THE COST OF CREDIBILITY: THE COMPANY OF GENERAL FARMS AND FISCAL STAGNATION IN EIGHTEENTH-CENTURY FRANCE

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The Company of General Farms, a quasi-private collector of about half the French taxes in the eighteenth century, was one of the largest lenders to the Crown. The relationship between the Crown and General Farms fits the model of sovereign debt as a contingent claim. Lending is sustained in contingent claims models if the lender credibly commits to withhold funds from the sovereign if he defaults. The General Farms maintained this commitment with a monopsony of the Crown's access to taxes and borrowed funds. When revolution threatened, the monopsony stood between the Crown and reform of the fiscal system. The history of the Company of General Farms shows how a contingent claims equilibrium can raise the cost of legitimate reform.

Among the many killed in the French Revolution was Antoine Lavoisier, founder of modern chemistry and contributor to the Enlightenment. To the radicals who sent him to the guillotine, Lavoisier's intellectual investment in the Enlightenment did not offset his capital investment in a sustaining institution of the Monarchy, the Company of General Farms. Like Lavoisier, the company was an invention of the Old Regime. It emerged during the reign of Louis XIV and unified much of the financial and tax collection activities of the Monarchy under the direction of a small group of wealthy financiers. And, like Lavoisier, the Company laid the foundations for the revolution that consumed it. Created to facilitate Royal borrowing, by the end of the eighteenth century the Company posed a severe constraint on fiscal reform. The behavior of the Company of General Farms helps explain the origin of the financial crisis that preceded the Revolution of 1789 and supports the theory of sovereign debt markets with empirical evidence of an equilibrium neglected by economists.

THE CREATION OF THE COMPANY OF GENERAL FARMS AND SOVEREIGN DEBT

The Company of General Farms originated in a seventeenth-century French tax farm system comprising over forty-three competitively auctioned tax farms. A tax farmer, a private agent, paid the government for the right to collect a tax. The most important taxes collected through farms were customs duties and sales taxes, about 20 percent of tax revenues in 1600.[1] During the first half of the seventeenth century, tax farm auctions were competitive and the farms small. For an early modern ruler with little information about his tax base, competitively auctioning the right to collect a tax made sense. Because collectors who kept their costs low could outbid competitors, auctions favored efficient farmers. The auctions revealed the value of the tax to bidders and helped the government extract maximum surplus from the contract. Nevertheless, competitive tax farming was replaced by a single cartel of tax collectors, the Company of General Farms, after 1661. Surprisingly, the shift from competition to monopsony led to a dramatic increase in revenues.

Competitive tax farming gave way to tax farmers used by the Crown as financial intermediaries. Farmers typically forwarded several years' worth of tax receipts to the government on the signing of a lease. Anticipations increased in importance, rising from an average of 1.27 million *livres tournois* in the 1620s to 4.29 million in the 1840s.[2] As lending increased through the farms, so did the incentive of the Crown to renege on its obligation to repay the farmers, and defaults ate away the property rights in tax farm contracts.

Between 1598 and 1655 more that a third of the leases signed between the King and his tax farmers were prematurely ruptured.[3] Contract renegotiations usually opened when the Crown owed large sums to a farmer. Between 1619 and 1623, Antoine Feydeau gained leases to two tax farms and made loans to the Crown. In 1623, by threatening default, the Crown blackmailed Feydeau into signing an unfavorable lease. In 1626, under increasing pressure to forward more money to the Crown, Feydeau fled the country and the King confiscated his assets.[4] The collapse of competitive tax farming during the first half of the seventeenth century was, in effect, a capital market failure. The King's refusal to repay loans was capitalized into lease prices on the farms. A tax farm's value as collateral for a loan was dependent on the farmer's holding onto it long enough to collect taxes.

Between 1661 and 1683 the Company of General Farms, a cartel of financiers, unified tax farms and reinforced property rights in tax farm contracts.

With the exception of the John Law period (1717–20), the Company controlled the tax farm system for most of the eighteenth century. The increased security of property rights was capitalized into the value of the tax farms and lending to the Crown increased. Between 1661 and 1675 the real value of tax farm revenues increased fourfold,[5] although neither trade nor tax rates increased significantly.[6] During the eighteenth century, the Company provided 40 percent of tax revenues and was one of the most important creditors of the Crown. The abandonment of competitive tax farming in favor of a financial cartel at least temporarily improved royal finances. As the eighteenth century progressed, however, contemporaries complained of corruption in the Company. The popular journalist Louis-Sébastien Mercier wrote in 1782 that he could not walk by the headquarters of the Company without feeling the desire to "reverse this immense and infernal machine which seizes each citizen by the throat and pumps out his blood."[7] Finance ministers found the Company an obstacle to fiscal reform.

THE THEORY OF SOVEREIGN DEBT AND THE COMPANY OF GENERAL FARMS

Before 1661 there was a capital market failure because the Crown could not commit to repay loans made by the tax farmers. The Company of General Farms alleviated this capital market problem and as a Crown-creditor contributed to the fiscal crisis that preceded the French Revolution. The sovereign debt literature visits this relationship: Jeremy Bulow and Kenneth Rogoff developed a no-lending model. Their sovereign wants to smooth spending over time despite fiscal shocks like war by borrowing funds or drawing on savings.[8] If the sovereign's creditors' only response to default is to stop lending, there is no lending.

But sovereigns had debts and no lending does not explain them. Two classes of models address this issue. Bulow and Rogoff constructed a punishment model to show that if the lenders' credible punishment is more than withholding loans, then lending continues.[9] The institutional details of punishment are a matter of conjecture. The contingent claims literature offers an alternative explanation for lending. Herschel Grossman and John Van Huyck developed a model in which the sovereign's only help smoothing fiscal shocks comes from the lender.[10] If the lender is a monopsony-provider of funds, then positive lending, state-contingent equilibria may be derived. In these equilibria, the lender expects only partial repayments during harsh

times. In time of war the lender knows that the sovereign will not fully repay loans, but in good times he expects full payment. Among the factors that determine the amount of lending in the Grossman and Van Huyck model are the sovereign's access to alternative capital markets and the unity of the lenders in remembering past defaults. The lender-organization's effectiveness as a financial intermediary is determined by its capacity to overcome collective action costs of protecting its monopsony and ensuring that its members enforce punishments.

Historical evidence suggests that for most of the seventeenth century the relationship between the Crown and the tax farmers resembled Bulow and Rogoff's no-lending world because of the competitive organization of tax farming. The Crown could selectively default on individual farmers at low cost because there were other bidders willing to take their places.[11] After formation of the Company of General Farms, the relationship between the King and the farmers resembled Grossman and Van Huyck's model of lending as a contingent claim. After 1661 the Company of General Farms, through its lending activities and control of taxation, became a large enough component of the French fiscal system that its threats of punishment for defaulting on loans were credible—the proportion of royal finance controlled by the Company was large enough that the king could not easily avoid punishment by shifting to other lenders. And throughout the eighteenth century the Company allowed for partial defaults by the Crown during "bad states of the world" just as predicted by the Grossman and Van Huyck model.

French kings drew on short-run and long-run debt to finance their eighteenth-century wars.[12] James Riley estimates that between 1750 and 1768 long-term borrowing amounted to some 872.3 million *livres tournois.*[13] During that time the Company of General Farms loaned the king 244 million *livres tournois*[14]—about a quarter of long-term Royal debt but an underestimate of the financial importance of the tax farmers. The King commonly assigned third-party debt to be repaid by the farmers. The Company financed these assignations by issuing short-term debt known as *billets des fermes.*[15] *Billets des fermes* in circulation increased dramatically in the 1750s—Lavoisier estimated that they amounted to over 60 million *livres tournois* in 1762, declined to 48.5 million by 1767, and rose again to 60 million in 1770.[16] The Crown's debt in 1764 was 124 million *livres tournois*;[17] so the Company of General Farms maintained about half the Crown debt, and there was no alternative for debt service.

Frequent partial defaults offer another reason to apply the contingent claims model to the relationship between the Crown and the General Farms. In 1759, 1761, and 1770 the government failed to pay on the *billets des fermes,* so the company temporarily stopped issuing them. These defaults came at a time of severe strain on the treasury, and, consistent with contingent claims, the General Farmers chose not to punish the Crown. There were other times, however, when the Company interpreted a potential default as a violation of their contract and threatened punishment. In October 1783, Louis XVI's Finance Minister, D'Ormesson, abrogated the Company's lease. Holders of 30 million *livres* worth of *billets des fermes* demanded immediate repayment lest they lose their investment. The Company refused to redeem the notes and demanded and received an audience with the King. Thirty of the General Farmers explained to Louis XVI what would happen to his portfolio if they defaulted on the *billets des fermes.* D'Ormesson was fired, and the Company's lease was reinstated within a week.[18] The Crown took seriously the Company's threats to withhold funds.

The unification of the tax farm system was an improvement for the King and the tax farmers in the early seventeenth century when property rights were not secure. The Crown gained access to credit, and the General Farmers gained secure property rights over their leases and loans. Nonetheless, establishing credible contracting between the tax farmers and the King was not costless. Competitive allocation of tax farm contracts was eliminated and auctions revealed the value of an asset to the bidders. With the loss of that information after 1661, finance ministers found it increasingly difficult to extract the maximum revenue possible from the tax farmers. Historians know that during some years the General Farmers earned profits as high as 37 percent on their investment, well above the return on comparable investments.[19]

Another cost of unification was the adaptive inefficiency that followed from constraining the King by creating a large cartel of financiers. Douglass North says adaptive efficiency is "concerned with the kinds of rules that shape the way an economy evolves through time."[20] The better a society's institutions are at evolving in response to changing relative prices, the more adaptively efficient they are. In keeping with contingent claims equilibrium, the credible threat the General Farmers used to protect their property rights was their control of a significant proportion of the Royal fiscal system. Over the course of the eighteenth century, the forty General Farmers responsible for managing the tax farms raised the cost to the Monarchy of interfering

with their control over the fiscal system. And, as its fiscal needs changed during the eighteenth century, the Monarchy was unable to reform institutions to meet those needs.

The contingent claims equilibrium that led to a Pareto improvement in contracting between the tax farmers and the King in the seventeenth century was adaptively inefficient during the eighteenth century. What was gained in the seventeenth century through secure property rights over tax farm contracts and credibility in the capital market was lost in the eighteenth century as the system became increasingly costly to reform. Credibility came at the cost of inflexibility in the face of the changing fiscal needs of the Monarchy.

THE COST OF CREDIBILITY: ADAPTIVE INEFFICIENCY AND FISCAL CRISIS

Contingent claims equilibrium requires the lender to control funds going to the borrower. George Matthews notes in his history of the farms that it was not possible to profitably "administer the great mechanism of the General Farms so long as places in the Company were endangered by every shift in court clique and influence. The tax farmers sought to insulate themselves and their families in the Company...then sought to entrench themselves."[21]

Over the course of the eighteenth century the Company developed formal and informal institutions to protect their monopsony power. Company officers bribed public officials: by 1726 it was common practice to offer the controller general a significant *pot-de-vin* on the signing of a new lease. Cardinal Fleury (1726–42) was paid 300,000 *livres* in six installments of 50,000 *livres* for every lease that was signed during his term. It was understood that if a minister left office before all installments were paid, his successor would receive them. In 1774, the farmers paid the *pot-de-vin* of 300,000 *livres* plus an additional 22,000 *livres* in pensions to the finance minister's family.[22] The bribes reinforced the farmers' control of the monopsony and kept the Crown dependent on the Company for financial services. Turgot (1776), the first minister to turn down a bribe, was an outspoken critic of the Company.

Because General-Farmer nominees were required to make larger contributions to the Company's capital fund than they could pay, they sold shares of their seats to *croupiers*.[23] Splitting a seat into *croupes* was like selling stock in the farms. The holder of a *croupe* was a residual claimant. If the Company invested wisely and the King honored his debt contracts, the *croupiers* earned

a return, but, if the fortunes of the Company were poor, *croupiers* suffered along with the General Farmer in whom they had invested.

The *croupier* system protected the tax-farm monopsony. Selling a *croupe* ensured the support of a key player at court. When Turgot allowed the list of *croupiers* for the Lease David to be published in 1776, people were scandalized. It named members of the Royal Controller General Terray's family, court insiders such as Mme de Pompadour and Mme du Barry, and the King himself. One plausible reason why the Crown did not predate on the tax-farm monopsony during the eighteenth century is because it owned stock.

The *croupiers* reduced the transaction costs of maintaining a credible threat against the King. The farmers faced a tension between coordinating their actions and raising sufficient capital. Coordination was needed to maintain credibility. When it was necessary to punish the King it was in the interests of one or more of the farmers to accept a side-payment from the Crown in exchange for not punishing. Lack of coordination made the seventeenth-century farm system a failure. There were fewer General Farmers with the right to vote on when to punish the King, so it was easier to prevent defection.

The General Farm needed massive capital to satisfy the financial needs of the Crown and day-to-day tax collection. In 1768 the 92 million *livres tournois* in the capital fund did not include the funds required to make payments on the *billets des fermes.* The lease price that year (a rough approximation of anticipated tax receipts) was 132 million *livres tournois.*[24] Without *croupiers,* the number of seats that would have had to be sold to raise the necessary capital could have easily extended into the hundreds and would have made coordinating the farmers impossible. By separating ownership from control rights in the farms, the *croupier* system provided sufficient capital without sacrificing the coordination necessary to protect property rights. The *croupiers* made the Company of General Farms one of the first partial liability corporations in the Western World.

The institutions the General Farms used to protect their monopsony were effective and obstructive, and the government found it increasingly difficult to collect enough tax money to meet its needs. Between 1726 and 1786 lease prices on the General Farms increased from 80 to 144 million *livres tournois,* primarily because of increases in tax rates. By the last quarter of the eighteenth century it was clear that further rate increases could not offset the need to reform the tax system. Taxes originated during the Hundred Years War were even by eighteenth-century standards inequitable and costly to

administer. The structure of the salt tax encouraged evasion and smuggling. In Paris 39 liters of salt cost 45 *livres* in 1713 but 60 *livres* in neighboring Ile-de-France.[25] Customs duties were levied on both internal and external trade. By the end of the century finance ministers recognized the need to reform the Company of General Farms but could not overcome earlier reforms designed to establish credibility in the lending relationship between the Crown and the Company.

The first minister to seriously attempt a reform of the tax farms was Jacques-Etienne Turgot. At his death in May 1774 Louis XV left behind a looming fiscal crisis. Before the Seven Years War, estimates put total Royal debt at 1.2 billion *livres* with an annual service of 85 million *livres*. By 1764 the debt had risen to 2.3 billion *livres* with an annual service of 196 million *livres*. By 1775, when Turgot came to power, debt payments were approaching the unsustainable.[26] Turgot could not increase rates on the tax farms because they had been increased by 30 percent over the years 1760 to 1780. Moreover, the company refused to loan more funds to the government. There was only one option, a partial default on 20 million *livres tournois* of long-term debt along with a gradual liquidation of outstanding *billets des fermes*. Turgot's reforms included liberalization of the Paris grain market and audits of the Company. During the winter of 1775–76 there were several uprisings in the provinces (Grain Wars), and by mid-1776 Turgot's enemies, numbering among them many General Farmers, had secured his removal from office.

Turgot's replacement, Jacques Necker also opposed the General Farms.[27] Unlike his predecessor, however, Necker was sufficiently educated in the art of court intrigue to know his limits when it came to opposing their power. He understood that a reform of the tax farms had to start with a buy-out of the General Farmers. When he came to office, the annual service on funded long-term debt was about 208 million *livres*.[28] At the conclusion of the current lease in 1780, he split the tax farms into three parts and reduced the membership in the Company from sixty to forty spots. Because no member's investments were defaulted on, the Company did not oppose the change. The twenty retired members of the company were bought out for 1.56 million *livres* each. Necker raised these funds by selling the rights to manage the newly separated taxes. Like magic, he got something for nothing. Necker received 50 million *livres* from the incoming commissioners plus the traditional surety bonds from the forty remaining farmers on the Lease Salzard

in exchange for reimbursing the retired farmers 31.2 million *livres*: a net gain of 81.2 million.[29]

Necker bought out some of the tax farmers and wrested control of part of the tax farms from them. He did this without defaulting and avoided punishment. Necker did not reform the tax farms but bought and sold them for a profit. Private agents remained in charge. Furthermore, he conceded to the company a law that made it illegal for anyone but sons of current farmers to become General Farmers. Necker reduced the number of monopsonists and at once strengthened the legal protection of the survivors.

Two years later, D'Ormesson assumed office with the heavy-handed reforms that were doomed to failure. When he tried to control the farms without compensation, the General Farmers threatened to stop servicing the short-term debt. His was the final attempt to break the power of the Company before the end of the Old Regime. D'Ormesson's successor, Callone, increased membership in the Company by four places. The French monarchy was in an explosive cycle of borrowing to cover debt.[30] By 1788, unable to reform the fiscal system by conventional means, the Crown called a meeting of the ancient Estates General for the first time since the sixteenth century, the first step on the road to the revolution.

Because finance ministers could not reform the tax farm system they had to create additional, ad hoc, taxes to raise funds. As the eighteenth century ran its course, tax-farm contribution to revenue fell from 40 percent in 1753 to 30 percent in the 1780s. New taxes were introduced as temporary expedients but maintained after the crisis. Unlike its British counterpart, the French tax system fell far short of national needs. The British used tax farming during the seventeenth century in much the same way as the French. The early Stuart Kings made extensive use of the tax farmers as financial intermediaries and frequently violated their property rights to avoid repaying loans.[31] In Britain, however, the solution to the Crown's credibility problem was to introduce representative institutions. Tax farming disappeared in Britain in 1641 when the Long Parliament confiscated all of the farms' assets. By 1688, and the Glorious Revolution, formal representative institutions like the Bank of England and a strong Parliament ensured credible government capital market behavior.[32]

The French had a constitutional revolution in the seventeenth century known as the Fronde (1648–53), but unlike in Britain, the King won in France. So instead of encouraging representative institutions, the French

government allowed organizations like the Company of General Farms to emerge with which it could credibly contract and create an equilibrium, like that described in the contingent claims literature, in which the ruler cooperated with an organization so long as it was powerful enough to punish him. The adaptive inefficiency of the French solution was greater than that of the British representative institutions. The French Monarchy captured a lower proportion of national income at the end of the eighteenth century than it had at the beginning, whereas the British collected 17 percent of national income at the start of the century and 22 percent at the end.[33] Moreover, by the end of the century the British were paying lower rates of interest on their borrowings than were the French. Between 1745 and 1789 the yield spread between similar short-term bonds in Britain and France was about 3 percent on average.[34]

The French solution to its seventeenth-century inability to enforce property rights was to cede control over a significant proportion of those rights in return for increased capital. The solution is consistent with the contracting equilibria described by the modern contingent claims literature. Because the Crown linked tax collection and lending in the Company of General Farms, reforming tax collection required the Crown to buy out the farmers. As the eighteenth century progressed, and the importance of the Company in sustaining Royal credit grew, buying out the tax farmers became increasingly unrealistic. The alternative was to predate on the rights of the tax farmers, as had been done repeatedly during the seventeenth century—the successes of the seventeenth century plagued the eighteenth. The Company of General Farms protected its monopsony, secured property rights, and bound the Crown to institutions that dragged it into revolution.

NOTES

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1. These taxes were known as *Aides, Traites, Gabelles, and Domaines. Aides* were wholesale and retail taxes on wine and spirits; *Traites*, excises on internal and external trade; *Gabelles*, taxes on salt; and *Domaines*, seigniorial rights

and dues. During the eighteenth century the tobacco tax, the *Tabac*, was added to the farms.

2. See Richard J. Bonney, "The Failure of the French Revenue Farms," *Economic History Review* 32, no. 1 (1979): 11–32.
3. Françoise Bayard, *Le monde des financiers au xviii*[e] *siècle* (Paris: Flammarion, 1988), 128.
4. See Pierre Heumann, "Un traitant sous Louis XIII: Antoine Feydeau," in *Études sur l'histoire administrative et sociale de l'ancien régime*, ed. Georges Pagès (Paris: Librairie Félix Alcan, 1938).
5. Data on the value of lease prices for the tax farms during the seventeenth century comes from two sources: *Archives Nationale*, Series KK335; and Margaret Bonney and Richard Bonney, *Jean-Roland Malet: Premier historien des finances de la monarchie française* (Paris: Comité pour l'histoire économique et financière de la France, 1993).
6. Declines in agricultural and industrial production, falling agricultural productivity, and deflation lead historians to characterize the second half of the seventeenth century as the *longue période des difficultés*. The literature surrounding these findings is summarized in Françoise Bayard and Philippe Guignet, *L'économie Française aux xvii*[e] *et xviii*[e] *siècles* (Gap: Ophrys, 1991), 107–13.
7. Quoted in Simon Schama, *Citizens: A Chronicle of the French Revolution* (New York: Vintage Books, 1990), 73.
8. Jeremy Bulow and Kenneth Rogoff, "Sovereign Debt: Is to Forgive to Forget?" *American Economic Review* 79, no. 1 (1989): 43–50.
9. Jeremy Bulow and Kenneth Rogoff, "A Constant Recontracting Model of Sovereign Debt," *Journal of Political Economy* 97, no. 1 (1989): 155–78.
10. Herschel I. Grossman and John B. Van Huyck, "Sovereign Debt as a Contingent Claim: Excusable Default, Repudiation, and Reputation," *American Economic Review* 78, no. 5 (1988): 1088–97.
11. Tax farmers were willing to profit at the expense of their fellow collectors. See Bayard, *Le monde des financiers*, 123–31.
12. The War of Austrian Succession, 1740–48, cost 500 million *livres tournois*, or 25 percent of annual ordinary revenues, and the Seven Years War, 1756–63, cost 1,325 million *livres tournois*, or 75 percent of ordinary revenues each year.
13. James C. Riley, "French Finances, 1727–1768," *Journal of Modern History* 59 (1987): Table 2.

14. Data compiled from George T. Matthews, *The Royal General Farms in Eighteenth Century France* (New York: Columbia University Press, 1958), 285; and Pierre Roux, *Les fermes d'impôts sous L'Ancien Régime* (Paris: Librairie Arthur Rousseau, 1916), Appendix 1.
15. The modern equivalent of the *billets des fermes* would be short-term government debt, like a one-month or three-month treasury bond. The value of the *billets des fermes* was subtracted from lease payments each year as charges.
16. Matthews, *Royal General Farms,* 255–56.
17. Eugene White, "France and the Failure to Modernize Macroeconomic Institutions" (Paper Presented at the 12th International Economic History Congress, August 25, 1988), Table 5.
18. François Nicolas Mollien and Charles Gomel, *Mémoires d'un ministre de Trésor Public, 1780–1815,* vol. 1 (Paris: Guillaumin et cie, 1898), 89–92; and Marcel Marion, *Histoire financière de La France depuis 1715,* vol. 1 (New York: B. Franklin, 1965), 350.
19. Eugene White, "France's Slow Transition from Privatized to Government-Administered Tax Collection: Tax Farming in the Eighteenth Century," Rutgers University, Department of Economics, Working Paper no. 200116 (2001): 18. The average profit on leases was 19 percent.
20. Douglass C. North, *Institutions, Institutional Change, and Economic Performance* (New York: Cambridge University Press, 1990), 80.
21. Matthews, *Royal General Farms,* 300.
22. *Encyclopédie Méthodique: Finances,* ed. J. P. Rousselot de Surgy, vol. 3 (Paris: Panckoucke, 1784–87), 357. Cardinal Fleury also refused to take a larger competing bid on the *Tabac* during his office.
23. Of the sixty seats in the Farm available in 1776, thirty-eight were divided into *croupes.* See the *acte de société for the Bail David* reproduced in Antoine Lavoisier, Œvres, vol. 6 (Paris: Imprimérie Nationale, 1862–93), 629–31.
24. Matthews, *Royal General Farms,* 285; and Roux, *Les fermes d'impôts,* Appendix 1.
25. Roland Mousnier, *The Institutions of France under the Absolute Monarchy, 1598–1789: Society and the State,* vol. 2 (Chicago: University of Chicago Press, 1979), 424.
26. Riley, "French Finances, 1727–1768," Table 2.
27. Mollien and Gomel, *Mémoires d'un ministre,* 197.

28. Adolphe Vührer, *Histoire de la dette publique en France* (Paris: Berger-Levrault & Cie, 1886).

29. Marion, *Histoire financière*, 319–20.

30. Eugene White, "Was There a Solution to the Financial Crisis of the Ancien Régime?" *Journal of Economic History* 49, no. 3 (1989): 545–69.

31. Robert Ashton, "Revenue Farming Under the Early Stuarts," *Economic History Review* 8, no. 3 (1956): 314.

32. For the development of representative institutions in Britain and the response of capital markets, see Douglass North and Barry Weingast, "Constitutions and Commitment: The Evolution of Institutions Governing Public Choice in Seventeenth Century England," *Journal of Economic History* 49, no. 4 (1989): 803–32.

33. Peter Mathias and Patrick O'Brien, "Taxation in Britain and France, 1715–1810: A Comparison of the Social and Economic Incidence of Taxes Collected for the Central Governments," *Journal of European Economic History* 5, no. 3 (1976): 601–50.

34. François Velde and David Weir, "The Financial Market and Government Debt Policy in France, 1746–1793," *Journal of Economic History* 52, no. 1 (1992): 15.