the note an attractive way to hold money balances, given the recurrent monetary reforms.

7.4 The Bank's "nationalization" in December 1718

The result was that the Bank was able to issue a fairly large amount of notes, 40-50mL per year on average, while maintaining a reasonable specie reserve (about 50%); when the Bank was converted to a Royal Bank in December 1718, it had 39.5mL in circulation. The notes circulated at par and were trusted.

The Bank's total dividend payments (three half-yearly payments from 1716 to 1718) amounted to 615L (Murphy 1997, 158) a respectable 15% rate of return on the cash price of the initial shares, although not as high as one would expect given the note circulation. If it held 50% of assets in specie and the rest in bills yielding 4 to 6% (the discount rate it charged), the income should have been

[5]Arrêt du Conseil (hereafter AC) Jun. 1, 1718. The notes were taken at 600L in payment of taxes, and redeemed in silver at the same rate. No time limit was set in the decree. The notes issued after June 1718 were claims to 100 new écus, or 10 marcs of coined silver, and were also legal tender for 600L. But since the old notes and the new notes were claims to different quantities of metal, they were considered different.

[6]There was also a provision that allowed one to bring a marc of old écus and 16L in billets d'État, and receive 56L in new écus instead of only 40L; this allowed individuals to pay most of the seigniorage tax (16L out of 20L) in the form of billets d'État. In the event, the demonetization of the old écu was postponed to November 1, and in the meantime, on August 20 the mint's price for the old coins was raised to 6L, thus reducing the seigniorage tax to the same level as on note-holders, whose advantage was therefore short-lived.

Date	dividend	share price
22 Dec 1716	100	
22 Jun 1717	150	
20 Dec 1717	375	5150
? Jun 1718		
Total	615	

Table 7.1: Shareholder meetings of the General Bank, dividends, and share price. Sources: BA 3431, fol. 102, 104, 202, 204; GA 1718:3; AE M&D France 137, 66v.

about 1,000L per share annually. But the returns to shareholders included a sizeable capital gain. I have found only two market prices for the Bank's shares. One, in January 1718, had them slightly above par in specie (103% of face value, GA 1718:3): this represents almost 90% appreciation over the purchase price a year and a half before (assuming a share fully paid with 1/4 cash and 3/4 billets d'Etat at a 60% discount). The other quotation, from the last week of March 1718, is 20% below par in specie.[7]

The Bank's success was visible in other ways. It succeeded in lowering the commercial paper rate in Paris, because the Bank successfully discounted at rates from 4 to 6%. It provided valuable foreign exchange services to the government, and to private clients as well. By late 1718, the Regent was convinced that the Bank was a profitable enterprise, and accepted Law's suggestion, already made in May, to nationalize it.[8] The Regent, on behalf of the king, bought out all the existing shareholders in cash at the face value of the shares (5,000L).[9] The operation was made public by a declaration of Dec. 4, 1718. The Bank would henceforth be managed by Law on behalf of the king, and all profits turned over to the Royal Treasury.[10]

[7]From a price courant reproduced by Montyon in his manuscript history of the French public debt (Archives de l'Assistance publique, fonds Montyon, Fossoyeux 101, carton 22(1).

[8]The rumor that the shareholders would be bought out by the king was circulating in March 1718 (GA 1718:28).

[9]Law himself bought out the shareholders at par using "my own funds or my credit" (Law 1934, 3:246) and was later reimbursed by the Regent.

[10]Arsenal 4559, 277 (Thomas Fantet de Lagny): ". Il s'agissoit d'engager les actionnaires à se

For a shareholder who was bought out in December 1718 by the King, the rate of return on his investment over 2 1/2 years was an annualized 35%, a very good deal indeed. This nationalization had two consequences: it gave the king a functioning printing press for the first time,[11] and it shows the gains to be made by investing early in a company launched by Law.

7.5 The Banks that never were

Before moving on to the next stage of the System, it is worth spending a moment considering the banks that never were: not only Law's various early proposals, including the one made in late 1715 by rejected by the Regency Council, but also the proposal he made in 1723 in an attempt to return to France, and which has never been studied.

The Land Banks

The Turin proposal

The king of Sardinia's comment on Law's proposal (AE Correspondance Politique, Genève 33, fol. 166).

défaire de leurs actions en faveur du Roy contre lequel les porteurs de billets de la Banque ne pouvient avoir aucune action, nétant responsable qu'à Dieu seul, et voicy comment le Directeur s'y prit. Le divident de l'année 1716 et des six premiers mois de 1717 avoient été tres considérables suivant le compte qu'il rendit à sa fantaisie des prétendus profits dans les négociations surtout avec les étrangers, et dont il étoit seul chargé. lorsqu'il s'agit de rendre compte de ces mêmes profits pour les six derniers mois de 1717 il les tourna de façon que l'action qui avoit profit 50 écus de profit pour les six mois précédents n'en produisit pas deux pour les six derniers mois, cela fit tomber le prix des actions et se prévalant de cette conjoncture il en achetta et en fit acheter par des gens affidez un tres grand nombre. Le Roy ensuite offrit le remboursement qui fut libre dans le commencement et devint ensuite forcé. dès qu'il y eut une partie assez considérable des actionnaires qui avoient vendu, et la Banque générale se trouva ainsi transformée en Banque Royale, ce qui bien loin d'augmenter comme le directeur le prétendoit le crédit de cette Banque, n'étoit propre qu'à le faire tomber, ôtant, comme j'ay déjà dit, toute ressource de contrainte aux particuliers pour le payement de leurs billets de Banque."

[11] The earlier instruments issued in France with the name of "billets," such as the *billets de monnoye* and *billets d'État*, were interest-bearing bonds with no convertibility and no redemption date, rather than non-interest bearing demand notes.

The 1715 proposal

Inaccurately described in Murphy (1997).

The 1723 proposal, or Law's last chance

Law's last plan for a bank is known to us.[12]

Law had been staying in England since August 1721, and corresponding with the French government concerning the liquidation of his estate. In 1723 his exchanges turned again to policy. In May 1723 he sent two memoranda to the Regent. One (Law 1934, 3:196–235) was an apology of his System, by way of a comparison with the South Sea bubble. The other (Law 1934, 3:174–191) was forward-looking. Law told the Regent that restoring credit and increasing revenues in France were possible, but that the latter (in spite of France being much less taxed than Britain) was more difficult than the former. Law recommended restoring credit first, thereby stimulating the economy and improving tax revenues. A draft edict (Law 1934, 3:191–195) set out the main lines of his plan for a new bank.

The Regent was impressed by the project. After Dubois's death in August 1723, the Regent (as Law had advised him to do, Mann (1910)) became Prime Minister, and decided to submit Law's project to the Council.[13] The meeting was called for November 28, 1723. The the duc de Bourbon and Dodun, solicited the opinion of the Paris brothers, who strongly opposing the plan, and argued against it, but the council did not conclude and the Regent, who seemed to have made up his mind, adjourned to the following week. The next day, the Paris brothers learned that the Regent had been displeased by the opposition he had encountered and blamed them for it. Meanwhile Law was being advised by his friends to return to Paris without even waiting for

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[12]The story of Law's near-recall has been told in parts by Mann (1910), (Faure 1977, 599–604), and (Murphy 1997, 321–22). See also Harsin (Law 1934, lxiv–lxxiii).

[13]Paris La Montagne ascribes the project to an otherwise unknown Rolland and another party he does not name. (Marais 1863–68, 3:60), who became aware of the project three weeks later, names Noël Danycan de Landivisiau, a senior civil servant, as the leader of the plan, and Melon as intermediary with Law. The involvement of both is confirmed by the letter of the garde des sceaux accompanying a copy of the final draft sent to Melon on November 23 (Arsenal 3857, fol. 312).

the Regent's invitation (Murphy 1997, 322). All seemed set for a return of Law and the launch of another bank, when the Regent died, unexpectedly if unsurprisingly, of a massive stroke in the company of a lady on December 2. The duc de Bourbon brought the news to the king and immediately asked for the position of Prime Minister, which he obtained on the spot.

The draft of the edict is known to us, along with Melon's recommendations (Arsenal ms. 3857, fol. 313–20, 307–12; see (Harsin 1933, 64–68)!).

See also the project by Hoguer and Mesmes, G/7/727.

Chapter 8

The Company

Meanwhile, Law went to work setting up a trading company, the Company of the West (*Compagnie d'Occident*).

Evidence of Law's early plan and the objections raised by Saint-Simon (AE, M&D 225, fol. 137–138, 158–161; 1232).

AE M&D Ameriques, 1: important!

The next component of the System was further removed from anything one finds in Law's earlier writings, and would later overtake the bank in importance. In early 1717, a group of merchants and outfitters were making plans for a small company to develop the vast colony of Louisiana, which consisted in the whole watershed of the Mississippi river. The territory had been French for over forty years but no one had yet made a profit from it. Law took over the project with government approval and made it far more ambitious, creating the Company of the West (*Compagnie d'Occident*) in August 1717 (Giraud 1966, 3:3–27).

The creation of the company followed two well-tried models. One was the model for developing land in the New World: governments typically handed over the territory to a company (while retaining nominal sovereignty) and expected to profit from its private development through tax collection. Here, the Company was given a 25-year monopoly on trading with the colony as well as on the beaver fur trade in Canada. The other classic model was to convert government debt into equity of a government-instituted monopoly, potentially riskier but also more rewarding. The model had just been used for the bank, but the scale was now much larger: the bank had raised 6mLwhile the Company would raise 100mL, all of it payable in billets d'État. In fact, the offering began on September 14, 1717 but was not closed until July 16, 1718, after measures were taken up to speed up payment, notably by introducing a down-payment system (a subscriber paid 20% of the price to secure an option on a share, with the rest payable within five months, else he forfeited the down-payment).

For a holder of a billet d'État, subscribing to the IPO meant converting a 4% bond into a share in a Company whose main assets were the same bond and Louisiana. The government's debt was unchanged: indeed, the Company had an arrangement with the government to consolidate the billets d'État received during the subscription for perpetual annuities accruing from January 1717. There seemed to be only upside potential for the subscriber, and no benefit for the government. The idea of substituting the returns on Louisiana for the interest on the bonds (the key idea behind Law's System) was explicitly negated in the terms of the Company's charter, and thus not part of the original plan.

The Company's initial business was to develop Louisiana. This was a common arrangement by which European rulers had developed their colonies in the Americas and elsewhere: the rights to develop the colony were granted to a private entrepreneur or a company, who was given monopoly rights to ensure profitability. The ruler generally profited by receiving as payment from the entrepreneur, and eventually by increasing his tax base as the colony prospered. Also, since the early 17th century, it was thought that long-distance trade such as that with India and the Far-East could only be carried out by large companies with monopoly rights, on the model of the Dutch and English Indies Companies.

The colony of Louisiana consisted in the watershed of the Mississippi river, or 41% of the lower 48. It had been French for over forty years but no one had made much money from it, and by 1717 its population of colonists was about 500. The colony's previous proprietor returned it to the king in payment of taxes in 1716, but strongly suggested that its development be entrusted to a company with a financial structure similar to Law's Bank. Projects for a small-scale company were being drawn in early 1717 when Law took them over, made them far more ambitious and secured the government's approval in August 1717 (Giraud 1966, 3:3–27).

Explain how the Company entered in the government's general economic policy by taking billets d'Etat out of circulation; AN G/7/730, mémoire au duc de Noailles.

Louisiana was ceded to the Company as a fief in perpetuity;[1] moreover, the Company had a 25-year monopoly on trading with the colony,[2] as well as on the profitable beaver fur trade in Canada. The Company was allowed to raise a private army, to enter into treaties with the Native Americans, and to call on the government for military assistance against other European powers. At the expiration of the monopoly, it would retain ownership of the colony but it would have to sell any forts and military equipment to the king.

8.1 The IPO

As in the Bank's IPO shares were issued, this time wholly payable in billets d'État. The IPO began on September 14, 1717 and 29mL had been subscribed within two weeks, but of that amount 13.3mL were bought by Law himself (Murphy 1997, 171).[3] After that, subscriptions were very slow, and dragged into 1718. The total number of shares was set in December 1717 at 100mL in face value. In June 1718 measures were taken up to speed up payment, notably by introducing a down-payment system (a subscriber paid 20% of the price to secure an option on a share, with the rest payable within five months, else he forfeited the down-payment). The *Gazette d'Amsterdam* (GA 1718:60) reported that all shares had been committed by July 16, but the subscription did not formally close until all shares were paid in, on Dec 31, 1718; of the 100mL sold, 40% was owned by the King, using spare billets d'État that had been printed but not spent.

[1]The company was technically the vassal of the king for Louisiana, and its only obligation was homage to the king and a fee of 30 marcs of gold (7.3kg) at the beginning of each new reign.

[2]The monopoly was extended to 50 years in August 1719 and became perpetual in July 1720, but was rescinded in 1730 when the Company returned the colony to the king.

[3]This amounts to 26,600 shares. However, in 1724, Law stated that his initial stake amounted to 12,000 shares and was later increased to 20,000, or 10% of the IPO (Law 1934, 3:246); he may have been speculating, or else buying for other parties.

8.2 The Company's commercial activities

Giraud and Haudrère. Discuss the choice of the directors, which included many individuals with extensive commercial experience.

Law's company was not a shell. Even as the subscriptions dribbled in, Law took over the assets of Louisiana's previous owner, including one ship. He hired competent and knowledgeable people as directors and they proceeded to purchase, lease and build new ships, so that by December 1718 the company had a dozen ships at its disposal and had already made several voyages to Louisiana (Giraud 1966).

8.3 The Company's resources

For a holder of a billet d'État, subscribing to the IPO meant converting a 4% bond into a share in a Company whose main assets were the same bond and Louisiana. From the point of view of the government, the debt was still the same, and it had given away an existing asset that, to be sure, had proven so far about worthless. There seemed to be only upside potential for the subscriber, and it is a little hard to see why the government went along, unless the idea (explicitly negated in the terms of the Company's charter) was ultimately to substitute the returns on Louisiana for the interest on the bonds. This would be the idea behind the System, but it was not officially the initial idea behind the Company.

Consistent with the notion that the underlying debt remained intact and merely changed hands, the Company had an arrangement with the government to exchange the billets d'État it received during the subscription for perpetual annuity contracts between itself and the King, with interest accruing from January 1717. These annuities would provide a working capital of 4mL per year. The Company's first dividend was not payable until July 1718. Thus the 4mL was available to the Company for about 18 months before a payment was due to the shareholders.

In practice, the subscription was slow, and the first annuity contract was not signed until February 1718. Furthermore, the tax on whose income the annuities were assigned was a sort of stamp tax (*contrôle des actes*), which was farmed out; but the farm's revenue of 2mL per year was already encumbered with other obligations. The only payment from that farm in 1717 was 250,000L, on direct order of the Regent. In 1718, The regent added the tobacco farm and the postal service farm as guarantees for the annuities due to the Company for 1mL each, and the tobacco farmers lent 1mL to pay for the interest of the year 1717 on behalf of the stamp tax farm. Nevertheless, the prospects for 1718 were uncertain. Should the subscription be filled, the Company would expect to receive in 1718 4mL for the previous year and 4mL for the current year, when the three farms together were yielding at most 6mL per year (Giraud 1966, 3:39, 44–48; BN Joly de Fleury 566, fol. 254-61). This financial uncertainty probably accounts for the slow take-up of the IPO.

The Company nevertheless immediately began its activities. As Giraud (1966) documents, it inherited some assets from the previous owner of the Louisiana concession, including one ship. Law hired competent and knowledgeable people as directors and they proceeded to purchase, lease and build new ships, so that by December 1718 it had a dozen ships at its disposal and had already made several voyages to Louisiana.

The subscription dragged on for so long partly because the company's claim on the government, the interest on the 4% bonds, was assigned on a tax farm that was already encumbered with other liens. Other state revenues were later assigned as surety for the interest, including the tobacco farm revenues. In July 1718, the company proposed to take over the tobacco farm directly. The current annual lease price was 4mL, exactly the sum that the government would owe the company as interest on the subscribers' bonds. The lease price would cancel out the interest payment, and the company would, as any tax farmer, take on the risky part of the tobacco monopoly's yield. Law believed that he could run the monopoly better, expecting to generate 6 to 8mL per year (a reasonable expectation, as it turned out). And, by running the farm himself, he was sure of being paid his interest. This operation would provide the template for the whole System.

8.4 Mergers and acquisitions

From its creation, Law's Company grew by a series of mergers and acquisitions, and extended its activities from trade to tax collection.

Tobacco monopoly

On Aug. 1, 1718: the Company purchased the right to run the tobacco monopoly for 4.02mL per year.

The difficulties that the Company encountered in getting the King to pay interest on his debt explain the first takeover, that of the tobacco farm. Already in early 1718, the farmers had lent the king funds to pay the overdue interest for the previous year. Law proposed to take over the tobacco lease for 4.02mL, so as to almost exactly cancel the 4mL annual interest payment owed by the king. Law believed that he could run the monopoly better, expecting to generate 6 to 8mL per year. And, by running the farm himself, he was sure of being paid his interest. The same logic would be applied to the successive purchases of tax farms.

Compagnie du Sénégal

On Dec. 4, 1718, it bought the Company of the Senegal for 1.48mL cash. The nominal price of 1.6mL was paid 200,000L in billets d'Etat and the rest in cash, price was paid over the course of one year (AN, M1026, dossier Sénégal, n. 5).

compagnie des Indes

On May 1719, the Company bought the Company of the Indies and the Company of China for its net worth (to be assessed; it turned out to be 1.5mL, Haudrère 1989, 102).

XXX acquisition of the Indies, J de F 13778 79-94 on resistances of the Parlement.

Compagnie d'Afrique

On June 4, 1719 (A3725), it received the Company of Africa's privilege on trade with North Africa.[4] The price was 68,000L plus the value of assets (which turned out to be 150,000L, Haudrère 1989, 129).

The mints

On Jul. 25, 1719 (A3940), it purchased the right to run the royal mints. The company paid a lump sum of 50mL to run the mints for nine years. (The sum was never paid in cash, instead the Company retired an equivalent amount of government bonds.)

The same day, the Bank was authorized to open branch offices in all cities of France having a mint, with the exception of Lyon.[5]

The Fermes générales

On Aug. 27, 1719 (A4079, published on the 28 Buvat 1865, 1:423), it bought the right to run the *Fermes Générales* (General Farms), which collected most of the excise taxes in France and about 30% of government revenues. The lease was to run for 9 years, and be worth 52mL per year (instead of 48.5mL previously). The same day, its charter and privileges were extended for 50 years.

See NAF2560 fol 25-27 on the circumstances. Also Paris la Montagne's Discours.

The Receveurs généraux

On Oct. 12, 1719 (A4258), it bought out the officers in charge of collecting all direct taxes (recettes générales, about 55% of revenues).

The Banque royale

Feb. 22, 1720: it took over the Royal Bank.

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[4]BN NAF 2564 p. 66.

[5]The cities were Rouen, Caen, Tours, Poitiers, La Rochelle, Limoges, Bordeaux, Bayonne, Toulouse, Montpellier, Riom, Dijon, Perpignan, Orléans, Reims, Nantes, troyes, Amiens, Bourges, Grenoble, Metz, Strasbourg, Besançon, Lille, Rennes, Aix, and Pau Clairand (1996).

Compagnie de Saint-Domingue

Sept. 1720: it bought out the Company of Santo Domingo and received the monopoly on the slave trade in Guinea.

8.5 Financing the expansion

The Company purchased the tobacco farm with its billets d'État, but the later acquisitions were financed by successive issues of shares, and by loans from the Bank. Every time, the shares were payable in monthly installments. The successive offered prices were increasingly high, although each new share had equal standing with the older shares, and was in particular entitled to the same dividend.

Here is the list of successive share issues of the Company from its inception to the end of 1719:

1. June 1717-Dec 1718 (IPO): 200,000 shares at 500L each, payable in government bonds (billets d'État) at face value

2. June 1719: 50,000 at 550L each in cash, 50L down and the rest payable in 20 monthly installments

3. July 1719: 50,000 at 1,000L each in cash, payable in 20 monthly installments

4. Sep–Oct 1719: 300,000 at 5,000L each in cash, payable in 10 monthly installments (the last 9 changed to 3 quarterly payments)

Mothers and Daughters

The second and third issues, in June and July 1719, took the form of a rights offering. A subscriber to the June issue had to own four original shares, which came to be known as the "mothers", as opposed to the July shares known as "daughters." Likewise, a subscriber to the July issue had to own four mothers and one daughter to purchase one "granddaughter." This requirement helped turn the secondary market in the older shares into a frenzy.

Law also demonstrated the profits to be made in a bull market by introducing Parisians to options, buying call options on shares of the Company in March–April 1719, and cashing in after the merger with the Indies Company had helped boost the price of his Company (GA May 1718 n. 43).

The Soumissions (September-October 1719

After making a down-payment, a subscriber received a certificate that entitled him to a share upon full payment of all the installments. By missing an installment he forfeited his share, and (in some cases) all previous payments made. This feature, noted by Cochrane (2001), made the certificates into options on shares issued by the company, or warrants, with a strike price paid over time (when the payments were refundable, the option was a standard European one).

This feature also characterized the fourth issue, generally called "soumissions."

Stock and warrants

The fact that the second, third and fourth issues were warrants rather than shares has been neglected by the literature. It has important consequences. One is that the price of the warrants cannot be used as substitute for the price of the shares, as has been done by Faure (1977) and Murphy (1997). Typically, these authors have taken the price of the warrants and added the remaining payments due to derive a price of the share. But there is a difference between the two, reflecting the option value intrinsic in the warrants.

Figure 8.1 shows the price of shares in the Company. The prices plotted here differ from what is found in the literature, partly because of new data, partly because I correct for mistakes in the known data (See Part III for details).

It appears that the successive share issues were offered at close to market prices.

Figure 8.2 shows the prices of the second, third and fourth issues, plotted

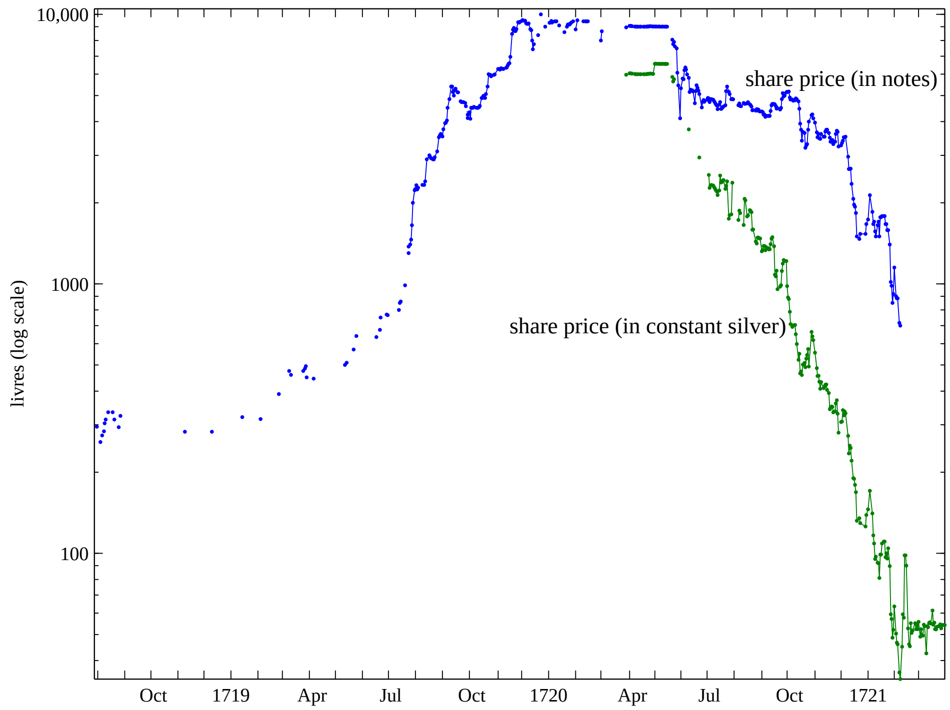


Figure 8.1: Prices of shares in the *Compagnie des Indes.* From June 1720 to Feb. 1721, the series is also shown converted into silver coin at 60L/marc. Source: see Appendix.

against the price of the underlying share, that is, of the first issue. The pay-off from the options is also plotted: since they had different strike prices, the 45-degree lines do not coincide.[6] As the Figure shows, the price of the options tended to coincide with the pay-off as the share price rose, particularly for the first two issues. The pattern is less clear for the last and largest issue, perhaps due to changing beliefs about the future behavior of the share price. The option feature of the certificates proved crucial in late 1719, as I will show.

[6]The successive strike prices are 500L for the second issue or daughters, 1000L for the third issue or granddaughters, 4500L for the soumissions before the first payment was due in January 1720, and 3000L after January. Interpreting the prices recorded in the contemporary sources is difficult; see Part III for the details.

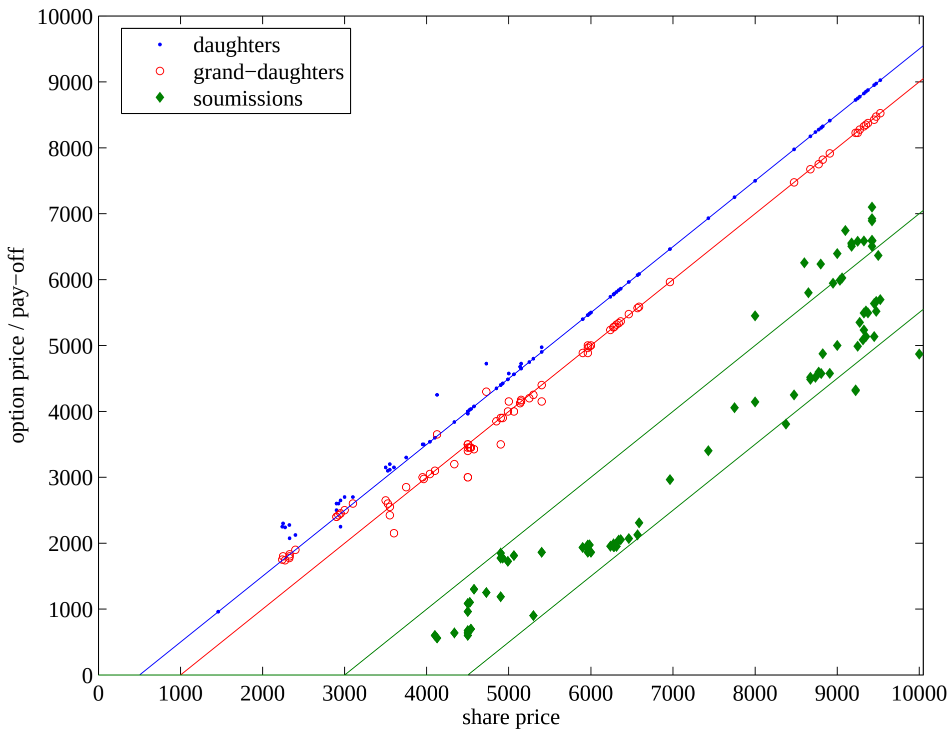


Figure 8.2: Prices of share issues (daughters, granddaughters, and soumissions), construed as options and plotted against the price of the underlying share. The straight lines show the pay-off of each option. Source: Appendix.

Loans from the Bank

The billets d'État received with the first issue (100mL at face value, bearing 4%) were supposed to provide 4mL in cash-flow. But they were used to buy the tobacco monopoly in August 1718. The other source of financing for the Company's acquisitions was note issues by the Bank, which was managed by the same people (and eventually merged into the Company in February 1720). In December 1718, the General Bank's note issue had stood at 40mL; by July 1719, the Royal Bank's issue stood at 400mL, and reached 1bnL in January 1720. It appears that the Bank simply lent notes to the Company in exchange for IOUs (*récépissés*) signed by the treasurer of the Company (see Harsin 1928, 310).

8.6 Speculation

Chapter 9

The Apex

Law's System reached its apex, and the price of the Company's share peaked, at the beginning of 1720. Two main elements crowned the system. The first was a virtual takeover of the French government, by which the Company substituted its liabilities (shares) for the whole national debt. The second was the substitution of the Company's other liabilities (notes) for the metallic currency. At the end of the operation, the Company, owned by the former creditors of the State, collected all taxes, owned or managed most overseas colonies, monopolized all overseas trade, and freely issued fiat money which was sole legal tender. Its CEO also became minister of finance on January 5, 1720.

9.1 Law's rise to power

His role (if any) in the fall of Noailles. D'Argenson becomes de facto finance minister, Law's growing influence.

Relations with Noailles

Law managed to arrange weekly conversations with Saint-Simon, not to coach him in financial matters but to gain his confidence, knowing him to be a close confident of the Regent. He was experiencing at the time increasing difficulties with Noailles. The younger d'Argenson reported in November 1716 that they were "brouillés" (Barthélemy 1883, 1:94). Another fall-out was much more widely reported. It occurred in October 1717, on the occasion of an edict [not clear what that would be] (AS Genova, Letteri Ministri, Francia, 2216, 18 Oct 1717 [EJH]). The newsletters reported that the two reconciled, on orders of the Regent, but there were doubts about how long this would last (Gazette de la

Régence; check other sources).

The monetary reform of 1718

Struggle with Parlement (June-August 1718)

History of the Parlement in Assemblée nationale mss. Response of the Regent (AE M&D 1232, fol. 86-88). The debates over the edict of May; resistance of Parlement.

The end of the polysynodie (late September 1718): Law's role (AE M&D 1232 fol. 165).

9.2 The War with Spain

The unfinished business of Utrecht

France and Spain were at loggerheads in that period, and the king of Spain, as next of kin, had some claims to the exercise of the Regency. And, should the young child die unexpectedly, the king of Spain was ready to press his claims to the throne against the duke of Orléans, the solemn renunciations of 1713 notwithstanding. In 1718, as tensions between France and Spain mounted, the Spanish ambassador in Paris drew plans to call the French Estates General in the name of the king of Spain and overthrow the Regency of the duke of Orléans. The plot was discovered, the ambassador expelled, and war declared on Spain a few weeks later in January 1719. Another minor plot by disaffected Breton noblemen was severely repressed.

9.3 Conversion of the national debt

The conversion of government debt into liabilities of the Company, which was decided jointly with the takeover of the Fermes Générales, began on Aug. 27, 1719.

How the decision was made (account by the duc d'Antin, BN NAF 23934, fol. 135–139; by Desmarets, AE M&D France 137, fol. 32–33).

Recall Law's earlier proposal to monetize the debt, in Faure (1977, 171).

Formally, the conversion took place as follows. The Company offered the government a perpetual loan of 1200mL (raised on Sept. 17 and Oct. 10 to 1600mL) at 3%.[1] Between the government and the Company, the loan took the form of a perpetual annuity at 3% owed by the king to the Company, assigned on the revenues of the General Farms. The annual 36mL payment (raised to 48mL) would in practice be deducted from the annual lease payment of 52mL that the Company owed for collecting the taxes of the General Farms.

	capital	interest
reimbursements ordered Aug 31 1719:		
rentes on the Hôtel de Ville	961,731,525	38,469,261
offices (*charges*) eliminated*	254,377,341	16,958,490
notes of the *caisse commune*	33,730,409	1,349,216
billets de l'Etat	250,000,000	10,000,000
actions of the Fermes générales†	[100,000,000]	—
total	1,499,839,275	66,776,967
other reimbursements ordered to Jul 1720:		
other rentes	2,933,258	117,330
augmentations de gages	200,000,000	11,939,366
unpaid arrears (interest-bearing)	36,427,796	1,633,000
unpaid arrears (non interest-bearing)	237,919,732	9,516,790**
total	1,977,120,061	89,983,453

Table 9.1: Reimbursement of debts from 1715 to 1720. Notes: * only 160mL were liquidated by Sep. 1, 1720. †: these amounts are probably already included in the total of rentes. **: assuming a 4% rate of interest. Source: État géneral des dettes (1720).

The government was to use the 1600mL to buy out the funded government debt (that is, the existing stock of perpetual annuities) and miscellaneous other

[1] Of this sum, 100mL corresponded to the Company's original asset, the billets d'État, on which it agreed to reduce the interest from 4% to 3% (AC of Sept. 17). This 3mL annuity remained as the Company's main asset after the collapse of the System, and it used it in 1723 to buy the tobacco monopoly in perpetuity.

debts, listed in table 9.1.[2] This buy-out was compulsory, but perfectly legal. Perpetual annuities and offices, by their legal nature, included a call option: the creditor could never demand repayment of the capital, but the debtor could reimburse at any time.[3] Bondholders would receive vouchers or drafts from the Royal Treasury on the Company in the amount of their holdings, payable by the Company's treasurer in specie or bank notes at the bondholder's option.

How did the company finance this gigantic loan? It did not have on hand such a vast amount of cash, greater than the money stock. To raise the funds, it was initially authorized to borrow the same amount (1200mL) from the public by selling 3% bonds. But at some point the Company changed its financing strategy and turned to equity. On August 26, before the repayment of the debt was announced, the Company's share stood at 3600L. By September 11, it had reached an all-time high of 5400L. That day, the Company asked the government permission to raise 500mL by selling shares at 5000L in cash. The success of the share issue led to two other share issues of the same size and at the same price on September 26 and on October 2, thus bringing the total sum raised through equity issue to 1500mL and covering the Company's loan to the king. Moreover, shares ceased to be sold for cash; instead, only the vouchers issued by the Treasury to reimbursed bondholders and other government bearer debt were accepted. In the end, the Company never issued the 3% bonds.

The wise plan and the made plan

There is some debate over what was offered to the public initially, a debate that matters for the interpretation of Law's intentions. The text of the AC of Aug. 27 authorized the company to sell either *actions rentières* to the bearer or perpetual annuity contracts at 3%. The AC of Aug. 31, announcing the reimbursement of the public debt, speaks of *actions* and *actions rentières* equivalently. Faure (1977)

[2]The debts listed in the AC of Aug. 27 include: all perpetual annuities; the shares in the General Farms company, which were originally issued in exchange for perpetual annuities; the *billets de la caisse commune*, short-term notes bearing 4% issued by the Receveurs généraux, the billets d'État, and all offices and "charges" which had been abolished since 1711 or would be abolished, and whose reimbursement was not yet funded.

[3]The king's debt to the Company created by the operation, as well as the bonds to be issued by the Company to raise funds, could not be called for at least 25 years.

has read both *actions* and *actions rentières* to mean annuity-like bearer securities, or bonds, emphasizing the *rentière* aspect, and argued that the share issues of September and October were not part of the original plan. For him, the Aug. 27–31 decrees represent a conversion of government bonds into Company bonds at a lower interest (a "wise" plan), while the September share issues represent a radical shift to a "mad" plan. Murphy (1997, 200) emphasizes the *action* aspect and reads both terms to mean shares; hence, for Murphy, there is no change in policy, just imprecise wording.

I follow Faure's interpretation for the following reasons. First, the terms of the AC of Aug. 27 clearly allow the company to "borrow," not issue shares (art. 4) and extend its privileges for the benefit of its shareholders and "creditors" (art. 7). At that date, the Company had not issued any bonds, and had no creditors: the creditors can only be the prospective purchasers of the actions rentières.

Second, article 12 of the AC of Aug. 31 prohibits the Company from amortizing the *actions rentières* for 25 years, a clause that makes sense for bonds but not for shares.

Finally, the Company later did issue *actions rentières* on Feb. 23, 1720: these were bearer bonds paying a fixed interest but carrying no voting rights (see the Appendix for details). There is no reason to think that the same term could mean shares in August 1719 and bonds in February 1720. The ambiguity stems from the use of the term *action* for a bond; the choice of words may be due to the fact that bearer bonds were unknown at the time, and needed to be distinguished from ordinary annuity contracts. In later accounts, equity shares are termed more precisely "actions intéressées" (e.g., AN V/7/235).

See also NAF2560 fol. 41 on the public's refusal of the company's bonds in Sept 1719.

Debt for equity swap

In other words, since government bonds were accepted in payment of the shares, the operation was simply a gigantic swap of government bonds, bearing on average 4.5%, for Company equity.[4] The company's profits came from the 3% interest it was owed by the government, plus any profits on its commercial and tax-farming activities.

The end result of the process was that the company collected about 90% of taxes in France, passed on a fixed nominal amount to the government, and distributed the rest as dividends to its shareholders. Figure 9.2 illustrates the System. Prior to the System, taxes τ were collected by various tax collectors and a fixed sum $\bar{\tau}$ was passed on to the State. The State was in turn creditor for an annual payment of roughly 90mL, which I label as "constant" between quotation marks because of the government's unreliability; what is left is spent on government purchases g. In the System, the Company has consolidated all tax collection, and has also inserted itself between the State and its creditors. The Company now owes a variable amount no less than 48mL to its shareholders, and the State has more to spend on g.

This doubling of the Company's equity did affect the price of the original shares. From their peak of 5400L on September 11, it fell to 4100L by October 3. On that day, the Company announced it was willing to buy back any its shares at the price of 4500L. The market responded immediately and the price rose above 4500L within two days, and remained clear above that floor for the rest of the year. Dutot (2000, 168) reports that the Company did not actually purchase any shares under that program. The AC of Oct. 12, 1719 also denied rumors that further issues were planned, and promised not to issue more shares.

9.4 Money: paper competes with metal

Over the same period of time, the Royal Bank continued to be managed by Law on behalf of the Treasury. Little is known about its management during this period, until it was outright merged with the Company in February 1720. It is likely that the Bank ceased to be a classic private bank and just became a

[4] The debt-for-equity swap has been noted by Hoffman et al. (2000, 83–84), although they date its inception to March 1720, when the swap actually ended.

tool in the hands of Law. Under what conditions did it issue notes is not clear: I suspect that it was freely lending to the Company.[5]

The notes issued by the Royal Bank became increasingly prominent, and quickly changed from being the liabilities of a private bank, claims denominated in fixed amounts of silver, to the status of sole legal tender, disconnected from any standard. This process was entirely consistent with Law's stated belief that metallic money was inferior and wasteful, and would better be replaced by paper money or by a highly liquid, interest-bearing security.

Denomination

A first step was taken on Jan 5, 1719, when new types of notes were issued, which were not denominated in specific coins, but rather in units of account, in sizes of 10L, 100L and 1,000L.[6] The smallest notes of the General Bank had been 60L; the new 10L notes were in direct competition with silver coinage. The note stated: "The Bank promises to pay on demand to the bearer 100 livres tournois in silver coins" without saying how many coins. (See figure 25.2). Then, in April 1719, a decree explained that the new issue of écu-denominated notes had not been met by any demand, and that older écu-denominated notes were increasingly turned in to be converted into the new livre-denominated notes. It was therefore decided to abandon écu-based notes altogether and order the conversion of the remaining ones into livres-based notes. The Bank's liabilities were therefore only denominated in units of account, although still payable on demand in silver.

As we have seen, monetary reforms in which the face value of coins was increased benefited debtors who had coins. The holder of a note denominated in coins (as were the notes before 1719) benefited to the same extent. With notes denominated in units of account, the benefit disappeared. But in the case of a monetary reform *decreasing* the value of coins, the holder of a note was protected against the loss in legal tender value. This was made clear by a decree of April 22, 1719 which stated that livres-denominated coins were not

[5] The bank's account drawn up in 1723 has an item of 1,857,588,347L "paid to the cashier of the Indies Company"! (Harsin 1928, 310).

[6] Notes of 10,000L were authorized on Sept. 13, 1719.

subject to changes in value in the case of a lowering of the value of coins. As if by coincidence, two weeks later a decrease in the value of gold coins was announced, from 36L to 35L; it was followed by further decreases from July to December, down to 32L. The silver coin was also decreased from 6L to 5.8L, then 5.6L, over the same period. At the same time, the king's tax collectors were advised that, in case of currency alteration, they would be held responsible for the capital loss on their specie holdings to the Treasury (a departure from usual practice).

Legal tender

The legal tender status of notes changed as well.

- On Dec. 27 , 1718, transactions larger than 600L were to be made only in gold, or in bank notes in cities which had branch offices of the Bank.[7] The legal tender of silver coins was thus limited to 600L. Notes tendered in payment could not be refused, except if the local branch was not making payments in specie.

- From Jul. 25, 1719, creditors in towns with branch offices[8] could refuse gold and silver payments, and demand payment in notes instead. Gold and silver were thus losing their legal tender status.

- From Dec. 1, 1719, the Company itself would deal exclusively in notes, could demand payment in notes (in particular for all the taxes it was collecting) , and would only pay out notes. Its payments to the king would also be made in notes.

- On Dec. 21, 1719 it was announced that no payments could be made in silver for more than 10L and in gold for more than 300L, effective immediately in Paris, from March 1 in cities with branch offices of the Bank, from April 1 everywhere else. All payments to the government

[7]Those were Paris, Lyon, La Rochelle, Tours, Orléans, Amiens.

[8]At the same time, branch offices were established in all cities in which a mint was located, about twenty.

made in cash were subject to a 5% surcharge. Bills of foreign exchange were made payable in notes.

- On Jan. 22, 1720 the seigniorage tax was set to 0%.
- On Jan. 28, 1720 notes were given legal tender throughout France, and it was announced that the seigniorage rate would go up to 10% (this increase was repeatedly postponed and then cancelled on Feb. 25).
- On Feb. 27, 1720 it was made illegal for anyone to own more than 500L in gold or silver coins, and no payment above 100L could be made other than in notes.
- On Apr. 1, 1720 all gold and silver clauses in contracts were voided.

The growth of the outstanding paper money stock is shown in table 9.2. Contemporary estimates of the gold and silver specie stock in the late 17th-early 18th century are around 1200mL.[9] Interestingly, the decree of Dec. 1, 1719 argues that the authorized issues of 640mL would be sufficient for "circulation and all operations of commerce." Within three months, the amount was tripled.

9.5 Money: paper replaces metal

Note how the new coinage that Law planned to introduce had a certain theoretical purity. It was to consist of two identically sized coins, one in gold and one in silver. Both were to be minted with pure metal. The silver coin was to have a value of 1L, the gold coin was to be worth 15L, thus visibly expressing the gold-silver ratio. In the event, only the silver coin was ever minted, in Paris (the coin is called by numismatists the *livre de la Compagnie des Indes*).

[9] Dutot (2000, 5) estimates 600mL at 30.6L per marc in 1699, and 900–1000mL at 49.8 per marc in the 1730s; Forbonnais (1758, 4:98) estimates 500mL in 1683 at 26.75L per marc; Law (1934, 3:201) estimates 600mL at 28L per marc in September 1715. Converted in silver marcs, these estimates are in the 19–21m marcs range, which would give 1200mL at 60L per marc (the standard from May 1718 to March 1720). The AC of Feb. 27, 1720 states that there was currently about 1200mL in specie in France, based on minting records.

	notes issued less notes burned						value of estimated circulation		
	10,000L	1000L	100L	50L	10L	total	nominal	silver	
							(L)	(current L)	(60L / mc)
						(1)	(2)	(3)	(4)
30 Apr 1719	0.0	28.0	10.0	0.0	0.0	38.0			38.0
31 May 1719	0.0	96.0	13.0	0.0	0.9	109.9			109.9
31 Jul 1719	0.0	144.0	15.0	0.0	0.9	159.9			159.9
31 Aug 1719	0.0	334.4	45.0	0.0	1.2	380.6			380.6
30 Sep 1719	120.0	334.4	45.0	0.0	1.2	500.6			517.9
30 Nov 1719	240.0	334.4	45.0	0.0	1.2	620.6			642.0
31 Dec 1719	332.9	370.0	54.6	0.0	11.6	769.0			769.0
30 Jan 1720	358.6	379.9	57.2	0.0	14.4	810.1			810.1
29 Feb 1720	466.8	507.5	77.3	0.0	18.2	1069.7			1069.7
5 Mar 1720	458.6	530.9	82.2	0.0	18.2	1089.9			1089.9
31 Mar 1720	—	—	—	—	—	1261.5			841.0
30 Apr 1720	—	—	—	—	—	2054.0			1369.3
22 May 1720	—	—	—	—	—	2116.5			1539.3
31 May 1720	804.8	1158.5	239.4	0.0	32.5	2235.1			1625.5
30 Jun 1720	—	—	—	—	—	2359.0	2284.0	1633.1	1187.7
31 Jul 1720	—	—	—	—	—	2081.7	1801.7	990.9	495.5
31 Aug 1720	538.9	1065.3	341.5	0.0	61.2	2006.8	1466.8	878.2	439.1
30 Sep 1720	529.4	1001.9	341.4	52.9	76.1	2001.7	1335.0	394.4	262.9
10 Oct 1720	533.0	1009.0	342.2	73.6	80.7	2038.4	1308.4	258.5	172.3
31 Oct 1720	524.1	987.8	342.0	131.6	83.6	2069.0	1201.7	251.5	167.6
27 Nov 1720	521.6	979.7	341.1	134.9	91.7	2069.1	1025.3	126.4	84.3
8 Jan 1721	521.6	979.7	341.1	134.9	91.7	2069.1	685.3	59.2	47.4

Table 9.2: Outstanding stock of notes, by denomination, and estimated circulation (in mL). Column (1) sums the previous columns and consists of notes issued less notes burned. Column (2) adjusts for the fact that some notes had been retired but not burned. Column (3) converts into current silver livres at the market value of notes, while column (4) converts column (3) into constant silver livres of 1719, at 60L per marc of silver. Sources: see Appendix.

The difficult process of replacement

Correspondance des intendants. Also G/7/790.

continued

The complete elimination of gold and silver was announced on March 11. After May 1, it would be illegal for anyone but the heavily regulated goldsmiths to own gold in coin or bullion. Silver coin and bullion was also made illegal, from Jan. 1 1721, except in the form of the lower denominations of 1.5L and below. At the same time, a planned for revaluating the livre in terms of silver was announced, whereby the 1L coin was progressively lowered in value to 0.5L by January 1. All silver was to be carried to the mint, where it would be purchased with a 20% seigniorage rate. All gold was also to be sold to the mint, at a rapidly decreasing price, in exchange for notes.[10] The Company would be the only one using gold and silver for foreign trade: import of gold and silver was made illegal. Silver would remain as mere subsidiary coinage, which would not even be convertible into notes (decree of April 6), although notes remained convertible into silver, albeit subject, presumably, to the 500L restriction.

The creation of a final silver coin was not without analogies with the earlier monetary reforms. The Company had a particular interest in the high seigniorage rate, since it was also running the mints, since July 25, 1719. In the original contract, the Company promised to pay 50mL (from October 1719 to December 1720) in exchange for the profits of running the mints for nine years. The king pledged to not raise coins or reduce their fineness at any time during those nine years; and, should he lower the coins, he promised to lower the mint price at the same time (leaving intact the seigniorage rate, which had stood at 20% for silver and gold since October 1718). Both promises were to be broken repeatedly, two days later in fact concerning gold (Dutot 107), but most strikingly in January 1720 when seigniorage was set to 0. The March 1720 reform was a compensation for this lost income.

[10]Although official texts are not clear, it is likely that the mints, run by the Company, only paid out notes only since Dec. 1, 1719.

Date	MP	ME	Date	MP	ME			
1 Sep 1715	28	28	6 Mar 1720	80	80	1 Dec 1720	63	75
23 Dec 1715	32	40	1 Apr 1720	70	90	23 Aug 1723	68	69
1 Feb 1716	32	40	1 May 1720	65	82.5	4 Feb 1724	60.5	63
1 Jan 1717	31.5	40	29 May 1720	82.5	82.5	27 Mar 1724	49	50
3 Mar 1718	36	40	1 Jul 1720	75	75	22 Sep 1724	39.2	40
31 May 1718	40	60	16 Jul 1720	67.5	67.5	30 Sep 1724	40.7	41.5
1 Oct 1718	48	60	31 Jul 1720	120	120	1 Jan 1726	35.6	36.3
28 Sep 1719	46.4	58	1 Sep 1720	105	105	1 Feb 1726	34	41.5
8 Dec 1719	56	60	16 Sep 1720	90	90	26 May 1726	44	49.8
23 Jan 1720	60	60	1 Oct 1720	78	90	15 Jun 1726	46.9	49.8

Table 9.3: Mint prices and mint equivalents of the silver coinage, in livres per marc of silver 11/12 fine. Sources: original decrees at `http://www.ordonnances.org/`.

9.6 Money and Prices

There are two ways to measure the depreciation of the paper currency, denominated in units of account. One is against its direct monetary competitor, namely silver coin. The other is through a broad price index. For the latter, we have Hamilton's 1936 price index for Paris and Hamilton's 1936 indices for three southern cities: Bordeaux, Marseille and Toulouse. All series are based on commodities purchased by hospitals. The series shown in figure 9.4. For the former, we have foreign exchange data until September 1720, which can be converted into a price of paper livres for silver (ignoring many things like transaction costs). From June 1720 we have direct observations on the price of bank notes (by denomination) in Paris against coin, although one must keep in mind that "coin" means "current silver livres" whose silver content changed several times over the period. The result is shown in figure 9.3.

Several features are worth noting in figure 9.3. First is the coherence of the foreign-exchange based series (until September 1720) and the bank-note based series (from June 1720). In the period for which the two overlap, they track each other closely.[11] A second point is that, until October 1719, the foreign exchange

[11] The foreign-exchange series is originally in the form of English pence sterling per "écu de

series remains close to the mint price, that is, the silver import point.[12] By late January 1720, the foreign exchange series rises above the mint equivalent. But, as noted above, from January 1720 on, bills of exchange in London on Paris were actually claims to bank notes rather than silver coins, since they were payable in notes. The discrepancy thus measures indirectly the degree to which bank notes are depreciating with respect to silver. In this light, the devaluations of March 1720 (25%), April 1720 (11%), and July 1720 (44%) appear as attempts to bring the silver livre back into line with the paper livre.

Hamilton's commodity price index presents a slightly different picture when it is plotted against the parameters of the silver coinage (figure 9.4). Several points are worth noting.

The overall movement of the price series (units of account per goods) are broadly consistent with each other, and with the mint equivalent and mint price lines (units of account per silver). All series (the price indices on one hand, the mint price and equivalent on the other) are indexed to be 100 in 1725; they coincide in 1725 by construction, but they also track each other quite well from 1711, when Hamilton's series begin, to 1715, suggesting a constant silver price of goods.

The devaluations of 1716 and 1718 do not have much of an immediate impact on goods prices, but by late 1719 goods prices seem to have caught up with silver, southern France first and Paris rising very rapidly in late 1719 and early 1720 (+25% in January 1720 in Paris). During the critical year 1720, Paris and southern France behave differently. The Paris index continues to rise through 1720, but much more slowly, only 19% from January 1720 to the peak in August 1720. The index for southern France shows a lot more inflation: it

change," a fictitious unit corresponding to three livres (units of account). It is normalized so as to represent French livres per fixed quantity of silver, based on the official silver content of the English penny (62d per troy ounce of silver 92.5% fine). The bank-note series is originally in the form of livres of specie per 100L note. To plot the bank-note series on the same scale as the foreign-exchange series, the livres of specie are converted to their silver content as defined at each point in time by the laws.

[12] If it were much lower, it would mean that French livres were overvalued in London, and that it would be profitable to sell bills of exchange at the prevailing price in London and ship silver to Paris and have it minted and redeem the bill in Paris.

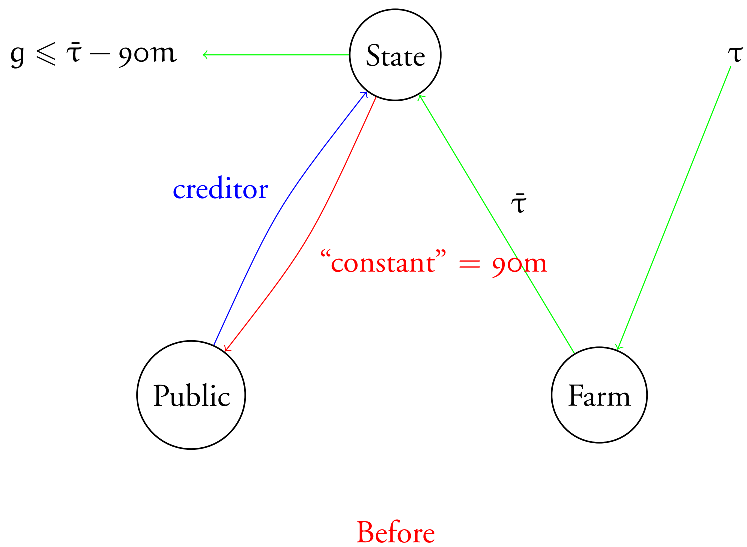
peaks about the same time (in July 1720), 55% higher than in January 1720.[13]

These are high rates of inflation, but over the same period of time, the quantity of money in circulation multiplied by a factor of 2.6 (table 9.2) and the price of foreign exchange has increased by 2 or more. This increase in paper money, which consisted overwhelmingly of large denominations, does not seem to show fully in overall prices. Also, the behavior of prices in Paris seems to differ from that of the provinces (Faure (1977) presents considerable but anecdotal evidence from throughout France of price increases, particularly in commodities markets, in the spring of 1720).

After the System, we can infer that the silver price of goods (the ratio of Hamilton's index to the mint price) remains relatively low until the revaluations of 1723–24.

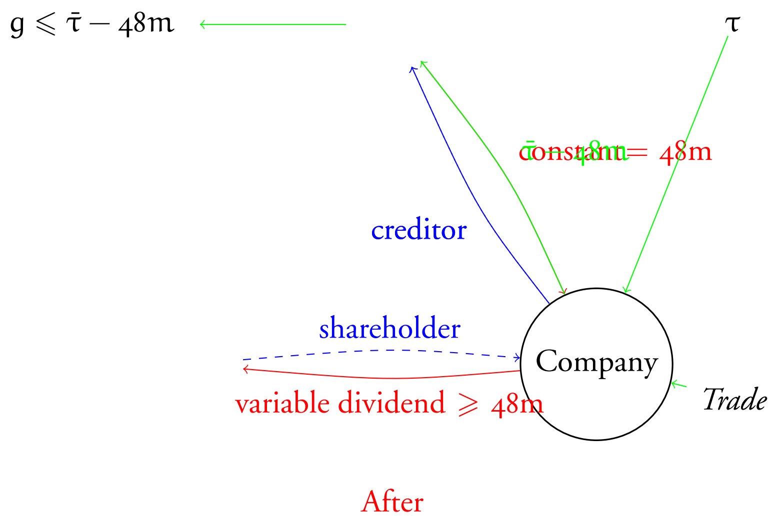
The two measures of the value of money (paper money against silver, and money against a commodity index) present different patterns. figure 9.4 is not reminiscent of fiat money inflations of later periods, but figure 9.3 is, and we do know that Law monitored the latter quite closely (Dutot 2000 uses foreign exchange throughout his book as an indicator of the state of affairs). It was no doubt a growing source of concern to him in the spring of 1720.

[13]The peak in July–August 1720 precedes the plague epidemic which broke out in Marseille on July 22 and lasted until November, leading to a quarantine of the city and the deaths of 100,000 people (Dupâquier 1988, 2:213).



Before

Figure 9.1: French public finances in 1718.



After

Figure 9.2: French public finances before and after the System.

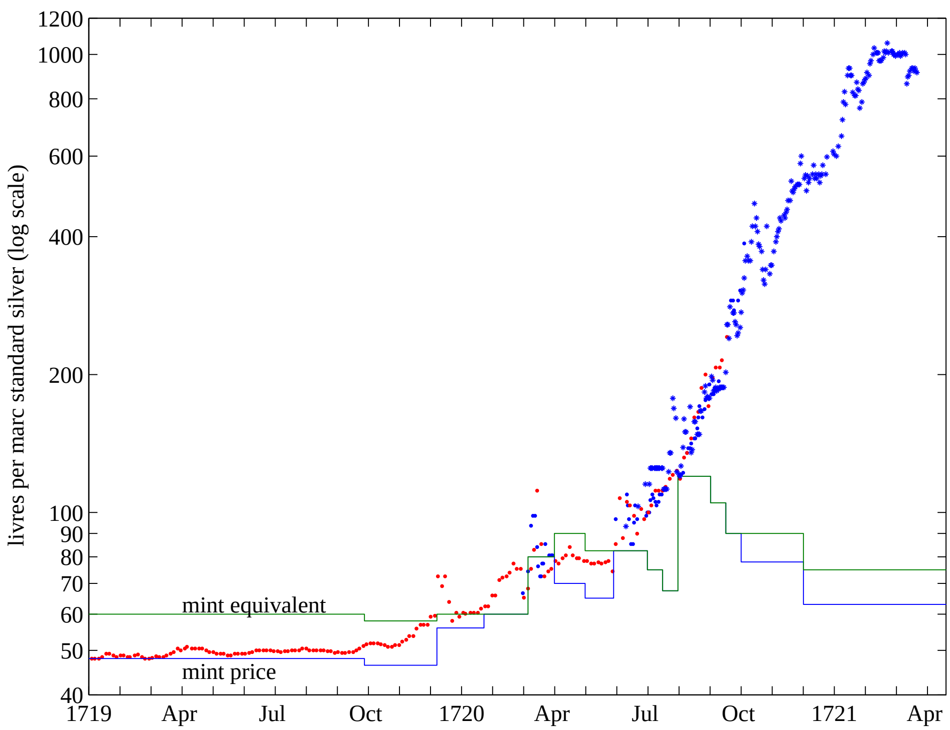


Figure 9.3: Indices of the bank-note price of a marc of standard silver. The dots are (transformations of) the price of French livres in foreign exchange markets, January 1719 to September 1720; the stars are based on the specie price of bank-notes, June 1720 to March 1721. The mint equivalents and mint prices for the French silver coinage are also shown. Source: *Course of the exchange* (ESFDB database), Appendix.

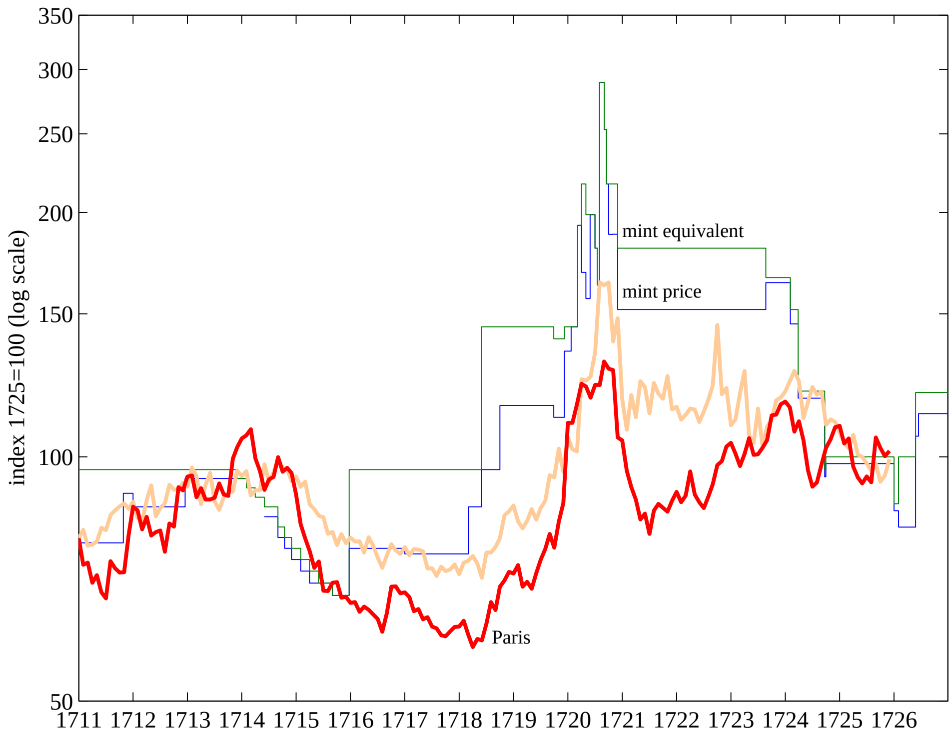


Figure 9.4: Commodity price index in Paris, monthly 1711–1726. The mint price and mint equivalent are also shown for reference. Source: Hamilton (1936).

Chapter 10

Collapse

10.1 Seeds of disaster (to May 1720)

It was a crucial aspect of Law's scheme that the share price remain high. As long as the PE ratio was higher than the comparable ratio on government bonds (22 according to table 9.1), the conversion of bonds into shares was worthwhile for the Company and the government. However, the call-option feature of the subscriptions meant that bondholders (who were obligated to accept repayment of the bonds but not necessarily in the form of shares) could back out if the price of shares fell too low for their liking and lead to the scheme's unravelling.

		Date	Shares:		PD	Date
Semester	Dividend	Announced	number	price	ratio	Paid
1718:I	10	Aug 1717	—	(175)	8.8	Jul 1718
1718:II	10		200,000			Jan 1719
1719:I	10	27 Mar 1719(?)	200,000	460	23	Jul-Dec 1719
1719:II	10		200,000			Jul-Dec 1719
1720:I	30	26 Jul 1719	250,000	1960	32.7	—
1720:I	100	29 Dec 1719	600,000	9413	47.0	Jan-May 1720
1720:II	180	20 Jun 1720	200,000	5216	14.5	Aug-Nov 1720
1721:I+II	0	24 Mar 1723	56,000	1600		
1722:I+II	100	24 Mar 1723	56,000	1600	16	Apr-Dec 1723
1723:I	75	17 Dec 1723	56,000	1330	8.9	Jan 1724

Table 10.1: Semi-annual dividends announced and/or paid by the Compagnie des Indes, and number and price of shares at the time of announcement (for August 1717, cash value of the offering price). Source: Appendix.

There is later evidence that the former bondholders were not all in a hurry to convert their bonds into shares (Lüthy 1959–1961, 1:320): on January 12 they were given a deadline of April 1 to receive their reimbursement, and on February 6 a new deadline of July 1 after which the interest on their bonds would be reduced to 2%. Since it appeared that some bondholders preferred to keep a fixed income, the Company was authorized to issue up to 500mL in 2% bonds (called, confusingly, *actions rentières* or "annuity shares") in denominations of 1000L and 10,000L, and bondholders were given the option to exchange their government bonds for either shares or company bonds.

Law used a variety of means to shore up the price of shares. By the fall of 1719, the Company was giving out low-interest loans against shares as collateral. We saw it intervening directly in the market in October, a first hint of the debt monetization that was to come. The share price doubled and peaked at 9525L on December 2, then started sliding again; this was attributed at the time to speculators facing their first due payment on the subscriptions of September 1719, and selling shares to meet it. The Company delayed the opening of its office to receive the payments on the subscription several times, and opened it on Dec. 11, when the price was 8805L. By December 15, the price had fallen to 7750L. It rose again to 9000L by December 28, perhaps through covert intervention of the Company. On Dec. 30, 1719, the Company formally opened a window where shares and subscriptions could be bought and sold for prices posted each day. The office functioned with some interruptions until the middle of February (Faure 1977, 340), during which time the Company bought 800mL worth of shares, or about 16% of its capitalization, with a corresponding addition to the money supply.[1]

Dealing with the growing money stock

Law now needed to deal with shares and notes in order to manage the growing money supply. Between late February and early March 1720, his policies were marked by inconsistencies and sudden reversals.

At first, Law tried to curb the growth in the money supply. On February

[1]Hautchamp (1743, 1:109). The stock consisted at the time of 300,000 original shares, which the Company was buying at 9425L, and 324,500 subscriptions, valued at 6600L: a total capitalization of 5.0bnL.

22, after a general assembly of shareholders, the Bank was formally merged with the Company, limits were placed on further issue of bank notes, and the Company was prohibited from lending to the King; in return, however, the Company bought back from the King his 100,000 shares at 9000L each, payable 1/3 during 1720 and the rest over the course of 10 years. Also, the price support policy was officially halted. The effect on prices was immediate: from the support price of 9425L the market price of shares fell to 8000L by March 1, while the subscriptions fell from 6600L to 5450L (Dutot 2000, 225).

Law quickly reversed course on the price of shares and, on March 5, opened another office for the buying and selling of shares at a fixed price of 9000L. At the same time, the outstanding subscriptions lost their option and were all converted into shares at a 2:3 ratio, while reimbursements of the public debt continued to be made, but in bank notes. From March to late May 1720, the company spent another 1319.5mL in notes to buy 28% of its stock, resulting in the increase in outstanding notes shown in table 9.2.[2]

The exchange rate between coin and note was also subject to reversals. On March 5, Law effectively devalued the metallic livre by 1/3, changing the face value of the recently issued silver coin from 1L to 1.5L. This was the first monetary manipulation since May 1718, and was accompanied by a pledge that "the bank note is a form of money that is not subject to any variation."

Then, within days, Law reversed course and set forth the plan for the full replacement of metal by paper described earlier. The plan included a gradual appreciation of the livre relative to silver, above and beyond its previous level, since the 1-livre piece was scheduled to be fall back from 1.5L to 0.5L by January 1721. Figure 9.3 suggests that the devaluation of March 5, 1720 was merely ratifying the fall in the market exchange rate of the French livre (which meant the Bank's notes) relative to other metal-based currencies. If so, this represented a powerful warning sign of inflation, which Law somehow expected to contain by his demonetization plan. Indeed, he expected to engineer a serious deflation.

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[2]AN, M1025, *premier recueil*, p. 27-28; another 297.7mL worth of shares were bought with other Company liabilities: bank account balances, life annuities and bonds.

The devaluation of May 21, 1720

Law presumably realized the process by which shares were being replaced by legal tender notes. On May 21, an arrêt was published that represented a major change in the System. The preamble, drafted by Law himself[3] recites the achievements of the System, but attributes to "ill-disposed individuals" attempts to undermine it, and presents the devaluation of March 5 as a means supporting the credit of the System by depreciating the coinage, and the plan of March 11 as a means of restoring the proper foreign exchange rates. Such measures, he wrote, would necessarily induce a deflation in the prices of all goods and assets, and consequently a similar deflation was necessary for the System's liabilities. Thus, abandoning the tenet of constancy of the paper money affirmed weeks earlier, Law devalued both the shares and the notes by roughly equal amounts, in monthly stages, from 9000L to 5000L for the shares, and the shares down to a half of their face value by December 1. To alleviate the burden on small noteholders, the notes remained legal tender at their original face value in payment of taxes for the rest of the year 1720.

The Bank started paying its notes on demand in specie and exchanging notes for shares at the new parity, but within days public outrage against the measures was growing; on May 27 the devaluation of May 21 was rescinded and the Bank stopped buying shares. On May 29 Law was fired and placed under house arrest while his fate was debated. A commission was formed to audit the Company and the Bank; in the meantime, the Bank closed its window, effectively ending the convertibility of the notes. The planned demonetization of March 11 was halted, and the freedom to hold and use specie returned.

The Regent ultimately decided to bring Law back, although formally not quite to the same position. Law recovered his positions at the Bank and at the Company, but not the contrôle général which was (at Law's suggestion) put in commission and entrusted to three persons; Law continued to have the right to attend the council.(Faure 1977, 453).[4]

[3]A draft in his own hand is in AN G/7/1628-1629.

[4]The commissioners, formally appointed on June 14, were Le Peletier des Forts, Gaumont, and Lefèvre d'Ormesson. Law was made on June 12 *secrétaire du Roi*, a relatively prestigious position without any duties (Favre-Lejeune 1986).

10.2 Saving the System (May–November 1720)

See NAF 2560 fol. 21 sq on the events.

Law never gave up hope, and from his recall on June 2, he tried to save the System. The primary goals were to reduce the quantity of notes in circulation and to save the Company (and Bank) from bankruptcy. To this end, a series of measures aimed to withdraw notes from circulation and convert them into other, mostly non-demand liabilities of the Bank or the government: (1) life or perpetual annuities, (2) bank accounts, and (3) a new subscription of Company shares. These three means were outlined in an Edict of July 1720 which reaffirmed and extended the Company's privileges. The bonds were expected to soak up 1000mL, the bank accounts 600mL, and the new shares 600mL. The thrust of the measures was to retire the large denomination notes (1,000 and 10,000L), which represented 88% of the total issued by late May.

Bonds and bank accounts

The Company had already started issuing bonds in February 1720, and it began an issue of life annuities in May 1720, which sold out by late June. These liabilities of the Company only amounted to 150mL. In June, the government put on sale traditional perpetual annuities at 2.5%, for a total face value of 1000mL; they could be bought with old bonds. At the same time the Company and the government cancelled most of the Company's loan (1433mL out of 1600mL). This was effectively reversing the conversion of the debt and renationalizing it. Former bondholders who still had their bonds or their liquidation receipts had priority to purchase the new bonds, which could otherwise be bought with notes. The notes retired were to be burned publicly.[5]

One second outlet for the notes is of interest. The "bank accounts" (*comptes en banque*) created on July 13 were proposed to Law by private bankers (according to du Hautchamp), and modelled on the bank accounts of the public banks of Amsterdam and Hamburg, which served to settle large transactions. Law

[5]In August 1720, the king created a further 8mL (later reduced to 6mL) in perpetual annuities at 2%, and 4mL in life annuities at 4%, with the explicit goal of exchanging them for large denomination notes.

gave his Bank's accounts a monopoly as means to settle all transactions greater than 500L, wholesale trade, bills of exchange, and they could only be purchased by the deposit of large denomination notes.

Law's plan to create a dual currency system in France, with coins having different legal tender values depending on their use; NAF 2560 fol. 18.

Both outlets, bonds and bank accounts, were slow to take notes out of circulation. By July 19, only 159mL of the government's perpetual annuities had been subscribed (Faure 1977, 471). As for bank accounts, within three weeks of the opening of the accounts, only 100mL of notes had been withdrawn in this manner; the final figure would be 209mL.

New share issues

The third way to retire notes was to convert them into shares. The Company had bought nearly 300,000 of its own shares (both full shares and soumissions) and decided to cancel these shares; the king graciously donated his 100,000 shares. In all, the number of outstanding shares had been reduced to 200,000 (AC June 3, 1720). The same day, a capital call of 3000L per share was announced. Those who made the payment would receive a dividend of 360L per share; those who didn't would only receive a fixed coupon of 200L. With 200,000 shares outstanding, this capital call could be expected to soak up 600mL in notes. It was clearly not successful, since on June 20 shareholders were authorized to pay in with shares instead of notes, each old share taken at a face value of 6000L: the operation simply amounted to a two-for-three reverse share split, except that the promised dividend increase (from 600L for the three old shares to 720L for the two new ones) was more difficult to justify in the absence of any cash receipts. Furthermore, with the renationalization of the debt, the Company's loan to the government was partially cancelled (1000mL in bonds were issued), and the corresponding interest of 30mL, a substantial fraction of the Company's income, owed by the king could not be counted on to support the promised dividends.

A second attempt at retiring notes with a new issue of shares was made on July 31 and August 14, again in the form of subscriptions: the price was

9000L, with 1000L down-payment in notes and the rest due over the course of six months. This appeared to have some success, and 70,000 subscriptions were sold. On September 15, however, the subscription scheme was altered: the subscriptions, on which only one payment had been made, were made convertible each into a tenth of share; this conversion was made mandatory on November 1.

The bank could redeem or buy notes directly in exchange for coin. It did not do much redeeming. The Bank's window, closed during the events of late May, reopened on June 12 but only to convert large denominations into small denominations, while some local officials in Paris converted small denominations into silver on a very limited basis. On July 9 the Bank it started to redeem small amounts of notes in coin, but the ensuing melees led to an indefinite suspension on July 17 (Faure 1977, 477–89). After the end of May, the Bank's notes were in effect inconvertible. There are indications, however, that the Bank bought notes on the open market, in other words at a discount over face value (Faure 1977, 501; see figure 10.2 for the market value of notes). Interestingly, Law had suggested to Louis XIV in July 1715 that he should buy back the government's heavily discounted debt on the open market, both to reduce the debt and shore up confidence (Law 1934, 2:??).

The note is abandoned

The bank notes were trading at a discount to face value since June 10 at least. The bank had ceased to redeem its notes when it was closed on May 29 to have its books inspected. Once the inspection over on June 12, however, it did not open its window again except to exchange large denominations into 10L notes. From mid-June to July 6, the *commissaires de quartier* of Paris redeemed these small notes into coin on a limited basis (30L per person) twice a week on market days; outside Paris, this was done through the mints.[6] Then, from July 8, the bank briefly resumed payments every other day (10L per person), until a serious commotion in the courtyard of the Bank on July 17 led to a near-riot and indefinite suspension of payments (Faure 1977, 477–89).

[6] See the example in Rouen, Archives Seine-Maritime, C1047, n. 204 [EJH]).

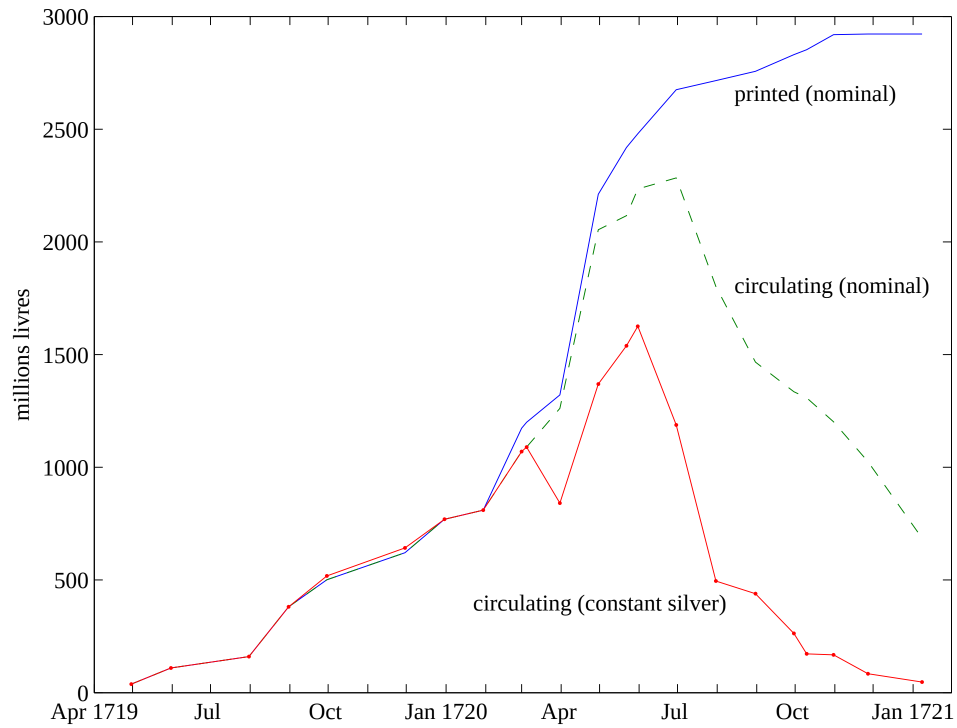

Figure 10.1: Net issue of notes, actual circulation (nominal and constant silver value). Source: table 9.2.

By now, the notes were circulating with difficulty, and merchants were required to accept them on pain of fines (AC 17 July 1720). After a very sharp devaluation of the silver currency failed to bring the notes more than briefly back to par in early August, Law decided to jettison the note altogether. On August 15, the government announced its plans concerning their ultimate fate. The demonetization of large denomination notes was scheduled for October 1, and that of low-denomination notes for May 1, 1721.[7] The freedom to denominate contracts in gold and silver above 1000L and to hold coins in any quantities

[7]The issue of low-denomination notes continued until October; 10% of the notes converted in bonds or bank accounts were returned to the owner in the form of low-denomination notes.

was restored on XXX. Until October 1, the notes were still legal tender for debts and taxes (a decree of September 15 limited the validity of both high and low denominations to 50% of any payment except for existing debts). After October 1, the large denominations could only purchase government bonds, bank accounts, or company shares. During the month of October an additional outlet for notes was provided at the mints, where they were taken along with old coins in exchange for the new coins ordered in September 1720, at the rate of 60L in old coins and 30L in small denomination notes for 90L in new coins, in effect allowing individuals to pay the seigniorage tax in full with bank notes.[8]

The bank note continued to depreciate, and the demonetization was brought forward. On October 10, the government reckoned that about 700mL in notes had been retired and burned, and another 730mL retired but not yet burned,[9] leaving an outstanding stock of 1169mL, and it considered that there were enough options available for their conversion to bring forward their demonetization to November 1 for all payments. The Company retained the ability to make its payments for debt service, wages, and dividends, in notes until January 1. The notes remained accepted at face value to purchase the government annuities of June and August 1720.

The bank accounts had been intended to survive the notes. On September 15, Law tried to recreate elements of the System, with the bank account in the role of the note. He created a dual unit of account, one based on the metallic currency, the other on the bank account. The nominal value of bank accounts was reduced by a factor of 4, and the ability to buy them with notes apparently ended. But at the same time, he made it possible to convert shares into bank account balances at a rate of 2000L per share, just as the shares and notes had been convertible into each other in March. This created a nominal exchange rate between bank accounts (which were called *nouvelles écritures*; Dutot 2000, 362) and paper currency of 4:1. On October 22, the aggregate amount of bank accounts was limited to 100mL (presumably in bank-account units). They

[8]Edict of Sept. 1720; the outlet was only available for a short while, as notes ceased to be accepted at the mints, AC Oct. 24, 1720.

[9]The arrêt of October 10 also mentions 90mL converted for specie by the Bank, but Dutot omits it.

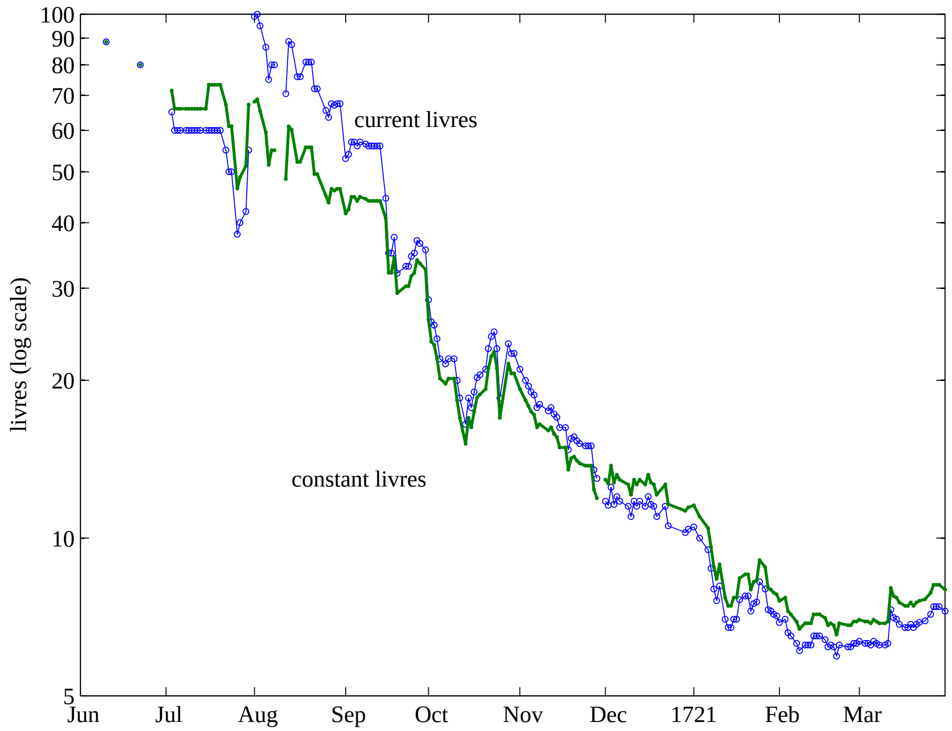

Figure 10.2: Price of 100L note in current silver livres and in constant silver livres of June 1720 (82.5L / marc). Source: Appendix.

remained the official means of payment for the large transactions detailed above, and foreign exchange was quoted in terms of bank account balances. The dual-unit system was abandoned on December 26, when the bank accounts were overnight demonetized, converted back to paper-currency units (i.e., multiplied by 4), and made exchangeable into government bonds. The bank accounts never proved successful. A total of 407mL (in paper-currency units) had been created, consistent with the 100mL limit; but of those, only 239mL had actually been issued, and 51mL were held by the Royal Treasury or the Company, so that only 188mL were in fact held by the public (Paris-Duverney 1740, 2:258).

Last attempts to raise funds for the Company
Capital calls, forced loans. The Company simply runs out of cash.

10.3 The Aftermath

Law's position was becoming untenable in late November. When his promises to finance government expenditures proved to be empty, his departure became necessary. Although he did not hold an official position in government since May 1720, the position of contrôleur général had been held in commission; on December 12 it was filled again by Le Peletier de La Houssaye, who insisted on Law's departure as a condition for accepting it. Law left Paris on December 14 for his castle at Guermantes (Vernes 1961, 86–88) where he stayed a few days, leaving on December 18. He was held up briefly at the border and finally reached Brussels on December 21.

What next? The new contrôleur général faced complete chaos. The immediate urgency was to keep the government functioning: its treasuries (and those of the Company) were filled with now-worthless paper. The next problem was the liquidation of the System: the disposal of its liabilities, and the reallocation of its assets.

Le Peletier reportedly sought advice from old hands: Desmarets, his predecessor in office under Louis XIV and nearing death; and the bankers Bernard and Crozat, both of whom declined to get involved (Marais 1863–68, 2:19, 24, 34). Finally, he turned to the Paris brothers, sending them an urgent "all is forgiven" letter. They arrived in Paris in the early days of January, with a plan.

The plan had four parts: provide immediate funds, restore order in the accounts, remove the Indies Company from public finance, and retire the liabilities of the System.

The council of January 26. Temptation to default resisted. Broad decisions made.

Chapter 11

The Visa of 1721: recreation of the public debt

introductory section.

The Brunoy manuscript.

evidence it gives on composition of government bondholders. Did it change?

The immediate problem was what to do with the wreckage of the System, namely, the various instruments and securities (company shares, bank notes, bank accounts, government bonds of 1720, company bonds, receipts from various treasurers). All instruments were submitted to a liquidation called the "Visa," managed by seasoned financiers and former rivals of Law, the Paris brothers.[1]

The result of the Visa was a newly recreated national debt, in the form of perpetual and life annuities. The Indies Company was put in receivership in April 1721 and emerged again in April 1723; it continued as a trading company until 1769. I review the Visa itself and the ensuing fate of the Company.[2]

[1]The four Paris brothers, former wartime suppliers turned financiers, had been involved in the management of government finances in the 1716–18 period, among other things reforming accounting and tax collection practices. In 1718 they organized at Law's behest the short-lived publicly-held General Farms, and later fell out with him. They remained in power from 1721 until May 1726. Aside from Dubois-Corneau (1917), there is no study of their career and policies.

[2]We have little information on the accounts of the System and the Visa. What we have comes mostly from a controversy in the 1730s. In 1738 Dutot published a commentary on Mellon's recent work, which contained an apology of Law's System and a harsh criticism of the Visa; this book prompted a reply by one of the Paris brothers (Paris-Duverney 1740). Dutot wrote a rejoinder but died before publishing it; Harsin edited Dutot's original book and the manuscript rejoinder (Dutot [1738] 1935). Hautchamp (1743) is a history of the Visa written by a former speculator. The archives of the Visa were publicly burned in November 1722, those of the Indies Company that were not needed for its continuing business were destroyed in 1727. There exists an inventory of those archives in AN V/7/235; furthermore, AN M1025 and M1026 contain a compilation of memos written by the Paris brothers between November 1722 and August 1723,

11.1 The Visa of 1721

Throughout 1720, the government had made available its newly created perpetual and life annuities (of June and August 1720) in exchange for certain instruments of the System indistinctly at face value. On Jan 26, 1721, the government put an end to these conversions at face value. Over the following two years, the government carried out the conversion itself, through an operation called the 'Visa.'

There were roughly three sorts of securities arising from the wreckage of the System: the Bank's liabilities (bank notes and bank accounts), the Company's bonds and shares, and the bonds issued by the King in June and August 1720. The Company's shares were dealt with separately. All other instruments were treated together, initially without regard to the originator (Bank, Company, or Royal Treasury).

All owners of instruments created by the System were required to file claims with a specially appointed commission, listing the instruments in their possession and explaining how they had acquired them. Anything not submitted to the Visa became worthless. This first step was completed by August 1721. The sums submitted are shown in table 11.1.

The second step was to convert these claims into public debt, "based on the realm's abilities and on the rules of fairness": that is, (a) to reduce the aggregate amount, and (b) to treat the individual claims based on the information submitted. For the aggregate amount, the government announced in November 1721 that it would accept a total debt capital of 1631mL, and an annual interest payment of 40mL. To solve the allocation problem across individuals, the government applied a matrix: the rows were the instruments, the columns were the manner in which they had been acquired (from a reimbursement, from a sale of real estate or personal estate, etc); the entries in the matrix were the coefficient by which the nominal amount was to be reduced. The coefficient ranged from 100% (for government bonds traceable to a reimbursement by the

when they were working to disentangle the Company from the System. Finally, (Harsin 1928, 303–15) published the account submitted by the treasurer of the Bank in November 1723.

Instruments presented to the Visa		Notes withdrawn
1. Government bonds (annuities)		
2.5% perpetuals (Jun 1720)	1020.1	
2% perpetuals (Aug 1720)	113.9	
life (Aug 1720)	91.5	
	1225.5	1225.5
2. Company liabilities		
life annuities	92.8	17.3
actions rentières	87.1	49.2
Bank accounts	148.6	140.9
Royal Treasury drafts	10.0	0.0
miscellaneous	1.9	1.9
	340.2	209.3
3. Bank notes	656.9	
Total visa	2222.6	

Table 11.1: Instruments submitted to the Visa and the bank notes withdrawn through the issue of those instruments. Source: (Paris-Duverney 1740, 2:141); AN M1025 1er recueil, p. 19-20, p. 27-28, 2e recueil, p. 16.

king or by a private party prior to Sept. 1719) to 5% (for any security submitted without explanation).[3] The end result, for each claim, was either a number of shares (for share owners) or a nominal amount (for all other instruments). It took thousands of employees from December 1721 to September 1722 to apply the matrix to all the claims, at a cost of 9mL (Dutot [1738] 1935, 2:266). *As many as 1729 employees, cost of 9,139,508L (NAF 2560 fol. 80).* The regulations governing their activities are intricate and detailed (Hautchamp 1739). Fraud and corruption inevitably occurred, but was harshly repressed (Paris-Duverney 1740, 2:229).

The bottom line of table 11.2 shows that 2222.6mL in instruments were

[3]To verify the statements made by owners concerning the origin of their securities, the government ordered notaries to submit all documents relating to reimbursements and other financial transactions from September 1719 to December 1720. Over 1,393,000 documents were submitted. The information collected was then solemnly burned in October 1722 to protect "le secret des familles."

presented to the Visa from January to August 1721. They were liquidated at a face value of 1700.7mL, a 23.5% average reduction, but with much variation across individuals. The authors of the Visa (Paris-Duverney 1740) insisted that their goal was to bring back the debt to a sustainable level while maintaining fairness, by which they meant a bias for small holders. No claim of 500L or less was reduced: these small claims represent half of the individuals and 40% of the sums involved. This means that the remaining 60% of the sums were reduced by 39% on average.

Number of claims submitted: 552,362 according to NAF 2560 fol. 870; check against other sources. Share of Parisians and provincials.

Starting in February 1722, claimants were required to turn in the instruments they had presented in exchange for certificates bearing a liquidation face value. Only 2211.2mL of instruments were turned in from February to November 1722; they were exchanged for 1661.6mL of certificates of liquidation, of which 62.6mL were never used. A supplementary tax on excessive profits from trading in the System was levied on about two hundred individuals and further reduced the debt by 190mL.

The certificates were convertible into life annuities at 4% and perpetual annuities at 2.5% and 2% created from 1720 to January 1724, of which a total of 1700mL in capital, 47mL in perpetual annuities, was available.[4] These annuities became the core of the national debt; the bulk of the perpetuals were still in existence in 1789 (Marion 1914, 1:474).

The cash value of the liquidation certificates on the open market averaged 22% of face value from February 1722 to February 1724. This means that the average holder of a note ultimately got about 17% of face value in March 1722, which was the market value in the middle of November 1720. it also indicates that the market interest rate on French perpetual debt was at least 9% after the Visa.[5]

[4]A few other outlets were also provided for these certificates, such as the purchase of some offices that were recreated, the payment of tax arrears, or the purchase of new coins, since the monetary reform of September 1720 continued until 1724.

[5]22L in cash bought a 100L certificate which could be used to buy a 2L perpetual annuity. I use the 2% perpetual as benchmark; the 2.5% issued in June 1720 had been fully subscribed by the

It is interesting to compare this interest rate with the few comparable rates we have. Prior to the Visa, the 4% perpetuals traded at more than 50% discount in September 1715, or 8% interest (Dutot [1738] 1935, 1:29) and at 24% discount on July 27, 1719, or 5.3% interest right before Law's debt conversion (BN, NAF 22245, fol. 294). The price on government debt rose after the Visa. In 1729–1731 the *Gazette d'Amsterdam* occasionally quotes the 2.5% perpetuals at 36 to 41% of face value (6–7% interest rate) and by June 1740 they traded at 50% of face value, a 5% interest rate (Paris-Duverney 1740, 2:309). Market prices are available more regularly from about 1745 (Velde and Weir 1992).

What became of the notes?

From the peak of note circulation in May 1720 to January 1721, when the Visa began, the stock of notes was reduced by redemptions and conversions into other assets. In the end, some notes had been converted into other assets and either had been burned or were still in the hands of accountants; the rest of the notes were in the hands of the public, and most of those were submitted to the Visa. I try here to account for the way in which the notes were ultimately disposed of.

We have information on where the notes were once the Visa began (table 11.2), and also the quantity of various assets submitted to the Visa (table 11.1).

The instruments presented to the Visa were themselves the result of conversion of notes and shares between February 1720 and January 1721. The notes that appear in the hands of accountants in table 11.2 can be readily matched to the instruments for which they were exchanged. For example, the 1068.9mL in notes at the Royal Treasury had been exchanged for government bonds

time the Visa began, and only holders of those 2.5% annuities whose capital had been reduced could apply certificates of liquidation to offset the reduction, that is, exchange certificates for 2.5% annuities. The 2% perpetuals created in August 1720 were not fully subscribed, and could be purchased freely with certificates; although the fact that 100mL were replaced with 4% life annuities in November 1722, and that additional life annuities were issued in July 1723 and January 1724, indicates that the latter were preferred by the public to the perpetuals; hence 9% is a lower bound on the market interest rate. Using 18th c. life tables, the rate of return on the life annuities at that market price was 16.5 to 17%.

notes issued (to June 1720)	2922.2	
net of denomination exchange:	*2776.4*	
burned by Bank (June-Aug 1720)	657.3	
burned by Company (Aug-Oct 1720)	150.0	
net of denomination exchange:	*50.0*	
remaining (Oct 1720)	2069.1	
distribution of notes (Jan 1721):		
at the Bank	68.2	
at the Company	246.7	
of which		
exchanged for bank accounts:		140.9
exchanged for Company bonds:		18.3
exchanged for government bonds:		1.9
at the mints:		79.1
in various accounts:		6.6
at the Royal Treasury	1068.9	
in the public	685.3	
of which		
exchanged at the Visa		621.0
submitted but not exchanged		35.9
not submitted		28.4

Table 11.2: Distribution of the notes at the time of the Visa (millions L). Sources: Calculations based on AN M1025, 1026 and Paris-Duverney (1740). Of the total of notes issued, 145.8mL were small denominations that were intended to replace large denominations and were in fact exchanged (100mL, included in the notes burned by the Company) or never issued (45.8mL).

(perpetual and life annuities). A part of the bank account balances had also been exchanged for notes, as shown in table 11.3.[6]

The question that remains is to determine how the 707mL of notes burned had been withdrawn from circulation. Some of those notes had been exchanged for instruments submitted to the Visa. Table 11.1 shows the quantity of each

[6]Because the Company (illegally) used some of the notes it received to buy shares, the net amount of notes retired with bank accounts is 140.9mL.

Bank account balances					
issued in exchange for		held by			
notes:	209.3	Treasury:	21.9	(exchanged for bonds)	
of which held by Company	*140.9*	public:	187.4	submitted to Visa	148.6
used to buy shares	*68.4*			not submitted	38.8
shares:	168.4	Company:	168.6		
bank credit:	30.0	Bank:	30.0		
total:	407.8	total:	407.8		

Table 11.3: Summary of the Bank accounts (millions L). Source:AN M1025, 1er recueil, p. 19–20, 74–75, 2e recueil p. 16; (Paris-Duverney 1740, 2:262).

instrument presented at the Visa (left column) and how many notes had been exchanged for each type of instrument (right column). Table 11.4 infers how one can allocate notes between three categories: exchanged for instruments submitted at the Visa, held by the public, and other.

There are 656mL of notes which were withdrawn by the Bank or the Company other than by issuing government or Company bonds (item 4 in table 11.4. Of those, 500mL are part of the notes burned between June 28 and August 29 and not otherwise accounted for; the rest are notes that were in the treasuries of the Bank and the Company at the time of the Visa. How were they withdrawn? There are three possibilities.

The last burning on August 29, for 50mL, corresponds to notes withdrawn by the issue of subscriptions in the month of August (which, if fully subscribed as it seemed to be, should have withdrawn 70mL).

Another part of this remainder consists of notes exchanged for specie between June and October 1720. Recall that Law had proceeded to buy back the metallic stock from March to May 1720; Dutot ([1738] 1935, 1:91) reports that the public brought 44.7mL in specie to the Bank in March 1720, and Faure (1977, 378, 385) finds at least 221mL in notes issued for coins at 82.5L per marc. After the July 31 devaluation, the same coins could buy back at par 320mL in notes at par, or 550mL at market value. Marais (1863–68, 1:372) suggests that in the middle of August the Bank was buying notes with specie at a 25% discount

Bank notes (as of Jan 1721)	
1. converted into government bonds:	
at Company	1.9
at Royal Treasury	1068.9
presumed burned	154.7
	1225.5
2. converted into Company liabilities:	
at Company (bank accounts)	140.9
at Company (bonds)	18.3
burned	50.0
	209.2
3. held by public:	685.3
4. other notes:	
held by Company	85.7
held by Bank	68.2
other burned (June-Aug 1720)	502.6
	656.5
Total notes issued	2776.4

Table 11.4: Accounting for the banknotes.

over face value. Dutot (2000, 323, 383) complains that 51mL in specie held by the mints in late August were all spent to exchange the notes of well-connected owners, although he does not say at what price, but a memorandum of the Bank's inspector states that "it was an established practice at the Bank to pay in coin for notes to the bearers of special orders of M. Law, and such payment was made at the price of specie on the day those orders were issued" (AN G71119, *Mémoire du Sr. Fenellon*). The Paris brothers would later mention the loss of "considerable sums" that were available in the Mints in late May 1720 (Lévy 1980, 186). In September 1720 new gold and silver coins were issued, which could be purchased with up to 1/3 of the price in small denomination notes, providing another avenue for retiring notes in exchange for coins. Finally, we know that most of the notes remaining in the hands of the Company were in the treasury handling the mints' accounts (table 11.2).

The third possibility is that the Company received a number of notes in the course of its operations as tax collecting agency; but it is impossible to say how much this accounts for.

In summary, one can say that of the 2800mL of notes issued, 2100mL ended up in the Visa liquidation and became government bonds, 50mL were never redeemed, about 70mL were converted into shares, and the remaining 580mL redeemed in coin at varying discounts over face value or received in payment of taxes at face value.

Accounting manoeuvres in the dark

The Visa operation applied to all instruments of the System and converted them into government debt. There were two other actors involved, the Company and the Bank. On the same day as it announced the Visa, the government decided to hold the Company accountable for the management of the Bank. The shareholders objected that the Bank had been merged with the company against the latter's will, that it had always been a tool of government policy, that the Company had borrowed vast amounts from the Bank to buy shares on the government's orders, and that forcing its liabilities onto the Company would make it a net debtor to the government of 650mL and would bankrupt it. Their appeal was rejected, and the government put the Company in receivership.

The government nevertheless decided to keep the Company in business.[7] This required disentangling it from the Bank. The Bank itself needed to be liquidated, and a proper account given to the Chamber of Accounts, an independent auditing body. This involved some complex accounting exercises between Company, Bank, and government.[8]

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[7]The Company was lucky to count among its principal shareholders a royal prince, the duke of Bourbon, who would succeed the duke of Orléans as prime minister after the latter's death in December 1723.

[8]See AN M1025, M1026. Several problems arose because of illegal activities: for example, notes printed to retire large denominations were instead used to by shares; so were notes retired through the creation of bank accounts. These operations, disavowed by Company officers,

The Company owed 2221.3mL to the Bank, the total of notes it had borrowed. To offset this liability, the Company had 1103.9mL in drafts (*assignations*) of the Royal Treasury (mostly issued by the Treasury when it was reimbursing the debt), 292.5mL notes in hand, proof that it burned another 150mL notes on royal orders, 54mL in miscellaneous claims on the Bank. This left a deficit of 621mL with respect to the Bank.

The Company used 532mL of its drafts to redeem the notes collected at the Visa, 621mL in total. The difference between the two sums reflects the reduction in value due to the Visa, the benefit of which partially accrued to the Company. Then, in June 1723, the king awarded to the Company a total indemnity of 583.4mL, in the form of drafts on the Treasury, for rather dubious losses allegedly incurred by the Company. This sum allowed the Company to clear its debt with the Bank. The Bank, in turn, used the drafts it had collected from the Company to redeem the notes in the hands of the Treasury and thus provide a complete account of the notes it had issued (save for 64mL left in the hands of the public as of January 1721 and never presented to the Visa). The Bank's account was settled in November 1723 (Harsin 1928, 303–15).

Another debt conversion: Alexander Hamilton and the US national debt

involved 175mL and were carried out by Dutot (An M1025, 1er receuil, p. 22).

Chapter 12

Setting a new course (1721–26)

Outline the policy followed. Make clear the complex nature of the new environment: Orléans still in charge, Melon his adviser, Law could return (recall the near-miss of a new bank in 1723). Not a radical break.

Tax increases. Farms put in régie. Policy of deflation: postponed under the duc d'Orléans (Melon's arguments against, Paris brothers for), implemented under Bourbon and Dodun.

12.1 Government finances during and after 1720

A word about the tax on profiteers; see NAF 22245, fol. 335–356, article in RHDF.

Table 12.1 summarizes what indications I have found about French finances from 1715 to 1726.[1] The numbers are very approximative because, in contrast with numbers for the period up to 1715, they come mostly from summary planning budgets rather than ex-post accounts. For the year 1720 we do not have even such a summary document; and in 1721 the government had so little information that it used as a basis a plan made for 1717. The numbers I have put in table 12.1 would correspond to the middle of 1720, under the System.[2]

[1]For revenues and expenditures: BN Fr. 7766, fol. 250-55; BN, Joly de Fleury 566, fol. 254-81; BN, NAF 22245, fol. 365; Affaires Étrangères, M & D France 1258, fol. 150-1, 200-4. For direct taxes: Clamageran 3:198, 226-32, AN K885, 1, p. 40, AN K886, no 13. For indirect taxes: AN K885, 1, p. 51, 59, 2, p. 58; AN G/7/1176; Dutot ([1738] 1935, 2:214-19); BN, NAF 5010. The negative number for seigniorage in 1724 reflects the cost to the government of capital losses on coins held by tax collectors during the revaluations of the coinage in that year (BN, NAF 22245, fol. 365).

[2]BN, Joly de Fleury 566, fol 277. For 1720 I have done as follows. I have interpolated civil spending from 1718 and 1721. I assumed 14mL for the navy, compared to 12mL in 1721 and

	1715	1716	1717	1718	1719	1720	1721	1722	1723	1724	1725
direct	101.7	100.4	75.3	63.8	58.8	78.1	66.9	78.7	87.7	88.6	80.9
indirect	59.9	60.1	59.8	59.7	67.0	70.8	76.7	90.9	103.1	108.6	104.0
misc	3.9	3.9	3.9	2.7	2.9	2.9	3.6	3.9	4.1	4.4	6.2
seigniorage	0.0	75.5	12.7	17.9	12.0	30.5	24.0	20.0	0.0	-33.5	0.0
total revenues	165.6	239.9	151.6	144.1	140.8	182.3	171.3	193.5	195.0	168.0	191.1
military	71.5	50.7	50.7	45.8		88.0	76.4			66.3	61.0
civil	46.3	26.1	25.2	36.6		35.0	34.1			41.0	40.6
total non-debt spending	117.8	76.8	75.9	82.3		123.0	110.4			107.3	101.6
primary surplus	47.8	163.1	75.7	61.8		59.3	60.8			60.7	89.5
debt service	86.7		93.7			58.6				86.7	
livre index (1 = 1726)	1.78	1.25	1.25	0.83	0.83	0.60	0.66	0.66	0.66	1.25	1.20

Table 12.1: Government finances, 1715–26. Sources: see text.

The Table shows clearly the general pattern of public finances during that period. In 1715, the debt burden is large. In 1716, exceptional seigniorage revenues allow the government to deal with the most pressing debts, but in 1717 political pressures force the government to rescind wartime direct taxes In 1718 it had to resort to seigniorage again, and it was still some ways from balance. More cuts in expenditures were planned for 1719, and indirect tax collection was starting to improve. The System was accompanied by a number of tax cuts and an amnesty for overdue taxes, leading to a fall in revenues. Spending had surged, meanwhile, because of the war with Spain in 1719. After the end of the System, revenues increased, at first because of seigniorage, then because of increases in regular tax revenues. This eventually allowed the government to reach balance by 1725 or 1726.

The primary deficit at the peak of the System was over 50mL, which is as large as it was during the War of Spanish Succession. Law's management of the traditional components of government finances, cutting taxes in time of high expenditure, was good policy (and highly unusual for France), but might seem less than prudent when undertaken at the same time as his other radical reforms.[3] It can be argued that the high level of spending in 1719 and 1720 was exceptional and temporary, and that revenues would soon improve as they did. It is true that the improvement in revenues came in part from reversals of Law's tax cuts in 1722 and further tax increases. In part they came from improved tax collection in the early 1720s, which accrued to the government because the indirect taxes were not farmed but managed on the government's account (*en*

12mL in 1719, Lévy (1980, 216); expenditures for the army were 74mL in 1720 (BN Joly de Fleury 566, fol. 278). The capture of Fontarrabie and St. Sebastien was said to have cost 48m (AC 1720:48) XXX. Use also figure from Paris la Montagne, discours XXX. I put debt service at 36mL, the debt to the Company. For revenues, the document in AN, M1026, n. 19 gives 84.6mL for direct taxes for 13 months. I assumed that revenues from the post farm were unchanged from 1719; revenues from the general farms were 27.4mL (BN NAF 5010) net of the 36mL payment to the Company (same figure in AN M1026, n. 19). The revenues from the mints for Aug 1719–Sep 1820 was 35.536m (AN M1026, 1er recueil, p. 113–23) I have set seigniorage revenues from the mints at 5.5mL, which is 1/9 of the 50mL which the company paid lump-sum for the right to run the mints for nine years.

[3] Law (1934, 3:38–76) intended to completely do away with existing taxes and replace them with a single tax on land, an idea that would find partial implementation in 1791.

régie). The same improvements would have accrued to the Company and its shareholders, not to the government, at least for the remainder of the lease on the farms (until 1724).

Faure (1977) castigated Law's "good fairy policy." If the deficit in 1719 (the war year) was twice that of 1720, we can figure that about 150mL in deficits were financed by money creation during the System.

12.2 The revolution of 1726

The fall of the duc de Bourbon. Paris brothers exiled. Fleury becomes prime minister de facto, uninterested in finances. Complete reversal of Paris policies under Le Peletier des Forts (whom Bourbon had had fired in December 1720 (Marais 1863–68, 2:23)): return to pre-1716 arrangements for the Recettes générales, to pre-1718 for the Fermes. Deflationary policy reversed. Cinquantième abandoned. Default on the debt in November 1726 (magnitudes). Massive reliance on the credit of the receveurs généraux in 1727 when war threatens. The controversy over the baux Bourgeois and Carlier.

Debunk the cliché of Law versus the financiers. In reality, the period from 1715 to 1726 is one of persistent attempts at reform. Law was not brought down by, or replaced by, the old guard. This only happened in 1726.

NAF2560 on Le Pelletier des Forts' program to return to the sound practices of Colbert.

12.3 The Indies Company

Its shares were submitted to the Visa but handled separately from other claims. The number of shares was 600,000 as of March 12, 1720, reduced to 200,000 by June 3 as a result of the Company's repurchase program and of the king's gift of the 100,000 he owned to the Company as part of the rescue effort in early June (Dutot 2000, 251, 260). These were converted into new shares at a

2:3 ratio over the summer, leaving 133,000 new shares. An unknown number of these failed to submit to the "second stamp" of October 1720 (see Appendix). In 1721, only 125,000 shares were presented to the Visa, and they were reduced to 55,735.

Having cleared its books of any trace of the System, the Company emerged from receivership in March 1723, and in June 1725 a series of edicts absolved it from any further liability for the System, and confirmed its remaining privileges.

Discussion of its prospects.[4]

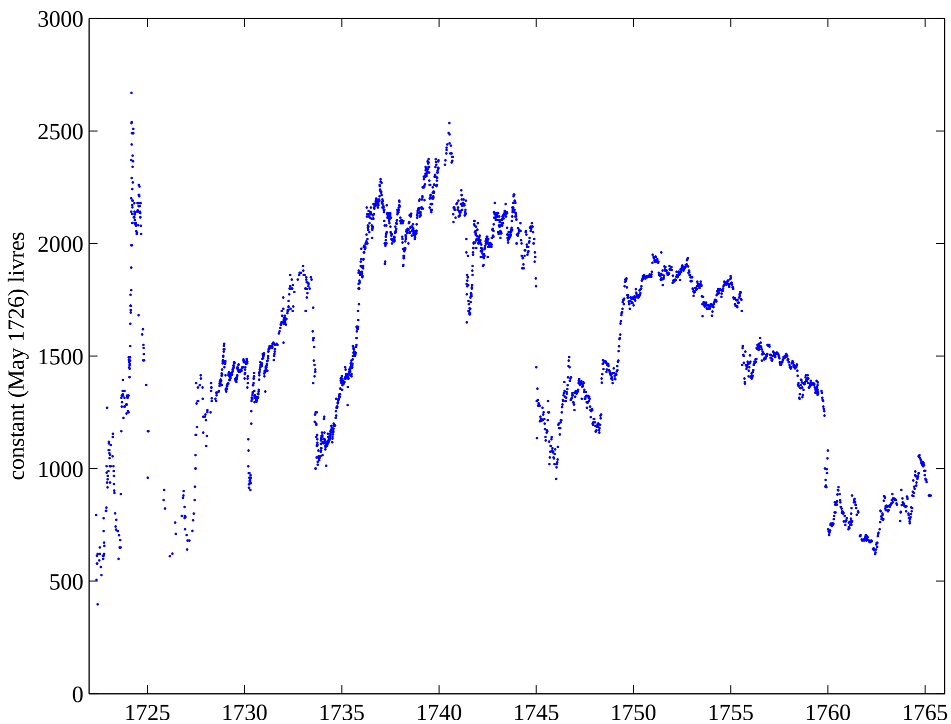

Figure 12.1: Price of the Indies Company share, 1722–65 (weekly observations from 1733). Source: *Gazette d'Amsterdam, Affiches de Paris.*

[4]BN Fr 8973 has documents from 1722-23, including balance sheet, revenues and expenses for the 1st year of regie, etc.

The market value of shares fluctuated after March 1723, but it averaged about 1200L for the rest of the year. Assuming that the average share was cut in half by the Visa, and taking into account changes in the unit of account and the reverse share split of June 1720, this value of the Indies share in 1723 corresponds to the market price in October 1720 (about 720L), or in January 1719 (about 320L).

monopoly	*acquired*	*lost*
Louisiana	Aug 1717	Jan 1731
Canadian beaver	Aug 1717	Feb 1763
tobacco	Aug 1718	Jul 1721
Senegal trade	Dec 1718	Feb 1763
India and China trade	May 1719	Aug 1769
North African trade	Jun 1719	Nov 1730
mints	Jul 1719	Jan 1721
General Farms	Aug 1719	Jan 1721
Recettes Générales	Aug 1719	Jan 1721
Haiti slave trade	Sep 1720	Jul 1725
Guinea trade	Sep 1720	Jul 1767
domaine d'Occident	Mar 1723	1725
coffee distribution	Aug 1723	1727
tobacco	Sep 1723	Jul 1747*

Table 12.2: Privileges and monopolies of the Indies Company, 1717–67. *: exchanged for a perpetual annuity of 9mL. Sources: Morellet (1769), Haudrère (1989).

At the same time, the Company was placed under tighter government supervision, with the finance minister sitting on the board, and made to focus on its "core competencies." It lost the lease on the General Farms and the mints, and the collection of the direct taxes, in January 1721, and the lease on tobacco in July 1721. It initially retained all its trading monopolies, but shed them one after the other as they proved unprofitable or unenforceable, retaining only the monopoly on Canadian furs, the slave trade in Guinea and Senegal, and the trade with India and China (see table 12.2). The Company continued to operate until the treaty of Paris of 1763 deprived France of its possessions in

Canada and India, and the company of its commercial viability. The Company was liquidated in 1770 and its shares converted into government bonds Velde and Weir (1992).

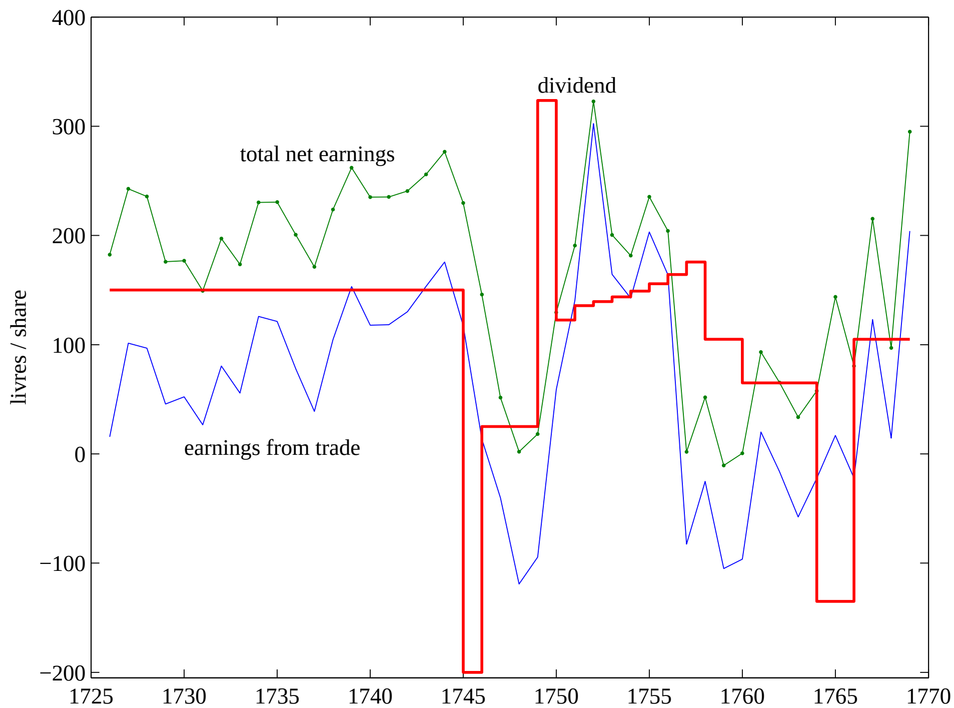

Figure 12.2: Commercial earnings (profits on sales of merchandise less shipping costs), net total earnings after interest, and dividend of the Indies Company (inclusive of the 1745 loan).

The Company share was traded on the market from the end of the Visa in 1722, and quotations were reported in newspapers through the 18th century. As figure 12.1 shows, the price was quite volatile, both at high frequencies and at low frequencies. The main disruptions are wars: Polish succession in 1733, Austrian succession in the 1740s, and the Seven Years War in the 1750s. The Company was obligated to pay a fixed dividend, initially 150L per year, backed by the commercial profits, and by the tobacco monopoly which the king ceded in 1723 in payment of his debt of 100mL (representing the original billets d'État brought by the subscribers of 1717–18). A first crisis brought about a suspension in the payment of dividends in January 1745; the dividends of 1744 and 1745 were not paid in cash; instead, the Company took the coupons (wroth 300L) along with a 200L cash payment, and issued in exchange a 5%-bearing bond, which it endeavored to reimburse over 15 years. When dividend payments resumed, they were set at 80L. A second crisis at the end of the Seven Years War brought about in 1764 a capital call on shareholders in order to maintain the same dividend, and an end to the repurchase of the 1745 bonds.

Figure 12.2 plots the actual dividend payments, with capital calls counted as negative dividends. It also plots the commercial earnings on a per-share basis, and the total net earnings after interest payments.[5] The bulk of commercial revenues (90%) came from trade beyond Cape Hope. Commercial earnings averaged 2.6mL from 1725 to 1769 (64L per share), while total net earnings averaged 7.8mL (162L).

[5]Commercial earnings are calculated as the net revenue from sales of imported merchandise less shipping costs (construction, maintenance and fitting of ships, provisions, wages of embarked personnel). Total earnings adds revenues from the tobacco monopoly and deducts interest payments on annuities and on the 1745 loan. Repayments on the 1745 loan are not deducted, as they are counted as (delayed) dividend payments. I haven't yet found data on other expenditures such as personnel and fixed investment in France and the colonies, so the net earnings figure are an upper bound.

Questions

Chapter 13

Who invented the System?

There is no doubt that Law implemented the System. Did he invent it? Put another way, where did the idea of the System come from?

Law the eclectic. he took bits and pieces from various people.

13.1 The South Sea Company

13.2 The Casa di San Giorgio

13.3 Louisiana before Law

Rely on Giraud (1966).

13.4 The so-called Anti-System

(Price 1973, Ch. 9), (Faure 1977, 151–53)

One of the key moments in the System is in late August 1719, when Law takes over the lease of the General Farms and offers his mega-loan to the king. The first move changed the Indies Company from a trading company with other interests into a financier company, in the French sense of the word. The second move gave the System its unique element, the debt conversion.

It is now worth taking a closer look at who held the lease on the General Farms in August 1719, when the king unilaterally rescinded the lease and awarded it to the Indies Company.

The General Farm leases typically ran for six years, from October 1 to September 30. The current lease had begun in October 1718, and was held under the name of Aymard Lambert, with thirty *cautions* (bondsmen) who were the general farmers. This syndicate had been formed by the Paris brothers, under the following circumstances.[1]

The last years of Louis XIV's reign had seen the farmers of the General Farms walk away from their obligations in the midst of the war, and the taxes included in the normal lease were collected by the farmers as employees of the government (in a system known as a *régie*). In June 1715 the government returned to farming the taxes of the General Farms, but the product of a 10% increase in tax rates announced in May 1715 was to be collected under the régie system. According to Malezieu the purpose was for the government to find out the real product of taxes, and for this reason the farmers took advantage of the change of sovereign to propose that the 10% increase be folded into the lease contract. This was accepted, and the new lease price ranged from 48.5m for the year 1716 to 50m for the year 1721.

The lease was rescinded on June 18, 1718 and the put out for auction in August 1718. Malezieu tells the story, repeated by many authors, that d'Argenson is the one who induced the Paris brothers to bid for the lease, so as to create a counter-power to Law; yet it seems difficult to imagine such a maneuver when Law was so firmly in political control since the events of June 1718. In their autobiographical documents, the Paris brothers state that it was Law and the duc de la Force who put them to it, which seems more plausible.

The final auction took place on August 29; the incumbents had initially proposed 43m (exclusive of the 10% increase), but the Paris brothers, at the behest of the Regent, outbid the incumbents to 48.5m. Within a few weeks they had chosen eighteen associates, and seen the government impose another eight chosen from the previous syndicate. The Paris brothers then proposed to their associates that the syndicate issue shares. Their plan was to issue a total

[1]This episode is described in one of the brothers' autobiography (*Discours de Paris la Montagne à ses enfants* (I used the copy at the University of Chicago, Ms. 1026), in several apologetic documents they wrote in 1740 (AN K885, n. 1), and in Malezieu's manuscript history of the tax farms (BN, NAF 2564).

of 100 millions in 50,000 shares, offering an interest of 7% and any benefit or loss would be shared by the shareholders (presumably this means that the 7% figure was an expected return, with dividends possibly above or below). The farmers were to take up 250 shares each, and leave 150 as bond. The farmers were to receive 21,000L each as their salary and to pay for a clerk; beyond that, their only income from the farm was to come from their own shareholdings.

The final plan, approved after some discussion by the farmers and authorized by the government, was slightly different. The shares were 1,000L each.

XXX Add material from NAF 2560 fol. 25–27.

It had been authorized in September 1718 to finance itself through a share issue: the shares were sold in exchange for 100mL in 4% government bonds at face value (*XXX insert details from AN, E *914B, fol 128.* A 10% down-payment was required, with the remainder due by September 1719 (Dutot 2000, 80). It appears (AN, G/7/1176, letter of Paris to the Regent, Aug. 17, 1719) that the issue was nearly complete; its shares were traded on the market (prices for July and November 1719 in BN NAF 22245, 294–96; sixteen quotations from November 1718 to August 1719 in the *Gazette d'Amsterdam*, see Table 15.4).[2] This company came to be known as the "Anti-System," although it was probably formed at Law's instigation (Lüthy 1959–1961, 1:313–15, (Faure 1977, 151–53)). After the lease was broken, the shares became part of the public debt.

Add material from NAF2564

[2]The Musée Carnavalet in Paris has a copy of one dividend coupon (collection Fabre de Larche, GB 22).

Chapter 14

What did Law think he was doing?

Although, as Murphy (1997) emphasizes, Law was both a policymaker and a theorist, there remains a disconnect between the two aspects of his life.

Document thoroughly.

His writings on economics in general and schemes for banks in particular cease in 1715, shortly before his last pleas were successful; and we have little direct testimony on what he thought he was doing when he created the System, aside from a few apologetic pieces anonymously published in 1720, and a lengthy self-justification sent to the duke of Orléans in 1723 (Law 1934, 3:98–190).

Law entered economics by way of adding to an existing literature on land banks. The idea of replacing commodity money with a substitute had been around for decades, and in England in particular a stream of proposals had been published since 1650, all centered on the idea of a land bank. His first essay, published by Murphy in 1994, belonged to that tradition, and his magnum opus, *Money and Trade* (1705) was an attempt to provide deeper theoretical underpinnings for the proposal he would continue to put forth until 1710 or so. The goal is essentially to replace commodity money with an alternative that better fulfills the functions of money. Law emphasizes particularly stability and liquidity among the desirable properties of money; the former leads him away from silver, whose value fluctuates over the long term as demonstrated by the Price Revolution, and the latter toward financial securities that he sees traded on the London market. He does not address in his writings the fact that shares can be considerably more unstable in value than silver; in fact, this tension is at the root of his fateful decision to fix the price of shares in term of notes in March 1720.

Money and Trade, however, places another consideration at the center of his proposal, namely the elasticity of currency. Law wants to put under-utilized resources to work by providing a source of loans to entrepreneurs, thereby stimulating employment, output, and ultimately the demand for money, in a manner compatible with stable prices. He also sees a lowering of interest rates as a desirable consequence of expanding the money supply. This explains his insistence on achieving an interest rate of 2% which justified in his opinion both the high valuation of the shares which he sustained, and the massive debt conversion that he engineered.[1]

Where did the 2% number come from?

Law's writings, however, are close to silent on the centerpiece of the System, the debt conversion and the takeover of all tax collection. No such idea appears in any of his pre-1715 writings, and he makes only vague hints at grandiose projects in his correspondence with the Regent in late 1715. A few apologetic writings dating from March and May 1720 are known, as well as some writings from 1723–24 to the Regent and to his successor as French prime minister, but they shed little light on the rationale for the System.

At one level, it seemed natural for the government to enjoy the benefits of lower interest rates that his Bank had seemingly brought about. In this sense, the debt conversion scheme is a forerunner of the perfectly orthodox policies followed by Britain later in the 18th century, of calling outstanding bonds at their face value and replacing them with less expensive debt once market rates had fallen low enough. This will not fully explain the 3% rate which the Company offered the king, since the market interest rate on government debt stood at 5.3% a month before the conversion was launched (BN, NAF 22245, fol. 294).

Another idea (Law 1934, 3:88–89) is that government debt crowds out productive investment, and converting it into the equity of a trading firm allows to channel savings into wealth-creating activities. But by stating that the Company could someday earn greater returns than the 5% previously enjoyed by bondholders, he flatly contradicts his stated goal of 2% dividends.

[1]The AC of 21 Dec. 1719, which decreed a tax amnesty for fiscal years prior to 1719, also promised that the king would start lending at 2% to his subjects against real estate; and, in late March 1720, the legal maximum on interest rates was lowered to 2%.

Another explanation given by Law (1934, 3:188) in 1723 is political: he would have left the Bank and the Company as they were before the takeover of the General Farms, had it not been for the shaky state of government finances. But, mindful of the difficulties he had met in 1718 in being paid his interest by the king, he felt that his companies would inevitably be raided by the government; lowering the interest on the debt, and thereby bringing the budget into balance, was a way to prevent it.

His takeover of debt collection can be motivated as a tactical move, intended to put out of business the class of financiers who had long profited from the government's poor handling of its finances and its inability to borrow from a capital market. Law's System, as a by-product, had imported into France the active securities markets that Amsterdam and London already had. In the new rationalized system of public finances, the financiers were deprived of their function as lenders, and likewise as tax collectors.

Lüthy (1959–1961, 1:314–5) suggests another tactical reason for the takeover of the Farms: as a consequence of the 1717 decree requiring tax collectors to accept the Bank's notes as legal tender for taxes, they were holding large amounts of notes, and this put them in a position to run the bank at any time. Law's buy-out was necessary in order to ward off this threat from his enemies.

Finally, Law (1934, 3:80, 87, 108, 156) repeatedly argued that centralizing all fiscal functions in a single entity gave the proper incentives to everyone, by aligning the King's interests with those of his creditors. The Bank, merged with the Company, was now a resource that was vital to the government, and he could not afford to default on his commitments to the Bank, and in particular manipulate the currency (see Greif et al. 1994 for a similar argument about the Bank of England). The Company was an single independent entity, controlled in principle by its shareholders and not by the King (notwithstanding the fact that the King was its largest, albeit not majority, shareholder), and in a monopoly position vis-a-vis an otherwise sovereign and unaccountable monarch. This was in some ways an extension of the old principle behind government borrowing from tax collectors (who held tax revenues as collateral for their loans), but also a radical experiment in quasi-democratic control of the crucial element of the State, its ability to collect revenues and borrow.

Chapter 15

Was the System a bubble?

Ondertusschen zyn de opinien aengaende den uytslag van deeze actien, nog zeer verschillende. Het is bekend dat een ieder zegt, dat al het gemunt geld van de gantsche wereld, niet genoeg zoude wezen om de actien van de Compagnie der Indien, op de voet, als die nu zyn, te betaelen; en echter wil ieder een van deeze actien hebben.[a]

[a]The opinions on the outcome of the shares are still quite divided. As is well-known, everyone knows that all the coined money in the whole world would not be enough to buy the shares of the Indies Company at their present value; yet everyone wants to have one of these shares.

Amsterdamse Courant, 11 Dec 1719

Figure 8.1 plots the price of shares in John Law's company, from August 1718 when the initial offering closed to March 1721 when the company went into receivership. Note the logarithmic scale! In July 1718, after the initial offering closed, the price of a share in the Company of the West was around 250L. After the Company's restructuring in 1723, the share price (adjusting for share splits and changes in the units of account) was equivalent to 320L. In-between, the price of shares peaked at 9,525L on December 2, 1719 (and possibly close to 10,000L just before Christmas), and bottomed around 50L in March 1721.

Can the price of an asset rise by a factor of 30 in less than 2 years, and fall by as much in a little more than 2 years, purely because of reasonable beliefs about prospective returns on this asset? The intuitive answer is "no," and, as far as the existing literature goes, suffices. It seems enough to notice the price rise, without paying much attention to what, exactly, the rising price was pricing.

The foregoing narrative suggests two points that I develop in this section. One is that the bubble did not arise spontaneously. The English name of the episode, the Mississippi Bubble, is less telling than its French name, *le système* *de Law*. It was Law's scheme, after all. Whether or not he knew from the start where he was going remains debatable; what is beyond doubt is that a man was behind the company, and the market. It is worth noting here that, while the South Sea Bubble in London witnessed a proliferation of schemes and companies and a broad-based rise in the market for shares, the French bubble concerned only one company.[1] Not only is the market only for Law's company, but Law actively managed the market, and the prices that we see rising in late 1719 are not "pure" market prices. Law had been influencing, if not manipulating, the price of his company's shares for a long time (Lüthy 1959–1961, 1:310, 319).

The second point is that Law's company was in the business of identifying and acquiring a large collection of profitable opportunities. The rise in the price of shares reflects the fact that these opportunities were turned into publicly traded assets. Thus, a rise in the price, in of itself, is not informative. The real question is: How profitable were the opportunities? Did the price collapse merely reveal their true value, or was it caused by other events?

Any economic definition of a bubble will rely on a divergence between a fundamental value based on future earnings and the market value. Was Law's company overvalued? Amazingly, no one has so far tried to answer this question, at least not since (Dutot [1738] 1935, 1:92). Here, I carry out a crude price/earnings calculation. To do this, I need P (the price, shown in Figure 8.1), E (the expected earnings) and some discount rate to which we can compare the ratio.

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[1]Part of Law's scheme was to buy out other trading companies, taking them out of the market. Of other companies there is little trace. Contemporary Dutch newspapers mention plans for a trading company of the North seas in the fall of 1719, but nothing else is known. One company, led by the previous owner of Louisiana, the banker Crozat, issued shares in 1718 to build a canal in Provence.

15.1 Expected earnings

Announced dividends

Law's companies paid dividends twice a year, and dividends were announced in advance (see table 10.1). The dividend announced on Dec. 29, 1719, at the peak of the System, is of particular significance. Could the dividend of 200L per share announced by Law justify the market's price of shares at 9000L?

The mints

Law put an estimate of 10 to 12L for the seigniorage profit that he expected to earn on the lease of the mints. That may have well been the gains made in 1719 on recoinages, but under normal conditions of operation the mints brought negligible profits, since seigniorage rates were set not much above production costs. But, with advance knowledge of his plan to replace gold and silver with fiat money, one could chalk up the stream of revenues to be expected from holding the whole monetary money stock. In other words, the Company would appropriate the social gain made in the move from commodity to fiat money (assuming a well-managed fiat money). The money stock in France at the time was estimated at around 600mL. It is not clear what Law intended to do with this hoard: use it strategically to undermine foreign monetary systems (as the English seriously feared in April 1720, according to their diplomatic correspondence), or invest it domestically in loans at 2%, as Law announced the Company planned to do in 1720. Assuming the latter course, a 12mL annual return was in fact quite reasonable.

Trade

Some information on the trade component can be found in the subsequent history of the Indies Company, which survived the crash and continued for another half-century.

The Company's shares were submitted to the Visa but handled separately from other claims. The number of shares, reduced in successive operations during 1720, was cut in the Visa from 125,000 shares to 55,735. Having cleared its books of any trace of the System, the Company emerged from receivership in March 1723, and in June 1725 a series of edicts absolved it from any further liability for the System, and confirmed its remaining privileges.

At the same time, the Company was placed under tighter government supervision, with the finance minister sitting on the board, and made to focus on its "core competencies." It lost the lease on the General Farms and the mints, and the collection of the direct taxes, in January 1721, and the lease on tobacco in July 1721 (but regained this last in 1723).

An assessment of its balance sheet and prospects in April 1722 (BN Fr 8973) found that its net worth amounted to 46mL and proposed the estimates for its revenues (table 15.1). Certain items (carrying trade in India, Mauritius island, Haiti, Louisiana) were not estimated because the Company had not earned any revenue yet. The unknown (but clearly knowledgeable) writer came to a figure of 7mL in strong money, or 14mL at the standard that prevailed in 1720.

trade	*revenue*
Indies	1.60
Arabian coffee	1.20
China	1.40
Guinea	0.90
Senegal	0.87
Cap Negre	0.15
Canada	0.14
Total 6.26	

Table 15.1: Estimate of the Company's prospective revenues, in mL at 30L/marc, April 1722. Source: BN Fr 8973, fol. 106.

The company initially retained all its trading monopolies, but shed them one after the other as they proved unprofitable or unenforceable, retaining only the monopoly on Canadian furs, the slave trade in Guinea and Senegal, and the trade with India and China (see table 12.2). The Company continued to operate until the treaty of Paris of 1763 deprived France of its possessions in Canada and India, and the company of its commercial viability. The Company was liquidated in 1770 and its shares converted into government bonds Velde and Weir (1992).

The Company share was traded on the market from the end of the Visa in 1722, and quotations were reported in newspapers through the 18th century. As figure 12.1 shows, the price was quite volatile, both at high frequencies and at low frequencies. The main disruptions are wars: Polish succession in 1733, Austrian succession in the 1740s, and the Seven Years War in the 1750s. The Company was obligated to pay a fixed dividend, initially 150L per year, backed by the commercial profits, and by the tobacco monopoly which the king ceded in 1723 in payment of his debt of 100mL (representing the original billets d'État brought by the subscribers of 1717–18). A first crisis brought about a suspension in the payment of dividends in January 1745; the dividends of 1744 and 1745 were not paid in cash; instead, the Company took the coupons (wroth 300L) along with a 200L cash payment, and issued in exchange a 5%-bearing bond, which it endeavored to reimburse over 15 years. When dividend payments resumed, they were set at 80L. A second crisis at the end of the Seven Years War brought about in 1764 a capital call on shareholders in order to maintain the same dividend, and an end to the repurchase of the 1745 bonds.

Figure 12.2 plots the actual dividend payments, with capital calls counted as negative dividends. It also plots the commercial earnings on a per-share basis, and the total net earnings after interest payments.[2] The bulk of commercial revenues (90%) came from trade beyond Cape Hope. Commercial earnings averaged 2.6mL from 1725 to 1769 (64L per share), while total net earnings averaged 7.8mL (162L). Its net earnings (without the tobacco monopoly) averaged 3mL from 1725 to 1730 and 2mL from 1725 to 1740. The average dividend paid per share, inclusive of repurchases of shares in 1730–33, is 117L (at 60L/marc) or

[2]Commercial earnings are calculated as the net revenue from sales of imported merchandise less shipping costs (construction, maintenance and fitting of ships, provisions, wages of embarked personnel). Total earnings adds revenues from the tobacco monopoly and deducts interest payments on annuities and on the 1745 loan. Repayments on the 1745 loan are not deducted, as they are counted as (delayed) dividend payments. I haven't yet found data on other expenditures such as personnel and fixed investment in France and the colonies, so the net earnings figure are an upper bound. They do include the revenue from the tobacco monopoly.

6.5mL in aggregate, in 1719 livres. This figure is twice the 1722 estimate shown above.

Tax collection: the receveurs généraux

finances: total 4,070,000L (multiplied by two for the alternatifs?) Encycl. Méth. 3:457 taxations des receveurs generaux et particuliers: 1,731,661 Fr 7766, fol. 257–59 taxations des RG: réduites à 5d/L jusqu'à 1.5mL, 3d/L au-delà, en 1717 (Enc Method 3:455)

A separate component of tax collection was the direct taxes, taken over from the receveurs généraux in October 1719. They made profits from collecting taxes early and lending out the funds before they were due to be turned over to the central Treasury. Supposing that they could earn 5% interest for 6 months every year on 75mL they collected would lead to an income of 1.9mL. Law put down 1mL in one estimate, 1.5mL in another, and either one seems reasonable.

Tax collection: the fermes générales

The most difficult piece to estimate is the profit on the general farms. The price of Law's lease was 52mL, which was an increase over the previous lease of 1718 (48mL). Dutot ([1738] 1935, 2:214) states that the revenues during the lease year 1720 were 90.4mL, but he does not take into account the fact that the livre was on average at 80/marc during that period: at 60L/marc, this would amount to 67.6mL, or a 15.6mL profit; which is about the profit claimed by the Company after the fact, in April 1721 (Giraud 1966, 3:80), and used as a basis to compensate the Company for the loss of the lease (AN M1026, Premier recueil, p. 113–23). There is evidence that profits would have increased over the next few years. The Farms were managed directly by the government for the next few years, and, according to White (2001), the receipts rose from 61mL in 1721 to 91.5mL in 1725 in that period. That would have yielded an average profit of 22.8mL, but these would not have lasted. During the Carlier lease which followed (1726–32), the average profit was 4.9mL (5.9mL in 1719 livres), but over a lease price of 80mL. That is, the government ratcheted up the lease price when the lease came up for renewal. The experience of the 18th century suggests that the government might leave in the 5–15mL range as profit to the Farms, or roughly 10% of gross receipts (Marion 1914, 1:145–46). Of course, had Law's System continued in place, the government's power and incentives in its bargaining with the Company would have been quite different, knowing in particular that part of the profit it was leaving to the Company would have been paid to former bondholders.

Tobacco

There is better information on the tobacco monopoly: table 15.2 reports information on lease prices paid by successive farmers and, when known, the farmers' profits. The average revenue from 1724 to 1789 was about 25mL (at 60L/marc), from which a lease price must be deducted to obtain the Company's expected profits. In 1719, the Company paid 3mL per year, but, as with the General Farms, the difficulty is in estimating what lease prices would be negotiated in the future. table 15.3 assumes a fairly generous 10mL average profit.

The earnings

Writing in 1723, Law (1934, 3:212–13) counted that he needed revenues of 80mL to pay the 200L dividend to 400,000 shares, omitting 100,000 shares held by the Company as collateral for loans, and a like amount owned by the King (which were ultimately given for free to the Company in June 1720). He presented some estimates of likely earnings to the general assembly, and Dutot presented slightly lower estimates (see table 15.3). I now evaluate those estimates.

As table 15.3 shows, it is not too difficult to come up with an estimate that matches or even exceeds Law's projections.[3] and one can perhaps justify a 200–250L dividend in steady state, with the important caveat that, in steady state, Law could not expect to pay no dividends to the king's shares, or to those shares held as collateral for loans. Paying dividend on those additional shares, based on the earnings estimate of table 15.3, would bring the dividend down to 145–165L.

Even granting the 250L dividend, can one accept a valuation of 9000L per

[3]Harsin's estimate of 99mL (cited in (Faure 1977, 304)) is perhaps overly generous.

Year	Lease	Profit	Year	Lease	Profit
1698–1714	1.5	?	1730		7.0
1715–16	2.0	?	1731–32	7.5	4.5
1717	2.2	?	1733–38	7.8	6.5
1718–21	4.0	2.4	1739–44	8.0	10.5
1722	1.2	?	1745–50	8.0	13.3
1723	1.8	?	1751–56	13.0	12.1
1724		7.9	1757–62	15.0	8.7
1725		7.4	1763–68	22.2	?
1726		6.9	1769–74	23.1	0.9
1727		6.9	1775–80	24.1	2.3
1728		7.1	1781–86	26	?
1729		6.8	1786–89	27–31	?

Table 15.2: Total revenues of the tobacco monopoly, broken down into lease price and farmers' profits, in current livres. Notes: the lease years run from October 1 to September 30. The Company owned the monopoly from 1724 to 1747, and did not farm it from 1724 to 1730, hence there is no lease price for those years. Sources: Dutot ([1738] 1935, 2:222–26), Morellet (1769, 51), Marion (1923, 525), Clamageran (1867–76, 3:254, 402, 444), Matthews (1958, 129–30).

share, a P/E ratio of 36? Law clearly thought so, as he explicitly set a target interest rate of 2% for his System.

15.2 Discount factor

As described above, there are several distinct components to the Company's revenue stream.

The commercial component

Trade

The trade component (6.5mL) can be evaluated by looking at the Indies Company as it survived after 1725. Its price was quoted on the market, and we see

Source	*Law (1)*	*Law (2)*	*Dutot*	*revised*
King's debt	48	48	48	48
General Farms	12	8	15	10
Recettes Générales	1	1	1.5	1.5
Mints	12	10	4	12
Tobacco	6	5	2	10
Trade	12	8	10	6.5–14
Total	91	80	80.5	88–95.5

Table 15.3: Expected revenues from the Company's activities as of December 1719. Law's first evaluation was presented in December 1719 to the shareholders; his second evaluation was made in May 1723. Source: Harsin (1928, 174), and see text.

that the price-dividend ratio fluctuated widely between 4 and 24, and averaged about 15. (figure 15.1).

The tax component

The fiscal component (tobacco, general farms, collection of direct taxes, amounting to 21mL) was probably subject to similar risks as the Indies trade, since the main source of risk were foreign wars. The shares in the General Farms issued by the Paris brothers in 1718 confirms this. From the *Gazette d'Amsterdam* we have a few market prices for these shares, along with some observations on the price of government bonds. The share were expected to earn on average 7%. In late August 1719, the share price rose above par on rumors of a 8% dividend.

Not much growth could be expected to boost the ratio, except perhaps in the tobacco monopoly, which shows 1.5% annual real revenues growth. Overall fiscal revenues grew by about 0.6% annually in real terms from 1726 to 1789, slightly above the estimated 0.5% GDP growth (Maddison 2001).

The debt

The largest component of revenues (almost two thirds) was the king's debt. What was its market price at the time? Before the System, in 1718, the cash price of 4% debt in 1718 was 50% of face value (Forbonnais 1758, 6:67; Law 1934,

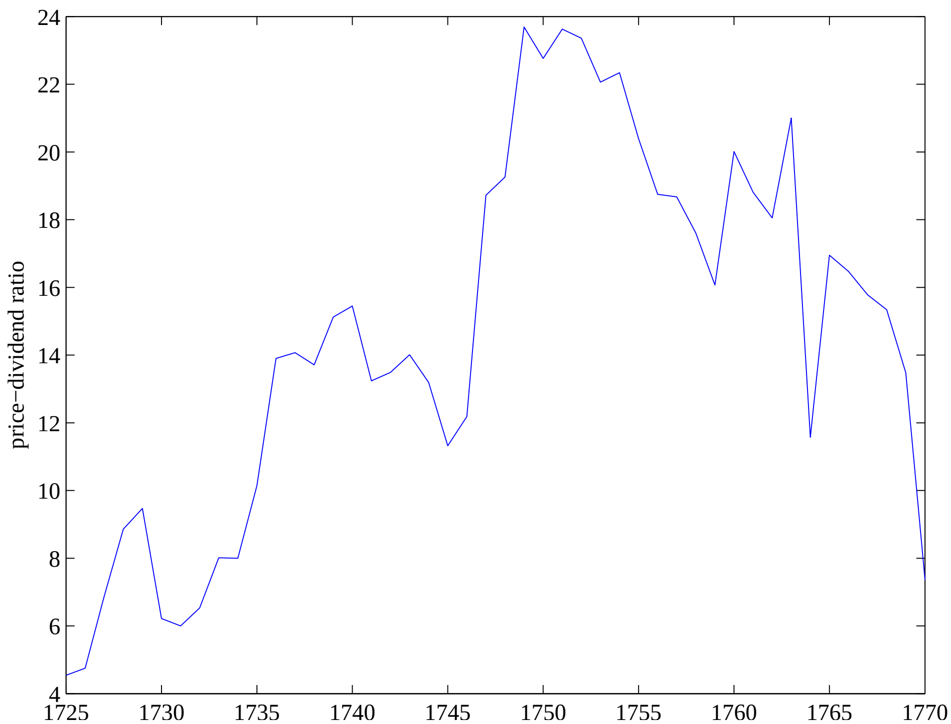

Figure 15.1: Price-dividend ratio on the Indies Company stock, 1723–69. Source: Morellet (1769).

3:199). After the Visa, the average market price of liquidation certificates, which were convertible into 2% debt, was 22% of face value (from prices reported in the *Gazette d'Amsterdam* from February 1722 to February 1724; see also Dutot [1738] 1935, 1:343). These figures suggest a PE ratio of 11 to 12.5. Of course, these valuations of French government debt come from a time when default risk was probably seen as fairly high. A market interest rate of 8% or 9% on French debt is about 5–6% higher than the rate on Dutch debt at the same time, or English debt around 1730. By the early 1730s, French 2.5% debt had risen to 40% of face value, a 6.25% interest rate.

Date	FG	rentes	Date	FG	rentes
9 Nov 1718	56.5	62	29 Jun 1719	91, 92	
10 Dec 1718		67	30 Jun 1719		100
14 Jan 1719		65	26 Jul 1719	105	
4 Feb 1719		75	27 Jul 1719	92	66
9 Mar 1719	64		31 Jul 1719	108	
11 Mar 1719	67	70	2 Aug 1719	105 to 108	
14 May 1719	76		10 Aug 1719	99	
24 May 1719	78		17 Aug 1719	106	
25 May 1719	80		21 Aug 1719	101, 102	
17 Jun 1719	80.5		24 Aug 1719	100	80 to 82

Table 15.4: Prices of Fermes Générales shares (FG) and government *rentes sur l'hôtel de Ville* (rentes), 1718–19. Prices are expressed as percentage of face value. Source: *Gazette d'Amsterdam.*

Sources of growth

Not much growth could be expected to boost the ratio, except perhaps in the tobacco monopoly, which shows 1.5% annual real revenues growth. Overall fiscal revenues grew by about 0.6% annually in real terms from 1726 to 1789, slightly above the estimated 0.5% GDP growth (Maddison 2001).

15.3 A valuation

Let's now add up.

Table 15.5 yields a valuation of 1600–1715mLfor 600,000 shares, or a share price of 2660–2860L, which puts the peak share price of 9500Las overvalued by a factor of at least three. The big difficulty with justifying Law's valuation is not the income, but the discount factor. The calculation isn't quite fair to Law, who used a discount rate of 2%, and who would have argued that his System was bound to reduce interest rates on government debt, both by making the debt more secure and by lowering interest rates in an economy lacking in financial intermediation. He also argued that his System would boost economic growth,

	revenue	factor	value
King's debt	48	12.5	600
General Farms	10	12.5	125
Recettes Générales	1.5	20	30
Mints	12	50	600
Tobacco	10	15	150
Trade	6.5–14	15	97.5–210
Total	75.5		1602.5–1715

Table 15.5: Valuation of Law's Company.

and these claims taken at face value all tend to raise the PE ratio. To justify the market valuation on the basis of 95mL in earnings would require, say, Dutch interest rates of 3.5% and a growth rate of 0.5%. This seems to me as far as one can go on behalf of Law, ignoring any considerations of the riskiness of Law's venture (the risk of his Company's shares would have been highly correlated with aggregate macroeconomic risk, since tax revenues varied sharply with the state of the economy). Unless one is willing to be extremely optimistic about the prospects for Law's success, it seems difficult to avoid the conclusion that the Company was overvalued several times over.

XXX find data on Dutch and English interest rates.

Where did the 2% number come from?

Law's writings, however, are close to silent on the centerpiece of the System, the debt conversion and the takeover of all tax collection. No such idea appears in any of his pre-1715 writings, and he makes only vague hints at grandiose projects in his correspondence with the Regent in late 1715. A few apologetic writings dating from March and May 1720 are known, as well as some writings from 1723–24 to the Regent and to his successor as French prime minister, but they shed little light on the rationale for the System.

At one level, it seemed natural for the government to enjoy the benefits of lower interest rates that his Bank had seemingly brought about. In this sense, the debt conversion scheme is a forerunner of the perfectly orthodox policies followed by Britain later in the 18th century, of calling outstanding bonds at their face value and replacing them with less expensive debt once market rates had fallen low enough. This will not fully explain the 3% rate which the Company offered the king, since the market interest rate on government debt stood at 5.3% a month before the conversion was launched (BN, NAF 22245, fol. 294).

Another idea (Law 1934, 3:88–89) is that government debt crowds out productive investment, and converting it into the equity of a trading firm allows to channel savings into wealth-creating activities. But by stating that the Company could someday earn greater returns than the 5% previously enjoyed by bondholders, he flatly contradicts his stated goal of 2% dividends.

Another explanation given by Law (1934, 3:188) in 1723 is political: he would have left the Bank and the Company as they were before the takeover of the General Farms, had it not been for the shaky state of government finances. But, mindful of the difficulties he had met in 1718 in being paid his interest by the king, he felt that his companies would inevitably be raided by the government; lowering the interest on the debt, and thereby bringing the budget into balance, was a way to prevent it.

His takeover of debt collection can be motivated as a tactical move, intended to put out of business the class of financiers who had long profited from the government's poor handling of its finances and its inability to borrow from a capital market. Law's System, as a by-product, had imported into France the active securities markets that Amsterdam and London already had. In the new rationalized system of public finances, the financiers were deprived of their function as lenders, and likewise as tax collectors.

Lüthy (1959–1961, 1:314–5) suggests another tactical reason for the takeover of the Farms: as a consequence of the 1717 decree requiring tax collectors to accept the Bank's notes as legal tender for taxes, they were holding large amounts of notes, and this put them in a position to run the bank at any time. Law's buy-out was necessary in order to ward off this threat from his enemies.

Finally, Law (1934, 3:80, 87, 108, 156) repeatedly argued that centralizing all fiscal functions in a single entity gave the proper incentives to everyone, by aligning the King's interests with those of his creditors. The Bank, merged with the Company, was now a resource that was vital to the government, and he could not afford to default on his commitments to the Bank, and in particular manipulate the currency (see Greif et al. 1994 for a similar argument about the Bank of England). The Company was an single independent entity, controlled in principle by its shareholders and not by the King (notwithstanding the fact that the King was its largest, albeit not majority, shareholder), and in a monopoly position vis-a-vis an otherwise sovereign and unaccountable monarch. This was in some ways an extension of the old principle behind government borrowing from tax collectors (who held tax revenues as collateral for their loans), but also a radical experiment in quasi-democratic control of the crucial element of the State, its ability to collect revenues and borrow.

Law's claim to have lowered interest rates

15.4 A manipulated market

An important caveat is in order, however. As noted above, the market was being increasingly manipulated over the course of the year 1719, and particularly in the period of explosive growth in share prices, in the fall of 1719. The price of 9,000 reached in January 1720 was sustained only through a massive repurchase program that led to uncontrolled money growth. Law had a target for his share price, partly motivated by misconceptions on the effect of monetary expansion on the interest rate, and therefore on the discount rate; partly motivated by the need to maintain the forward momentum of the debt conversion. Thus, evaluating the price of 9,000L is not making a judgement about the rationality of a free market driven by its own dynamics and expectations.

Overvaluation does not mean bubble or irrationality. It remains to note that the prices which we see rising in late 1719 are not "pure" market prices. Law had been influencing, if not manipulating, the price of his company's shares for a long time (Lüthy 1959–1961, 1:310, 319). In May 1718, to spur the languishing IPO of the Company of the West, Law publicly announced his willingness to buy American call options on the shares. For a 2% price, a shareholder would be obligated to deliver the share at any time of Law's choosing within the following year, for a price of 70% of face value (GA 1718:43); this at a time when the billets d'Etat traded at 65% of face value.

But it is in the late fall 1719 that the Company became an active participant: it lent 2500L against the security of a share (effectively putting a floor on the share price), then on October 5 it announced that it was ready to buy shares at 4500L (GA 1719:83), intervened directly in the market (for example selling for 30mL of shares in one week in November to keep down the price); it intervened again in mid December. Finally, in late December an office was set up to buy and sell shares at prices posted every day (Faure 1977, 307–308, 319, 340). The office operated intermittently until the price of shares was officially pegged at 9000L on March 5; and whenever it stopped its operations, the share prices faltered. From January 1720 at the latest, probably from November or December 1719, one cannot consider the "market" price to represent anything but Law's policies.

Ultimately, massive price manipulation, or price fixing, is what led to the expansion of note issue in 1720. Although Law was probably acting in good faith and out of confidence in his System's prospects, the rise of 1719 is nothing but the preview of the price-pegging of March 1720 and the subsequent monetization of the company's equity.

15.5 A "managed" market

XXX lots of pieces collected together in this section.

The market whose prices are plotted in Figure 8.1 was Law's market, in more ways then one. The prehistory of the French *bourse* is not well known. In the Middle Ages, currency traders in Paris gathered at the "exchange bridge" (*pont au change*) near the mint. In the late 16th century official positions of exchange traders were created, but there was no official location where they met. When Law's company set up its offices in the rue Quincampoix, it provided a focal point for the kind of trading in government securities that undoubtedly existed before. The market had become visible, and it could be tolerated or repressed but not ignored. Finally, the government decided to acknowledge and regulate the market and gave it a permanent location in September 1724.

Law did not only create the market in a physical sense. He also introduced the French to the kinds of financial instruments familiar to Dutch and English traders. In May 1718, the subscription of the Company of the West was still languishing. Law publicly announced his willingness to buy American call options on the shares, "for the convenience of those who have shares in the Company of the West." The announcement, published in the *Gazette d'Amsterdam* (GA 1718:43, May 23), reproduced the text of the option proposed contract. In exchange for a 2% premium, the writer of the option would commit to delivering one share (along with any unmatured dividend coupon) at any time of Law's choosing within the following year, at the price of 70% of face value. As the announcement pointed out, this guaranteed the owner of 100L in billets d'Etat a minimum 76L payoff: the 4% minimum dividend on the share in the course of the year, the 70% strike price and the 2% premium of the option. This compared favorably with the current market price of 65% on billets d'Etat.

A similar offer appeared a year later in the *Amsterdamse Courant* (AC 1719:78, June 26). This time, Law was buying European options on the new Company (presumably the renamed Indies Company) at a price of 200L in January 1720.[4] In this instance, rather than providing insurance to hesitant subscribers, Law was signalling that he believed the stock was heading up.

But it is in the fall 1719, after the debt conversion got under way, that the Company became an active participant in the market, especially at times when the share price sagged.

One such episode took place in late September 1719. The debt conversion had been announced on August 28, pushing the price of shares within the day from 3100L to 3500L. One share issue worth 500m L had been announced on the evening of September 14, when share prices were exactly 5000L. Shares

[4]The announcement states a price of 200L. The price of the share stood at the time around 150% of par, or 750L. It is quite possible that the proposed strike price was 200% of par; the confusion between N par and N livres is frequent in contemporary documents.

gained another 300L within three days, but then began to fall below 5000L in the second half of September. By the time a second issue of the same size was announced on September 30, the shares fell to between 4100L and 4200L. Rising to 4335L on October 2, they fell back to 4200L on October 3 when the third issue of 500mL was announced. Giraudeau's manuscript shows the shares back at 4500L on October 4, 5, and 6 but the contemporary newspapers tell a different story. According to the *Amsterdamse Courant*, the shares fell to 3800L, at which point Law called a meeting of the directors of the Company to deplore that the price of such a good security should be so low, and to discuss the possible remedies. The next day, shares opened at 4000L and closed at 4250L; that day, October 5, the Bank announced that it was willing to buy shares at 4500L; the next day the shares rose to that price, and on October 7 to 4750L. On October 13 the Bank was still buying shares at that price, and the market was barely above 4500 (GA 1719:84). Finally, a royal decree dated October 12, explicitly alluding to rumors of further share issues, formally promised that no other shares would be sold in any manner or form, thus putting to rest the risk of share dilution. The following week, shares rose to 4900L.

Another episode of falling prices countered by Law's intervention took place in December 1719. The problem here was not share dilution, but a liquidity crunch due to the upcoming deadline for making payments on the subscriptions. Recall that the subscriptions were options on shares, and to keep the option alive the owner had to make periodic payments. In late October the first monthly payment on the September issue was coming due, but obligingly a decree of Sep. 20 consolidated the monthly payments into quarterly payments and postponed the first one to December. This allowed the share price to pass the 6000L mark, although the *Amsterdamse Courant* wryly noted that the market being led by successive decrees like an orchestra, it might well end up jumping a whole octave (AC 1719:131). In late December, then, the first payment was due on the September issue, and since it combined three monthly payments, it amounted to 1500L. Speculators started selling some of their subscriptions in order to finance the payment on the rest, and this pushed prices down. From a peak of 9525L on December 2, the price of the shares had drifted down to 9250L on December 9 and then plummeted to 7430L on December 14. Likewise, the subscriptions fell from 5700L on December 2 to 3000L on the morning of December 14. That day, the Bank once again intervened by posting a purchase price of 4000L, and by the evening the subscriptions were back at 4500L. Nevertheless, the Company maintained the existing schedule for the down payment on the subscription, dashing the hopes of those who had counted on a postponement to mid-January, and keeping the price of subscriptions lingering around 4000L. Then talk of the upcoming general assembly of shareholders on December 30 gathered momentum. The original shares reached their recorded all-time high on December 23, at 10,000L.

Throughout this period, the Bank also lent 2500L at 2% per annum against the security of a share, effectively putting a floor on the share price as well as fueling speculation with easy money. The total lent under this program amounted to 276mL.[5] On Dec. 30, 1719, at the General Assembly, the Company decided to open a window where shares and subscriptions could be bought and sold for prices posted each day (Faure 1977, 307–308, 319, 340). The office operated intermittently: it closed temporarily between January 10 and 15, then again from January 29 to February 10; each closure brought a fall in the share price. Finally, the price of shares was officially pegged at 9000L on March 5. By May 1720, the Company had bought 800mL worth of shares, or about 16% of its capitalization, with a corresponding addition to the money supply.

From January 1720 at the latest, probably from November or December 1719, one cannot consider the "market" price to represent anything but Law's policies.

The market was thoroughly managed, if not manipulated, and for good reason. It was a crucial aspect of Law's scheme that the share price remain high. As long as the PE ratio was higher than the comparable effective ratio on government bonds as of August 1719 (about 22), the conversion of bonds into shares was worthwhile for the company and the government. However, the call-option feature of the subscriptions meant that bondholders (who were

[5]Dutot (2000, 183,197). Dutot states that the Bank began lending in March 1719, which is not plausible given that the share price at that date was less than 500L.

obligated to accept repayment of the bonds but not necessarily in the form of shares) could back out if the price of shares fell too low for their liking and lead to the scheme's unraveling, and there is evidence that the former bondholders were not all in a hurry to convert their bonds into shares.

This manipulation had disastrous consequences for Law, as he probably realized if we can judge by the inconsistencies and sudden reversals that mark his policies between late February and early March 1720. On February 22, 1720, the bank was merged with the company with the intention of preventing it from lending to the king. Also, the company stopped its price support. The effect on prices was immediate: from the support price of 9425L the market price of shares fell to 8000L by March 1, while the subscriptions fell from 6600L to 5450L. Law quickly reversed course on the price of shares and, on March 5, opened another office for the buying and selling of shares at a fixed price of 9000L. At the same time, the outstanding subscriptions lost their option and were all converted into shares at a 2:3 ratio, while reimbursements of the public debt continued to be made, but in bank notes. This removed the problem of enticing bondholders to convert their bonds, since they were now reimbursed in what had become full legal tender; but, of course, at the cost of transforming a debt-equity swap into a pure monetization of the debt, with predictable consequences for exchange rates and inflation. From March to late May 1720, the company spent another 1319.5mL in notes to buy 28% of its stock, resulting in a colossal increase in outstanding notes.

The seeds of destruction were sown, and Law was soon forced to control the nominal money supply, by either reducing the number of outstanding notes or reducing the face value of each note. He tried the latter on May 21, 1720, resulting in a collapse of confidence. He tried the former from June to August 1720, buying back notes with coins, bonds, new shares, and bank account balances, all to little or no avail. On August 15, a gradual demonetization of the notes was announced and carried out. By November 1720, the monetary experiment was over, and Law's company was insolvent. Law went into exile on December 18, and it was left to others to pick up the pieces.

15.6 Market rationality

Black and Scholes in 1719

As noted earlier, the soumission issued in September 1719, with its down-payment and staggered installments, had the nature of an option. Was it priced as such correctly?

Figure 15.2 compares the actual price of the soumission with its theoretical counterpart, using the volatility of the share price over the previous 30 days. Figure 15.3 plots the volatility implied by the actual price of the soumission, against the 30-day volatility. The two pictures are produced using the classic mapping from volatility to option price and vice-versa implied by the Black-Scholes formula (assuming a discount rate of 5%). The formula is applied as if the soumission were an European option with the sum of all payments (4500L) payable in one payment in June 1720.[6]

The graphs suggest two thoughts. One is that the soumission's valuation was not unreasonable by the standards of modern theory. The other is that, in late 1719, the soumission's price seems to imply a much higher volatility than that recently experienced by the share: in other words, the soumission price (which was being supported actively by Law) was overvalued.

More needs to be done here, in particular in teasing out of these prices what the market's expectations were about the future evolution of share prices.

Market froth

The South Sea bubble, as is well-known, centered on speculation in the shares of the South Sea bubble, but, as has been documented by Neal (1990), the rise in the price of South Sea shares carried with it many other, unrelated shares (it also prompted a number of IPOs). There is so far little evidence that the same phenomenon occurred in France. This may be in part a problem of documentation: the main source for securities prices is a compilation produced in 1724, after the collapse of the System, and probably in relation with the

[6]A (sizeable) dividend was announced in late December 1719 and actually paid on paid-up shares (i.e., options exercised early) in the first half of 1720: in other words, the American option was not without value, but I am ignoring it for simplicity.

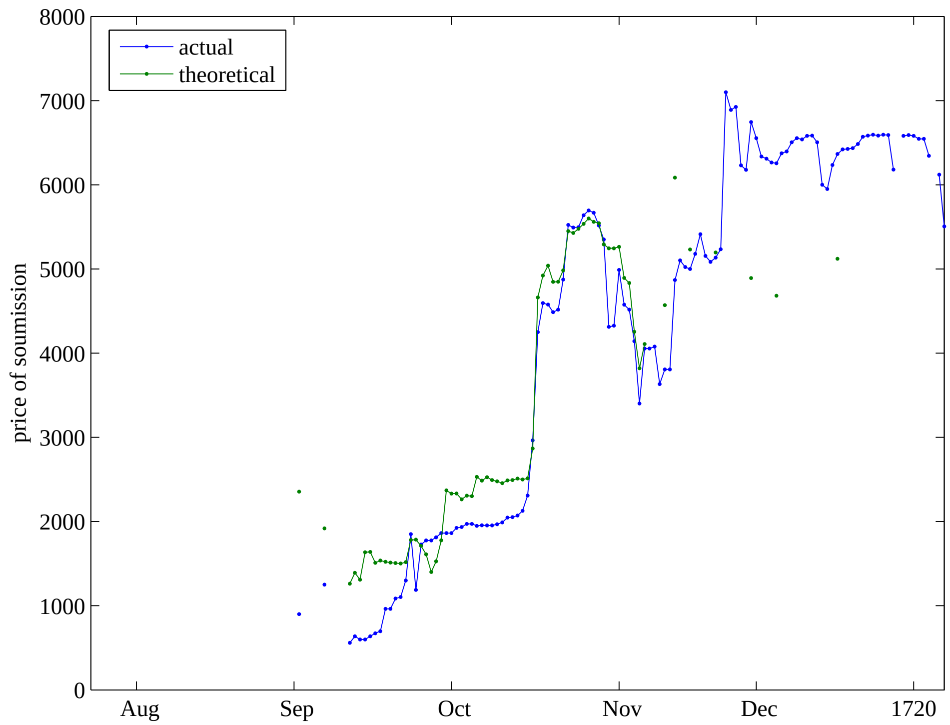

Figure 15.2: Actual and theoretical price of a soumission.

Visa operation; if so, it is natural that it focussed only on securities related to John Law's company (and government bonds which were involved in the debt conversion). But even the contemporary price sheets do not show any other stocks being traded. The Dutch papers carried rumors in August and November 1719 of the creation of a Company of the North to carry out trade with northern Europe, but this was thwarted by Law's Company announcing that it would itself enter this trade.

The only evidence I have found so far is for a company to build a canal from Marseille to Lyon; shares were offered for sale in June 1718, and there is one report of a share price in March 1719. This company was apparently founded by Crozat, a financier who had been Louisiana's last owner before Law.

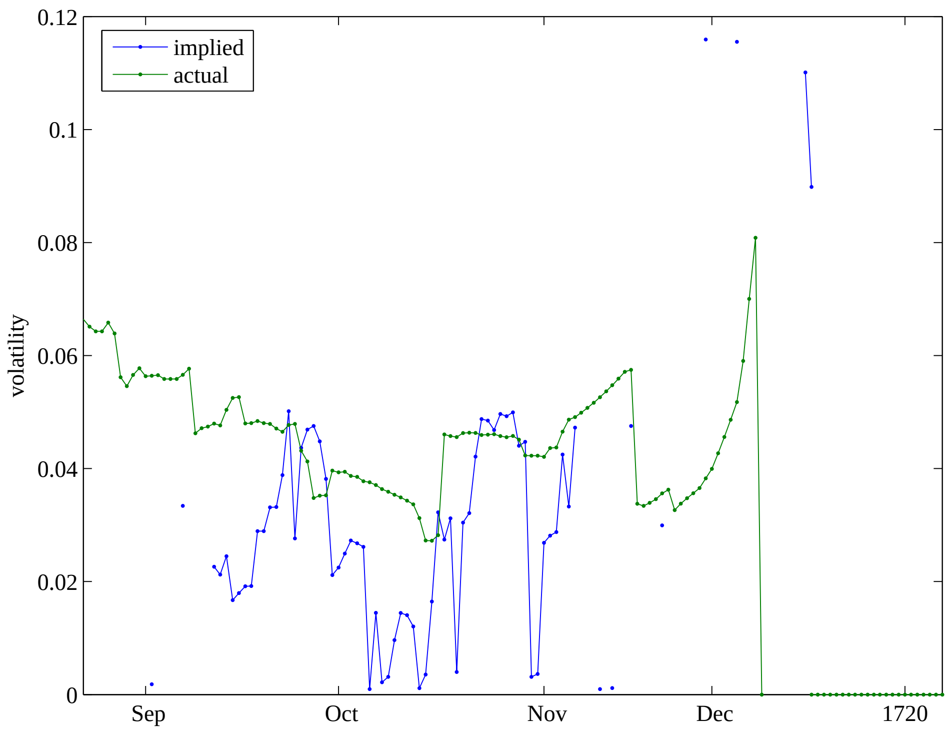

Figure 15.3: Actual and theoretical volatility of the share price.

This company continued into the late 1720s, when it changed its purpose to building a canal in Picardy.

15.7 Further thoughts in defense of John Law

Also remains to be done a formal evaluation of the viability of John Law's System. Cochrane (2005) discusses money as stock, supposing that Microsoft shares were used as money, and valuing this form of money based solely on the basis of Microsoft's future dividends. In fact, in a model where money serves some purpose and has therefore has value above its intrinsic content, Microsoft shares used as money would be worth more. The calculation done above neglects this aspect; likewise, it does not formally allow for the possibility that his System would have increased the productivity of the French economy, by improving financial intermediation and eliminating deadweight losses due to the inefficient fiscal system which hobbled France throughout its long rivalry with Britain in the eighteenth century. A successful implementation of "government equity" to replace government debt, which could have freed the government from the all-too frequent resort to manipulations of the price level Sims (2001) might also have removed some of the risk premium imbedded in nominal interest rates in France.

15.8 Conclusion

Although Law's experiment has been called a "bubble" in the English language since at least the mid-18th century, it is not a classic example of a bubble in the modern sense of the word.[7] Law's ambition was a wholesale transformation of French public finances, achieved through two radical innovations: the replacement of metallic with fiat money, and the replacement of government debt with equity.

Both conversions were to be voluntary, as they had to be if the goal was to endow France with the kind of credit that would give it the necessary edge over its Dutch and British rivals for European dominance. But this required Law to manage the market's expectations more and more forcefully and reach a price peg for his company's shares that was too high. I find that the peg was two or three times too high. In that sense, the company was overvalued, not by a frenzied and irrational market, but by Law himself.

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[7] Whatever Swift meant by the title of his poem on the South Sea, "bubble" as verb or noun meant "swindle." Law's decision to invest his fortune into French real estate does not suggest a bubble in the eighteenth-century sense either.

Chapter 16

Did the System make sense?

Try to limit the discussion to the mechanics of the System, as opposed to its long-run benefits or potential (reserved for next chapter).

On a conceptual level, Law's System involves a number of basic principles that are not absurd. His debt conversion scheme relies on the idea that all government liabilities are backed the same way, with future revenues that are either strictly fiscal (revenues from existing taxes) or quasi-fiscal (the ability to create monopolies). In fact, the French monarchy had a long history of raising funds by selling claims to these revenues. Furthermore, that backing is inherently stochastic. The debt conversion simply made explicit this stochastic nature, by converting existing claims on a constant component of these revenues into claims on the variable component. It also generalized an existing commitment device, whereby the tax collector serviced the debt. The novelty was to do so at once, with a single entity, and retroactively for the entire existing debt.

Emphasize the novelty.

The other novelty of Law's scheme was the replacement of specie with paper. This was the more radical innovation, and one that stood in ill repute for much of subsequent time. By the 1930s, of course, increasing experience with fiat money and the notion that government policy (including monetary policy) could and should be used to stimulate the economy resulted in a rise in Law's reputation. History does not suggest, however, that the first large-scale experiment with paper-based fiat money was likely to succeed (see Sargent and Velde 2001 for earlier experiments with fiat money).

16.1 The Company and the Farms

As noted earlier, the viability of the System depended in large part on the relations that would exist between the King and the Company. Greif et al. (1994) suggest arguments why placing a monopolist vis-a-vis a sovereign without commitment technology might be a good idea. The clean separation of the two actors did not obtain in practice, however: the King was a major shareholder, Law was both the king's minister and the Company's CEO, and ultimately the Company's powers and monopolies derived from the King's will.

Discuss the general problem of tax-farming, its causes, its advantages and how Law's system would have addressed/enhanced them.

16.2 The absolutist temptation

Disconnect between Law's early emphasis on credit and his later use of coercion to sustain his System. If the creator of the System could so rapidly resort to force, how could the System, even if properly implemented, have resisted the absolutist temptation?

Law's writings from during and after the System are replete with justifications of coercion (notably the measures against gold and silver in early 1720) in the better interest of people: "it was necessary to use authority and induce the people to contribute to their own welfare," "the law is necessary to save men from their own hands" and a commentary on John 5:6 to the effect that "some sick men refuse to heal" (Law 1934, 3:91, 110, 170).

16.3 Conclusion

Quantitatively, the crucial aspect of Law's System was the ability to justify a high enough share price to carry out the debt conversion on profitable terms. To offer the king better terms than he was paying on his debt, the PE ratio on the Company's shares had to be higher than 22. A dividend of 125L (based on the revenue estimate of table 15.3) and Dutch-like interest rates of 3% could bring valuation to about 5000L, the price at which Law launched his debt conversion in September 1719. With the benefit of modern theory and experience, and with a good dose of optimism, it is possible to accept that the System could have worked.

Chapter 17

Why did the System collapse?

The view that the System was driven by a stockmarket bubble takes care, in a slightly vacuous way, of explaining the price rise of 1719, and leads into a search for an explanation of the crash itself. There are naturally the usual conspiracies of powerful vested interests threatened by Law's reforms, which Law himself, Dutot, and Murphy blame generally. Haudrère (1989, 1:78) claims that disappointing results in Louisiana were not known until the second half of 1720 and that profit-taking was to blame for the downward pressure on share prices. Law (1934, 3:110) himself, in March 1720, rails against people who try to cash in on the high prices, without understanding that the shares are assets to be held for their income like real estate: "men must put themselves in the same frame of mind with respect to the shares as to their other assets; it seems that they have a hard time doing so on their own."

In my view, the rise itself was the result of covert and later overt price support, carried out in part to entice the bondholders to submit willingly to the debt conversion. The massive conversion of shares into notes in the first half of 1720 can be seen as profit taking, or simply as the result of an asset being pegged at too high a value. The collapse was stanched by Law's ability to print notes and at the same time create demand for them with the demonetization of gold and silver. But, aside from the openly coercive nature of the procedure, the exchange rates were soon indicating that this would not be sufficient to prevent inflation. Once Law started backtracking, in May 1720, no orderly retreat was possible.

It is harder to understand why Law insisted on pegging the shares so high. Lüthy (1959–1961, 319 n40) argues that early insiders had an interest in keeping share prices up until they could reap their profits. Whether this was enough of a consideration to move Law in such a dangerous direction is questionable. It seems more likely that he miscalculated the price of shares (or, equivalently, the long-term interest rate) at which he thought the System was sustainable.

Chapter 18

Was the System a default?

Whatever Law's original intentions (and there is no evidence that he originally intended to default on the debt), the debt conversion into a more or less compulsory monetization into notes that were ultimately not convertible into silver.[1] The point of the Visa was to reverse this monetization by another forced conversion of notes into bonds. The reduction from 2800mL in notes, or 2200mL in claims submitted, to 1500mL in bonds, is called by Marion (1914, 1:112) "yet another default, following the reductions of 1713 and 1715, the first visa [of 1716], the conversions of 1720, preceding the new violations of public faith by Fleury, Terray, and many others, and perpetuating a tradition disastrous for creditors and which would continue throughout the Old Regime."

Yet a large part of this mass of notes was issued in exchange for shares, themselves exchanged for bonds. The nominal amounts involved do not matter to the question: was it a default? Table 4.1 shows that the debt burden was roughly the same in 1724, after the System and the Visa, as it was in 1717 after the operations of the Noailles administration.[2] The debt was increased in the meantime (I estimated about 150mL), but not by a large amount. If default there was, it was on the order of 5 or 10%, which is modest by the standards of the Old Regime denounced by Marion. As for the Visa itself, it is hard to see the deployment of so much bureaucratic talent as a default.

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[1]Faure's book, titled "Law's bankruptcy," refers to the date of July 17, 1720, when the Bank suspended payment.

[2]A difficulty in comparing debt service over time in French accounts is the treatment of offices, which is not always consistent (White 2001). table 4.1 includes them.

Chapter 19

Was the System a swindle?

Was Law a swindler? His Company was not an empty shell, but immediately and aggressively engaged in its trading and colonizing business, sending ships east and west, founding New Orleans (named after the Regent). His reforms in tax collection and fiscal administration were short-lived but Marion (1914, 1:105–07) recognizes their value.

Most strikingly, while Law initially grew rich with his System (as was surely his plan), he invested his fortune (at least 9.5mL according to (Marion 1914, 1:99)) in French real estate, not a good move for someone planning a quick getaway.

Law claimed to have arrived in France in 1715 with 1.5mL, a claim he said could be verified through records foreign exchange remittances. He bought a quarter of the shares in the Bank, and its nationalization in 1718 must have at least doubled his stake. He bought 20,000 shares in his Company of the West (Law 1934, 3:246). *To be continued. Use material from AN K884, V/7/254.*

Chapter 20

Did Law matter?

Here I speculate on the impact of Law contemporaneously, as well as in the long-run.

Use the data I have on woollen production to analyze the impact on the French economy.

20.1 Impact on French public finances

To a large extent, the System appears in French financial history as a momentary aberration, followed by a return to business-as-usual. Is this a correct view?

In French finance, the eighteenth century (after 1726) looks rather different from the seventeenth century. A number of methods are abandoned: the reformations, and more generally manipulations of the coinage, cease after the reformation of 1724 and the devaluation of 1726 (the only operation remotely connected is the mandatory monetization of silver plate in 1759, which was a means to subject nonmonetary silver to the seigniorage tax). The *chambres de justice* disappear after 1716. Creations of offices are never again seen on the same scale, and in fact slow progress is made over time in redeeming existing offices, until the wholesale buy-back of 1789–90. Resort to special contracts with financiers (*partis*, *traités*) also ceases: tax revenue is mostly increased either by new direct taxes (the various *dixièmes* and *vingtièmes* which follow on the Paris brothers' innovative *cinquantième* of 1725), or by increases in indirect tax rates.

Other methods appear. After 1724, the secondary market for government bonds is officially acknowledged and organized. From the late 1720s, the government starts experimenting with lottery loans (in imitation of Dutch and English practice), at first indirectly with the floatation of Indies Company loans, then directly. The War of Polish Succession sees the first return of the government to a market that has by now well recovered, and bearer bonds (unknown in France before Law) are issued.

Whether or not Law has anything to do with it, his era marks a turning point, at least as far as methods are concerned. But methods and financial tactics only go so far. The problem of the French monarchy was not its inability to issue this or that type of bond, it was its inability to secure the tax revenues needed to back its bonds; in other words, the lack of a fiscal constitution (Sargent and Velde 1995).

20.2 Impact on financial development: Law the innovator or Law the crippler?

It is a received idea that Law's System set back financial development in France for a hundred years. True?

20.3 Would Law have mattered?

Indulge in wild speculation. If Law had succeeded, how would history have changed?

Place in context of literature on the links between public/private finance and development and politics (both in empirical macro/development and in economic history). Link between government and governance.

Chapter 21

What to make of the System?

XXX find the main opinions on Law: Dutot, Levasseur, Thiers, Harsin, Faure, Murphy. Use this as a foil to develop my own judgment.

The interesting thing is to ask whether, if his system had worked, would these innovations have stuck? Was France, anno 1720, ready for paper money. Would the temptation to resort to inflationary finance not have caught up with them later on eventually and could the system have survived in the longer run with fiat money?

This book is about a single data point, a unique although hardly unknown experiment. No theory will be proved or disproved by it. It is also a large-scale and extremely complex experiment, involving aspects of finance, public finance, and macroeconomics, and carried out at the scale of a country. The System is of interest, beyond its picturesque details, either as an example or a point along a path of theory and experimentation. Law's interest in creating a fiat money that would serve as a tool for policy-making is almost anachronistic; indeed, his critical fortunes did not revive until the 1930s, when such a notion became orthodox. The other concept that emerges from the System, that of government equity, is not one that has been formally reprised yet; Law may turn out to have been even more of an anachronism than we think.

Law's System was a unique experiment in many ways. Perhaps it should be removed altogether from the classic collection of early bubbles and examined in its own right, not so much as a precursor to modern stock-market bubbles, but as a case study in macroeconomic experimentation gone wrong.

The Securities

Chapter 22

Sources

John Law's System (1716–20) consisted in a pair of privately owned companies, a bank, originally called the *Banque générale* and later the *Banque Royale*, and a trading company, the *Compagnie d'Occident* (Company of the West) later called the *Compagnie des Indes* (Indies Company). These entities issued an number of financial instruments, many of which were quoted on the Paris market. This appendix documents the various instruments. It is organized as follows. The first section briefly describes what is known of the market. The next sections describe the instruments, beginning with the shares (section 2), the notes of the Bank (section 3), and other instruments (section 4). Section 5 describes the fate of these instruments after the collapse of the System.

22.1 The Paris stock market

The Paris stock market at the time of John Law was less developed than those of Amsterdam or London. Brokering in currency, commodities and securities was first regulated in 1572, when offices of *courtiers* (later called *agents de change*) were created; but they did not have a monopoly on brokerage until 1705. At the time of John Law's System there were official brokers in Paris (numbering sixty), Lyon, Marseille and Bordeaux. Their fee was 1/4% on securities (bills, notes, cash) and 1/2% on commodities. They were allowed to conduct business at their homes, and had to keep records. They were prohibited from trading on their own account (in other words, they were not market makers). The offices were replaced by commissions from August 1720 to February 1723 when the offices were restored; the regulations of 1723 would remain until the Revolution.

Money changers had met since the Middle Ages on the bridge called the

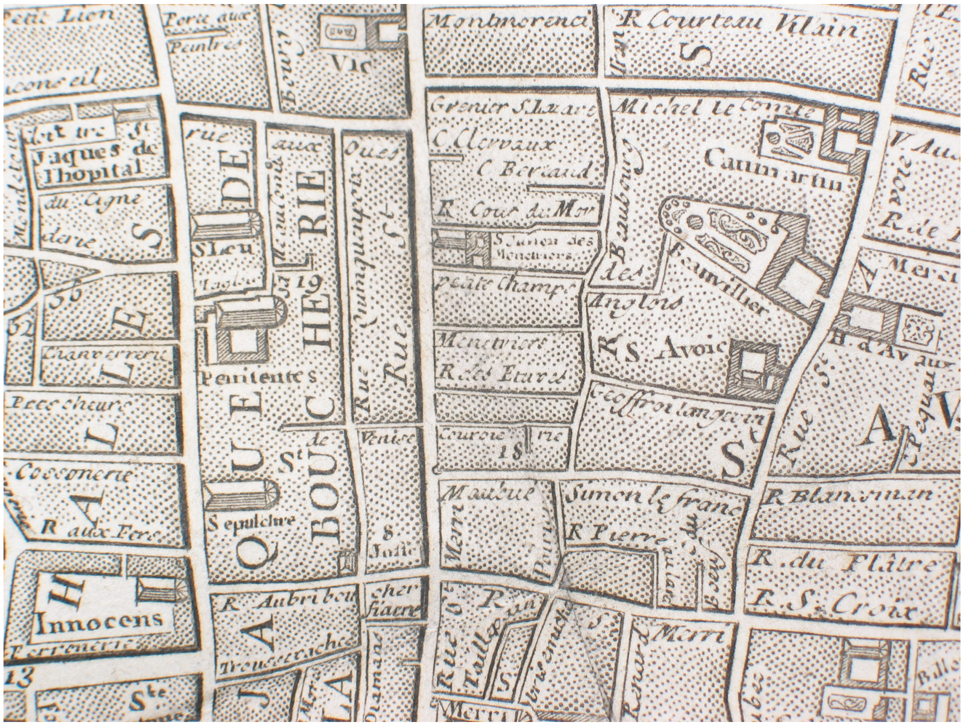

Figure 22.1: Detail of a map of Paris (1737) showing (from left to right) the rue Quincampoix, rue Saint-Martin, rue Beaubourg and rue Sainte-Avoie. Source: Delamare (1705–38, vol. 4).

Pont-au-Change, connecting the Île de la Cité with the right bank. In the 17th century, they moved to the nearby Palais de Justice, in the cour du Mai. When the Bank was created an informal market appeared in front of its offices in the hôtel de Mesmes, rue Sainte-Avoie (now rue du Temple). The market followed the Bank when it moved to the hôtel de Beaufort, rue Quincampoix, by the fall of 1719. On October 26 the king posted a permanent guard of 15 men in the street to maintain order (Hautchamp 1739, 5:274); and a section of the street was closed off with gates at either end. Enforcement of the rules (NAF 11222). The Bank and the Company moved to new offices in the hôtel de Nevers, rue

Figure 22.2: Detail of a map of Paris (1737) showing the neighborhood of the Compagnie des Indes (top left), the Palais-Royal where the Regent resided (bottom left) and the Hotel de Soissons (right). Source: Delamare (1705–38, vol. 4).

Vivienne (presently part of the old Bibliothèque nationale), which Law had bought in May 1719 to locate the headquarters of the Indies Company; but the street market remained rue Quincampoix until it was shut down on March 22,1720 (Buvat 1865, 2:39, 59, 97). Link to the murder by the comte de Horn. XXX Check Simone Balayé, 1988 Droz sur l'emplacement de la banque et de la Bourse. *Project to set up a bourse in the Saints-Pères; NAF 11222 f.287r.* By late May, when the Bank suspended payments, trading was taking place near its offices. On Jun. 1, 1720 the market was moved to the place Vendôme or place Louis-le-Grand (at the time a construction site) where traders set up tents

(Barbier 1857, 1:38; Marais 1863–68, 1:273, 281). A guard was posted there on June 14 to maintain order (NAF 2560, fol. 11). In August 1720, at the same time as offices were replaced by commissions, a formal market (*bourse*) was created and located in the gardens of the hôtel de Soissons, which had earlier housed a casino. One hundred and fifty enclosed stalls (137 according to AC 96), were rented for 500L per month to traders. A set of regulations was issued by the king, prescribing opening hours, etc. On October 25 the Bourse was abolished and trading prohibited except in the offices of the brokers (Marais 1863–68, 1:359, 472–73); the market in the hôtel de Soissons was shut down on October 29.

The market remained semi-clandestine and without official location. In February 1722 it was located rue Saint-Martin near the rue aux Ours, very close to its old location rue Quincampoix (Buvat 1865, 2:347); and in April 1723 it was in the hôtel des Quatre-Provinces, in the nearby rue Beaubourg (GA 1723:34).

In early 1724, the price of Indies shares displayed very large movements, rising from 1400 in January to a peak of 2400 in late March, and back down to 1700 in May; options were traded again, both short-term and at two or three months. Tumult in the market led police officials to post a permanent guard in February 1724, and suspicion that speculation was driving these gyrations led to the government to recreate a formal stock market in September 1724. The market was permanently moved rue Vivienne, next door to the Indies Company. The old galerie Mazarine, on the ground floor, was renovated and fitted at government expense; at the same time the *bourse* was officially created and placed under the supervision of the Paris police. The government also created offices of stockbrokers and defined their duties. The new location was inaugurated by the lieutenant général de police of Paris on October 17, 1724 (BN NAF 4287, f. 29v). This arrangement remained roughly unchanged until the Revolution (see White 2003).

22.2 The sources for prices

Price courants

In spite of the informal nature of the market at the time of Law's System, prices were collected and distributed in the form of price lists or price courants (see McCusker 1975 for analogues in other European markets such as Hamburg, Amsterdam and London). Only a few originals have survived: a handwritten list for July 27, 1719, and fourteen pre-printed sheets with date and prices filled in by hand, all issued by an official broker (*agent de change*) named Marine, located in the rue Quincampoix itself.[1] These price sheets, so far unnoticed, do not add many data points, but provide useful information, because they represent direct and contemporary testimony on the securities traded.

Pierre-Louis de Marine is listed as an *agent de change* from 1720 to 1749 in the *Almanach Royal*; Pierre Navarre is listed from 1713 to 1723. Marine received a commission on April 19, 1720 (AN V/1/240, p. 6) and a second one when the offices were recreated, on October 19, 1720 (AN V1/240, p. 45). He died on Dec 18, 1748. He was therefore practicing at the time of the System, and apparently was known to have kept detailed notes of the prices of various securities, since his signature appears in legal proceedings of 1727 to certify the value of a security on 26 Nov 1720 (V/7/262, liasse 19 [EJH]).

The Giraudeau manuscript

Navarre's notes served as the main source for a manuscript compilation made in 1724 by Giraudeau, the nephew of another broker, and studied by Faure (1977, 204) and Murphy (1997, 367). The manuscript's title is *Variations exactes de tous les effets en papier qui ont eu cours sur la place de Paris à commencer au mois d'aoust 1719 jusqu'au dernier mars 1721; avec la citation de tous les arrêts, édits, déclarations et lettres pattantes concernant lesdits effets, par le sieur Giraudeau, neveu, négociant à Paris.* An *agent de change* by the name of Giraudeau is listed in Paris from

[1]BN NAF 22245, fol. 294–305; Bibliothèque de l'Institut (Chantilly), Ms. 1063, fol. 7–12. The dates are Nov. 4, Dec. 9, 1719; Dec. 6, 1720; Jan. 29, 30, 31, Feb. 4, 5, 8, 11, 15, 28, Mar. 17, and Apr. 4, 1721. There is also a copy of a report for the week of March 22, 1718 in the Archives de l'Assistance publique, fonds Montyon, Fossoyeux 101, carton 22(1).

1715 to 1728 in the *Almanach Royal*; he is called "Pierre Giraudeau oncle" in the arrêt appointing sixty brokers (agents de change) in 1724 (Hautchamp 1743, 4:124). The author of the manuscript is no doubt his nephew. Giraudeau neveu is known for having published in 1726 and 1727 several books of tables for merchants.[2] He may well have worked for John Law, since a notice in the *Amsterdamsche Courant* (1721, n. 1) dated December 30, 1720 names as clerks of John Law Mongin and Guiraudiau [sic]. We also know that a person named Giraudeau was among those appointed on Oct. 24, 1719 to sign bank notes, and Murphy (in Dutot 2000, XXXVIII) supposes it could be the same person.

There are four extant copies of the manuscript. One is in the Bibliothèque Mazarine, MS. 2821, inscribed "pour Mr Duclosneuf," undoubtedly René Liber du Closneuf, one of the *premiers commis* of the finance ministry from about 1708 until after 1726 (Antoine 2003, 402,470) and secretary of d'Argenson in 1720 (G/7/24, 20 Feb 1720). One of his responsibilities was the stock market: we see the appointment of a commissioner at the Bourse in charge of detecting counterfeit securities transmitted for execution to him (AN G/7/791, March 26, 1725). Another copy identical in format, title and content, is in the Bibliothèque de l'Arsenal MS. 4061, inscribed "pour Monsieur Dubois".[3]. A third is in BN Ms. Fr 14092, with a slight variation in format and title. A fourth is in the BN, Réserve des imprimés, collection Fontanieu Z 211. There are very minor differences in quotes between the manuscripts. I used the BN 14092, Arsenal and Mazarine manuscript as basis; when two manuscripts agreed against a third one I went with the majority.

The inscription on the Mazarine copy suggests that this compilation was made for officials of the finance ministry.Indeed, there were a copy of the manuscript in the library of Gaspard Dodun, who was finance minister from

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[2]A pamphlet converting weights and measures of Europe into French units (BN, 8–V–11794), a tax schedule for the *cinquantième* tax (BN, V–19802); and a set of tables to calculate foreign exchange transactions titled *Le Guide des banquiers de l'Europe* (BN, V–6798). In the preface of this last work, dedicated to the contrôleur général, he says that he had "applied [himself] from his youth to learn the skills specific to trade by principles."

[3]This unidentified "Monsieur" is not likely to be the Regent's minister, who was archbishop of Cambrai since May 1720, cardinal since July 1721, and dead in August 1723; at a minimum, he would have been styled "Monseigneur."

1722 to 1726, and in the library of his successor Claude Le Peletier Desforts, in office from 1726 to 1730 (BN Δ 1283, Δ 10869).

The manuscript consists of 25 tables of prices for various instruments (notes, shares, bonds) quoted between August 1719 and March 1721. The document was compiled a few years after the events, although based on notes taken during the events, and the numbers it contains appear reliable with some exceptions discussed below. Writing almost 20 years after the events, Dutot relied on a very similar but more extensive source, since his notations occasionally complete Giraudeau (for examples Dutot [1738] 1935, 2:273–78, Dutot 2000, XXXVIII, 338–39, 358–59. It is likely that he consulted Navarre's notes directly.

Giraudeau's manuscript contains price series for 23 different instruments (shares, fractions of shares, options on shares, bonds, bank accounts, and notes of various denominations). The nature of the instruments, as well as the way in which their prices are reported, are explained in this part, presented in chronological order of issue.[4]

Finally, some indications of prices can be gleaned from contemporary sources such as diaries, letters, and *nouvelles à la main*, but they are subject to great difficulties in interpretation, because of the variety of instruments and methods of expressing prices, as will be discussed in the next chapter.[5] One source, so far unexploited, provides crucial elements. The *Gazette d'Amsterdam* was a bi-weekly summary of news from all Europe, published in French in the Netherlands from 1691 to 1796. The dispatches from Paris occasionally mention market prices of government bonds. Starting in July 1718, soon after

[4]The price sheets indicate that other instruments were quoted in 1719, mostly government securities. Paris-Duverney (1740), Dutot ([1738] 1935), newspapers, and various correspondances of the time cite prices from the 1715–16 period. Dutot's prices, compiled in the 1730s, come from bankers' registers. Some securities are interest-bearing notes from the time of Louis XIV (*billets de Monnoye*, *billets de l'Epargne*, *billets de la caisse commune*, *promesse des gabelles*), others are perpetual annuities (*contrats sur la Ville*, *contrats sur le contrôle des actes des notaires*, *rentes provinciales*). Shares, subscriptions for shares, and dividend coupons of the short-lived *Fermes Générales* company were also quoted in the price sheets cited above. A copy of one dividend coupon for the Fermes Générales is in the Musée Carnavalet, Paris, collection Fabre de Larche GB 22. All of these securities disappeared in the course of the debt redemption carried out by Law in late 1719.

[5]See for example Buvat (1865, 1:424, 436, 452, 453, 455, 457, 458, 462, 473, 477, 2:39).

the first initial offering of shares of the Company closed, the *Gazette* reported prices, with increasing frequency as the price rose. A total of about thirty new observations can be gleaned between July 1718 and July 1719. The prices reported from August 1719 to February 1721 generally agree with those of Giraudeau.

Chapter 23

Equity shares of the Indies Company: the early period (1717–19)

Shares in the Company of the West and its successor the Indies Company were sold in four successive issues between 1717 and 1719. Then, in the course of 1720, the shares were subjected to several capital calls; and finally, two other issues (one in the form of fractional shares) took place in the summer of 1720.

The issues typically took the form of a subscription in which a down-payment secured for the subscriber a certificate, on which further payments were required before a share could be issued. These certificates were traded distinctly from shares, and as the terms of issues varied, certificates of different vintages were priced differently.

In this and the next chapter, I review the successive share issues, and the problems in interpreting the price quotations of shares and certificates. I then construct a single series of Indies shares price.

23.1 The securities

The original issue of shares in the Company of the West (renamed in June 1719 Indies Company) took place from September 1717 to July 1718. Two issues, in May and in July 1719, took the form of rights offers, that is, they were restricted to existing shareholders. For this reason the original shares came to be known as "mothers," the shares of May 1719 as "daughters," and those of July 1719 as "granddaughters." The last issue of September–October 1719 was called *soumissions.*

In these issues, the subscriber made a down-payment at the time of subscription, and was obligated to make successive monthly payments in order to ultimately acquire the share. Until the final payment, he only held a subscription certificate (*soumission*). Each payment was recorded on the certificate with the signature (visa) of an Indies Company official.[1] Should the subscriber fail to make the required payments, the certificate became void; what became of the payments made? In the May 1719 issue (daughters), the initial 50L down-payment only was forfeited; in the September 1719 issue (soumissions), all payments made were forfeited.[2]

Here are the specifics for the original share issue and the three rights offers that followed.

Actions d'Occident (Mothers)

The original issue (Edicts of Aug. 1717 and Dec. 1717) consisted of 200,000 shares (the number was set only in Dec. 1717) sold for 500L each, payable immediately in government bearer notes, the *billets d'État.* Subscription was open on Sep 14, 1717. An AC of Jun 28 1718 changed the terms: a down-payment of 100L in billets d'État only was required, in exchange for which the cashier of the company issued a promise to deliver a share when the remaining payment was made during the month of October (the deadline was extended by AC Sep. 22, 1718 to Jan. 1, 1719), failing which the down payment was forfeited

[1]The early payment clause appears in the edict of May 1719 for the daughters (art. 7). Dutot (2000, 132) indicates that the subscription certificates were signed (*visé*) each time a required payment was made.

[2]The Edict of May 1719 for the second issue stated that, in case payment deadlines were not met, the initial premium of 10% was forfeited (*faute par lesdits Actionnaires de remplir leurs soûmissions dans les termes portez par le present Edit, ils perdront les dix pour cent excedens du capital qu'ils auront payez*, Hautchamp 1739, 4:199), which means by implication that the other payments were not forfeited. The AC of July 27, 1719 for the third issue states only that the subscription certificates become null and void (*faute de faire les payemens dans lesdits mois indiquez, les certificats du caissier de ladite Compagnie, qui auront esté delivrez pour les nouvelles Actions ordonnées par le présent Arrest, deviendront nuls & de nul effet*, Hautchamp 1739, 4:224) and is silent on the payments made. The AC of Oct. 20, 1719 for the fourth issue says that the certificates become void and all payments previously made are forfeited to the Company (*faute par les porteurs des certificats de souscriptions de satisfaire aux payemens dans les termes portez cy-dessus, lesdits certificats demeureront nuls, et les sommes portées par iceux aquises au profit de la Compagnie*, Dutot 2000, 132).

and the cashier's promise void. This is the first instance of an option-like instrument (Murphy 1997, 172). All shares were subscribed by July 16, 1718 (GA 1718:60). Since the billets d'Etat were converted into rent contracts between the Company and the government, the amount of capital actually paid in can be tracked through the cumulative total of these contracts: 24m on Feb 28, 1718, 26m on May 16, 30m on Jun 11, 75m on Sep 28, and 100m on Jan 16, 1719 (Giraud 1966, 3:37, 42, 49). The shares were issued to the bearer and had 10 semi-annual dividend coupons attached.[3] The shares in the Company of the West carried voting rights (1 vote per 50 shares owned).

Denomination of shares: fractions of shares of 300L were issued in January 1718 (AC 1718, n. 14; Reims BM 2086, p. 43). Billets de 20 actions et billets d'une action (Reims BM 2086, p. 168).

Number of shareholders: "[Law] told me today that these actions are now in the hands of 700 persons and five months ago they were but in the hands of 300" (SP 78/164/373 (Jul 22), Crawford to Craggs).

→ *actions d'occident* quoted from Aug. 9 to Dec. 15, 1719 in Giraudeau; some prices in the *Gazette d'Amsterdam* from Jul 31, 1718 to Aug 4, 1719.

Daughter

The second issue (Edict of May 1719, AC Jun. 20, 1719), to finance the takeover of the old Indies Company, offered 50,000 shares identical to the existing shares, at a premium of 10% over the face value of 500L. Subscription was opened on Jun. 26, 1719 for twenty days, and was restricted to existing shareholders, each holder of 4 shares of the original issue (the "mothers") being entitled to subscribe for 1 new share (the "daughter"). A subscriber made an immediate down payment of 50L in cash (coin or note) in exchange for which he received a certificate issued by the Company. The remaining 500L was payable in 20 consecutive monthly payments; early payment in full was possible, but no discount could be demanded for doing so. The AC of Jul. 27, 1719 allowed

[3]The Musée Carnavalet in Paris has a copy of one share, numbered 4922 (Collection Fabre de Larche, GB20), with the 8th, 9th and 10th dividend coupon still attached. All shares were dated Sept. 19, 1717 (Giraud 1966, 3:41).

the first monthly payment to be made during the month of August, the AC of Aug. 12, 1719 extended the deadline to September 30.

→ *soumissions de mai* quoted from Aug. 1 to Dec. 15, 1719. Called *soumissions* in July and August 1719 (BN, NAF 22245, fol. 294; GA 1719:66), *soumissions des premiers 25 millions* in November and December 1719 (BN, NAF 22245, fol. 296–97).

Granddaughters

The third issue (AC Jul. 27, 1719) offered another 50,000 shares, for a price of 1000L each. Subscription was opened on Aug. 1, 1719, and was restricted to holders of original shares or new certificates. Subscribers needed 5 mothers or daughters for each "granddaughter" subscribed. The initial payment of 50L was made upon subscription, during the month of August, the remaining 19 payments of 50L each were to be made each of the following months. The AC of Aug. 12 extended the deadline for making the initial down-payment to Sept. 30. The AC of Sep. 26 made the remaining payments payable in the same securities as the issue of Sep. 13 (see below).

→ *soumissions de juillet* quoted from Aug. 1 to Dec. 9, 1719. Called *nouvelles soumissions* in August 1719 (GA 1719:66), *nouvelles soumissions sur les 25 millions de monnoyes* in November and December 1719 (BN, NAF 22245, fol. 296–97).

Soumissions

The fourth issue (AC Sep. 13, Sep. 28, Oct. 2, 1719) comprised a total of 300,000 new shares (doubling the number of shares), sold at 5000L each. In contrast to the second and third issues, this was a public (unrestricted) offering. Acceptable tender for the shares was at first either specie or bank-notes (Sept. 13), then included a variety of government bonds[4] were accepted (AC Sept. 26).

[4]Namely, outstanding billets d'État, shares in the recently liquidated General Farms, notes of the *caisse commune*, and most importantly the receipts (*récépissés*) issued by the Treasury for the reimbursement of the public debt.

Subscription opened on Sep. 23 (GA 1719:79). Then bank-notes were taken at a 10% premium in payment (Sep. 25), and finally specie and bank-notes were excluded, and only government debt was accepted (Sep. 26). A subscriber received a subscription certificate (*soumission*) in exchange for a down payment of 500L for each share, the remaining 9 equal installments to be made each following month. Each certificate could represent subscription for 1 or more share, up to 100, as shown in table 23.1. There is evidence that, during the month of October, there were different prices depending on the size of the certificate, (GA 1719: 84, Buvat 1865, 1:453–58).

size of certificate	total number of shares
1 share	94,437
2 shares	61,932
10 shares	30,220
20 shares	113,120
100 shares	23,800
varying	976
Total	324,485

Table 23.1: Distribution of certificates of the September 1719 issue, by size. Source: AN V/7/235, f. 9v-12r; see also GA 1719:60, 62, 64.

The terms were soon changed (AC Oct. 20, 1719): the remaining 9 installments were grouped into quarterly installments, the first to be made in December, the second in March 1720, the last in June 1720. Only after making the last payment would subscribers receive shares. Payments on the first installment began on Dec. 11 (GA 1719:102). It was possible to pay in full all installments at once, but this does not seem to have happened much.[5]

→ *soumissions sur les 150 millions* quoted from Oct. 2, 1719 to Feb. 29, 1720.

[5]AN V/7/235, fol. 18v records the existence of a register of such payments in full (*parfait payement*) begun on Dec. 22, 1719, with only 2200 soumissions.

Called *soumissions sur les derniers cent cinquante millions* (see also BN, NAF 22245, fol. 296–97), *nouvelles soumissions* (*Gazette d'Amsterdam*).

Having identified and described the four different series of shares issues, we are now confronted with two problems. One is a matter of reading the quotations, that is, translate the numbers we find in the original sources into simple cash prices. For this purpose, I find it helpful to discuss the mothers, then the soumissions, followed by the daughters and granddaughters. The second problem is understanding the financial nature of the instruments, which I do subsequently. Both reading and interpreting the quotations leads me to differ with the existing literature, which is why I have to enter into the details.

23.2 Reading the quotations: the mothers

In the sources, quotations are usually not expressed as cash prices, but rather as percentages. To translate them into cash prices, we have to figure out whether they are gross or net percentages, and what is the base. In what follows, I will use the lowercase letters m, d, g, x to denote the quotations for mothers, daughters, granddaughters and soumissions; and uppercase letters M, D, G, X to denote the cash price.

In Giraudeau's manuscript, a footnote to the table giving the prices of the mothers states that the prices are quoted as percentage premium, on the basis of a par value of 500L, to which was added the sum paid. A quotation of $m\%$ for a fully-paid share whould therefore convert into a $m/100 * 500 + 500 = 5m + 500$ livres cash price. Previous writers have used this formula (Dutot, Faure, Murphy). I believe this is incorrect, because *all* the contemporary evidence indicates that the quotation is a *gross* percentage, and the cash price should be $5m$. Some of the evidence is cited by the same writers: Murphy (1997, 190) cites Law converting a quotation of 120 to 600L in June 1719, Faure (1977, 266n1) cites a contemporary letter which quotes shares at 900 and prices 20 shares at 90,000L $= 20 * 900 * 5$. Another instance is the decision by the Bank on October 5 to support the share price by offering to buy shares from the public at 900. This decision is cited by (Buvat 1865, 1:452) and in the GA (1719:83). Both sources explicitly convert to 4500L in cash.[6]

Furthermore, the prices found in the *Gazette d'Amsterdam* and *Amsterdamse Courant* before August 1719 provide convincing evidence. From July 1718 to February 1719, the share prices are quoted as percentage premium over the billets d'Etat, with which they were initially purchased. The premium was paid in cash, as explained (AC 1718 n. 99, 12 Aug): a quote of 16 meant that "indien men een acte van 500 liv. wilde koopen, men nu daer voor zoude moeten geven 500 liv. in brieffjes, en 80 liv. in klinkend geld." From March 1719, the *Gazette* rarely reports prices for the Billets d'Etat, and gives the cash price of the shares, but expressed as a percentage, sometimes net and indicated as loss or gain, sometimes gross: on March 10, "at 95 cash for 100"; on March 13, "at 89" on April 7, "at 8% loss against cash"; on May 25, "28% above par", on June 19, "at 127" (consistent with Law as quoted by Murphy 1997, 190, and with the *Mercure Nouveau*, January 1720, p. 141, quoting "130, that is, a 30 profit"). From that date, the price is always given by the *Gazette* as a number, continually rising to 450 by August 1. Thereafter the quotations in the *Gazette* continue, and correspond closely to Giraudeau's manuscript. To believe that Giraudeau's prices are net percentages, one would have to suppose that the *Gazette* changed its manner of reporting prices in June 1719, and that the price at that time doubled in a few weeks, an extraordinary event that would surely have been noted.

Finally, the January 1720 issue of the *Nouveau Mercure* (p. 158–59) explained the manner of quoting prices for the benefit of its provincial subscribers, and asserted that the *action d'Occident* cash price was 5 times the quoted price.

I conclude that the footnote in Giraudeau's manuscript is incorrect, and that the price of mothers should be interpreted as a gross percentage of the 500L par.

[6] Dutot (2000, 129) converts it to 5000L, but he is writing nearly 20 years after the facts and probably relying on a copy of Giraudeau's manuscript.

23.3 Reading the quotations: the soumissions

The fact that strike payments were staggered and non-refundable apparently led to two possible methods of quoting their price, depending on whether one included past payments or not. Both methods quote the price as x percent premium over the face value of shares, which is also the initial down-payment, of 500L.

One method quotes the *net* percentage premium over the face value of 500L, *exclusive* of any payments made: the cash price is then $5x + q$, where q is the sum of all payments made including the initial down-payment ($q = 500$ until January 1720, $q = 2000$ from January to March). This is the method described in the *Mercure Nouveau*. That percentages are *net*, not gross, is corroborated by a contemporary pamphlet titled *Tarif pour sçavoir la valeur des nouvelles souscriptions de la Compagnie des Indes, composé par le Sieur Perpoint* (Paris, 1719) which gives tables for converting quotations as percentages into cash prices based on the formula $5x + 500$; a sequel titled *Tarif du quatrième payement, pour sçavoir la valeur des nouvelles souscriptions de la Compagnie des Indes* (Paris, 1720; Bibliothèque nationale, V 49201) was published after the January 1720 payment and is based on the formula $5x + 2000$.[7] The other method is to quote a price *inclusive* of *all* payments made hitherto, as *gross* percentage of the initial down payment of 500L, in which case the cash price of the soumission is $5x$.

Although a note in Giraudeau's manuscript states that the net-exclusive method is used for the soumissions (as, allegedly, for the mothers), it is clear that the method switches to gross-inclusive after Jan. 5. At that date, the series displays a jump in price from 947 on January 5 to 1420 on January 8, which I interpret as the result of switching from net-exclusive to gross-inclusive ($400\% = 500 + 1500$). Dutot clearly uses the net-exclusive method, even after the January payment, since his prices for Mar. 31, Apr. 3 and Apr. 30 are 789, 805, 798, at a time when the Company was pegging the cash price of soumissions at

[7]Occasionally, one finds a gross exclusive quotation, for example in a probate inventory of November 21, 1719, a soumission is assessed at the current market price (*au cours de la place*) as "910% compris la prime, soit 4550L." This corresponds to Giraudeau's datum of 819% for that day (AN MC CII, 252).

$6000 = 800 * 5 + 2000.$[8]

There is also a third method of quoting the soumissions, used from Sep. 18 to Dec. 30 1719 by the *Gazette d'Amsterdam* and other Dutch papers: it expresses the cash price plus the sum of all payments past and future (5000L), as percentage of the face value (500L). The official documents creating the *soumissions* are probably the source for this form of quotation, because they express the IPO price as "1000%". This third method simply adds 1000 to the exclusive price, or 900 to the inclusive price. The prices reported in the *Gazette*, after subtracting 1000, are indeed very close to Giraudeau's prices.[9]

The manner of pricing of the September soumissions is important, because the quotations for the shares themselves (the mothers) as well as the daughters and granddaughters cease to be reported by Giraudeau after Dec. 15, 1719. This has led researchers (Faure 1977, 272–75, Murphy 1997, 208) to use the soumissions' prices as a proxy for the share price for January and February 1720, by taking the price of the soumission and adding all remaining due payments to represent the price of the underlying share.[10]

Recognizing the existence of these two forms of quotations also allows us to explain three abnormally low quotes in Giraudeau: January 12, 1720 (835.5), January 13 (949), and February 29 (765). Dutot (2000, 187, 204, 225, 232), who quotes in prices exclusive, reports monthly highs of 964 in January and 920 in February, roughly consistent (adding 400) with Giraudeau's highs of 1420 and 1319. But Dutot's monthly lows are 810 in January and 790 in February, which

[8]There are examples of net-exclusive prices in contemporary letters and diaries, gross-inclusive prices in announcements of the Company's price support in newspapers (Faure 1977, 340, 348–49). The price sheets use the exclusive method.

[9]Faure (1977, 266n1, 268n3) and Lévy (1980, 209) cite contemporary letters that follow the same method of quotation. The *nouvelle à la main* in PRO, SP 101/120, cited EJH papers, switches from one method to the other, for example quoting the shares (meaning the soumissions) at 1910 on Nov. 25, between 1000 and 1010 for Nov. 27–30, and 2030 for Dec. 4. Compare Giraudeau who gives 875, 1000, 1034 for those dates. To complete the confusion, in December the price of shares is quite close to the price of soumissions expressed in this third method.

[10]Faure (1977, 275) interprets the price jump in Giraudeau's quotes as reflecting only the January payment, mistakenly assuming that prices before Jan. 5, 1720 were gross-exclusive. Murphy makes the same mistake, since he computes a proxy of the share price from Dec. 15 to Jan. 5 as $5x + 4500$.

should correspond to 1210 and 1190 in Giraudeau (adding 400). If Giraudeau's three outliers are taken to be prices exclusive, as other evidence suggests they are, then Giraudeau's lows are 1190 and 1101, much closer to Dutot's lows.

There is ample evidence to make these corrections. Consider the two abnormal January quotations. First, taken literally, Giraudeau's quotes imply a drop of 3000L from a peak on January 8, and a rebound of almost the same magnitude. It is true that contemporary reports discuss a price drop as a result of the introduction of primes on January 9 and the Company's suspension of its share purchases on January 10: Murphy (1997, 216–7) cites a contemporary letter attributing a drop in the price of shares of 750L to this cause. Indeed, from January 8 to January 11 the price of soumissions had fallen by 870L according to Giraudeau. Issue of the primes was suspended temporarily on January 11 to deal with the overwhelming demand. It seems difficult to imagine that suppression of the cause (the issue of primes) would have led to an additional drop of over 2000L over the next two days. It is also hard to believe that Law would not have immediately reacted to such a catastrophic movement in the price of shares: yet the Company did not resume its share purchases until much later, on January 22. Second, we have contemporary evidence from the GA 1720:7 which reports a price of 1345 (inclusive) in a report dated Monday January 15; the *Gazette*'s Monday price reports usually pertained to the previous Saturday, which would be January 13. Finally, in NA SP 101/121, 13 Jan 1720, prices are reported for Jan 10 in the evening (drop to 1220), Jan 11 (1250) and Jan 12 (1270); another letter reports 860 for Jan 10 and 800 for Jan 11.

As for the February 29 quotation, (Buvat 1865, 2:39) says that prices rose to 720 then fell to 630 on the same day, and (Barthélemy 1883, 2:39) also has 630 for the same day; an English source (NA SP78/167, fol. 128) has submissions offered at 625 in the morning; for January the same individual reports a price exclusive of 908 (ibid., fol. 29).footnoteFaure (1977, 348) misreads Giraudeau's price as 965 instead of 765, but correctly interprets Buvat's price as exclusive.

Figure 26.1 plots the gap between the price quotes of the mothers and the soumissions (for January and February 1720, it is the gap between the support prices reported in Faure 1977, 340).

23.4 Reading the quotations: the daughters and granddaughters

I now come to the daughters and granddaughters.

Giraudeau's manuscript refers the reader to the same footnote, indicating that the prices are exclusive. But there are some difficulties with the behavior of the prices of mothers, daughters and granddaughters up to December 15, when they cease to be quoted. Figure 26.2 plots the difference in price between mothers on one hand, daughters and granddaughters on the other. From early August to Sept. 19, the prices of mothers and daughters differed by a variable amount, rising to about 100 (or 500L). Then the mothers are not quoted until October 2, when their price becomes absolutely identical to that of the daughters Meanwhile the price difference between daughters and granddaughters, previously around 200 (or 1000L), is almost always 100 (500L) after Oct. 30.

Faure (1977, 273) rationalized this by assuming that (a) the daughters and granddaughters are quoted like the shares as $d\%$ and $g\%$ net premium over par of 500L, and (b) the option value is zero, so that the price of a paid-up share $(1 + m/100) * 500$ should exactly equal that of a daughter plus the remaining payments $d/100 * 500 + 550$, or a granddaughter plus remaining payments $g/100 * 500 + 1000$, implying $m = d + 10 = g + 100$, or $m \simeq d \simeq g + 100$ (neglecting the difference of 10).

There are several problems with this interpretation. One is that it does not explain the prices before Oct. 1, 1719. The other is a discrepancy with contemporary evidence from the price sheets cited above (BN, NAF 22245, fol. 296–97). For November 4, 1719, Giraudeau gives 1255, 1255, and 1155 respectively for the mothers, daughters, and granddaughters, while the price list gives 1250 to 1260, 1150 to 1160, and 1050 for the *cent millions d'actions de la compagnie d'occident visees*, *soumissions des premiers 25 millions id. visees*, and *nouvelles soumissions des Indes sur les 25 millions de monnoyes* respectively.[11] For

[11] I am not sure what to make of the word *visé*, which means signed or verified. The *Gazette d'Amsterdam* (Sep. 2, 9, 14, 23) and the *Mercure Nouveau* (August 1719, p. 193) quote prices for

December 9, Giraudeau gives 1850, 1850, and 1745 while the price list gives 1840 to 1850, 1740 to 1750, and 1640 to 1650.

I propose a different (and tentative) interpretation, arrived at in the following manner. Let the payments already made on daughters and granddaughters be q_D and q_G, and the strike prices (payments remaining) s_D and s_G. By definition $q_D + s_D = 500$ while $q_G + s_G = 1000$ (the reasoning is the same if the strike price is taken to be 500 and 1000 respectively). We have already established that $M = 5m$. I wish to express G and D as functions of g and d. I assume that these functions does not vary during the September–December period, and will use the behavior of the quotes in December to make inferences about these functions. Figure 26.2 indicates that, in December 1719, $m \simeq d$ and $g \simeq m - 100$. Given that the strike price of both (500L and 1000L) were low compared to the price of the share at that date (around 9000L), [12] I assume that the option value was close to 0 at that time, so the price of the option plus the strike price should be equal to the share price: $M = D + s_D = G + s_G$. It follows that

$$D = M - s_D = 5m - s_D = 5d - s_D = 5d - 500 + q_D$$

and

$$G = M - s_G = 5m - s_G = 5g + 500 - s_G = 5g - 500 + q_G.$$

Thus, Giraudeau's quotes (as of December 1719) are *gross* percentage premia over the par of 500, which are converted to cash prices by making them into net premia and adding the payments already made.

I can find no other way to account for the jump in October 1719, and for the discrepancy with the price sheets, than by supposing that the Giraudeau

actions non-visées and *visées*, and those prices correspond to those of mothers and daughters, respectively, for those dates in Giraudeau. On or about Nov. 13, Buvat (1865, 1:462) gives 1264 for the (*anciennes soumissions visées* and 298 for the (*soumissions nouvelles*), compared to 1267.5 for the mothers and daughters and 309 for the soumissions in Giraudeau. Dutot (2000, 132) indicates that the subscription certificates were signed (*visé*) each time a required payment was made.

[12]Around Sept. 15, options were traded with strike prices at 8000L; by late November there were options with strike prices at 15,000L (GA 1719:76, 97.

manuscript changed the reporting of prices for daughters and granddaughters from net to gross percentage premia in late September, while the price sheets continued to report net percentages. Before October 1719 (and in the price sheets), the formula would then be $D = 5d + q_D$ and $G = 5g + q_G$, as the footnote claims. The change in the manner of reporting prices could be explained by the fact that September 30 was the deadline for making the first payments on daughters and granddaughters. That payment may have caused some confusion over the appropriate way to quote prices.

When were the options exercised? More broadly, how long was the schedule of monthly installments followed for the daughters and granddaughters? Probably not beyond December 1719. Prices for shares (mothers) and the first two series of options (daughters and granddaughters) cease to be recorded in Giraudeau's manuscript in December 1719. Dutot (2000, 187, 204, 225, 232) indicates that these three instruments continued to be quoted until April 1720. Dutot only provides highs and lows for each month from January to April. However, he lists a single price for mothers and daughters; moreover, the highs and lows he gives are exactly the same for mothers and daughters on one hand, and for the granddaughters on the other. We also know that all shares and soumissions were converted into a single new type of share in March 1720, and that, at that date, there is no mention of unexercised daughters or granddaughters. Moreover, the conversion rates used from March 1720 make sense for shares and soumissions, but not for unexercised daughters and granddaughters. This suggests that all three (mothers, daughters and granddaughters) had become perfect substitutes in January 1720, which can only be the case if the options had been exercised and converted into shares.[13] It thus seems likely that the daughters and granddaughters, the options with the lowest strike prices, were all exercised by early January 1720, in time to collect the semi-annual dividend, to which only holders of shares were entitled. In fact, the Company announced

[13]Dutot (2000, 196) states that, as of February, the only shares were the mothers and daughters, the rest being soumissions. By implication, the granddaughters would still be options, and, in his calculations of the capitalization of the System, he treats them as if remaining payments had not yet been made; but, as noted, the prices he reports are the same for all three instruments, which does not seem consistent.

in the middle of December that anyone paying up in full his options would receive shares and collect the four dividends of 1718 and 1719 on the basis of 4% of the face value of 500L(GA 1719:103), a total of 40L (*Mercure Nouveau*, Dec. 1719, p. 182).

Furthermore, the Company kept a written register of the first two payments on the daughters (from June 26 to Nov. 26, and from Aug. 5 to Nov. 26, respectively), and of the first payment on the granddaughters (from Aug. 30 to Dec. 30), but, according to the Company's *caissier*, the remainder of the Company's receipts on these issues were entered on loose sheets which were not kept (AN, V/7/235, fol. 18v).

23.5 Interpreting the quotations: shares or options?

As Cochrane (2001) has noted, the certificates (*soumissions*) sold in the course of the second, third and fourth issues, were in fact options on (identical) underlying shares, which complicates the interpretation of their prices.

Taking the terms of the offers literally, we can interpret the second and third issues as offering options on shares. The strike price was payable in installments over time: by virtue of the AC of Aug. 12, 1719, the payments for both daughters and granddaughters were scheduled concurrently in 19 payments from September 1719 to April 1721, but were twice as large (50L) for the granddaughters as they were for the daughters (25L), although the underlying security (the Indies share) was identical. A non-refundable 50L down-payment had been made at subscription for the daughters (late June to the middle of July 1719), but that is a sunk cost from the perspective of the price quotations we have. The fact that the strike price was payable in installments seems irrelevant (aside from the time cost), since the payments were apparently refundable if the option was not ultimately exercised. In other words, both daughters and granddaughters were American call options with strike price of 500L (respectively 1000L) and an expiry of April 1721.

The fourth issue (soumission) was somewhat different because the payments were not refundable, and there was no explicit provision for early payment (see in particular the AC Oct. 20, 1719 in which payments are required to be made in certain months). It was therefore an European call option sold for 500L in September 1719, at a strike price of 4500L payable by thirds in December 1719, March and June 1720: with each payment, the strike price effectively went down by the size of the payment.

Chapter 24

Equity shares in the Indies Company (from 1720)

With the AC Mar. 5, 1720, a policy of fixing the price of shares at 9000L was announced, and at the same time all existing options on shares were converted into shares, at a rate of 2 shares for 3 options, reflecting a value of 6000L assigned to the options (since 3000L remained due on the 4th issue).

From April 3, Giraudeau's manuscript reports prices for the new shares, called Indies shares to distinguish them from the Occident shares or mothers. They are quoted as percentage premium over par of 500L, but the percentage is clearly gross and the cash price is $5x$, because Giraudeau's quotes for April are between 1800 and 1812, at a time when the Company is known to peg the price at 9000L. The other sources for prices of the shares in the January–February period are the support prices reported by Faure (1977, 340) and the monthly highs and lows reported in Dutot (2000, 187, 204, 225, 232). These also seem to be expressed as gross percentages.

24.1 Action des Indes (AC Mar. 12, 1720)

The original shares bearing the name of Compagnie d'Occident, were ordered to be replaced with new shares in a single format, bearing the new name , with six dividend coupons for the years 1720 to 1722; all shares were to be dated Jan. 1, 1720 ((Dutot 2000, 251); there is an example in Diderot's *Encyclopédie*, s.v. *coupon*). Starting in April 1720, these shares are quoted as such (*action des Indes*) subject to further vicissitudes detailed below. They were replaced by new shares issued in June 1720 and those not exchanged became void on Sept 1, 1720.

→ actions des Indes quoted from Apr. 3 to May 24 as premium over the face value of 500L, from May 25 to Jul. 31 1720 in cash. Dutot (2000, 225) gives the price for March 1 and March 31.

24.2 REVERSE SPLITS AND CAPITAL CALLS (1720)

From June to November 1720, a series of conversions and capital calls have created successive versions of the Indies Company share (figure 24.1).

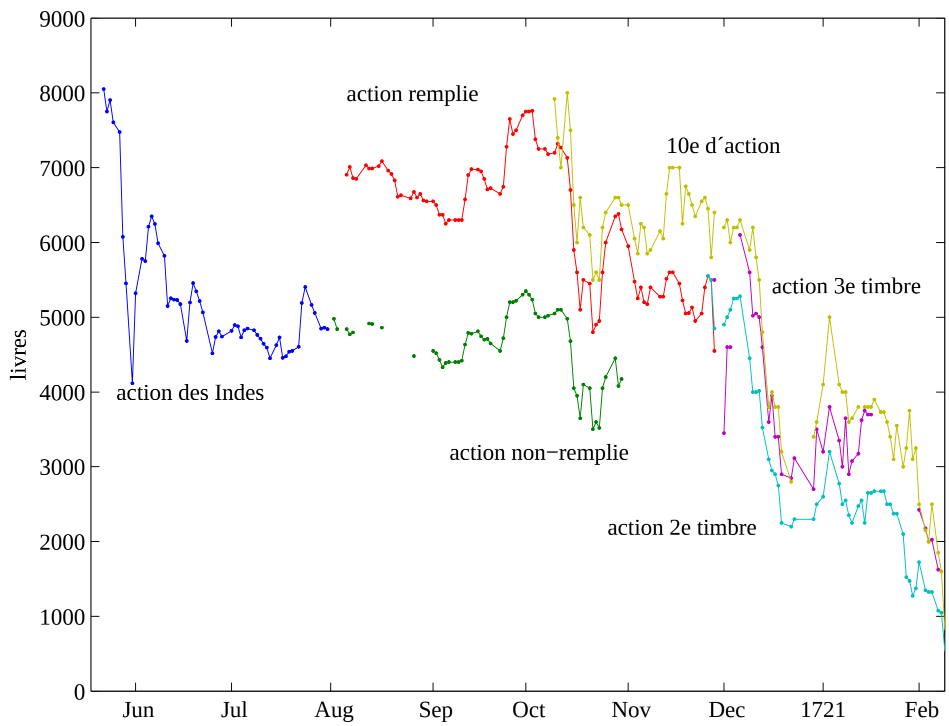

Figure 24.1: Prices of various shares, in notes (May 20, 1720–Feb. 9, 1721).

On June 3, 1720, two actions were taken (Dutot 2000, 260). One was to reduce the number of shares officially to 200,000. The Company was authorized to destroy the shares that it had been been buying since December

1719; the King, who had sold his 100,000 shares to the Company in February, agreed to write them off and not ask for the sale price.

At the same time, shareholders were offered the option to pay in 3000L per share, in six equal monthly cash (coin or note) payments (changed to three monthly payments, AC June 14), increasing the face value of the share from 9,000L to 12,000L. Shares that were not paid-in (*actions non remplies*) earned 200L per share annually (2.2%), the dividend set at the General Assembly of December 1719. Shares that were paid-in (*actions remplies*) would earn a dividend of 360L (or 3%), any additional profits would be distributed among the paid-in shares only. This was, in effect, making the *actions non-remplies* into preferred stock (whether they had voting rights is not clear).

It was later decided (AC June 20, 1720) that, until July 15, the capital call could be paid with shares at a rate such that 3 old shares could be exchanged for 2 new shares; this changed the capital call into a 2-for-3 reverse share split.

New share certificates were issued in exchange for old shares, starting on July 15, with dividend coupons for 1721, 1722, and 1723. Holders of old shares were told to keep the dividend coupon for the second semester of 1720 in order to redeem it in the usual way during the rest of the year; the increase in dividend for that semester (20L per old share) was paid out at the time of exchange. [1]

The conversion was later made mandatory (AC Oct. 3, 1720), and shares that were not converted before Oct. 31 would become Company bonds (*actions rentières*, see below) earning 2%. The Giraudeau manuscript stops quoting the *action des Indes* on July 31 and begins quoting the *action remplie* on Aug. 6. The actions remplies were given a face value of 8000L on Sept. 15, 1720. The action remplie is known to have been quoted until October 31.

Actions remplies/non-remplies (AC Jun. 3, 1720)

→ actions non-remplies quoted in Dutot ([1738] 1935, 2:273–75) from Aug. 6 to 14; Marais (1863–68, 1:360, 363, 388, 406) for Aug. 2, 3, 17, 27; Dutot

[1] GA 1720:59. The Musée Carnavalet in Paris has one example of the new shares, with its full complement of dividend coupons, numbered 147738 (Collection Fabre de Larche, GB15) and a copy of another numbered 160312 with only the dividends of 1723 (ibid., GB14).

(2000, 338–39, 358–59) from Sep. 2 to Oct. 31, in notes. Dutot (2000, 303) also gives an average price of 4671L for August.

→ actions remplies quoted from Aug. 6 to Nov. 26, 1720, in notes.

second timbre (AC Oct. 24, 1720)

In a measure ostensibly aimed at speculators, the government ordered that all shares be brought back to the Company, and the names of their owners registered. Those shares deemed to be owned by "good faith shareholders" would receive a second stamp (the first one having been imprinted at the time the share was issued) and be returned to their owners. Shares were received from Oct. 29 to Nov. 23, and they were returned starting Nov. 25 (Marais 1863–68, 1:490). Shares without a second stamp became void (AC Dec. 2, 1720).

→ "actions du second timbre" quoted from Nov. 27, 1720 to Mar. 31, 1721 (in notes until Feb. 10, 1721; in coin afterward).

troisième timbre (AC Nov. 27, 1720)

Shareholders were required to subscribe a one-year loan of 150L per share, payable 2/3 in specie and 1/3 in bank notes (see below, *bulletin de 52 louis*). Each share received a third stamp to indicate that the owner had fulfilled the obligation. Shares without a third stamp were to become void after Dec. 20, but the deadline was extended twice and then cancelled on Feb. 9, 1721.

→ "actions du troisième timbre" quoted from Nov. 29, 1720 to Mar. 31, 1721 (in notes until Feb. 10, 1721; in coin afterward). The loan itself was also quoted (see below, *bulletin de 52 louis*).

soumissions (AC Jul. 31 and Aug. 14, 1720)

In the summer of 1720, attempts were made to retire bank notes by issuing whole shares and fractional shares. To retire large denomination bank notes, the Company issued 70,000 new shares: subscribers could purchase them in 9 equal monthly payments of 1000L each, the first upon subscription. It seems that only the initial down-payment was ever collected, since the subscriptions (*soumissions*) were soon made convertible into fractional shares (see below) at a rate of 1000L worth of shares (or 1/8 share) each, for a maximum total of 8750 new shares (AC Sept. 15, 1720, conversion made mandatory Nov. 1, 1720).

→ *soumissions* quoted from Aug. 1 to Nov. 15, 1720; quoted as percentage premium/discount over par of 1000L (see Marais 1863–68, 1:387, who buys one for 1050F on August 15).

dixièmes d'action (AC Sept. 15, 1720)

To retire small-denomination bank notes, the Company issued up to 500,000 tenths of shares. They could be purchased for 800L each in notes of 10L, 50L, or 100L, and received an annual dividend of 36L. Six dividend coupons were attached for the years 1721 to 1723.[2] They could be converted into bank accounts. On Oct. 12 the Company decided to pay its dividend in the form of tenths of shares.

→ quoted from Oct. 10, 1720 to Mar. 31, 1721 (in notes until Feb. 10, 1721; in coin afterward).

24.3 Creating a single series of share prices

I use the following series to create a single series of the Indies Company share from Jul. 24, 1719 to Mar. 31, 1721:

- *action d'Occident* from Jul. 24, 1719 to Dec. 15, 1719, using the formula $p = 5x$, with the price of *soumissions de Mai* as proxy[3] between Sept. 15 and Sept. 30;

[2]The Musée Carnavalet in Paris has a copy of one example, numbered 19998 (Collection Fabre de Larche, GB18).

[3]There is a two-week gap in the mother series. Inspection of figure 26.3 suggests that the mother-daughter gap in the second half of September 1719 can be interpolated as constant at 100.

- *action d'Occident*, market prices and the Company's purchase price as reported in the *Gazette d'Amsterdam* from Jan. 2 to Mar. 2, 1720, using the formula $p = 5x$;
- *action des Indes* from Mar. 31 to May 24, using the formula $p = 5x$;
- *action des Indes* from May 25 to Jul. 31;
- *action remplie* from Aug. 6 to Nov. 11, using the formula $p = 2x/3$;
- *action du 2e timbre* from Nov. 29, 1720 to Feb. 7, 1721, using the formula $p = 2x/3$.

I make several corrections to the quotations in Giraudeau: the prices of January 11, January 12, and February 29 1720 are construed as prices exclusive as explained above. I also correct what seems to be a copying mistake for Nov. 27, 1719.[4]

The nominal series can be deflated by the price of a 100L billet from Jun. 10, 1720 to Feb. 8, 1721, and then spliced with the *action du 3e timbre* quoted in coin until March 31, 1721.

I prefer not to use the method of Faure and Murphy, which is to use the price of the soumission and add remaining payments due as a proxy for the share price in January and February 1720. When the soumission and share series overlap (October to December 1719), the procedure does not work very well; if it did, then the gap between the two series should be close to 900 (4500L = 900% of 500L), but figure 26.1 shows substantial fluctuations above and below 900.

[4]The price for the mothers and daughters is reported at 1670 in all three manuscripts, compared to 1765 on Nov. 25, 1865 on Nov. 28, and a price of 1770 for the granddaughters on Nov. 27. A price of 1870 would fit better with the prices before and after, and also fit the pattern that, in November and December, the price of granddaughters is almost always 100 less than that of mothers and daughters. The possibility of a copying mistake is suggested by the fact that the prices of the daughters for Nov. 28 and Nov. 29 are reported as 1665 and 1675 in the BN manuscript, 1865 and 1875 in the other two manuscripts. The Gazette d'Amsterdam has no report for this day, but reports 1900 for November 26 and 1880 for November 30. Another suspicious price I have corrected is 1273 for granddaughters on November 14, identical to the price for mothers and daughters instead of the usual 100 difference.

24.4 Dividends

This section is the basis for table 10.1.

The edict of August 1717 creating the Company of the West specified (article 40) that the Company was obligated to pay 4% interest to the shareholders on their shares, accruing from Jan. 1, 1718, and payable every six months beginning in July 1718. Thus, the company was initially paying dividends on the previous semester. This interest, 20L per year on shares of 500L face value, was financed by the interest on the billets d'Etat which shareholders had turned in to buy their shares. Article 43 makes a distinction between the payment of interest and the payment of profits (*repartitions*), the amount of which was to be decided every year in December by a General Assembly (article 42). This probably means that 10L was the minimum semi-annual dividend.

The first dividend was paid in July 1718 (Giraud 1966, 3:52, Reims BM ms 2086, p. 168), the second, for the second half of 1718, from January 11, 1719 (GA 1719:5; AC 1719:8). In July 1719 the Company decided to pay the 3d and 4th dividends simultaneously over the course of the second half of 1719 (AC 27 Jul, 1719), thus switching to paying dividends on the current semester. The company also announced a (semi-annual) dividend of 30L beginning 1720. The accounts of the Bank (which owned 12,000 shares of the Company) record payments of 10L dividend per share for the second semester 1718 and the two semesters of 1719 (Harsin 1928, 308–09).[5]

Dutot (2000, 81–86) relates the first general assembly on March 27, 1719. The second assembly took place on Dec. 30, 1719 (Dutot 2000, 168; Murphy 1997, 191; Faure 1977, 202). It is well known that a dividend of 200L per share was announced at that assembly, but it is not clear for which semester. A report in the GA 1720:3, cites one of the directors of the Company as promising that dividend for the years 1718 and 1719, but this may be a garbled report. Reports of Company announcements in later issues of the *Gazette* indicate that the Company would pay an aggregate of 120mL in dividends to all shares (1720:5)

[5]The inventory of the Company's archives (AN, V/7/235) mentions "un registre qui a servy pour le payement des quatre premiers dividens des actions de la compagnie aux porteurs des souscriptions remplies."

during the first half of 1720; and that it paid the 5th dividend from January to May (n. 16, 20, 26, 34, 38, 40, 42).

The Company paid the dividend for the 2nd semester 1720 starting in August 1720 (GA 1720:66). The Company was authorized to continue to pay its dividends for the year 1720 in banknotes at face value even after their demonetization (AC Oct. 10, 1720; see also AN, K885, 2, fol. 95, and Buvat 1865, 2:223). On Oct. 12 it resolved to make its current dividend payments in the form of tenths of shares (Dutot 2000, 349). Dividend payments stopped when the Company was put in receivership in April 1721 (see AN, G/7/1705 for a plan to continue payment in banknotes after that date).

The new shares issued in June 1720 in replacement of the old shares had dividend coupons starting with 1721 (example at the Musée Carnavalet, Paris, collection Fabre de Larche GB 15), and the dividend was set at 360L for the shares that had paid the capital call (actions remplies), 200L otherwise (actions non-remplies). Paris-Duverney (1740, 2:78) states that the dividends of 1721 were never paid. The AC of Mar. 24, 1723 set the 1721 dividends to 0, and announced the dividends for 1722 and 1723 (Hautchamp 1743, 2:23, 50; Buvat 1865, 2:438).

24.5 Number of shares

The following table summarizes the information on the number of shares and subscriptions. It seems important to distinguish the two, although, as shown earlier, it is not clear when and to what extent subscriptions were converted into shares. I assume here that the daughters were all converted to shares by late September 1719, and all granddaughters by late October 1719. In many instances we don't have a precise number of shares or subscriptions, but a maximum authorized, and sometimes it is not known if the limit was reached (subscriptions of September 1719, of July 1720).

The September 1719 soumissions were authorized up to 300,000 with an extra 24,000 secretly authorized by the Regent in early October (Dutot 2000, 124); a total of 324,485 were actually issued and later retired (table 23.1). The new certificates issued in December 1719 numbered at least 287,400, since that is the number burned publicly (GA 1720:62, 64).[6]

By March 1720, there were shares, soumissions of September 1719, and two series of primes (see below) issued in January and February 1720. All these instruments were converted into a total of 600,000 new shares: the 300,000 existing shares were converted into new shares one for one, the (unknown number of) soumissions 3 for 2, and the primes at various rates, 1.05/9 share per January prime and 5/9 share per February prime (see above). Law (1934, 3:271) claims that 300,000 primes were issued in January, which would have been converted into 35,000 shares in March. We don't know how many primes were issued in February.[7] Neglecting the February primes (which had little success according to Lüthy 1959–1961, 320) would lead to a total of 265,000 soumissions still in existence in early March.[8]

The AC of June 3, 1720, issued new shares with a maximum of 200,000. A new series of soumissions were issued in July 1720 up to a maximum of 70,000. Although we don't know for sure how many were actually taken up, 35.6mL in notes withdrawn through this issue were burned on August 20 (GA 1720:70). Each subscription was converted to 1/8 share in September 1720, or a maximum total of 8750 shares. Tenths of shares were issued in Sep. 15, 1720, totalling 55,847 (equivalent to 5585 shares; AN, V/7/235, fol. 201). The AC of Sept. 15, 1720, which authorized the issue of tenths of shares converted the July 1720 soumissions into shares and , set an overall maximum of 250,000 shares; I assume 200,000+8,750+5,585. The mandatory registration of shares in November 1720 (see "second timbre" above) probably reduced the number

[6]The same source tells us (AN, V/7/235, insert at fol. 201) that 159,926 new subscription certificates were printed to be issued for the March 1720 payment, but one subscription could represent as many as 100 shares, so we don't know the corresponding number of shares.

[7]The GA 1720:66, says that 461,250 primes (presumably of both series) were burned in July 1720, but that apparently double-counts single-share primes issued in exchange for multiple-share primes.

[8]This might seem to contradict the total of 325,000 soumissions issued by October 1719; however, primes could be purchased with soumissions, at a rate of 6 primes per soumission; so some soumissions may have been exchanged for primes.

Date	Shares	Subscriptions	Date	Shares	Subscriptions
Sep 1717	subscription opened		Jun 1720	200,000	
Aug 1718	200,000		Jul 1720	200,000	$\leqslant$ 70,000
Jul 1719	200,000	50,000	Sep 1720	215,000	
Aug 1719	200,000	100,000	Nov 1720	160,000	
Sep 1719	250,000	50,000	Jan 1721	$\geqslant$ 125,000	
Oct 1719	300,000	324,500	Mar 1723	56,000	
Mar 1720	600,000				

Table 24.1: Number of shares in the Company of the West/Indies Company, 1717–21.

of shares. As of November 9 240,000 unconverted shares had been registered, yielding 160,000 shares (GA 1720:93). The AC of Nov. 27 authorizing the Company to issue a forced loan implicitly assumes 150,000 shares. The number of shares for January 1721 is the number submitted to the Visa (Paris-Duverney 1740, 2:143)). The final number for March 1723 is the number of shares that emerged from the Visa liquidation.

Chapter 25

Monetary liabilities: notes and bank accounts

25.1 Notes of the Banque générale (1716–18)

The Banque générale issued two series of notes, both denominated in silver écus:

- *billets de 8 écus au marc* from June 1716 to March 1718, in denominations of 10, 40, 100, 400, and 1000 écus, each écu worth 5L.
- *billets de 10 écus au marc* from June to October 1718, in denominations of 10, 50, 100, and 500 écus, each écu worth 6L.

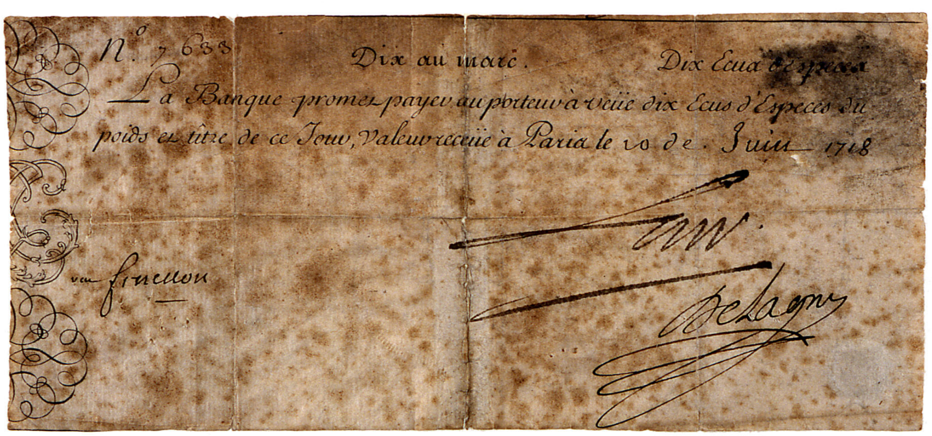

Figure 25.1: A 10 écus note of the General Bank issued Jun 20, 1718. Musées de Poitiers.

A handful of notes of the Banque générale, from the June 1718 issue, have survived (Grèze 2004); one is shown in figure 25.1. Their format is identical to that of the first issues (8 écus per marc) which is known from the letters patent of May 2, 1716 creating the Bank: ... *écus d'espèces. La Banque promet payer au Porteur à veüe ... Écus d'Espèces du poids & titre de ce jour valeur receüe à Paris le... de ... 171....* The only difference in the June 1718 issue the addition of the phrase "Dix au marc."

25.2 Notes of the Banque royale (1718–21)

Issues of the Banque Royale were in principle authorized by Arrêts du Conseil (most texts available at `www.ordonnances.org`). Dutot provides end-of-month numbers from November 1719 to November 1720 on notes of each denomination printed, held by the Bank, burned, and cancelled (Dutot 2000, 114, 127, 141, 171, 185, 201, 213, 225, 232, 237, 252, 270, 289, 305-9, 341, 347, 360, 372). He also gives dates and totals of notes burned (Dutot 2000, 269, 274, 277, 283, 287, 302, 346) pursuant to the AC of Jun. 11, 1720 and others.

Starting in June 1720, Giraudeau provides prices of notes against specie, by denomination (see figure 26.4).[1]

The large denomination notes (1000L and 10,000L) and the small denomination notes (10L and 100L) were treated differently starting in July 1720:

large denomination notes

They were made convertible into bank accounts (Jul. 13, 1720); demonetization announced for Oct. 1, convertible until then into government bonds, bank accounts or *soumissions*, and after the deadline convertible only in Company bonds (*actions rentières*, see below) (Aug. 15, 1720), legal tender only up to 50% of existing debts (Sept. 15, 1720); deadline for conversion to Company bonds

[1]Dutot (2000, 309, 338–39, 358–59) also gives the price of gold bullion from Aug. 14 to Oct. 31, 1720.

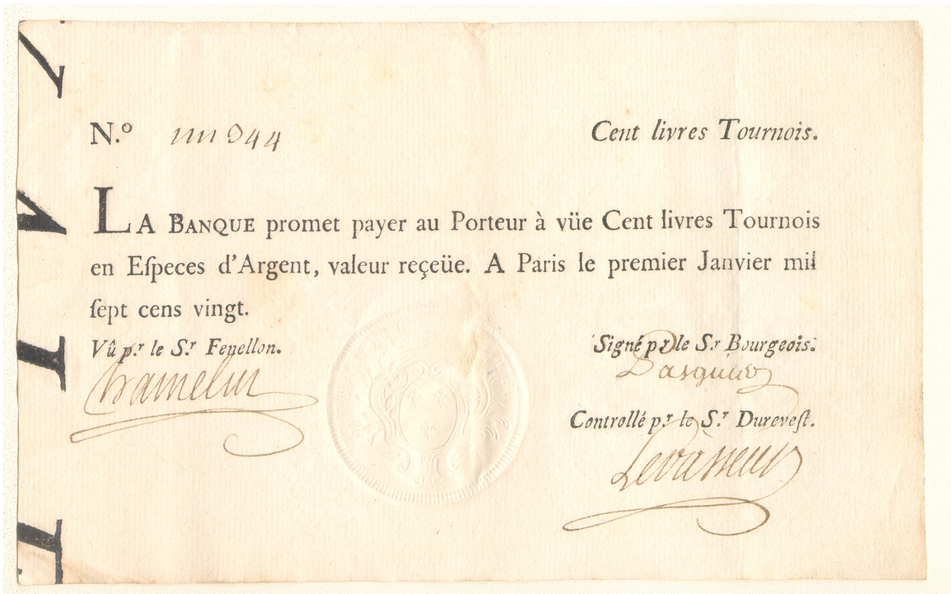

Figure 25.2: A 100L note of the Royal Bank issued Jan 1, 1720. Author's collection.

set to Nov. 30, later extended to Feb. 1, 1721. The notes could be exchanged for receipts from the directors of bank accounts and be treated like bank accounts.

→ 1000L: quoted for Jun. 10–11, Jun. 26–28, and from Aug. 29, 1720 to Mar. 31, 1721.

small denomination notes

Their demonetization was scheduled for May 1, 1721 (Aug. 15, 1720); legal tender only up to 50% for payments greater than 20L, up to 100% for existing debts (Sept. 15, 1720); taken in payment of new coins up to 1/3 (Sept. 30, 1720; suspended Oct. 24); demonetization announced for Nov. 1 (Oct. 10, 1720), convertible into government bonds until Nov. 30 (deadline extended to Jan. 31, 1721), void after.

→ 100L: quoted for Jun. 10, from July 4 to July 15, and from Aug. 1, 1720 to Mar. 31, 1721. 50L: quoted in Bibliothèque nationale, NAF 22245, f. 299–304, but not in Giraudeau. 10L: quoted from Sep. 6, 1720 to Oct. 26, 1720 and Jan. 8 to Jan. 11, 1721.

coupe des billets

Giraudeau's manuscript lists prices for *couppe des billets de banque de 10,000*L *en 1,000*L (Sep. 20, 1720 to Jan. 2, 1721) and *couppe des billets de banque de 1,000*L *en 100*L (Aug. 20, 1720 to Feb. 21, 1721). The price lists of January–February 1721 in Bibliothèque nationale, NAF 22245, fol. 299–304 also quote a *Coupe du Billet de 1000*L *en billets de 50*L. These are apparently the prices paid to exchange a 10,000L note (respectively 1,000L) into 1,000L notes (respectively 100L); see Marais (1863–68, 1:387) who says that on August 15 *on perd 180fr. pour couper un billet de 1,000fr. en billets de 100fr, et 10fr*, and the *Gazette d'Amsterdam* (GA 1720:68) reporting that on August 14, 1720 *on prenait 130 livres pour couper un billet de banque de 1000 livres en 10 portions.* Thus, although listed in Giraudeau, this does not represent a security but a service.

25.3 Amounts issued

The cumulative total of note issues is known from surviving accounts (Harsin 1928, 305–07). The last official issue was ordered on May 1, 1720. On June 26, Sep. 2, Sep. 19 and October 13, additional issues were ordered in small denominations (100 to 10L), totaling 260mL, of which only 246.84mL were actually printed (Dutot 2000, 372). These notes were supposed to be issued only in exchange for large denomination notes, and were stamped with the word "division". But 106mL of those notes were used to buy back shares instead (AN, M1025, Premier recueil, fol. 27).

To construct a table of notes by denominations, I proceed as follows. Up to November 1719, the total in circulation is assumed to be the total issues authorized. For Dec 1719, Dutot (2000, 171) gives a total of 769m made, and the breakdown by denomination is interpolated. From January to May 1720, the total in circulation is the total made as reported by Dutot (2000, 185, 201, 213, 225, 232, 237). From June 1720, the total in circulation is the total made less the total burned, cancelled, or held at the Bank (Dutot 2000, 252, 269, 270, 274, 277, 283, 287, 289, 302, 305-9, 341, 346, 347, 360, 372). From June to October 1720 an adjustment is made for the notes retired but neither held by the Bank nor burned: we only know the total of these notes for October 10, which is 820m (AC Oct. 10 1720, Dutot does not seem to accept the 90m in the bank's registers, so I have excluded it; see Murphy 1997, 298). From October 10 to Jan 8, 1721 the adjustment linearly brings the outstanding circulation to the figure of 685m notes held the public that one can infer from the Visa accounts (Paris-Duverney (1740, 2:241–47). The adjustment is assumed to be a substraction to large denomination notes. Market value is computed by taking market prices for each denomination in Giraudeau. Silver value is obtained by adjusting the market value for changes in the silver coinage's mint equivalent relative to May-June 1720.

25.4 Comptes en Banque (1720–21)

An AC of Jul. 13, 1720 authorized the Company to create bank accounts, starting on July 20 in Paris, and August 20 elsewhere, to a maximum of 600mL. Balances in the bank accounts could be purchased with large denomination notes only, and the notes were to be burned by the Bank. Any commercial bill over 500L, foreign exchange transaction, and sale of wholesale goods had to be settled with bank account transfers. The *Mercure Nouveau*, July 1720, pp. 69–77 contains detailed instructions on their use. An AC of Sep. 15, 1720 announced that the bank account balances were set at 1/4 of their original value, with however an option to convert them at their original value into certificates with which newly issued government bonds could be purchased until Oct. 31 (AC of Sep. 18, 1720). This option was made mandatory when the bank accounts were abolished on Dec. 26, 1720 and were made convertible into government bonds or Indies shares until March 1, after which they would become Company bonds (*actions* *rentières*, see below) (Dutot 2000, 277, 315, 349, 388).

A total amount of 407.8mL was officially created, but only 209.4mL issued to the public in exchange for notes (Dutot [1738] 1935, 201), although only 200.4mL in bank account balances were presented to the Visa (Paris-Duverney 2:262).

→ quoted from Aug. 16, 1720 to Jan. 25, 1721 against notes, Nov. 16, 1720 to Mar. 4, 1721 against coin (these two prices are called *reduit* and non reduit respectively in BN, NAF 22245, fol. 299–304) (figure 26.5 and 26.6).

CHAPTER 26

Other Securities

The Company issued various bonds and other liabilities over the course of 1720.

26.1 PRIMES

These were call options on shares, written by the Company itself. There were two series, called respectively *primes premières* and *primes nouvelles*. The first were announced by a broadsheet[1] posted by the Company on Jan. 9, 1720: the Company sold for 1000L the right to buy from the Company a share for 10,000L, at any time in the 6 months from date of contract; if the option was not exercised the Company kept the 1000L premium. The options were sold by the Company from January 9 to February 9. From January 29 to February 9, the Company accepted soumissions at 6600L each in payment of primes.

→ *Primes premieres*, quoted from Jan. 8 to May 17, 1720, as percentage premium over initial purchase price of 1000L (figure 26.7)

See NAF2560 fol. 10 on the issue of the primes.

[1] See Law (1934, 3:269–71) for the motivation. The text of the announcement is quoted in Giraudeau's manuscript, fol. 8: *Le public est averty que la Comp. des Indes s'engage a fournir a la volonté du proteur dans le courant de six mois du jour de la datte de la police qui sera passée, des actions de lad. Comp. avec des repartitions, moyennant 11,000*L *pour chaque action dont 1000*L *seront payées comptant pour prime qui restera au proffit de lad. Comp. faute par le porteur de payer dans le courant des six mois les 10,000*L *restantes.*

26.2 Primes nouvelles

A new series of options was issued on February 29, sold for 5000L and giving the right to purchase a share at 5000L before the end of 1720 (GA 1720, n. 20; Lüthy 1959–1961, 320). How the premium of 5000L was paid is unclear: a note in Giraudeau says that they were purchased in *récépissés du Trésor Royal* at par or in bank notes at a 10% premium for the options (*a 10% de beneffice aux primes*), but the report in the *Gazette d'Amsterdam*, which may be garbled, says that it was payable in the form of options of the January series (*comptant en Primes de la Compagnie*). An AC of Mar. 5, 1720 ordered the conversion of the options into shares at a rate of 1050L for the first series and 5000L for the second; they were later also made convertible into the Company's life annuities. Those not converted were voided after Sept. 30 (Dutot 2000, 208, 236, 260, 321).

→ *Primes nouvelles*, quoted from Feb. 26 to May 16, 1720, as percentage premium over initial purchase price of 5000L (figure 26.7).

26.3 Action rentière

The Company was authorized by AC Feb. 23, 1720, art. 10, to issue *actions rentières*, preferred stock or bearer bonds earning 2% per year, accruing from Jan. 1 1720, for a maximum of 10mL in annuities, or capital of 500mL, for those former creditors of the government who preferred to hold bonds rather than shares. They could be real or personal property at the purchaser's option. They could be purchased with shares (valued at 10,000L each), soumissions (valued at 8,000L), primes at face value (i.e. 1000L) or récépissés (receipts) of the Trésor Royal at par. The AC of Mar. 5, 1720, art. 12, confirms that every share exchanged for an *action rentière* would be destroyed. The first ones were issued on April 9 (GA 1720, n. 32). On May 31 the Regent ordered that actions rentières be issued in exchange for outstanding récépissés of the Trésor Royal and for bank notes (instead of shares, as was being done until May 22). In June 1720, an amount of 50mL in capital (1mL in interest) had been created (according to the AC Jun. 20, 1720). Interest on the first six months of 1720 was paid starting in August. After their demonetization in October 1720, large denomination notes were to be brought in and converted into actions rentières before Nov. 30, deadline extended to Dec. 31 and again Feb. 1, 1721 (Nov. 8, Dec. 3, Dec. 29, 1720). Shares which had not been converted into actions remplies were to be deemed actions rentières after Oct. 31 (Oct.5, 1720). Bank accounts not converted into other instruments were to be converted into actions rentières after March 1, 1721 (Dec. 26, 1720).[2] A total of 95.8mL were issued (AN, V/7/235, Etat des comptes, fol. 201) of which 46.6mL was issued in purchase of shares (AN, M1025, Premier recueil, fol. 27). A total of 87.1mL were submitted to the Visa (Paris-Duverney 2:141).

→ quoted from May 6, 1720 to Mar. 31, 1721, as percentage premium or discount until February, in coin afterward (figure 26.8).

26.4 Rente viagère

By AC May 16, 1720 the Company was authorized to issue life annuities at 4% interest, to a maximum of 4mL in annuities, or a capital of 100mL. The annuities could be purchased with notes or with shares valued at 9000L each. The minimum capital was 2500L. By June 1720, it appears that almost all had been issued (AC of June. 20, 1720). A total of 100mL was issued, of which 82.7mL in purchase of shares (AN, M1025, Premier recueil, fol. 27). A capital of 92.8mL was presented at the Visa in 1721, and they were reduced at rates varying from 40% to 95% of their face value. They are distinct from the life

[2]These actions rentières were first issued on November 19 (GA 1720:96). They were denominated in 10,000L and 1,000L (the latter called tenth of share and quoted in Bibliothèque nationale, NAF 22245, fol. 299–304, but not in Giraudeau). The Musée Carnavalet in Paris has two examples of dividend coupons (Collection Fabre de Larche, GB16 and 17). Their exact nature is a little unclear: should they be treated as bonds or preferred stock? In the Visa, they were treated exactly as the Company's life annuities and the Banks's bank accounts, and converted into government bonds at the same rates.

annuities issued by the King in August 1720, but were included in the Visa and converted into government life annuities.

→ quoted from Jun. 1, 1720 to Jan. 16, 1721, as percentage premium (figure 26.9).

26.5 bulletins de 52 louis

These were the bonds which each shareholder was required to purchase for 150L, 2/3 in silver specie (*louis d'argent* valued at 3L each) and 1/3 in bank notes (AC Nov. 27, 1720; see *troisième timbre* above). The bond was redeemable in coin at the rate of 3L per louis. The interest was 4%, and the face value of each bond was 156L, or 52 *louis d'argent*, hence the name of the bond. They were converted into 2% bonds by AC of Jul. 26, 1723.

→ quoted from Dec. 19, 1720 to Mar. 31, 1721, in coin.

26.6 billets de 36 louis (et demy)

The AC of Jan. 9, 1721 allowed the Company to change the terms of the mandatory loan: since the notes were demonetized, the bond was sold for 105L in coin, at the rate of 3L per louis, or 35 louis. The bond was redeemable for 36.5 louis (an implied interest of 4.3%) one year after the date of issue (Jan. 10). They were converted into 2% bonds by AC of Jul. 26, 1723.[3]

→ quoted from Jan. 14, 1721 to Mar. 31, 1721, in coin.

Two other securities quoted in the Giraudeau manuscript are of interest because they were among those which, to the exclusion of cash and notes, were allowed in payment of the September soumissions (AC Sept. 26, 1719).

[3] Giraudeau's manuscript incorrectly identifies this loan with one authorized by AC of Oct. 27 and Nov. 17, 1720, which failed completely, and was superseded by the mandatory loan of Nov. 27.

26.7 BILLETS D'ETAT

A royal declaration of Dec. 7, 1715 authorized the issue of 200mL in *billets d'Etat* (amount increased to 250mL on Apr. 1, 1716). These bearer bonds, in denominations ranging from 30L to 10,000L, carried a 4% interest payable semi-annually, with interest accruing from Jan. 1, 1716. The issue began on May 4 and continued until late 1717. By August 1717, the 250mL had been printed and signed, and 237.6mL had been either directly exchanged for liquidated debts (180mL) or handed over to the Royal Treasury (80mL). A total of 195.8mL in debts was ultimately paid off (BN Fr 7759, part 2, fol. 26–72; AN G/7/728-735; AN K886, no 26).

In August 1717, an edict offered a variety of means to redeem the billets d'Etat, including a monthly lottery (details in AE M&D 1232, fol. 99), the sale of some royal forests, the sale of 1.2mL in life annuities, but most importantly the issue of shares on the Company of the West, and also payment of the profiteering taxes levied by the Chambre de Justice of 1716 (17,839,647L in billets d'Etat were collected in this fashion by Jan. 31, 1718; Marion 1914, 1:70, 464; Giraud 1966, 3:42n5). From May 1718, they were also accepted in payment of the seigniorage tax on the new coinage, as new coins could be purchased with 2/5 in billets: a total of 118,859,000L were redeemed in this fashion by May 31, 1719 (BN, Joly de Fleury 566, fol. 199). The redeemed billets were burned publicly, and a total of 107.8m had been burned by Sept. 4, 1719 (Buvat 1865, 1:427). The last remaining billets were included in the general reimbursement of the public debt of August 1719.

→ quoted from Aug. 1 to Dec. 5, 1719 as percentage of face value (figure 26.10). Some prices can be found for earlier dates.[4] Comparison with the prices in the *Gazette* suggest that the prices in Giraudeau's manuscript for the month of August are percentage discounts.

[4] In percentage discount over face value: April 1717, 65; Aug. 1717, 66 to 70; Oct. 1717, 64; Apr. 1718, 62 to 63; May 26, 66; May 27, 62; Ma 28, 60; June 1718, 52; July 30, 1718, 43; Aug. 6, 1718, 53.25; Nov. 10, 1718, 58.5; Dec. 12, 1718, 58.5; Jan. 16, 61; Feb. 6, 1719, 62; Feb. 27, 60; Mar. 10, 58; Mar. 13, 58.5; May 31, 57 (Lüthy 1959–1961, 1:355–58; Dutot 2000, 41, 65; Buvat 1865, 1:398; GA 1718:45, 64, 92, 101; 1719:7, 13, 22, 23, 65).

26.8 récépissés du Trésor Royal

These receipts were delivered by the Royal Treasury to bondholders who were reimbursed as a consequence of the AC of Aug. 27, 1719. They were accepted in payment of shares of the Indies Company, initially concurrently with cash, then exclusively. An AC of Oct. 5, 1719 made it possible to issue them in denominations as small as 500L. By AC of Mar. 5, 1720 the reimbursement of the debt continued in the same form but the récépissés were henceforth redeemed in bank notes by the Indies Company instead of shares. A total of 9.65mL in récépissés submitted to the Visa. They are called *récépissez de M. Hallée* in the price sheets (Hallée was *garde du Trésor Royal*).

→ quoted from Dec. 15, 1719 to Mar. 23, 1720, as percentage premium or discount (figure 26.10).

26.9 billets des receveurs généraux

See discussion in Encyclopédie Méthodique. Also K900 (photocopy), K886 for numbers.

Reims 2086, p. 45: 14 janv 1718 p. 45 Mercredy dernier on commenca a payer les six derniers mois de 1717 aux porteurs des billets de la caisse commune des receptes generalles.

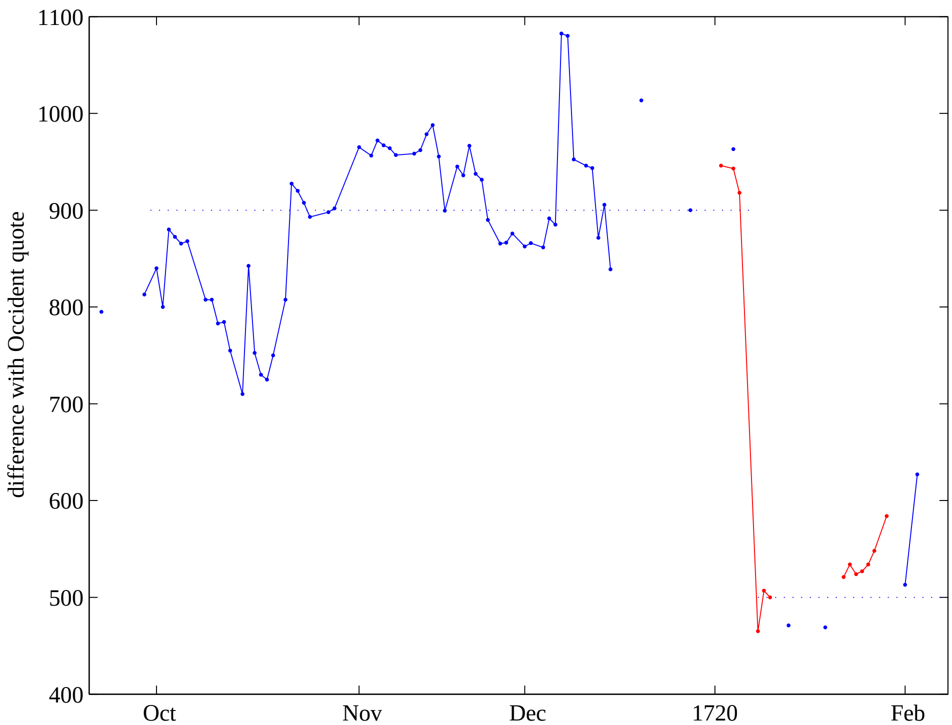

Figure 26.1: Difference between mothers and soumissions, Aug. 1719–Feb. 1720.

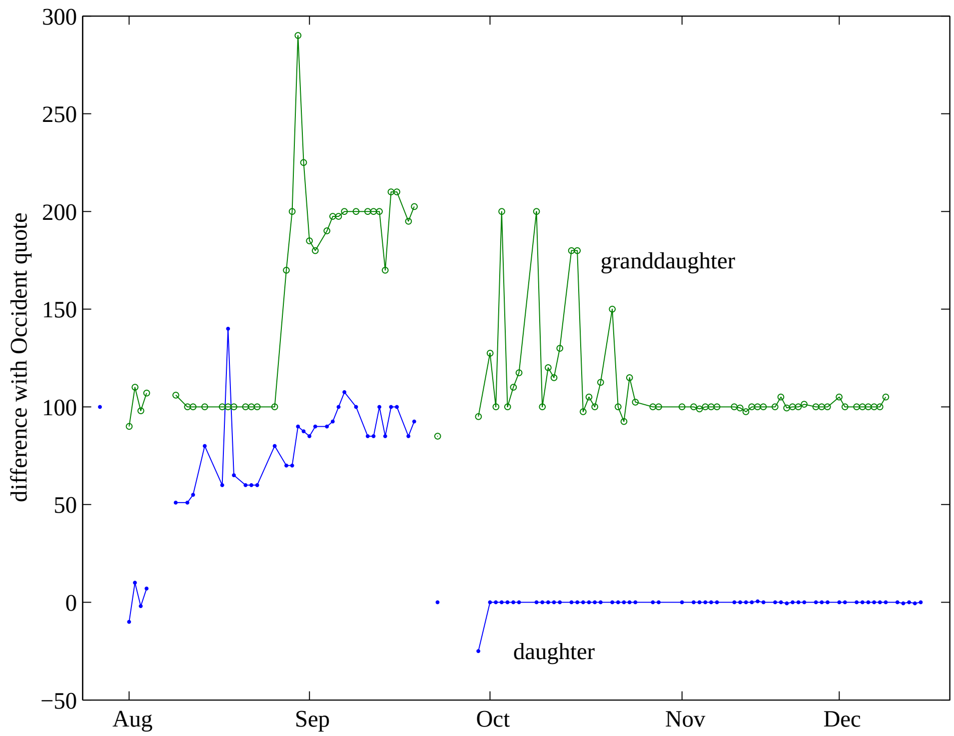

Figure 26.2: Difference between mothers and daughters (resp. granddaughters), Aug–Dec. 1719.

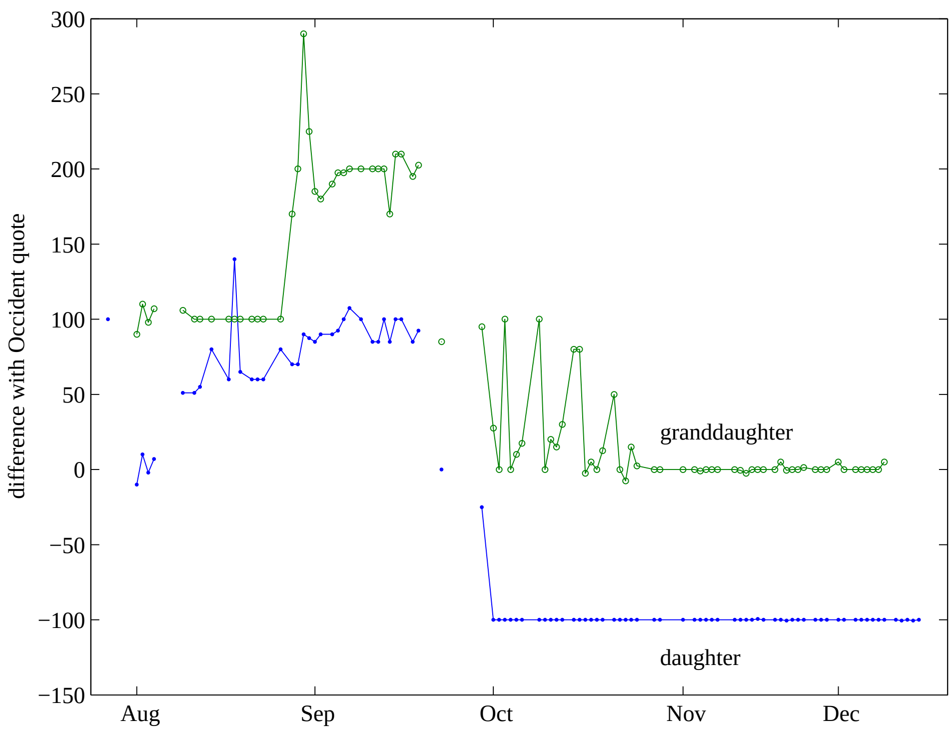

Figure 26.3: Difference between mothers and daughters (resp. granddaughters), Aug–Dec. 1719, with quotations corrected after Oct. 1 (see text).

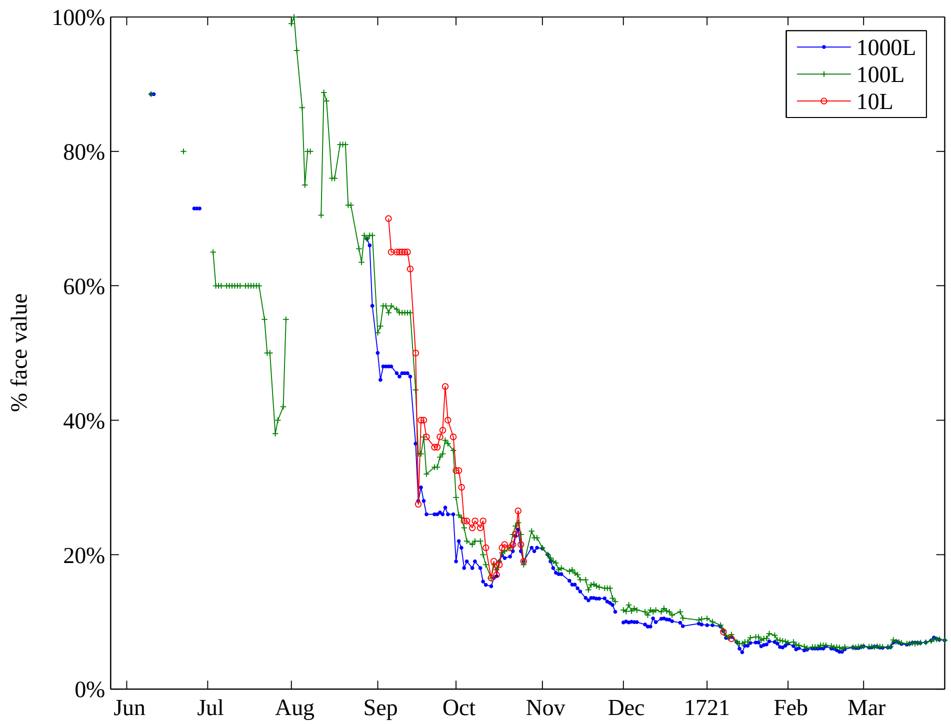

Figure 26.4: Prices of notes of 1,000L, 100L and 10L, in coin (May 24, 1720–Mar. 31, 1721).

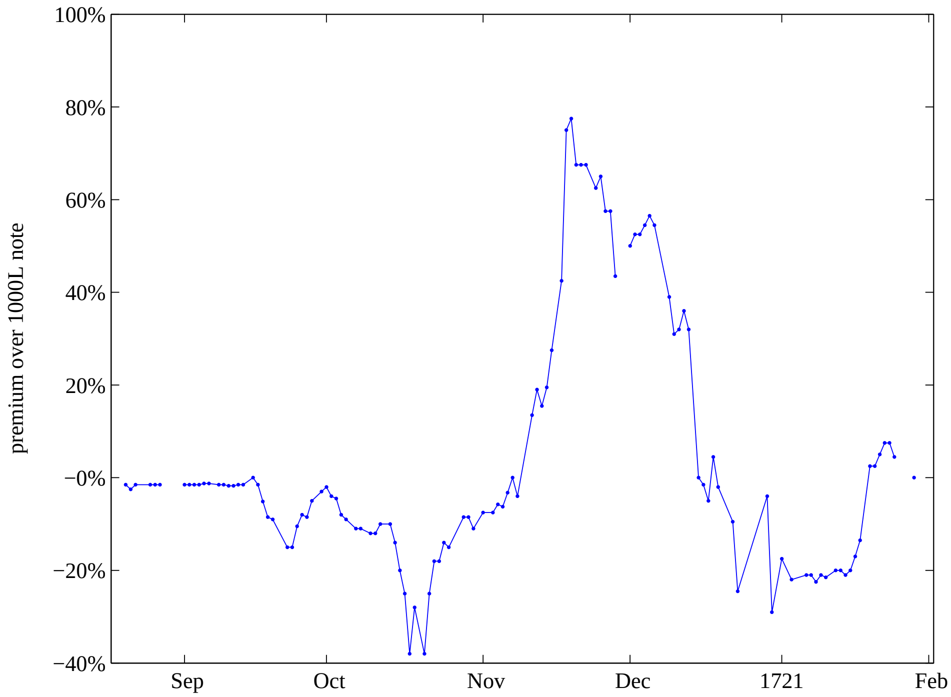

Figure 26.5: Comptes en banque, premium/discount over notes (Aug. 21, 1720–Jan. 29, 1721).

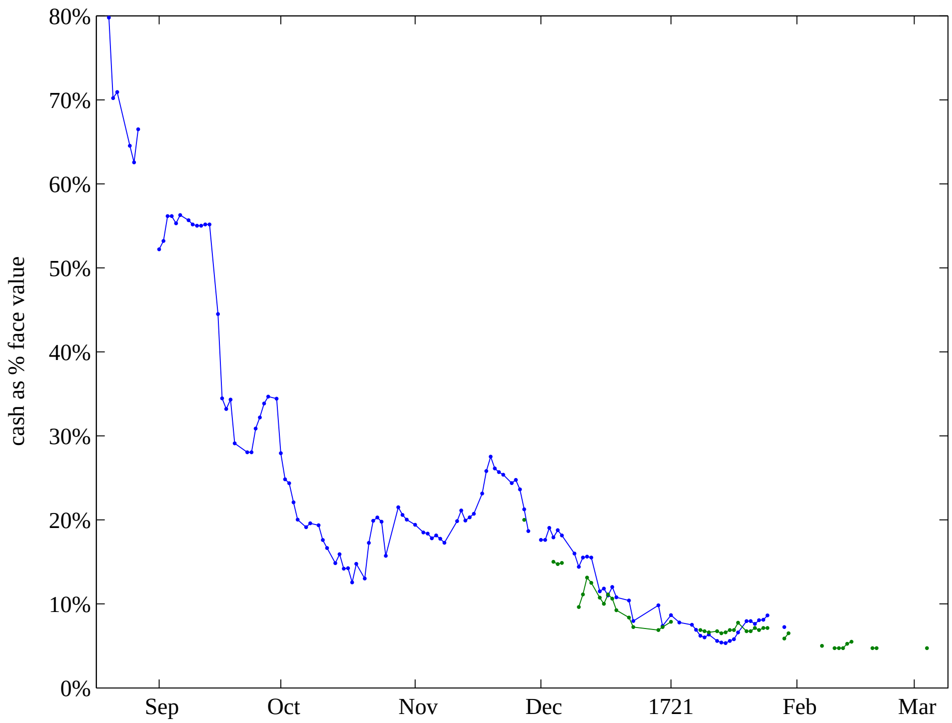

Figure 26.6: Cash price of compte en banque (nominal price deflated by price of 1000L notes, Aug. 21, 1720–Jan. 29, 1721; coin price Nov. 28, 1720–Mar. 4, 1721).

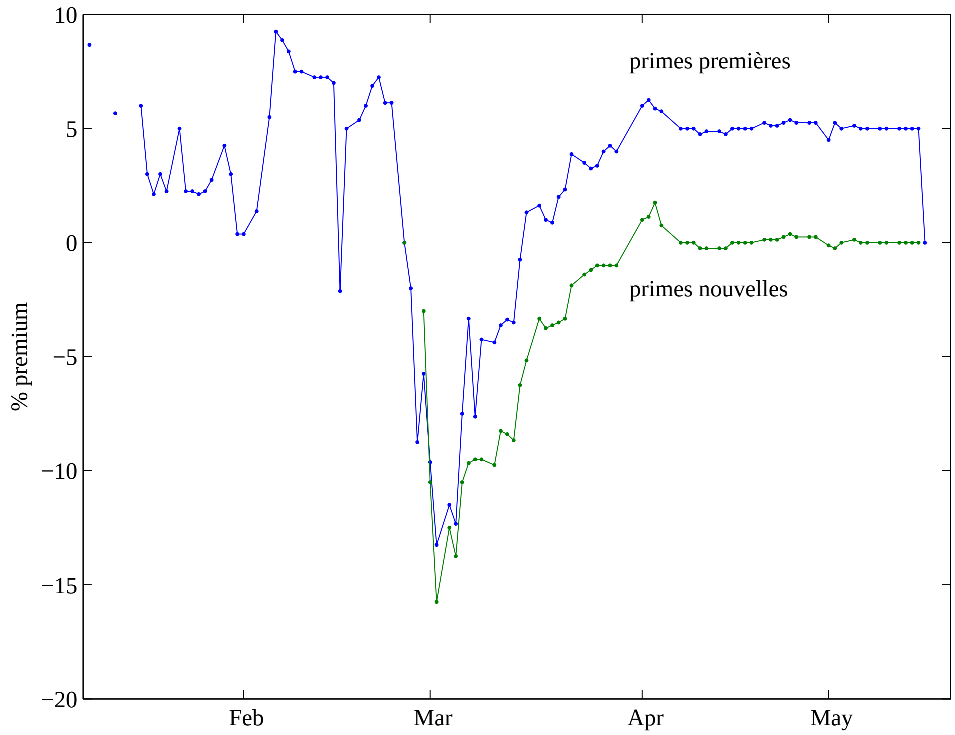

Figure 26.7: *Primes premières* and *primes nouvelles*, quoted as percentage premium/discount over face value (Jan. 7–May 21, 1720).

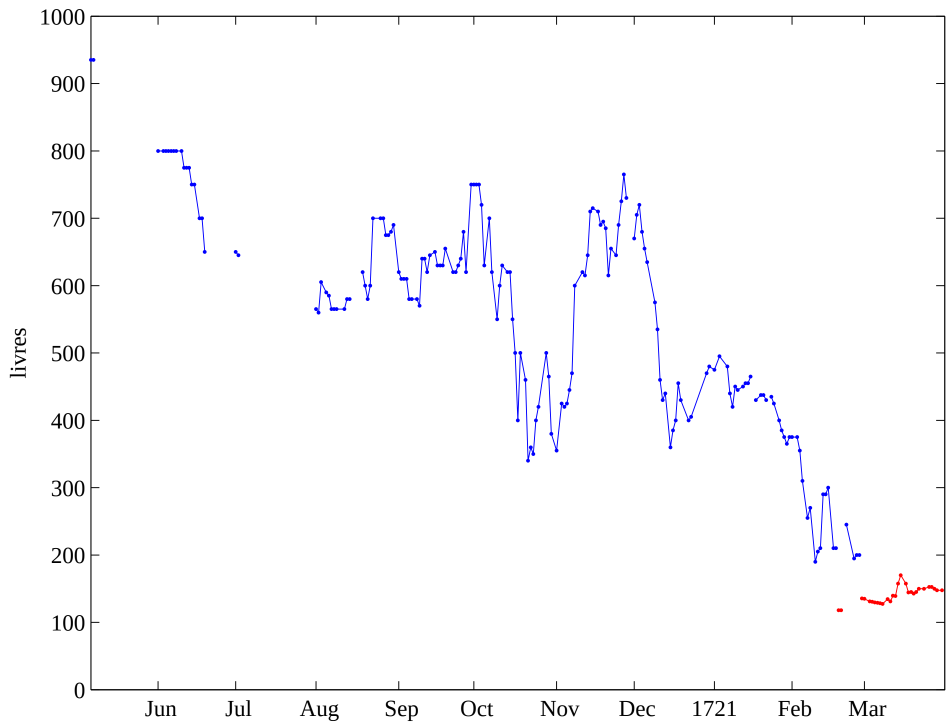

Figure 26.8: *Action rentière*, in notes (Jun 5, 1720–Feb. 27, 1721) and coin (Feb. 19–Mar. 31, 1721).

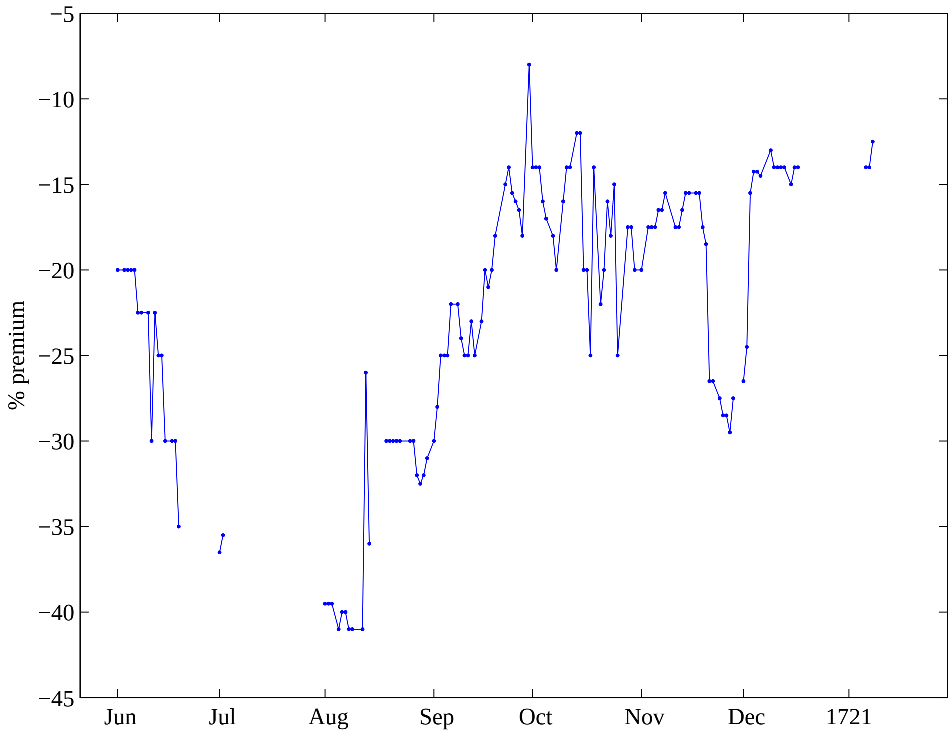

Figure 26.9: *Rente viagère*, in notes (May 21, 1720–Jan. 31, 1721).

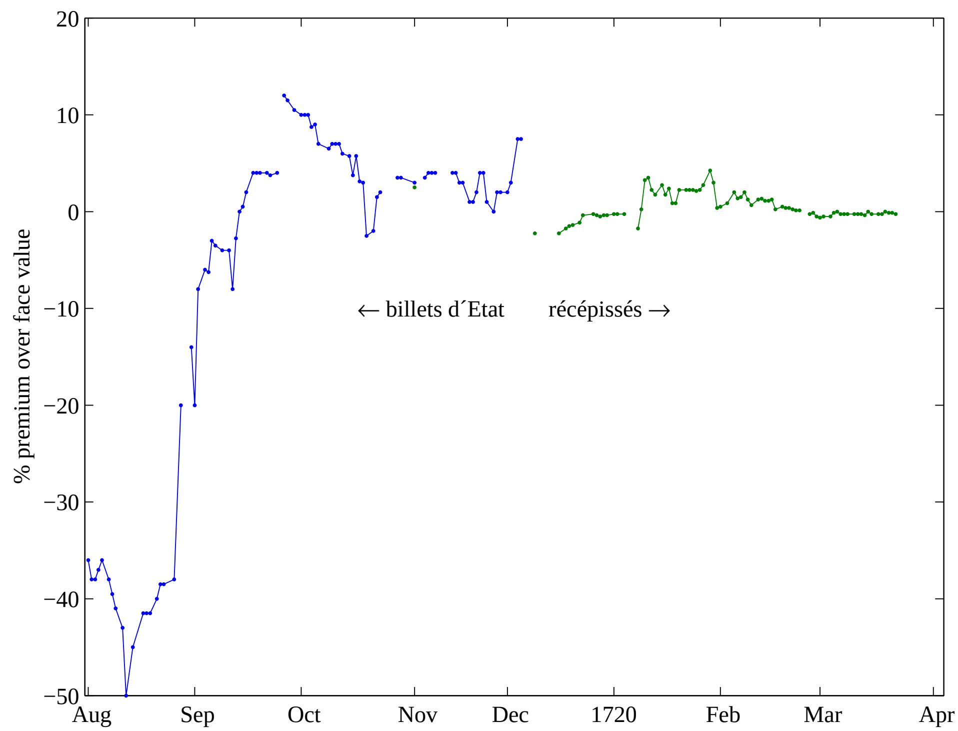

Figure 26.10: *Billets d'État* (Jul. 27–Dec. 5, 1719) and *récépissés du Trésor Royal* (Dec. 9, 1719–Mar. 23, 1720), quoted as percentage premium/discount over face value.

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Memo to self: Make a list of archives consulted.

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Author Index