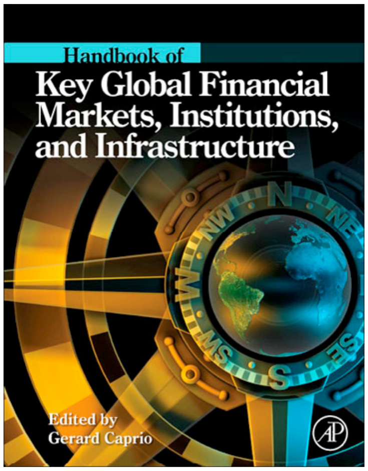

Munro J.H. (2013) Rentes and the European 'Financial Revolution'. In: Gerard Caprio (ed.) Handbook of Key Global Financial Markets, Institutions, and Infrastructure, Vol. 1, pp. 235-249. Oxford: Elsevier Inc.

CHAPTER

23

Rentes and the European 'Financial Revolution'

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OUTLINE

CHIEF FEATURES OF THE MODERN FINANCIAL REVOLUTION

The modern Financial Revolution saw the establishment of a national public permanent funded debt composed of negotiable perpetual annuities or rentes (the continental European term). The public debt was national in that it was the responsibility of the national state, usually represented by a legislative assembly – such as England's Parliament – rather than the personal responsibility of a prince or monarch. This public debt was funded in that the government or national legislative assembly levied specific taxes, chiefly taxes on consumption, to finance the state's annual payments on the public debt. This national debt was permanent in that it did not consist of loans or bonds with specific maturity dates, so that the state, while always retaining the right to redeem this debt (in part or in whole), had no obligation to do so, for the right of redemption was its sole prerogative – with no such rights for the debt holders. Therefore, those who bought or held such annuities or rentes had only one option to regain their capital, in whole or in part: to sell them to third parties. Exercising that option in turn depended on the legal establishment of full-fledged negotiability.

Handbook of Key Global Financial Markets, Institutions, and Infrastructure
http://dx.doi.org/10.1016/B978-0-12-397873-8.00008-6

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This meant legal protection for third-party creditors (assignees), the unencumbered freedom to sell annuities anywhere (in the western world), and finally, the development of efficient secondary markets in negotiable securities, beginning with the Antwerp Beurs or Bourse (1531), followed by the Amsterdam Beurs (1608), and subsequently, the coffee houses in Exchange Alley in London (1694: the precursor of the London Stock Exchange, 1801) and other international exchanges. Finally, the government's issue and sale of these negotiable securities always took place without any elements of coercion, including arbitrary conversions of short-term floating debts into these perpetual securities. This is an important distinction from other similar forms of public debts in later medieval and early-modern Europe.

We owe the term Financial Revolution to Dickson's (1967) magisterial monograph on English public finances from the late seventeenth to the mid-eighteenth century. Contrary to the assumptions of so many historians influenced by this book, England was not the birthplace of this financial revolution.

THE GEOGRAPHIC ORIGINS OF THE 'FINANCIAL REVOLUTION': PUBLIC FINANCES IN THE LOW COUNTRIES AND FRANCE

According to Tracy (1985, 1994), that honor belongs to the sixteenth-century Habsburg Netherlands. His thesis is all the more attractive in that the seventeenth-century Republic of the United Provinces (Dutch Republic) clearly inherited a modified form of this Habsburg system and then, according to many historians, transmitted this financial revolution to England, shortly after England's Glorious Revolution of 1688. The new King William III (r 1689–1702), replacing the deposed James II (r 1685–88), was married to, and coruler with, James' daughter and legal successor, Queen Mary (r 1689–94). William was also, as the Dutch Prince of Orange (Willem III), the stadhouder or ruler of five of the seven Dutch provinces. In Dickson's view, shared by many other historians, the political principles established by the Glorious Revolution were essential for the subsequent Financial Revolution, and many such historians believe that William's financial advisors (many of them Dutch) were deeply influenced by the current Dutch financial model.

There are, however, several problems in attributing the origins of the Financial Revolution to the sixteenth-century Habsburg Netherlands. In the first place, while the sale of renten did involve public state finance, the renten or rentes were the responsibility not of the Netherlands' Staten Generaal (États Généraux) but of the various provincial Estates. Second, rentes had not yet become the predominant form of public finance (certainly not to the extent of England's Financial Revolution). Third, the rentes were, as in centuries past, sold in two forms: life rents (lijfrenten), extinguishable on the death of the holder (or of his/her assignee), and perpetual rents (erfelijkrenten). Only the latter were clearly transferable and negotiable, and the peculiar status of the latter is indicated by the more common early-modern Dutch term: losrenten. Tracy's admirable study never makes clear the extent to which rentes were negotiable and sold on secondary markets. Fourth, both in the sixteenth-century Habsburg Netherlands and subsequently, in the seventeenth-century Dutch Republic, a substantial proportion of the public debt was in the form of life rents. Fifth, some purchases of rentes were obligatory, not voluntary, especially during war-time emergencies, although this was a burden imposed chiefly on the wealthy mercantile classes.

A better, if not entirely satisfactory, case for the national origins of the Financial Revolution can be made for both France and Habsburg Spain, during the course of the sixteenth century. For France itself, for the Burgundian and then Habsburg Low Countries, and indeed for all medieval Europe, the origins of this peculiar form of public finance can be traced back to the urban finances of France's northern counties of Artois and Flanders, from the 1220s.

THE HISTORICAL ORIGINS OF THE RENTE CONTRACTS: IN PRIVATE AGRICULTURAL FINANCE

In private finance, however, the rente contract goes back centuries earlier, to Carolingian times, in the eighth century. This was a form of a census contract by which monasteries acquired bequests of land on the condition that the donors would receive an annual usufruct income (redditus) from the fruits of that land: in kind, money, or some mix of the two, for the rest of the investor's life or for the lives of his/her heirs and assignees. That income was, in effect, part of the rental value of the bequested land, and that value explains the origin of the term rente, which is a more useful term than annuity, since it indicates more clearly the fruitful and landed source of the income.

In Catalonia, southern France, and Italy, similar forms of census or rente contracts became a common private financial vehicle, certainly by the later twelfth or early thirteenth century, by which merchants invested in the agricultural enterprises of small, independent peasant farmers (a form of finance that was basically inapplicable to the communal open-field farming of northern Europe). By that time, most such agricultural-commercial rente contracts were perpetual and assignable. The basic

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principle of such contracts was that investor who bought such contracts could never reclaim his capital from the issuer, unless of course the issuer–seller defaulted on his annual rente payments, since the land itself served as the pledge or collateral for this investment. Otherwise, the investor could reclaim his capital only by selling his rente contract to some third party while undertaking the risk of some loss in doing so.

THE USURY DOCTRINE AND THE REVIVAL OF THE ANTI-USURY CAMPAIGN

In resorting to this form of public finance, in retrospect a revolutionary move that inaugurated the financial revolution, the northern French towns were simply drawing on a long and well-established form of private finance. One may ask what impelled these northern French towns to do so and particularly in and from the 1220s? The answer lies in a vigorous and indeed vicious resuscitation of the Church's anti-usury campaign, forcing both town governments and investors to seek an alternative to interest-bearing loans, for which the rente contract proved to be the most effective and fully licit substitute.

Usury, according to the Church, is the sinful act of both paying and receiving interest on a loan (with a few licit exceptions). Many historians still unjustifiably dismiss the economic significance of the medieval usury doctrine, echoing the famous statement of Kindleberger (1993) that it "belongs less to economic history than to the history of ideas." Others mistakenly contend that the usury ban applied only to excessive interest charges – the modern definition – or only to consumption loans, while, in fact, it always applied to any and all payments above and beyond the principal advanced in any form of a loan contract (including sales on credit). The usury ban is also not explicitly Christian, let alone Catholic in origin, and may be found, for example, in ancient Judaism, Hinduism, and Islam (as riba = excess) throughout its entire history to the present day. In the Old Testament, the book of Ezekiel 18.13 states (New International Version, 2010)

> He [who] lends at interest and takes a profit. Will such a man live? He will not. Because he has done all these detestable things, he is to be put to death.

That seemingly extreme view is repeated almost verbatim by Bishop St. Ambrose of Milan (339–97 CE): "if someone takes usury, he commits violent robbery [rapina], and he shall not live." That statement is, in turn, included in Gratian's famous codification of the Church' canon law, known as the Decretum (Concordia discordantium canonum), compiled between 1130 and 1140, a fundamental bulwark of the subsequent anti-usury campaign, from the Lateran III Council of 1179.

Over the many centuries, from the early days of the Church to the Scholastic era of the thirteenth century, the usury doctrine evolved through three forms: from being merely a sin against charity to a sin against commutative justice to a truly mortal sin against Natural Law and thus directly a sin against God Himself. The true core of the doctrine was, however, based on the concepts of property rights, theft, and loan contracts as presented in the Roman Law Code of Justinian (r 527–565 CE), which was in turn later incorporated into Gratian's Decretum. In both codes, a loan was defined specifically as a mutuum – literally: what was thine [yours] becomes mine. Thus, in a loan contract, the ownership of the capital was transferred from the lender to the borrower but only for the stipulated time period of the contract (i.e., until maturity). Therefore, during the entire term of the loan contract, all the benefits or returns from the use of that capital belonged entirely to the borrower – and none to the lender. Consequently, for the lender to exact any payment beyond the principal, and in effect to demand any share of any returns on that capital, constituted theft (as in St. Ambrose's famous dictum).

That provides the fundamental distinction between the Church's view of illicit returns on capital (as in usury) and of fully licit returns on capital invested in real-estate and equity-based commercial enterprises. In both these latter investment contracts, the investor retains the full ownership of his capital and is, therefore, entitled to a valid return on his capital: whether in the form of rent (real-estate) or profits (as in a commenda contract, a compagnia partnership contract, or a joint-stock company). This analysis makes clear that the usury prohibition had nothing to do with the so-called consumption loans, but to all mutuum loan contracts, without distinction.

For many historians, however, the full Scholastic definition of the usury prohibition was based on the reintroduction of Aristotle's condemnation of usury, as 'the most hated sort of money making,' on two related grounds: that the natural and hence sole use of money is to serve as a medium of exchange and, thus, that money is sterile – and incapable of 'breeding' to produce more money (i.e., interest). Hence, usury is unnatural – against the laws of Nature. As the foregoing analysis makes clear, however, there is no such assumption of the sterility of money in the Justinian and canon law definitions of the mutuum. Indeed, the contrary assumption may be made for all investment loans.

Furthermore, Aristotle's critical works on this subject were not translated into Latin and effectively reintroduced into Western scholarship until well after the revival of the anti-usury campaign: specifically, the

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Nichomachean Ethics in 1246–47 (revised in 1260) and his Politics (1260s). Yet Aristotle's treatises had a very powerful influence on Scholastic philosophers, especially in the tracts of Albertus Magnus (1206–80) and St. Thomas Aquinas (1225–74), in their firm declarations that usury is a sin against Natural Law, against God Himself, and hence a truly mortal sin.

In convincing the laity that usury was such mortal sin, the Scholastic reliance on Aristotle's views was a far more effective tool for the continuance of the anti-usury campaign during the following two centuries than mere recitations of arcane features of the Justinian Code and Gratian's Decretum. Also, more effective was the very common but quite irrelevant argument that usury was the 'Theft of Time, which belongs only to God.' Never explained, even by the most renowned scholastics, was the question why it was a mortal sin to charge for the use of money based on time (as interest is always reckoned), while it was perfectly licit to charge for the use of real estate based on time (rent per month or year). That the true distinction between these two forms of investment returns was the ownership of capital, according to Roman and canon law, proved to be incomprehensible for most people (then and now).

The inauguration of the anti-usury campaign took place much earlier, as just noted, with the Third Lateran Council of 1179. Not only did it cite Gratian's Decretum to endorse all previous sanctions against usury but it also proclaimed the severe penalties of excommunication from the Church for all usurers who did not repent and did not restore their ill-gotten gains and thus forbade Christian burials for any such unrepentant usurers. The next (and Fourth) Lateran Council, of 1215, provided two additional features of great importance. First, it launched a vicious attack on Jewish money lenders, for their supposed 'treachery' and 'cruel oppression' in extorting 'oppressive and excessive interest,' that is, beyond variously imposed legal limits. The usury ban had always applied and continued to apply only to Christians. Jews (in the virtual absence of Muslims in Christian Europe) were the only non-Christians then engaging in money lending, chiefly in legal although closely regulated pawn broking. In addressing a largely anti-Semitic public, this Lateran Council made the sin of usury appear all the more heinous by so invidiously associating it with Jews, thus providing a powerful new weapon in the anti-usury campaign. Second, the Fourth Lateran Council decreed that all Christians were obligated to make annual confessions to priests – including confessions of usury.

That also proved to be a powerful weapon in the anti-usury campaign as conducted by the two new mendicant preaching orders, founded just before and just after Lateran IV: the Franciscans, or the Order of Friars Minor, founded c.1206–10 (by St. Francis of Assisi) and the Dominicans, or Order of Friars Preacher, founded in 1216 (by St. Dominic). In preaching to a largely illiterate, uneducated public, the Dominican and Franciscan friars supplemented the Lateran Council decrees and papal ordinances with their own lurid and utterly diabolic exempla: utterly horrifying stories about the ghastly fates awaiting all usurers in the eternal fires of Hell. The resulting popular verdict that usurers were among the very worst of all evildoers was one fully endorsed in one of the most famous literary tracts of this era: the Divine Comedy of the Florentine Dante Alighieri (1265–1321), who placed usurers in the lower depths of Hell, as 'the last class of sinners that are punished in the burning sands.' The impact of the preaching orders went well beyond the general public to convince virtually all secular governments of their duty to enforce the anti-usury bans, with harsh, pitiless vigor. That command to secular princes and local governments was reinforced by the Decretales that Pope Gregory IX (r 1227–41) issued in 1234. They were firmly instructed to expel all usurers from their jurisdictions, never to readmit them, and to nullify all wills and testaments of unrepentant usurers. Furthermore, any priests who permitted the Christian burial of usurers were themselves to be considered usurers and to be punished accordingly.

THE RELATIONSHIP BETWEEN FRANCO-FLEMISH URBAN RENTES AND THE ANTI-USURY CAMPAIGN IN THE THIRTEENTH CENTURY

Shortly after the founding of the two mendicant preaching orders and just before Pope Gregory's Decretales were issued, the first resort to rentes is found as a substitute for interest-bearing loans in financing urban governments in northern France, beginning with Troyes, the major town of the Champagne Fairs, just before 1228, and again in 1232. Those transactions involved the sale of a series of several life rents (rentes viagères) to financiers from Arras, St. Quentin, and Rheims, who evidently resold them to citizens in those towns. Subsequently, similar sales of rentes are recorded in the treasurer's accounts of many neighboring towns, in Artois, Picardy, and Flanders, from the following indicated dates: Rheims (1234), Auxerre (1235), Arras (1241), Douai (ca. 1250), Roye (1260), Calais (1263), Saint-Riquier (1268), Saint-Omer (1271), and Ghent (before 1275).

The connection between the intensification of the anti-usury campaign and this novel form of public urban finance is indicated by an event that Desportes (1979) has recorded in his history of late-medieval Rheims. In 1234, local clerics had threatened the Rheims bourgeoisie with the most dire consequences for their suspected usuries, subjecting them to a reign of terror – with the

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irredeemable loss of their mortal souls. In response, the local merchants decided henceforth to buy rentes from the town government rather than to engage in any interest-bearing loans. In his study of thirteenth-century Flanders, Bigwood (1921–22) asserted that "the struggle against usury was energetically and remorselessly conducted" by the Church, town governments, and the counts of both Flanders and Artois. Nicholas (1992) observed that the later-medieval "Flemings seem to have been more concerned than the Italians to avoid the imputation of usury."

The central issue was not the ability of merchants and financiers to find ready means of disguising interest, which no longer appeared in loan contracts (Munro, 2003, 2008), but instead, their very real fear of eternal damnation in Hell, with unbearable, unremitting agony. Usury could well be hidden from secular authorities but never from God – or so most of the very devout Christian society then believed. Another powerful if more mundane reason to explain a growing mercantile preference for buying rentes was the frequency with which secular authorities sought ecclesiastical permission to repudiate their usurious debts, in northern France (Saint-Rémi and Beauvais) as early as 1254. During the Flemish fiscal crises of the 1290s, the Flemish communal governments, on several occasions, received permission from the Parlement de Paris, King Philip IV (r 1285–1314), and even Pope Boniface VIII (r 1294–1303) to repudiate loans deemed to be usurious, and on other occasions to relieve them of any payments beyond the principal sums owed to them. Even the Flemish count, Guy de Dampierre, in the 1290s, appealed for papal assistance in releasing him from the usurious loans owed to his Arras bankers.

THE ECCLESIASTICAL DEBATE ABOUT THE USURIOUS OR LICIT NATURE OF RENTES

A direct link between the thirteenth-century anti-usury campaign and the resort to rentes in urban (and subsequently in territorial) public finances can be seen in various ecclesiastical diatribes against such rente contracts. One of the earliest came from the Italian canonist Gottofredo da Trani (Geoffrey of Trani, d. 1245), who condemned the purchase of rentes as usurious on the grounds that the buyers were guilty of an 'immoral hope' that the value of their annual annuity payments over time would exceed their costs in purchasing the rentes, and his views were supported (ca. 1250) by the Dominican canonist Guillaume de Rennes.

In 1250–51, however, Pope Innocent IV (r 1243–54) opposed these critics by declaring the new rentes to be fully licit (as were any real-estate rent contracts) on the grounds that they were not loans, since they never had to be repaid, but instead legitimate contracts of sale, in purchasing a future stream of income. The pope's declaration was not, however, universally accepted, not until the fifteenth century, with the canonists' and theologians' ultimate affirmation of this fundamental principle: ubi non est mutuum, ibi non est usura (where there is no loan, there is no usury). In accordance with that principle, they insisted that those who bought rentes could never demand their redemption (an act that would have converted them into loans), while affirming that the seller–issuer of rentes had the sole right to effect a redemption when the issuer deemed it to be desirable or necessary. The other condition that the papacy and canonists specified is a most important one for the future of this instrument of public finance: that the annual payments had to be based on real properties and the income derived from such properties. In brief, a rente contract was to resemble a standard real-estate rent contract.

These two issues – the conditions of redemption and the nature of the annuity payments – engaged the Church in ongoing debate for almost two centuries until they were finally settled in the fifteenth century. A series of opinions issued by the Council of Constance (1414–18) were ratified by three related papal bulls: those of Martin V (Regimini, 1425), Nicholas V (Sollicitudo pastoralis, 1452), and finally, Calixtus III (Regimini, 1455). While reaffirming the basic principle enunciated by Innocent IV and specifically reaffirming the sole right of the issuer–seller to redeem rentes, at their own discretion, these decrees, nevertheless, obligated the issuer–sellers to redeem their rentes for the full principal or par value – but obviously in nominal and not real terms. The other conditions were, in sum, that the rentes had to be tied to real estate or other real property; that the annual payments were to be derived from such property; and that the annual return or annuity payments were not to exceed 10% of the capital sum. That final condition was almost never observed, although without causing any further controversy.

PAYMENTS TO RENTIERS IN LATER-MEDIEVAL FLEMISH TOWNS

The far more vexatious problem was the rental nature of rentes and thus the sources of public income used to make the annual payments (if not specifically the redemptions). As the later-medieval Flemish town accounts reveal, most of the perpetual rents (erfelijkrenten) were tied to real estate, and the annual payments came from such rental incomes. Very different was the source of the annual payments for the life rents (lijfrenten). They came instead from excise taxes on the consumption of various products of the land – foodstuffs (bread, meat, fish),

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alcohol (beer and wine), textiles, and so on – but never from direct taxes.

Such excise duties (accijnzen, in Dutch) constitute one of the most regressive forms of taxation, far more regressive than late-medieval land, wealth, and other forms of direct taxation. A recent study, based on the accounts of the Flemish town of Aalst (Munro, 2008), virtually complete for the period 1395–1550, contends that such taxation often provided a very heavy burden on the urban artisanal and laboring classes and resulted in significant income transfers from the poorer to the wealthier (i.e., rentier) strata of late-medieval Flemish urban societies. Indeed, such tax burdens largely offset the general rise in real wages during the so-called Golden Age of the artisans in the fifteenth century and aggravated the fall in their real wages during the ensuing sixteenth-century Price Revolution era. For the 155-year period from 1496 to 1550, excise taxes accounted for 74.5% of Aalst's total urban revenues (renten sales, for 11.9% – no loans are indicated), while payments on renten accounted for 36.5% of total urban expenditures during this period. During the war-torn years of the fifteenth century (1401–80), they accounted for 48.6% of such expenditures (and as much as 74.5% during the Anglo-Burgundian War of 1436–39).

There is now a substantial volume of literature on the public finances of the later medieval and early modern Low Countries (see the section 'References'), although there is not yet a monograph that covers this entire region – the modern-day kingdoms of the Netherlands and Belgium – from the thirteenth to eighteenth century. Most of these individual studies indicate, if not fully demonstrate, how this rente-based system of urban public finance was adopted by various provincial governments of this region during these centuries, with the most complete development in the seventeenth-century Republic of the United Provinces (the Dutch Republic).

THE DEVELOPMENT OF A PERMANENT FUNDED NATIONAL DEBT IN EARLY-MODERN FRANCE

In the neighboring kingdom of France, according to both Cawès (1896) and Hamilton (1947), King Francis I (r 1515–47) was the first European monarch to establish a permanent funded national debt, in 1522. This contention may be disputed, however, on several grounds. First, although the king received the proceeds from the sale of rentes worth £200 000 livres tournois to a consortium of Parisian merchants, that transaction was undertaken by the Hôtel de Ville of Paris, which was responsible for the annual payments, derived from its own administration of specified royal excise taxes and gabelles. Evidently, French merchants then had a far greater trust in the municipal government, to honor the fiscal obligations, than in the royal government. Second, the issuer's right to redeem such rentes did not receive royal approval until 1539, and even then it was limited to rentes secured on real estate, and only for 30 years (though extended to 60 years, in 1548). Third, although these rentes were assignable to third parties, no secondary markets were then available, and the rentes were not negotiable in any modern sense (see Munro, 2003, 2012).

A far greater expansion of national rente sales took place under Francis' successor, Henry II (r 1547–59), and through the crown itself: a total of £6.8 million livres tournois. But of this amount, £3.1 million in rente sales were forced on wealthy Parisian merchants (in defiance of Parlement) along with other forced loans. Furthermore, in 1557 and 1559, Henry IV's royal government defaulted on restructured short-term debts (consolidated in the Grand Parti de Lyon). This odious policy of forced loans and other requisitions (especially from the clergy), forced sales of rentes to the wealthy bourgeoisie, and periodic defaults on both short-term loans and annuity payments continued under his successor, Charles IX (r 1560–74), who presided over the initial phase of the ruinous Wars of Religion (1562–98).

In 1600, Maximilien de Béthune (1560–1641), Duke of Sully, the justly famed Superintendent of Finances for the victor, Henry IV (r 1589–1610), effected a much needed financial reform. At that time, rentes accounted for about £157 million livres tournois, over half of the total French royal indebtedness of £297 million, and much of that was in arrears. Sully canceled many rentes lacking a verifiable claim, ceased payments on many arrears, redeemed some rentes with budget surpluses, and forced many other rentiers and debt holders of the Grand Parti to accept major reductions in their claims. He also reduced the annuity payments on rentes from the traditional rate of 8.33% (1/12) to 6.25% (1/16), and in 1634, this rate was further reduced to 5.55% (1/18). Those rates were far, far lower than the interest rates that current and succeeding French monarchs had to pay on regular loans (which averaged 25.88%, from 1631 to 1657). Finally, in 1789, on the eve of the French Revolution, the total public debt was about £3.5 billion livres tournois: about £1.0 billion in short-term (interest-bearing) floating debt, £2.0 billion in rentes, and £0.5 billion in capital invested in royal offices (Hoffman et al., 2000).

THE DEVELOPMENT OF PERMANENT FUNDED NATIONAL DEBTS IN SPAIN (CASTILE)

A far better case, for the initial successful establishment of a permanent funded national debt, based on rentes, may be made for sixteenth-century Habsburg Spain,

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which had inherited this form of public debt from late-medieval Catalonia (Aragon) and Castile. In 1325, the Catalan towns, as part of the Crown of Aragon, received the king's permission to raise public funds, either by borrowing or by selling censals, the Catalan version of rentes, in return for their consent to new royal aides (taxes). During a financial crisis of the 1330s, Barcelona sold censals in two forms: the censal mort, as a perpetual, hereditary annuity, with an annual payment of 7.14% (1/14), and the violari (censal vitalicio), as a life annuity but commonly for two lives, with an annual payment of 14.29% (1/7). Other Catalan towns followed suit in the 1350s: Alzira (1351), Valencia (1355), Gandía (from 1359), and Gero (from 1359). By the 1360s, such sales of censals, funded by levies of various urban excise (consumption) taxes, had become a fundamental feature of Catalan and Aragonese municipal finances. With a few exceptions – in 1359 and 1376 (Perpignan), the censals were freely marketed without any compulsory purchases, and these towns also had the right to redeem them at will. They could also be sold to third parties – however, in a cumbersome fashion – again requiring civic officials and notaries public as agents for such transactions, similar to provisions for real estate sales. By the fifteenth century, sales of censals had largely displaced floating debts of short-term loans. In neighboring Castile, issues of similar censals were first authorized in the reign of Henry II (1368–79) and according to Usher (1943), had become a common feature of public finance by the fifteenth century.

The history of modern Spain's permanent funded debt began in 1489 when Ferdinand and Isabella sold a series of hereditary, perpetual, and redeemable rentes, known as juros de heredad, to finance their war with Granada, which led to the federal union of Castile, Aragon, and Navarre in 1492 (but without a federal national assembly). These juros (sometimes supplemented with life rentes) initially paid 10%, while subsequent juros yielded on an average 7%, and they were funded, in Castile, by levies of royal excise taxes (rentas ordinaris). From the first continuous records, in 1504, to the end of Ferdinand's reign, in 1516, the Spanish (or Castilian) funded national debt rose modestly, from 2.996 million ducats (escudos of 375 maravedís) to 3.586 million ducats. But then, from the accession of the Habsburg Charles V (Emperor from 1519) to the death of his son and successor Philip II (r 1556–98), the Castilian national debt ballooned to 80.040 million ducats.

Not only Spaniards but also an increasing number of investors across Europe purchased these juros, which were readily transferable by sales contracts. Indeed, an international commerce in Habsburg juros and rentes became one of the principal activities of the South German merchant-banking houses, led by the Fuggers, Welsers, Höchstetters, Herwarts, Imhofs, and Tuchers. Evidently, they were marketed through the newly established Antwerp Beurs (although conclusive evidence for such transactions is not available). Furthermore, from 1537 to 1541, the Staten Generaal of the Habsburg Netherlands provided Europe's first national legislation to protect and enforce full-fledged negotiability of commercial bills and other financial obligations, in particular to protect the property rights of third-party creditors (assignees) (Van der Wee, 1963, 1967).

According to many critics, Habsburg Spain's claim to fame in establishing a national (Castilian) funded public debt based on negotiable perpetual annuities was marred by Philip II's failure to honor interest obligations on short-term loans called asientos, whose interest rates ranged from 14% to 20%. Instead, he imposed an arbitrary conversion of most of the asientos into 5% perpetual juros al quittar on four occasions, in 1557, 1560, 1575, and 1596, in effect making them obligatory obligations, although they remained fully negotiable securities. Recently, furthermore, Drelichman and Voth (2010) have confirmed that Philip II never defaulted on any payments for these juros (both life and perpetual). Even though servicing the public debt was often a very heavy fiscal burden, consuming 49% of total Castilian revenues in Philip's final decade, these authors contend that Philip's finances were 'largely sustainable' and that 'Castile's fiscal position was much healthier than is commonly assumed.' That is all the more remarkable when full account is taken of the enormous military burdens imposed on this 'superpower of the age' and Habsburg Spain's resolute refusal to debase its coinages.

THE PUBLIC FINANCES OF THE LATER MEDIEVAL ITALIAN CITY STATES: FORCED LOANS

In view of Aragon's long involvement in Italian affairs, from the later thirteenth century, one may wonder if the Italian city states had had any influence on the evolution of public finances in Aragon and then Castile. There is no evidence of any such influence nor are the origins of the European financial revolution to be found in any of the medieval Italian city states (Stasavage, 2011).

To be sure, the Italian city states were the first in Europe to establish funded public debts, with arrangements to pay interest on loans from specified commercial taxes: first Genoa in 1149 and then Venice in 1164. But the Italian city states are not the fount of the Financial Revolution for several reasons. The most important is that their public finances came to be largely based on forced loans, of which the first was imposed by the Venetian Doge Sebastiano Ziano, as early as 1172. In Venice, they were known as prestiti; in Florence, as prestanze; and in Genoa, as luoghi. While most of these forced loans

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initially had specific redemption dates, they soon evolved into undated perpetual loans, which were consolidated together into one public fund, with annual interest payments financed by specific commercial and excise taxes, under various names, for example, Monte Vecchio (Venice: from 1264), Monte Comune (Florence: 1345), and Compera (Genoa: 1340). Furthermore, all these city–state consolidated funds came to be linked to civic-organized secondary markets in which debt holders could sell their claims to third parties, and these Italian city states may have been the first in Europe to organize such secondary if still imperfect markets in public debts. In that respect, these Italian public debts seem, but deceptively so, to resemble the rentes and censals to be found in the towns of northern France, the Low Countries, and Catalonia in the fourteenth century.

The second major difference between the Italian and the non-Italian forms of urban public finance involved again the usury prohibition. The Church – the Franciscan and Dominican theologians in particular – grudgingly agreed that interest payments on these forced loans did not constitute the sin of usury, at least on the part of those who received the interest, chiefly on the grounds that volition, central to the usury doctrine, was necessarily absent. Furthermore, the obvious civic alternative was taxation, which the Church would never have challenged, all the more so since the clear objective of these forced loans (or of any tax alternatives) was to finance the public defense of the commune.

When a secondary market developed in these various civic monte funds, however, the usury issue did come to the forefront, with unrelenting attacks from especially the Dominicans, who contended that those who bought shares of the public debt were willingly accepting interest payments that were clearly usurious. One of the most important and famous medieval treatises in public finance, one that arose from this dispute, was the Tractatus de usuris, which the Florentine jurist and statesman Lorenzo di Ridolfo published in 1403–04. He contended that commerce in monte shares through the civic-organized market did not involve usury but only a licit purchase of income streams from the town government, since those who purchased these shares had never lent any money to the government. That argument is reminiscent of the thirteenth-century debates over the rentes. But while virtually all theologians had come to agree that rentes were not usurious, most still remained hostile to a free market in shares of the civic monte. That hostility is reflected in considerable evidence for a fairly widespread reluctance to engage in such financial transactions, including some wills dictating restitutions of incomes earned from monte shares purchased in secondary market (see Armstrong, 2003a,b; Kirshner, 1977). A third major difference – a difference from a developing international market in various rentes – is that normally the trade in monte shares was restricted to citizens of the city state that had undertaken the forced loans and issued these shares. The reason for this restriction was to emphasize the principle that the forced-loan obligation was justified by the civic duty to finance the commune's defense, a duty obviously not borne by foreigners. Again this explains why theologians had accepted the legitimacy of interest payments on those loans, but only payments to those who had originally and unwillingly furnished the funds. Consequently, the various civic monte shares could not be traded on international markets and transfers to third parties could be effected only through the designated civic offices of each town's monte. Kirshner (1977, 1983, 1993), one of the leading authorities on the Florentine monte, has provided many cogent reasons why trade in the Italian monte shares did not meet the modern tests for negotiability.

For all these reasons, the Italian city states eschewed a financial system based on genuine rentes, and only Venice experimented with them, briefly, the sixteenth century. In 1536, Venice issued a form of life annuities paying 14%, but they were sold by the mint (Zecca), not by the civic government. Subsequently, in 1571, during the Venetian war with the Turks, the Venetian government issued perpetual but redeemable annuities at 8%. Yet the Venetian government did not continue with this new mode of public finance, and from 1577 to 1600, it redeemed all the outstanding annuities that the Zecca had issued in its own name, at a cost of over 10 million ducats.

PROTESTANT ENGLAND AND THE USURY QUESTION

In returning to investigate England's own Financial Revolution, one finds that it did come to meet all the fundamental tests, those enunciated in the introduction, more fully and more satisfactorily than did any other early modern European government.

First, however, one must ask whether or not the usury prohibition has any relevance for the English Financial Revolution. It is a commonplace in the financial literature that the Protestant Reformations had accepted the legitimacy of interest payments and thus made the usury problem irrelevant. That view, or at least the latter part, is mistaken. To be sure, in 1545, Henry VIII's Parliament of newly Protestant England did enact legislation to permit interest payments up to a limit of 10% (statute 37 Henrici VIII, c. 9). In doing so, Henry VIII's government had followed the model of an edict issued five years earlier, in October 1540, by Charles V and the Staten Generaal of the still Catholic Habsburg Netherlands, although it had made interest payments fully licit up to a limit of 12% (but only for commercial loans). In both sets of

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legislation, usury (woekerie, in Flemish) thus came to be defined (as now) as interest charges above the legal limit.

In England, however, Henry VIII's legislation did not long survive his reign. In 1552, under his successor Edward VI (r 1547–53), the far more ardently Protestant government of John Dudley, Duke of Northumberland (r 1551–53) had Parliament repeal Henry's statute (5–6 Edwardi VI, c. 20): 'Forasmuche as Usurie is by the worde of God utterly prohibited, as a vyce moste odyous and detestable.' Not until 1571 did Henry's daughter Elizabeth I (r 1558–1603) dare to restore her father's statute (13 Elizabeth I, c. 8). Even so, the new statute reiterated standard historical prejudice in declaring that all interest charges above 10% 'shalbe utterlye voyde – forasmuch as all Usurie being forbydden by the lawe of God.' (see Munro 2012).

Of the two leading Protestant Reformers, Martin Luther (1483–1546) and John Calvin (1509–64), only the latter accepted interest payments, but grudgingly under certain conditions: only on investment loans and certainly not on charitable loans to the poor. Indeed, Calvin stated that "it is a very rare thing for a man to be honest and at the same time a usurer." Subsequently, in seventeenth-century England, a Puritan divine commented that "Calvin deals with usurie as the apothecarie doth with poison." (Tawney, 1926). Thus, Protestant reformers in not only the sixteenth century but also throughout much of the next century, through the Civil War and Protectorate era (1642–60), were generally more hostile to usury than were Catholics, even though usury remained banned in Catholic countries until the French Revolution. As Tawney (1926) has noted, Protestant preachers of this era were unceasing in their condemnation of the 'soul-corrupting taint of usury.' Stone (1965) has been the most eloquent in commenting on the negative consequences of the usury doctrine as it persisted in early-modern Protestant England:

> Money will never become freely or cheaply available in a society which nourishes a strong moral prejudice against the taking of any interest at all – as distinct from objection to the taking of extortionate interest. If usury on any terms, however reasonable, is thought to be a discreditable business, men will tend to shun it, and the few who practise it will demand a high return for being generally regarded as moral lepers.

Indeed, English/British Parliaments in early modern England, even after the Glorious Revolution, continued to express their hostility to usury by statutes that progressively lowered the legal maximum interest rates: in 1623, from 10% to 8%; in 1660, to 6%; and finally, in 1713, to 5%. Not until 1854 (17–18 Victoria c. 90) did Parliament finally abolish the usury laws.

THE BEGINNINGS OF THE ENGLISH FINANCIAL REVOLUTION, FROM 1693

When one realizes that in 1693, shortly after the Glorious Revolution, the crown was forced to borrow at 14% to finance William III's wars with France's Louis XIV (r 1643–1715), one can better appreciate the significance of annuities, which, of course, were always fully exempt from the usury laws. According to Peter Dickson, one may mark the beginning of the English Financial Revolution with the so-called Million Pound Loan of 1693 – which was not a loan but a life annuity (with a curious tontine feature added to it). The second step, the following year (1694), was the formation of the Bank of England, with a monopoly on both joint-stock and government banking, in return for a perpetual loan, with an annual interest payment of 8%. Parliament reduced that rate to 6% in 1709 and then to 3% in 1742 (plus an annual management fee of £4000). In between and after those dates, to the eve of the consolidation of the national debt (see below), the Bank of England made other major loans to the crown, for a total of £11 686 800: £8 486 800 at 4.0% and £320 000 at 3.0% (accounting for 16.59% of the national debt: Dickson, 1967, Table 26).

EXCISE TAXES IN FUNDING THE ENGLISH NATIONAL DEBT

In establishing the Bank of England in 1694, as a chartered incorporated joint-stock company, Parliament had voted to levy a special tax, on ship tunnage, to pay the Bank its annual interest. Subsequently, Parliament funded all the subsequent components of what became the permanent national debt with similar taxes, chiefly excise taxes on consumption.

England, in comparison, with most of the western continental countries, had been quite tardy in adopting excise taxes on consumption, chiefly because it had previously received ample revenues from customs duties on both exports (wool, cloth) and imports, especially those on wine. This continental form of taxation was not introduced until 1643, in the Long Parliament under the leadership of John Pym, in order to finance the first phase (1642–46) of its armed conflict with Charles I (r 1625–49) in the English Civil War. From 1660, with the Restoration of the Monarchy, and also with the onset of the era of the so-called New Colonialism, the English government began receiving growing revenues from import duties on such colonial products as tobacco, tea, sugar, rum, Indian cottons, timber, and iron, in addition to those on wines. The combination of excise taxes and the new customs duties soon became the principal mechanism for financing the government, especially from the 1690s, and in particular the national debt. By the late eighteenth century, the sum of excise and import-customs duties accounted for 78.8% of the Major Taxes (accounting for over 90% of total taxes), while the land tax and the few other forms of direct taxation (excluding an income tax, not levied until the temporary tax of 1799–1816) accounted for the remaining 21.2% (O'Brien, 1988; O'Brien and Hunt, 1993, 1997).

THE THREE SISTERS AND THE ENGLISH NATIONAL DEBT

For the remaining history of the English Financial Revolution, only the salient features need be mentioned here, of which the role of the famed Three Sisters is the most important. The first was the Bank of England itself, and the second was the East India Company. In 1698, Parliament had chartered a rival, the New East India Company, in return for a perpetual loan of £2.0 million, also at 8.0%, and in 1709, Parliament permitted the older company to absorb its rival, as the United East India Company, for another perpetual loan of £1.2 million (interest rate not specified).

Two years later, in 1711, Parliament chartered and incorporated a new overseas trading company: the South Sea Company, which became the third Sister. Ostensibly founded to control English trade in the Spanish-dominated South Pacific, its real purpose was to take over, by stages, the share of the national funded debt not controlled by the other two Sisters. In that year, the South Sea Company successfully negotiated a conversion of £9 471 324 in various issues of short-term redeemable (callable) debts into the Company's perpetual stock with a 5.0% dividend (Dickson, 1967, Table 7). Although the debt holders surrendered securities with higher interest rates, they gained two enormous advantages: a far longer investment time horizon, if not perpetual, and the ability to trade these fully negotiable shares (the debts so exchanged were not readily negotiable), with good prospects of capital gains, with brokers or stockjobbers in London's Exchange Alley or with broker–dealers in Amsterdam. By 1719, the Company's holdings of government debt had risen to £11 746 844 (23.54% of the total). The Company proposed, with a similar voluntary conversion scheme, to take over the remainder of the national debt not held by the three sisters: in sum, a total of £16 546 202 in redeemable government stock and £15 034 686 in both long-term and short-term annuities, for a total of £31 580 888 or 64.28% of the total debt (£49 902 760: Dickson, 1967, Table 9).

THE ROLE OF ANNUITIES IN THE ENGLISH NATIONAL DEBT (TO 1719–20)

The role of annuities in the evolution of the national debt, to the 1719–20 South Sea venture, provides interesting contrasts with contemporary continental public debts. As noted, the 1693 Million Pound Loan was actually a life annuity (at 14%). In 1694, during the formation of the Bank of England, the Exchequer (Ministry of Finance) sold a small series of annuities with various durations: for three lives (14.0%), two lives (12.0%), and one life (10.00%). In 1704, the Exchequer sold another series of annuities, paying 6.60% per year: one series for 99 years and the other for one, two, and three lives. Thereafter, from 1705 to 1709, the Exchequer sold another five series of 99-year redeemable or convertible annuities, with rates that fell from 6.60% (1705) to 6.25% (1708). In 1710, it began issuing a combination of 32-year annuities and redeemable lottery loans, at 9.00%. By 1719, the long-term annuities had been increased and converted into 5.00% annuities, totaling £13 331 320, and the short-terms annuities had been expanded and converted into a total of £1 703 366, with an average rate of 7.143%.

THE AFTERMATH OF THE SOUTH SEA BUBBLE AND PELHAM'S CONVERSION: 1721–57

The subsequent history of this venture and the famed South Sea Bubble – which reduced the South Sea Company's status to that of a holding company – are not the subject of this study. In effect, the Bank of England effectively took control of the national debt, with a small role played by the Exchequer. After 1721, all further issues of government debt took the form of perpetual but redeemable government stock or redeemable nonterm debentures (both of which series also had lottery features), with coupons that varied from 5.0% (1721 only) to 4.0%, 3.5%, and 3.0% (but not in any chronological sequence).

The culmination of England's Financial Revolution came with the conversion and consolidation of the national debt from 1749 to 1752, with a stipulated final change in 1757. On the eve of that conversion, the Three Sisters collectively and directly held £19 549 584 of the government debt (27.75%). Two of them, the Bank of England and the South Sea Company, managed a total of another £49 241 891 of the debt in the form of perpetual stock (69.90% of the total debt). The Bank of England had the largest single share: £25 602 472 (36.35% of the total debt). The remaining £23 639 419 (33.56% of the total debt) was in the form of South Sea Old Annuities and

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South New Annuities. In total, the Three Sisters thus held or managed virtually all the national debt – 97.65% – leaving only £1 649 821 or 2.34% to be managed by the Exchequer, for a total national debt of £70 441 296 (Dickson, 1967, Table 26). Of this total national debt, 81.92% (£57 703 475) was a combination of direct debt and perpetual but redeemable securities with a coupon of 4.0%; the remainder was largely in the form of 3.0% securities, with only £400 000 in 3.50% securities, managed by the Exchequer.

The great achievement of the Chancellor the Exchequer, Sir Henry Pelham, was to achieve a massive conversion of that 4.0% debt, by 1752, into the Consolidated Stock of the Nation, with a 3.5% coupon. By the provisions of Pelham's Conversion, that coupon was reduced to 3.0% at Christmas 1757. Despite strenuous opposition from South Sea Company shareholders, that conversion was voluntary, in the light of the government's historic power to redeem perpetual annuities. As indicated earlier, in the fifteenth-century ecclesiastical debates, redemptions had to be effected at par value: in the case of Consols, £100 per share.

In fact, the British government did not choose to redeem its Consols for over 130 years, not until 1888, when ongoing and severe deflation had raised real interest rates and thus the market value of the 3.0% Consols. In that year, the Chancellor of the Exchequer, George Goschen, converted the entire issue of 3.0% Consols into new 2.75% Consols, with the statutory provision that this rate would be further reduced to 2.50% in 1903. Those 2.50% Consols, unredeemed, continue to trade to this very day, on the London Stock Exchange (with a market value, on 1 June 2012, of £70.99 per share, for a yield of 3.52%).

ECONOMIC CONTRIBUTIONS OF THE FINANCIAL REVOLUTION

For England itself, this Financial Revolution provided a remarkably effective and stable form of public finance. It certainly contributed to a significant reduction in the cost of government borrowing and thus in the so-called crowding-out effect, for the private sector: from 14.0% in 1693 to 3.0% in 1757. Certainly, from their very inception, rentes or annuities in European public finances were far less costly to finance than interest bearing and thus usurious loans. Furthermore, perpetual, heritable rentes were always cheaper than life rents. Perpetual annuities, contrary to the term itself, did not pose a perpetual burden on the state because the state always enjoyed the reserve power of redemption, when it deemed best to exercise it (as in 1888).

Second, a clear majority of the investing public found government rentes or annuities to be a very attractive form of investment, despite such seemingly low yields (in fact, an acceptable market trade-off), because they were so readily negotiable, marketed on the London and many other international stock exchanges, while most bonds were difficult to trade (before the twentieth century), and most loans, even when assignable, were not readily negotiable. Indeed, for that very reason, Consols and other negotiable annuities provided European investors with a most valuable form of collateral for short-term borrowing, especially for merchants and industrialists during the Industrial Revolution and the subsequent nineteenth-century era of industrialization in Britain and the continent (if not in the United States, which had never resorted to such annuities for public finance).

Two questions remain to be answered, although not here. First, in terms of a global perspective on international finance, why did the Islamic world, equally subjected to the constraints of the usury doctrine (riba), fail to resort to rentes or some similar alternative in public finance, before the Ottoman imperial government finally adopted them in the eighteenth century? Second, why did European governments return to interest-bearing bonds and largely eschew annuities (or perpetual bonds), after World War I?

SEE ALSO

Globalization of Finance: An Historical View: The Financial Revolution in England; John Law and his Experiment with France, 1715–1726.

Glossary

Accijnzen Dutch term for excise taxes on consumption goods.
Asientos Spanish short-term bonds, based on specific tax sources.
Censals Catalan version of rentes, either censal mort (perpetual) or censal vitalico (life).
Erfelijkrenten Perpetual rentes, redeemable only by seller; buyer's only recourse was to sell in secondary market.
Gabelles French salt taxes collected regionally.
Juros de heredad Spanish perpetual, redeemable rentes.
Lijfrenten Life rentes, expiring on death of the buyer.
Livres tournois French unit of account, expressed with same pound sign as English system.
Mutuum Transfer of capital from lender to borrower (what is mine is now yours).
Rentes heritables French term for perpetual, inheritable rentes.
Rentes viagères French term for life rentes.

APPENDIX YIELDS ON PERPETUAL RENTS, LIFE RENTS, AND LOANS

Whether the predominant form of rentes issued by late-medieval town governments was in the form of life

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rents (rentes viagères, lijfrenten) or perpetual rents (rentes heritables, erfelijkrenten, losrenten) had some considerable significance for urban and also territorial public finances, primarily because the annual payment rates or the rate of return was so much higher on the former than on the latter. If not initially, the rates of return on lijfrenten normally came to be double those for erfelijkrenten, even though the historic long-term trend was falling for both. Thus, in late thirteenth-century Flemish towns, the annual payment rates or coupons on erfelijkrenten were typically 1/10 or 10%. While they were 1/8 or 12.5% in late fourteenth-century Ghent, these coupon rates fell to 6.25% (1/16) in the fifteenth and sixteenth centuries, in most towns of the Habsburg Netherlands. The late thirteenth-century annual payment rate on lijfrenten was typically 12.5% (1/8), subsequently declining to 10% (1/10) and sometimes even to as low as 8.0% (1/12.5). In fifteenth-century Zutphen, in the northern Netherlands, the rates on lijfrenten were 10.0% (1/10), and those on erfelijk or losrenten (as perpetual rents were now more commonly known) generally had an annual payment rate of 6.25% (1/16). In early sixteenth-century Leiden, while the payment rates on perpetual annuities (losrenten) remained low at 6.25% (1/16), those on lijfrenten for two lives were 10.0%, and those for one life were as high as formerly, at 12.5% (1/8), and thus double the rate for losrenten. In the fourteenth-century Catalan towns, the payment rate on life rents (censal vitalicio, or violari) was again exactly double the rate paid on perpetual rents (censal mort): 1/7 (14.29%) compared to 1/14 (7.14%).

The explanation for these differences is twofold. While today the yield on long-term bonds is generally much higher than yields on short-term bonds – with the lowest rates for 30-day Treasury bills, the opposite was often true in late-medieval and early-modern Europe, at least for rentes and annuities. In general, investors preferred the greater financial security from longer term debt instruments, that is, the prospect of receiving a steady interest or annuity income for a longer period of time. Therefore, they accepted the trade-off of lower annual rates for that longer term investment horizon, provided, of course, that there was no observable difference in the risk of nonpayment on the two types (including the risk of redemption).

The other and undoubtedly more important reason explaining the differences in the payment rates on these two types of rentes lay in the issue of negotiability of these credit instruments. Perpetual rents, being both inheritable and transferable, were much more marketable than lijfrenten, so that purchasers were much more willing to accept a lower rate of return, to gain that advantage. Furthermore, those holding lijfrenten ran the risk of dying with a nonheritable assets unless the lijfrent was sold for two lives, and with special features of assignability to the spouse or heirs. Hence, those holding standard lijfrenten demanded compensation for that risk of loss. As noted above (for Leiden), the payment rates on standard one-life lijfrenten were higher than those sold for two lives.

Obviously urban, territorial, and national state government benefited from selling perpetual rents at much lower payment or coupon rates than those assigned to life rents. When market interest rates rose, they benefited even more in not having to pay the higher rates that would have been necessary for new annuity issues. If market interest rates fell, such governments had the reserve power to redeem the perpetual annuities at par – and clearly such annuity payments were never perpetual. Thus, the seeming advantage of life rents, in that they were self-extinguishing on the death of the holder, was not an important one.

Any doubts about which form of rente was the more beneficial for urban or territorial governments were laid to rest, in 1671, when Johann de Witt, the Grand Pensionary of the Republic of the United Provinces, employing an early form of probability theory, mathematically demonstrated that the sale of lijfrenten was very costly for the government, if the age of the designated nominee was not taken into account, especially if the one so named was an infant. This certainly had an influence on England's Financial Revolution when (from 1720) the government shifted totally from life- or long-term annuities (33 and 99 years) to perpetual annuities, ultimately forming the Consolidated Stock of the Nation (Consols), in 1752. In contrast, France's public debt in the eighteenth century continued to be heavily based on rentes viagères, and surprisingly, a considerable proportion of Holland's debt also remained in the form of lijfrenten.

Whatever form of rentes the urban or territorial governments chose to sell, its servicing costs were always far lower than the interest charges incurred in selling bonds or engaging in other forms of borrowing. Because of the usury laws, however, the historian finds it most difficult to collect valid information on interest rates. The large difference in rates on Castilian asientos and juros has already been noted. It is equally instructive to compare seventeenth-century French interest rates on loans with the rates of returns on rentes. From 1631 to 1657, the annual average rate on loans and other forms of short-term borrowing was 25.88%. But by 1634, the rate of return on rentes had fallen from 8.33% (1/12) to just 5.56% (1/18). These exceptionally high French (and Castilan) interest rates reflect two very adverse factors encumbering these loans, both of which required compensation to the lender: the frequent high risk of government default and the deep social opprobrium that the lender bore by engaging so openly in usury. Conversely, the great advantage of rentes was not only their exemption from the usury

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prohibition but also a lower risk of government default, although that risk was much higher in early-modern France than in Habsburg Spain, the Habsburg Low Countries, and Dutch Republic, and then England.

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