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The Medieval Origins of the Financial Revolution: Usury, *Rentes*, and Negotiability

EARL HAMILTON observed many years ago that a 'national debt is one of the very few important economic phenomena without roots in the Ancient World'.¹ The first evidence for organized public debts is to be found in towns of twelfth-century Italy. But these interest-bearing loans bore little relation to what became known as the financial revolution in public debt, which, in its seventeenth-century Dutch and ultimate eighteenth-century British versions, had six fundamental components. First, the national debt was 'permanent', in that it consisted largely of perpetual annuities or *rentes*, which, however, were redeemable any time, at the will of the issuing government authority, in contrast to interest-bearing loans with stipulated redemption dates. Second, the debt obligation was national, or at least provincial, and not merely municipal or personal, that is, the personal obligation of the prince, even as head of state; instead, it was created by the state through representative parliamentary institutions. Third, the annual payments on such annuities and their periodic redemptions were authorized by that parliament or legislative assembly, which thus undertook to fund that debt by levying specific taxes, usually on consumption. Fourth, the government's creation or sale of these annuities took place without any elements of state coercion, and in particular without any arbitrary conversions of higher-interest short-term debts into lower-yielding perpetual annuities. Fifth, the public had complete confidence that the government would always meet its obligation to make the stipulated annuity payments on the promised dates. Sixth, those annuities were freely negotiable through financial intermediaries, in secondary markets, for purchase by any buyer both inside and outside the national state.

According to Peter Dickson, the British financial revolution (a term that he coined) began in 1693, within England (before the Act of

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¹ E. J. Hamilton, 'The Origin and Growth of the National Debt in Western Europe', *American Economic Review*, xxvii (May 1947), 118-30.

Union), during the reign of William III (r. 1689-1702) and Mary II (r. 1689-94). Forrest Capie, in referring to these events, remarks that ‘the word *revolution* has perhaps been overused in economic historical studies, but perhaps this is an occasion when it is appropriate’; similarly, Marjolein ’t Hart remarks that ‘currently the financial revolution in England is being regarded as one of the hallmarks of the Modern State, with England as the model country.’¹ James Tracy, in contrast, contends that the origins of the financial revolution are to be found in the sixteenth-century Habsburg Netherlands, with its full fruition in seventeenth-century Holland. Hamilton, and before him, Paul Cawès, had made virtually the same claim for sixteenth-century France.²

That national debts arose from the sale of annuities or *rentes* is their most striking feature: for they were *not* loans. Thus, they differed markedly from the forms of national public finance, notably bonds and debentures, common in medieval Europe and again in twentieth-century Europe and North America. To explain the anomaly, one must understand first the late medieval origins of the *rente* itself, and second, the origins and evolution of fully fledged negotiability for all instruments of credit. The foundations of the financial revolution are to be found in the responses of thirteenth-century municipalities and merchants to the increasingly severe obstacles that Church and State were placing in the way of borrowing and international financial transactions.

* * * * *

The most obvious, important, and best-known obstacle was the Church’s ban on usury: that is, the exaction of interest or of *any* specified return beyond the principal value of a loan. Many scholars mistakenly contend that the ban had no effect on medieval trade and finance, for one or more of four reasons: it concerned only so-called consumption loans; it applied only to excessive interest (rarely defined), as in the modern definition of the term; canon law allowed exceptions (extrinsic titles) that paid interest on commercial loans; and the public ignored the ban when and because the European economy became so commercialized during the High Middle Ages. In the words of Charles Kindleberger, usury ‘belongs less to economic history than to the history of ideas’.³ In fact, just when the commercial revolution

¹ P. G. M. Dickson, *The Financial Revolution in England: A Study in the Development of Public Credit, 1688-1756* (London, 1967); F. Capie, ‘The Origins and Development of Stable Fiscal and Monetary Institutions in England’, in *Transferring Wealth and Power from the Old to the New World: Monetary and Financial Institutions in the 17th through the 19th Centuries*, ed. M. Bordo and R. Cortés-Conde (Cambridge, 2002), p. 43; M. ’t Hart, ‘“The Devil or the Dutch”: Holland’s Impact on the Financial Revolution in England, 1643-94’, *Parliaments, Estates, and Representatives*, xi (June 1991), 40.

² J. D. Tracy, *A Financial Revolution in the Habsburg Netherlands: Renten and Renteniers in the County of Holland, 1515-65* (Berkeley, 1985); Hamilton, ‘Origin and Growth’, pp. 118-30; P. Cawès, ‘Les commencements du crédit public en France: les rentes sur l’Hôtel de Ville au XVI^e siècle’, *Revue d’économie politique*, ix (1895), 97-123, 825-65; x (1896), 407-79.

³ C. Kindleberger, *A Financial History of Western Europe* (London, 1984), p. 41. For other viewpoints

reached its apogee during the thirteenth century, not only was the campaign against usury in western Europe vigorously renewed, but most of the ecclesiastical tracts and fulminations against it also focused primarily on commercial or investment loans.

Two newly established mendicant religious orders – the Franciscans (Order of Friars Minor, founded in or just after 1206) and the Dominicans (Order of Friars Preacher, founded in 1216) – were chiefly responsible for the campaign, which began in the early thirteenth century. They were aided by the Fourth Lateran Council, which, in 1215, made annual confession obligatory, thus facilitating a more direct and more frequent contact between the mendicant preachers and the laity. It also issued a diatribe against Jews for ‘treachery’ and ‘cruel oppression’ in extorting ‘oppressive and excessive interest’, while engaging (as non-Christians were allowed to do) in licensed pawnbroking.¹ By so associating usury with Jewish moneylenders, the Council turned it into a more heinous mortal sin in the eyes of a largely anti-Semitic public.² The friars found more ammunition in the *Decretales* that Pope Gregory IX issued in 1234: after confirming the Third Lateran Council’s decree of 1179 that had excommunicated usurers and refused the unrepentant burial in consecrated ground, the *Decretales* required princes ‘to expel usurers from their territories and never to readmit them’.³ In addition, the Franciscans and Dominicans contrived their own stories about the ghastly fates awaiting usurers after death and, by their incessant inflammatory preaching, convinced most people that usurers were ‘linked with the worst evildoers, the worst occupations, the worst sins, and the worst vices’.⁴ By doing so, they helped to persuade many secular rulers to enforce the ban on usury during the later Middle Ages. Thus, loan contracts that in an earlier era openly admitted the payment of interest are rarely encountered from the thirteenth century.⁵

that also question the medieval economic significance of the usury doctrine, contending that its application varied with economic conditions, see R. B. Ekelund, R. F. Hébert, and R. D. Tollison, ‘An Economic Model of the Medieval Church: Usury as a Form of Rent Seeking’, *Journal of Law, Economics, and Organization*, v (1989), 307–31; E. L. Glaeser and J. Scheinkman, ‘Neither a Borrower Nor a Lender Be: An Economic Analysis of Interest Restrictions and Usury Laws’, *Journal of Law and Economics*, xli (1998), 1–36.

¹ See J. Gilchrist, *The Church and Economic Activity in the Middle Ages* (New York, 1969), pp. 182–3 (translation of Fourth Lateran Constitution, no. 67).

² See J. Shatzmiller, *Shylock Reconsidered: Jews, Moneylending, and Medieval Society* (Berkeley, 1990).

³ See J. A. Brundage, ‘Usury’, in *Dictionary of the Middle Ages*, ed. J. R. Strayer et al. (New York, 1982–9), xii. 337.

⁴ For the role of the mendicant preachers in conducting the anti-usury campaign, see in particular J. W. Baldwin, *Masters, Princes, and Merchants: The Social Views of Peter the Chanter and His Circle* (Princeton, 1970), i. 296–311; ii. 190–205; J. F. McGovern, ‘The Rise of New Economic Attitudes in Canon and Civil Law, AD 1200–1550’, *The Jurist*, xxxii (1972), 39–50; J. Le Goff, ‘The Usurer and Purgatory’, in *The Dawn of Modern Banking*, ed. Center for Medieval and Renaissance Studies, UCLA (New Haven, 1979), pp. 29–34; O. Langholm, *Economics in the Medieval Schools: Wealth, Exchange, Value, Money, and Usury According to the Paris Theological Tradition, 1200–1350* (Leiden, 1992), pp. 52, 88–97.

⁵ For Genoese examples, see *Medieval Trade in the Mediterranean World: Illustrative Documents Translated with Introductions and Notes*, ed. R. Lopez and I. Raymond (New York, 1955), pp. 158–9.

The other weapon in the thirteenth-century Scholastic armoury was the works of Aristotle, in particular his conceptions of natural law and the inherent sterility of money. Aristotle states that:

The most hated sort [of money-making], and with the greatest reason, is usury, which makes a gain out of money itself, and not from the natural use of it. For money was intended to be used in exchange, but not to increase at interest. And this term usury [τόκος], which means the birth of money from money, is applied to the breeding of money because the offspring resembles the parent. Whereof of all modes of making money this is the most unnatural.¹

To be sure, the early Middle Ages had been familiar with Aristotle's ideas, which had reappeared in the fifth- or sixth-century *palea Ejiciens*, itself incorporated between 1130 and 1140 into the earliest compilation of canon law, the *Concordia discordantium canonum*, commonly known as Gratian's *Decretum*.² But the first genuine and complete Aristotelian treatise to be received in medieval western Europe was the *Nicomachean Ethics*, which the bishop of Lincoln, Robert Grosseteste, translated from the original Greek into Latin in 1246-7. William of Moerbeke, who revised this edition, also translated Aristotle's *Politics* into Latin during the 1260s. Both works had a profound influence on the writings of St Thomas Aquinas (1225-74), himself a Dominican, as did the Aristotelian commentaries produced by his mentor and fellow Dominican St Albert the Great, or Albertus Magnus (c.1200-80).³

Odd Langholm has strongly reasserted the view that Aristotle's natural law concept of the sterility of money formed the core of Scholastic usury doctrine. John Noonan has contended, however, that many late medieval Scholastics did not fully accept this argument, even though they readily employed it, because of its popular appeal, to buttress their revived campaign against usury. Even before Aristotle's views were widely disseminated, no ingenuity was needed to find similar powerful arguments, beyond those emphasizing issues of charity. As early as the fourth century, St Ambrose of Milan (339-97) had stated: 'if someone takes usury, he commits violent robbery (*rapina*), and he shall not live,' a stricture quoted (along with the *palea Ejiciens*) in the *Decretum*.⁴ The assumption that usury is theft runs throughout Scholastic literature, because if money transferred in a loan is deemed to be sterile, unable 'to bear fruit', the exaction of more money for its use is obviously iniquitous, a form of robbery, as Aquinas contends.⁵ A closely related Scholastic argument states that, because usury was cal-

¹ *The Politics of Aristotle: Translated Into English*, ed. B. Jowett (Oxford, 1885), i. 19; *Politics*, book I.10. 1258b.

² O. Langholm, *The Aristotelian Analysis of Usury* (Bergen, 1984), pp. 71-2.

³ See Noonan, *Scholastic Analysis of Usury*, pp. 38-9, 52-3; R. McNery, 'Aquinas, St Thomas', in *Dictionary of the Middle Ages*, ed. Strayer et al., i. 353-66.

⁴ Quoted in O. Langholm, *The Legacy of Scholasticism in Economic Thought: Antecedents of Choice and Power* (Cambridge, 1998), p. 59.

⁵ See Noonan, *Scholastic Analysis of Usury*, pp. 38-9, 52-3.

culated according to the duration of the loan, it constituted the sinful theft of Time, which belongs to God alone.¹ Some later Scholastics, however, challenged this argument, on the grounds that licit rent contracts also specified a return based on the passage of time.

Canon lawyers also provided an additional and even more powerful reason for asserting that usury is *ipso facto* theft, in citing the Roman law concept of the loan, as defined by the sixth-century Justinian Code, specifically including one that enabled the borrower to invest money in property or a licit enterprise. The term for a loan is *mutuum*, literally ‘what had been mine becomes thine’. Thus, in making the loan, the lender transfers the ownership of the principal sum (in money or goods), including all attached property rights, to the borrower in perpetuity and requires, in repayment, only the *exactly equivalent* sum. Hence, it would be a violation of commutative justice – requiring an equality of exchange between lender and borrower – to exact an additional amount, and thus to rob the borrower of the fruits of his industry in utilizing capital that had become his own property. For Noonan, this Scholastic analysis of the *mutuum* is at the core of the late medieval usury doctrine, and explains why, if usury is theft, it becomes a mortal sin.² In fact, the argument predated the Scholastics. As early as 1165, the Bolognese canon lawyer Paucapalea had correlated the Justinian Code’s entries on *mutuum* with Gratian’s entry on *usura* in the *Decretum*. Langholm contends that, by 1187, Huguccio, the more renowned commentator of the Bolognese law school, had set forth more explicitly the argument for the transfer of ownership rights in a *mutuum*.³

Such concepts were developed, within the context of natural law, by Aquinas’ most prominent predecessors: William of Auxerre (1160-1229), Thomas of Chobham (c.1168-c.1235), Robert of Courçon (in his *Summa* of 1208), St Bonaventure (1221-74), and Albertus Magnus. Furthermore, although John Duns Scotus (1265-1308) disagreed with aspects of Aquinas’ analysis of the usury doctrine, he, too, based his own critique of usury on the transfer of ownership rights in a *mutuum*, as did later Scholastics such as Giles of Lessines (*De usuris*, 1278), Alexander Lombard (*Tractatus de usuris*, 1307), John Gerson (*De contractibus*, 1420), St Bernardino of Siena (*De Contractibus*, 1425; *De Evangelis Aeterno*, c.1430-44), and St Antonino of Florence (*Confessionale* of 1440, and *Summa Theologiae* of 1449).⁴

¹ See, e.g., William of Auxerre (c.1220) cited in Langholm, *Aristotelian Analysis of Usury*, pp. 112-13. For Peter the Chanter’s (d. 1197) development of the argument, see Baldwin, *Masters, Princes, and Merchants*, i. 296-311; ii. 191-202.

² Noonan, *Scholastic Analysis of Usury*, pp. 38-41, 53-7, 80-1.

³ *Ibid.*, pp. 22-33, 39-40, 51-81, noting that canon lawyers used only those parts of Roman law on the *mutuum* that supported the usury ban, while ignoring other aspects; see also Langholm, *Economics in the Medieval Schools*, p. 37.

⁴ See Langholm, *Economics in the Medieval Schools*, pp. 39-49, 52-6, 67-87, 163-5, 196-246, 344-73, 510-90; Langholm, *Legacy of Scholasticism*, pp. 63-70; Langholm, *Scholastic Analysis of Usury*, pp. 23-

Long before the publication of these later works, at the latest from the era of Aquinas' *Summa Theologiae* (1266-73), both theologians and jurists regarded interest on a loan as a sin not only against charity but also against commutative justice and natural law, and thus a mortal sin. It was even a mortal sin for the lender to *hope* for any payment in excess of the principal. The campaign against usury culminated in 1311-12 with the council of Vienne's decree of excommunication for all 'magistrates, rulers, consuls, judges, lawyers, and similar officials' who 'draw up statutes' permitting usury or 'knowingly decide that usury may be paid'. The council added that, 'if anyone falls into the error of believing and affirming that it is not a sin to practise usury, we decree that he be punished as a heretic.'¹ At this moment, Dante Alighieri (1265-1321) was writing his *Divine Comedy*, in which he placed usurers, 'the last class of sinners that are punished in the burning sands', in the lower depths, the Seventh Circle, of Hell.²

Such dire strictures applied only to a predetermined return on money lent in a *mutuum*, and certainly did not apply to other, licit forms of capital investment. The distinction between licit rents and profits and mortally sinful usury was based upon ownership. Anyone who owned or invested in land, or other forms of real estate or physical property, and who leased the use of the property to others was entitled to receive a rental income on what remained his own property, even though the return was predetermined. Furthermore, anyone who invested money in a standard partnership contract (*societas*) or a *commenda* contract, drawn up for a single seafaring venture, was entitled to receive a share of the profits, or dividends, according to the amount of his investment of *equity* capital; for he, too, retained ownership.³

To contemporaries unconvinced that retention of ownership supplied the distinction between licit and sinful investments, Aquinas offered a solution in his analysis of the transfer of fungible commodities within a *mutuum*: those not distinguishable from others in its group by a specific defining characteristic, such as sheaves of wheat, flagons of wine, jars of olive oil, and coined money. Since, as Aquinas argued, the borrower's use of such commodities *ipso facto* meant their transfer, consumption, and thus either their complete destruction or disappearance (in monetary circulation), repayment had to be made with other, but identical units: that is, the same quantity of wheat, wine, oil, or

40; Noonan, *Scholastic Analysis of Usury*, pp. 41-57; L. Armstrong, *Usury and the Public Debt in Early Renaissance Florence: Lorenzo Ridolfi on the Monte Comune* (Toronto, 2003), pp. 278-9, contending that the only theologian to reject the 'transfer of ownership' argument was Gerard of Siena (d. c. 1336).

¹ Gilchrist, *Church and Economic Activity*, p. 206 (translation of decree no. 29).

² Canto XVII of *Inferno*, in Dante Alighieri, *The Divine Comedy*, trans. Carlyle, Okey, Wicksteed, ed. C. H. Grandagent (New York, 1950), p. 93.

³ See *Medieval Trade in the Mediterranean World*, ed. Lopez and Raymond, pp. 174-211. If an investor provided all the capital, but did not otherwise participate in the venture, his liability was limited to his capital investment, which entitled him to receive 75 per cent of any profits.

coins – or coins of exactly equivalent value.¹ Conversely, a non-fungible is a commodity with individual distinguishing characteristics that is not consumed by its use: such as land, a house, barn, or horse. Therefore, one may licitly earn a rental income from the use of such property, while retaining ownership and subsequently regaining possession.

Both canon law and Scholastic treatises, influenced by civil law commentators on Roman law from the twelfth century, allowed several seeming exceptions to the ban on usury by which a lender in a *mutuum* may receive some payment beyond the principal. In fact, the exceptions were extrinsic titles carefully defined to accord with both commutative justice and the usury doctrine: permitting the lender to receive compensation for damages that occurred *after* the loan contract was issued. The first such title was *poena detentori* or *mora*: a penalty imposed for late payment – after the specified date of maturity of the loan – often assessed by the week. Nonetheless, a tacit agreement to make late payment was usurious (*in fraudem usurarum*). The second title was *damnum emergens*: a compensation for damages or loss that the lender incurred after having made the loan: for example, from not having the money accessible in an emergency – a fire or storm that destroyed his barns or livestock. The third title, which long remained the most contentious, was *lucrum cessans*: forgone potential gains from an alternative, licit, investment in commerce or industry. That may be viewed as the lender's opportunity cost in the form of *interesse* – the origin of the word interest, which twelfth-century Bolognese jurists derived from the Latin *intersum-esse* to designate the licit difference between the principal and repayment of the loan. The moment such a claim to compensation was seen to be predetermined and fixed, however, it failed to meet the required conditions of loss under commutative justice, thus making the return usurious. For these reasons, Aquinas himself, and most medieval canon lawyers, popes, and other Church authorities rejected *lucrum cessans* as a legitimate extrinsic title justifying the exaction of a return beyond the principal.²

Another reason for rejecting *lucrum cessans* as a licit extrinsic title to *interesse* was the fear that it appeared to contradict the Aristotelian concept of the sterility of money, even though many Scholastic treatises concerning profit and rent imply that money did play a direct role in the economy, as invested capital. Nevertheless, the Scholastics were virtually unanimous in insisting that, in the case of loans, the fruits derived from investing the borrowed money were uniquely due to the borrower's industry and enterprise.³ One important treatise that did

¹ Noonan, *Scholastic Analysis of Usury*, pp. 53-4.

² See *ibid.*, p. 118 (for Cardinal Hostiensis' use of *interesse* in this context of *lucrum cessans* c. 1250); see also pp. 120-1, 131-2, 249-68; Langholm, *Economics in the Medieval Schools*, pp. 51, 87-8, 246.

³ See Noonan, *Scholastic Analysis of Usury*, pp. 68-81, 126-8; Langholm, *Aristotelian Analysis of Usury*, pp. 25-6, 98-110.

imply a full endorsement of *lucrum cessans* and also implied that money, when so invested, could be 'fruitful' in itself, written by the theologian Peter John Olivi (1247-98), was placed on the papacy's banned list (though apparently for other reasons). Nonetheless, the treatise may have influenced both St Bernardino (1425) and St Antonino (1449), who recognized *lucrum cessans*, but only for merchants who charitably made loans *ex pietate*. Its use was 'never to be counselled' nor allowed to merchants who preferred to seek gains from 'a usurious loan [rather] than in commerce'.¹ According to Langholm, the Church recognized the exemption only in 1642.²

There were, of course, illicit ways by which to circumvent the ban on usury, but not without increasing transaction costs in both the private and state spheres of finance. One device was to cloak the loan in a sales contract that specified future payment; but that might be deemed usurious if the goods were actually sold on credit. If, however, the stipulated future price was deemed to be a 'just price' and if a lower current cash price was 'a discount gratuitously given by the seller', the sales contract would probably have been accepted as licit by the doctrine of *venditio sub dubio*, that is, with uncertainty.³ The most common device was to disguise the amount of the loan by augmenting the stipulated principal to be repaid by the amount of the required interest payment.⁴ Apart from the risk of prosecution, and of social stigma, the participants would know that they were committing both usury and fraud, giving a defaulting debtor the opportunity to claim that he had been the victim of extortion.

As Noonan remarks, even if the Church normally inflicted excommunication and other severe punishments only on 'open', 'flagrant', or 'notorious' usurers, 'all hidden usury was still a mortal sin, and the ultimate punishment of [eternal] damnation still awaited all hidden usurers.' Thus, 'the real force of the usury law lay in its hold on men's souls, and there no evasion was possible.' At a time when the Church held such sway, 'who will say that there is no meaning to the salvation or damnation of a man?'⁵ Both the Dominican Domenico Pantaleoni (c.1362-76) and the Franciscan St Bernardino (c.1430-44) had no

¹ Quotations from J. Kirshner, 'Reading Bernardino's Sermon on the Public Debt', in *Atti del simposio internazionale cateriniano-bernardiniano, Siena, 17-20 April 1980*, ed. D. Maffei and P. Nardi (Siena, 1982), pp. 550-1. For Olivi's treatise and its influence, see J. Kirshner and K. Lo Prete, 'Peter John Olivi's Treatises on Contracts of Sale, Usury, and Restitution: Minorite Economics or Minor Works?', *Quaderni fiorentini per la storia del pensiero giuridico moderno*, xiii (1984), 233-86; see also, R. de Roover, *San Bernardino of Siena and San'Antonino of Florence: Two Great Economic Thinkers of the Middle Ages* (Boston, 1967), pp. 30-1.

² Langholm, *Aristotelian Analysis of Usury*, pp. 25-6, 98-110; Langholm, *Legacy of Scholasticism*, p. 75.

³ See Noonan, *Scholastic Analysis of Usury*, pp. 90-3; de Roover, *San Bernardino*, pp. 29-30, notes that most fifteenth-century theologians remained suspicious of *emptio-venditio* contracts with prices higher for future goods than for current goods, as contracts *in fraudem usurarum*.

⁴ See, e.g., C. Wyffels, 'L'usure en Flandre au XIII^e siècle', *Revue belge de philologie et d'histoire/Belgisch tijdschrift voor filologie en geschiedenis*, lxix (1991), 855, 859-71, noting that such cloaking was virtually impossible with demand loans (*à maniaie*).

⁵ Noonan, *Scholastic Analysis of Usury*, pp. 35-6; cf. LeGoff, 'Usurer and Purgatory', pp. 25-6.

doubt that anyone who escaped conviction in the ecclesiastical courts, for lack of evidence, would nevertheless ‘be found guilty of usury in the confessional and before God (*quoad deum*)’.¹ As for non-Christians, one must recall the prohibition of usury in both the Pentateuch and (as *riba*) in the Koran.²

Even if such moral questions may not be susceptible of econometric analysis, Francesco Galassi provides convincing statistical evidence that, with the intensification of the anti-usury campaigns, Genoese merchants and financiers sought to buy ‘fire insurance’ or ‘passports to Heaven’ by making bigger donations to the Church, some of them as restitution of illicit returns of usurious transactions.³ Richard Goldthwaite, in analysing the records of fifteenth-century Florentine banks, comments on a telling peculiarity: ‘the lack of a cash account, which ... resulted from what was perhaps the strongest external constraint imposed on the banker, the usury doctrine’; similarly, Reinhold Mueller notes that the records of fifteenth-century Venetian bank deposit accounts do not mention interest, even though it was certainly paid.⁴ The risk of disclosure was not trivial. Goldthwaite cites the usury charges brought against the Florentine banker Lorenzo di Buonaccorso Pitti before the episcopal court in 1493 and, a century earlier, the advice that the renowned Francesco Datini received, in 1398, from an associate concerning his intention to open a local bank in Florence: that Datini ‘risked the ruin of his reputation as a merchant by entering this business, since no banker could avoid usurious contracts’.⁵

This statement is echoed in Lawrence Stone’s comments on the social costs of the ban on usury in Tudor-Stuart England, which was supposedly less critical of interest payments:

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 an 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.⁶

¹ Cited in J. Kirshner, ‘Storm over the *Monte Comune*: Genesis of the Moral Controversy over the Public Debt of Florence’, *Archivum Fratrum Praedicatorum*, liii (1983), 256; and in Kirshner, ‘Reading Bernardino’s Sermon’, p. 589.

² H. Soloveitchik, ‘Usury, Jewish Law’, and S. Ward, ‘Usury, Islamic Law’, both in *Dictionary of the Middle Ages*, ed. Strayer et al., xii, 339–41.

³ F. L. Galassi, ‘Buying a Passport to Heaven: Usury, Restitution, and the Merchants of Medieval Genoa’, *Religion*, xxii (1992), 313–26.

⁴ R. Goldthwaite, ‘Local Banking in Renaissance Florence’, *Journal of European Economic History*, xiv (1985), 13–16, 31–7, noting also that interest paid on time deposits was always a *discrezione*; R. Mueller, *Money and Banking in Medieval and Renaissance Venice: II: The Venetian Money Market, Banks, Panics, and the Public Debt, 1200–1500* (Baltimore, 1997), p. 13. See also R. de Roover, *The Rise and Decline of the Medici Bank, 1397–1494* (Cambridge, MA, 1963), pp. 77–141.

⁵ Goldthwaite, ‘Local Banking’, pp. 32–5.

⁶ L. Stone, *The Crisis of the Aristocracy, 1558–1641* (Oxford, 1965), p. 529.

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Despite the ban on usury, no medieval European government – municipal, territorial, or national – was able to function without borrowing, given that its powers to tax and exact rents were limited, while it was often engaged in costly wars.¹ But such loans were usually for short terms, often at punitive rates of interest. During the twelfth century, the Italian progenitors of the ongoing Commercial Revolution developed what became a system of municipally funded debts, debts that subsequently became permanent. Genoa took the lead, in 1149, when it agreed to give a consortium of the city's lenders control over a *compera*, a consolidated fund of tax revenues to be used in paying the city's creditors.²

Venice followed suit in 1164, by securing a loan of 1,150 silver *marci* against the tax revenues from the Rialto market for twelve years. In 1187, in return for a loan of 16,000 Venetian *lire*, to finance the doge's siege of Zara, creditors were given control over the salt tax and certain house rents for thirteen years; thereafter, the Salt Office was made responsible for all such loan payments.³ According to Mueller, by 1207, the Venetians had adopted what had already become the hallmark of public finance in the Italian republics: a system of forced loans, known locally as *prestiti*, whose interest charges were financed by additional taxes on salt, the Rialto market, and the weigh-house.⁴

Between 1262 and 1264, the Venetian Senate consolidated all of the state's outstanding debts into one fund later called the *Monte Vecchio* – mountain of debt – and decreed that debt-holders should receive annual interest at 5 per cent, which the Ufficiale degli *Prestiti* was required to pay twice yearly from eight specified excise taxes. These *prestiti* debt claims (with interest payments) were assignable through the offices of the procurator of San Marco and, by 1320 at the latest, a secondary market for them had developed.⁵ So long as the interest was paid regularly and some redemptions of principal were made, the *prestiti* claims traded between par and 75 per cent. From 1363, however, all redemptions ceased, except for occasional repurchases at prevailing market values (for example, in 1375), so that these forced loans, in effect, became perpetual liabilities. The interest was always paid on

¹ See P. Jones, *The Italian City-State: From Commune to Signoria* (Oxford, 1997), pp. 382-401.

² See J.-C. Hocquet, 'City-State and Market Economy', in *Economic Systems and State Finance*, ed. R. Bonney (Oxford, 1995), pp. 89-91.

³ J.-C. Hocquet, 'Venice', in *The Rise of the Fiscal State in Europe, c.1200-1815*, ed. R. Bonney (Oxford, 1999), pp. 395-6.

⁴ Mueller, *Venetian Money Market*, p. 459; see also, Jones, *Italian City State*, p. 398, who states that the first Italian evidence that he has found for a forced loan was at Pisa, in 1162.

⁵ See a detailed analysis in Mueller, *Venetian Money Market*, pp. 459-567; G. Luzzatto, *Il debito pubblico della Repubblica di Venezia, 1200-1500* (Milan, 1963); and also F. C. Lane, 'The Funded Debt of the Venetian Republic, 1262-1482', in *Venice and History: The Collected Papers of Frederic C. Lane* (Baltimore, 1966), pp. 87-108. Luzzatto, Lane, and Mueller agree that Venice lacked a permanently funded public debt before 1262-4.

schedule, until the war of Chioggia in 1377-81, when the Venetian state imposed a new series of forced loans and then, after temporarily suspending interest payments, subjected them to withholding taxes, reducing the effective rate to 4 or even 3 per cent.¹

Elsewhere, in Tuscany, Siena exacted forced loans from 1287, while continuing to solicit some voluntary loans.² Florence soon followed suit. Between 1343 and 1345, it, too, set up a consolidated fund (the *Monte Comune*) for its public debt, composed largely of forced loans, known as *prestanze*, on which the city paid an annual interest (*paghe*) of 5 per cent.³ Similarly, in 1340, Genoa consolidated all of its forced loans, which had commenced in 1258 and became known as *luoghi*, into a consolidated fund called a *compera*, and in 1407-8, while under French rule, consolidated all subsequent loans in the *compera nuova regiminis Sancti Georgi*, a state bank better known as the *Casa di San Giorgio*, which Jacques Heers calls 'la plus puissante institution financière de l'Occident'.⁴ It lowered the interest rates on the *luoghi* from 10 per cent to 7 per cent in 1405, and finally to 5.25 per cent in 1420.⁵ Lucca consolidated its public debt (*Dovana Salis et Massa Creditorum*) derived from forced loans (*proventus*) only in 1370, the year after it had regained its independence from Pisa.⁶

While also soliciting voluntary short-term loans, the Italian city states levied their *prestiti*, *prestanze*, or *luoghi* according to the citizen's ability to pay based on the value of his property and assets recorded in the communal *estimo* or census registers. The interest payments, financed by the salt tax and other indirect taxes (*gabella*), thereby transferred income from the lower to the upper income strata. But not all Italian cities resorted to forced loans: many of those ruled by *signori* (for example, Milan) relied instead on a floating debt of voluntary short-term loans. As Mueller has contended, most of the Italian city states that resorted to forced loans and consolidated their long-term debts had strong republican traditions.⁷

For such states, forced loans had three major advantages. First, they demonstrated that every citizen had the duty to provide the state with an equitable share of financial support – *sub necessitate et pro utilitate publica* – if only to help to ensure its security and territorial integrity.

¹ See Hocquet, 'Venice', pp. 395-6; Hocquet, 'City State', pp. 87-9.

² W. Bowsky, *The Finances of the Commune of Siena, 1287-1355* (Oxford, 1970), pp. 166-88, app. 12, pp. 329-39.

³ B. Barbadoro, *Le finanze della Repubblica fiorentina: Imposta diretta e debito pubblico fino all'istituzione del Monte* (Florence, 1929), pp. 629-87; A. Molho, *Florentine Public Finances in the Early Renaissance, 1400-33* (Cambridge, MA, 1971), pp. 63-74.

⁴ J. Heers, *Gènes au XV^e siècle: activité économique et problèmes sociaux* (Paris, 1961), p. 110.

⁵ *Ibid.*, pp. 97-190; and the classic study by H. Sieveking, *Genueser Finanzwesen mit besonderer Berücksichtigung der Casa Di S. Georgio* (Freiburg, 1897-8). In 1441, the rate was ostensibly reduced to 4.0 per cent; but with an additional payment of one florin, the real rate remained at 5.25 per cent.

⁶ C. Meek, *Lucca, 1369-1400: Politics and Society in an Early Renaissance City State* (New York, 1978), pp. 53-76.

⁷ Mueller, *Venetian Money Market*, pp. 454-8.

Second, citizens preferred forced loans to the alternative, direct taxation, because subscribers received both interest income and a marketable asset. After Florence abolished its *estimo* land tax in 1315, Siena was the only important Italian commune to combine forced loans (*preste*) with direct taxes (*dazi*) – though it permitted one to be deducted against the other – until Venice introduced its *decima* tax in 1463 at the outbreak of its war with the Ottomans.¹ Third, because virtually everybody agreed that forced loans were a necessary obligation imposed on all citizens, in defending their state, and because volition was at the very core of the usury doctrine, many theologians and jurists justified the payment and receipt of interest with some version of *damnum emergens* or *interesse*.²

When free secondary markets in the various *monti* or *compera* developed during the early to mid-fourteenth century, such justifications became much more difficult to devise. Indeed, many theologians now questioned the justification for interest payments received by those who had voluntarily agreed to buy *monte* shares, with contracts that, furthermore, usually permitted them to receive a higher rate than that paid to the original owners: that is, more than the nominal 5 per cent *paghe*, which had become the standard rate in Venice, Florence, and (eventually) Genoa. The reason why the buyer gained a higher rate is simply the fact that those who sought to sell their *monte* shares in these markets usually had to sell at discount, accepting values well below par, in order to attract a buyer; and thus the buyer who purchased a *monte* share with a nominal value of 100 *lire* (and a *paghe* of 5 *lire* per year) for only 50 *lire* would earn 10 per cent per year.

This situation led to a lengthy debate in fourteenth- and fifteenth-century Italy among theologians and jurists. The debate began in 1353, shortly after Florence had consolidated its debt, when the Franciscan master Francesco da Empoli (d. 1370) issued his treatise *Determinatio de materia montis*. He contended that buyers of shares in the *monte* bearing annual interest payments did not become lenders to the state; and they were not guilty of any usurious conduct, because such *crediti di monte* were no longer based on the original *mutuum* (loan). Instead, these *crediti* were now the object of an *emptio-venditio* (purchase-sale) contract in which the holder purchased the right (*ius*) to collect a stream of future income from the state, an argument with considerable significance for the evolution of *rentes*. In a strongly worded response,

¹ The Florentine government, during war emergencies, temporarily and abortively restored the *estimo* in 1328, 1342-3, 1352, 1355, and 1494. See Barbadoro, *Finanze della repubblica fiorentina*, pp. 73-215; Molho, *Florentine Public Finances*, pp. 22-73; Bowsky, *Siena*, pp. 98-113, 310-15.

² Kirshner, 'Bernardino's Sermon', pp. 553-60, 583-5; L. Armstrong, 'The Politics of Usury in Trecento Florence: The *Questio de Monte* of Francesco da Empoli', *Mediaeval Studies*, lxi (1999), 1-44 and *Usury and the Public Debt*, pp. 72-84. For one exception, Alexander of Lombard (c. 1303-7), see J. Kirshner, 'Conscience and Public Finance: A *Quaestio Disputata* of John of Legnano on the Public Debt of Genoa', in *Philosophy and Humanism: Renaissance Essays in Honor of Paul Oskar Kristeller*, ed. E. Mahoney (New York, 1976), pp. 439-40.

the Dominican theologian Piero degli Strozzi (1293-1362) contended that anyone who purchased *monte* shares did become a creditor of the commune, and in doing so harboured the sinful hope of profiting from this loan. Furthermore, he contended, the commune's annual payments on *monte* shares were actually a *donum* or gift given only to the original holders, who were therefore not entitled to sell the *ius* to collect such payments.¹

Raymond de Roover, relying on Matteo Villani's *Cronica*, contends that the Franciscans 'gave their blessings to state creditors' who purchased *crediti di monte*, while 'the Hermits of St Augustine, soon joined by the Dominicans, were representing them as parasites who were sucking the lifeblood of the state'.² Julius Kirshner and Lawrin Armstrong, on the other hand, both deny the existence of such a rigid division and contend that most of da Empoli's critics were theologians. Most Dominicans and Franciscans condemned participation in the secondary market in *crediti di monte* as 'unnatural and nutritive of sin', *in fraudem usurarum*; and those few who merely expressed reservations nevertheless advised everyone 'to refrain from such investments'.³ Conversely, most of da Empoli's supporters were jurists; and the most famous was the Florentine patrician and lay canonist, Lorenzo Ridolfi, who, in 1403-4, wrote the very influential *Tractatus de usuris*.⁴ Almost all theologians and jurists, while conceding that the state had the right to exact forced loans and pay an annual compensation, nevertheless agreed that those who willingly subscribed to loans, forced or not, 'out of greed' and *in the hope of* interest payments, should be treated as 'plain usurers'. Similar debates took place in Genoa and Venice.⁵ The legal treatises, however brilliant, failed to convince most theologians, or to appease the consciences of many investors.

In discussing the debates in Genoa, Kirshner cites 'well-documented cases of investors who, because of scruples of conscience, were hesitant about purchasing shares in the public debt'.⁶ Similarly, in an early fifteenth-century will, a wealthy Florentine merchant confesses that he is

¹ See Armstrong, 'Politics of Usury', pp. 1-44 and *Usury and the Public Debt*, pp. 63-5; Kirshner, 'Storm over the Monte', pp. 219-22, 227-30, 240-52.

² Quotations from de Roover, *San Bernardino*, pp. 39-40. For de Roover's apparent reliance on Matteo Villani, *Cronica*, ed. F. Dragomanni (Florence, 1846), lib. III, cap. 106, 296, see Kirshner, 'Storm over the Monte', pp. 219-21.

³ J. Kirshner, 'The Moral Theology of Public Finance: A Study and Edition of Nicholas de Anglia's *Quaestio disputata* on the Public Debt of Venice', *Archivum Fratrum Praedicatorum*, xl (1970), 47-72 and "'Ubi est ille?": Franco Sacchetti on the *monte comune* of Florence', *Speculum: A Journal of Medieval Studies*, lix (1984), 556-84; Armstrong, 'Politics of Usury', pp. 1-44 and *Usury and Public Debt*, pp. 72-84.

⁴ Kirshner, 'Storm over the Monte', pp. 219-52; Armstrong, *Usury and Public Debt*, pp. 93-9, 236-60, 367-80.

⁵ For Venice, see Kirshner, 'Moral Theology of Public Finance', pp. 47-72; F. C. Lane, 'Investment and Usury', in Lane, *Venice and History*, pp. 56-68; and Mueller, *Venetian Money Market*, pp. 484-7. For Genoa, see Kirshner, 'Conscience and Public Finance', pp. 434-53 and 'The Moral Controversy over Discounting Genoese Paghe, 1450-1550', *Archivum Fratrum Praedicatorum*, xlvii (1977), 109-67.

⁶ Kirshner, 'Conscience and Public Finance', p. 450. Cf. also Lane, 'Investment and Usury', p. 64: usury's 'greatest importance was its moral influence'.

'uneasy in his conscience' about the income earned from credits in the Florentine *monte*, which accounted for 30 per cent of his assets, even though they were solely 'on account of *prestanze*' that he and his parents had been forced to pay. The will therefore stipulates that 'if a declaration or decision is made by the Roman church or a general council' determining that such income was illicit, his 'heirs shall act in every respect in conformity with the decree, decision, determination, or conclusion of the Roman church'.¹

* * * * *

In northern Europe, the resuscitation of the anti-usury campaign had produced, by the early thirteenth century, even greater qualms about receiving interest from public loans, all the more so because most loans were then voluntary. That concern, even if shared by only a minority of potential investors, may explain why a growing number of French and Flemish cities, from the 1220s, devised a less problematic alternative in the form of *rente* contracts.

Rente contracts were unknown in Roman law; and Raymond Van Uytven's contention that they were employed in the ancient Greek city state of Miletus has dubious foundations.² As an instrument of public finance, the *rente* was based on the Carolingian *census* contract that many monasteries had long utilized in order to acquire bequests of lands, on condition that the donor receive an annual usufruct income (*redditus*) from the land, in kind or money, for the rest of his life and sometimes for the lives of his heirs.³ The income was deemed to be part of the 'fruits' of the property (for example, the harvest): originally it was paid in wheat, wine, olive oil, or similar commodities, and, from the twelfth century, more commonly in money. For that reason, the *census* or *cens* came to be known as a 'rent' or *rente*, from which we derive the term *rentier*. The closest equivalent in modern English is the annuity, although this term does not imply that the annual return was necessarily based on a 'fruitful good', as stipulated in all medieval discussions of both *rente* and *census* contracts, in both canon and civil law.⁴

¹ L. Armstrong, 'Usury, Conscience, and Public Debt: Angelo Corbinelli's Testament of 1419', paper delivered to the Centre for Medieval Studies, University of Toronto, Jan. 2002. Julius Kirschner, having discovered the will in the Florentine archives, informed Armstrong about it.

² R. Van Uytven, *Stadsfinanciën en stadseconomie te Leuven: van de XII^e tot het einde der XVI^e eeuw* (Brussels, 1961), p. 196. In the updated version of his source, that contention is not repeated: in M. Van Haften, 'Lijffrente', in *Grote Winkler Prins*, xii (Amsterdam, 1971), 351-2.

³ B. Kuske, *Das Schuldenwesen der deutschen Städte im Mittelalter* (Tübingen, 1904), pp. 12-24 (whose earliest example is for the Carolingian Abbey of St Gallen, in Hergau, 'um 700'). See also A. P. Usher, *The Early History of Deposit Banking in Mediterranean Europe: I: The Structure and Functions of the Early Credit System: Banking in Catalonia: 1240-1723* (Cambridge, MA, 1943; reissued New York, 1967), p. 146; E. B. and M. M. Fryde, 'Public Credit, with Special Reference to North-Western Europe', in *The Cambridge Economic History of Europe: III: Economic Organization in the Middle Ages*, ed. M. Postan, E. E. Rich, and E. Miller (Cambridge, 1963), p. 530 and especially n. 2.

⁴ See Noonan, *Scholastic Analysis of Usury*, pp. 154-70 (quotation on p. 155).

According to Bernard Schnapper, the *census* evolved into two related financial contracts. The older of the two, known as the *bail à rente*, provided for the sale of real estate or some form of fixed property in return for a perpetual annual income. The other form, more relevant to the history of public finance, evolved from the first into the *constitution de rente* – also known as the *rente à prix d'argent* – a contract by which the property holder (the *débirentier*) sold, for a specified sum, the right to receive a fixed annual income from his property or other real assets while retaining the ownership of the property. In almost all *rente* contracts dating from the early thirteenth century, the issuer or *débirentier* pledged all of his assets to meet the annual payment, on penalty of forfeiture.¹ Thus, well before the *rente* contract became a vehicle of public finance in northern Europe, it had become a widespread form of private investment in the agricultural economies of Mediterranean western Europe, one by which a merchant or financier supplied needed capital to a small landholder in return for a perpetual income.²

When the *rente* contract began to play a role in financing municipalities, it took two forms: the traditional perpetual hereditary rent known as *rente héritable* – *erfelijk rent*, *erfrent*, and later *losrent* in Flemish and Dutch; and a newer form of life-rent, known as *rente viagère* or *lijfrent*, that was extinguished on the death of the holder (*crédirentier*), though some were issued for two or three designated lives, to be transferred at death to a spouse, child, or close relative. The annual payments on single-life *rentes*, if always lower than interest rates on voluntary short-term loans, were always higher than, and sometimes twice as high as, those on perpetual or hereditary *rentes*, perhaps because the latter, being assignable, proved to be more marketable.³

In noting the crucial role of German, Flemish, and northern French municipalities in developing the *rente* contract as a vehicle of public finance during the thirteenth century, and its complete absence in southern French towns, Matthew and Edmund Fryde state that 'the contrast in the forms of municipal borrowing between northern and southern France cannot be satisfactorily explained.'⁴ James Tracy, however, offers several explanations to resolve this paradox, chiefly based on publications of Charles Petit-Dutaillis that analyse the differences in the legal status of northern and southern municipalities and

¹ B. Schnapper, *Les rentes au XVI^e siècle: histoire d'un instrument de crédit* (Paris, 1957), pp. 50–61.

² See D. Herlihy, *Medieval and Renaissance Pistoia, 1200–1430* (New Haven, 1967), pp. 136–45, and table 18.

³ G. Bigwood, *Le régime juridique et économique du commerce de l'argent dans la Belgique du moyen âge* (Brussels, 1921–2), i. 120–3. Thus, in late thirteenth-century Flemish towns, the annuity rate on perpetual rents (*erfelijk renten*) was 10 per cent, falling to 6.25 per cent (1/16) in the fifteenth century; the rate on *lijfrenten* in the late thirteenth century was typically 12.5 per cent (1/8), falling to 10 or even 8 per cent (1/12.5) in the fifteenth century. See also Tracy, *Financial Revolution*, p. 92 n. 57; and especially Fryde, 'Public Credit', pp. 531–2, noting that rates on life-rents in medieval eastern Germany were 12.0 to 13.5 per cent, but only 8 per cent in Cologne.

⁴ Fryde, 'Public Credit', pp. 529 (quotation), 533–40, 542–7.

their relationships with the French Crown.¹ Louis IX (r. 1226-70), who granted the chartered communes of the central and northern *langue d'oïl* region an augmented status as corporate legal entities, thereby enhanced their magistrates' authority to pledge both the revenues of the towns and the property of all their citizens as surety for the new *rentes*. In contrast, in the southern or *languedoc* regions under English jurisdiction, towns were forcibly subjected, from about 1260, to a much stronger royal control, while most towns in the south-east, under French jurisdiction, had never been incorporated as communes, and thus continued to be supervised by magistrates called *consuls*, whose office dated from the Roman era.² Both of these developments, however, occurred after the 1220s, when the earliest *rentes* were issued in various northern towns.

Some evidence that the currently vigorous anti-usury campaign may have played a role in their adoption of *rentes* can be found in Pierre Desportes' account of the response of the Rheims bourgeoisie, when threatened in 1234 with an ecclesiastical investigation of their 'usures': subjected to a 'véritable terreur', they decided to purchase *rentes* instead of making any further loans ('prêts proprement dits').³ In 1254, Pope Innocent IV (r. 1243-54) relieved the monks of Saint-Rémi and the commune of Beauvais of their obligation to pay interest owed to their creditors.⁴ Similarly, David Nicholas, in discussing social attitudes in medieval Flanders, northern France's most important county, remarks that 'the Flemings seem to have been more concerned than the Italians to avoid the imputation of usury.'⁵ Thus, he echoes Georges Bigwood's assertion that, in thirteenth-century Flanders and Artois, 'the struggle against usury was energetically and remorselessly conducted' by Church, towns (Douai from 1247), and princes.⁶ To be sure, from 1281, Guy de Dampierre (r. 1280-1305) and the successor counts of Flanders licensed Italian 'Lombard' merchants to maintain regulated pawnbroking 'tables'; but such pawnbroking could be interpreted as the discounted sale and repurchase of goods (*venditio sub dubio*) rather than as usury. De Roover comments that, nevertheless, 'the Lombards in Flanders as elsewhere lived in constant fear of a sudden reversion to repressive methods and under the permanent threat of expulsion and spoliation.'⁷

1 J. Tracy, 'On the Dual Origins of Long-Term Urban Debt in Medieval Europe', conference on Urban Public Debt and the Market for Annuities, 14th-18th Centuries, Ghent, Nov. 2001. I am indebted to Professor Tracy for sending me his valuable paper.

2 C. Petit-Dutaillis, *The French Communes in the Middle Ages*, trans. J. Vickers (Amsterdam, 1978), pp. 23-36, 86-94, 97-125.

3 Quoted in P. Desportes, *Reims et les Rémois au XIII^e et XIV^e siècles* (Paris, 1979), pp. 126, 131.

4 *Ibid.*, p. 126.

5 D. Nicholas, *The Metamorphosis of a Medieval City: Ghent in the Age of the Artevelde, 1302-90* (Lincoln, 1987), p. 122 (though referring in fact to fourteenth-century private transactions).

6 Bigwood, *Régime juridique*, i. 567-603. Cf. Wyffels, 'L'usure en Flandre', pp. 853-7.

7 R. de Roover, *Money, Banking, and Credit in Mediaeval Bruges: Italian Merchant Bankers, Lombards, and Money-Changers: A Study in the Origins of Banking* (Cambridge, MA, 1948), pp. 99-148; Wyffels,

The continuous risk of debt repudiation for usurious lenders was demonstrated during the financial crises that beset the Flemish towns during the 1290s.¹ In November 1291, the parlement of Paris issued a decree cancelling Flemish communal debts deemed to be usurious 'ou soupetteuse d'usure', and punishing civic 'administrateurs par lesquelz la commune aura estre dommagé' by such usuries.² In February 1294, Philip IV the Fair (r. 1285-1314) ordered the bailiffs of Ghent to take any steps necessary to protect victims of 'usurious transactions'.³ Shortly afterwards, in January 1296, Pope Boniface VIII (r. 1294-1303), at Philip's insistence, issued a decree to relieve Bruges from the 'vicious usurious obligations' (*per usurariam pravitatem de solvendis*) owed to Robert and Baldwin Crespin 'beyond the principal sums owed to them'.⁴ Guy de Dampierre, himself heavily indebted to the Crespins, also appealed to the pope to release him from their 'usurious loans'.⁵ In their survey of medieval public credit, Matthew and Edmund Fryde state that 'in no other country were lenders so frequently despoiled and ruined' as in France under Philip IV and his immediate successors; and that, on numerous occasions, 'Italian merchants were seized by the king on the pretext that they were guilty of usurious practices' and were released 'only after paying very substantial fines'.⁶

Such a misuse of the usury ban, in extorting financial advantages for princes and municipalities, might have backfired, in jeopardizing access to additional sources of credit, were it not for the new, alternative, and non-usurious form of finance that proved more attractive to risk-averse and morally concerned creditors. While many, like the bourgeoisie of Rheims, may have sought to invest solely in *rentes*, others may have preferred to hold a balanced investment portfolio, containing both long-term or perpetual *rentes* with low yields and the riskier, short-term, higher-interest-bearing loans, with specific redemption dates.

It is not, however, sufficient to assert that the diffusion of *rente* contracts was the consequence of the intensified anti-usury campaign of the thirteenth century, at a time when so many towns were experiencing financial difficulties. The hypothesis depends upon satisfying two other historical conditions: first, that municipal and then state governments benefited not only from a better supply of long-term funding that proved attractive to investors, but also from one with lower servicing costs; and second, and more necessary, that no taint of usury came to be attached to *rente* contracts.

When the theological discussion of *census* or *rente* contracts began, in

'L'usure en Flandre', pp. 866-7; Bigwood, *Régime juridique*, i. 319-88, 639-48.

¹ See D. Nicholas, *Medieval Flanders* (London, 1992), pp. 180-94.

² Bigwood, *Régime juridique*, ii. 299-300 (doc. no. 17).

³ *Ibid.*, ii. 303-4 (doc. no. 19).

⁴ *Ibid.*, i. 578-83; ii. 306 (doc. no. 21).

⁵ *Ibid.*, ii. 293-8 (doc. no. 15). See also Fryde, 'Public Credit', pp. 494-5.

⁶ Fryde, 'Public Credit', pp. 479-80.

the early thirteenth century, just after the northern towns had resorted to them, it did not augur well. In the first reference to such contracts, in July 1218, the archbishop of Rheims refused, 'in the name of the community', to approve the *Hôtel-Dieu's* sale of a *rente viagère*, because he suspected that the contract was usurious.¹ In 1241-3, Geoffrey of Trani contended that anyone who bought a *rente* harboured an 'immoral hope' of receiving a sum of annual payments that exceeded his original investment, and was therefore guilty of usury. Around 1250, William of Rennes, in a gloss on the *Summa* of Raymond de Penyafort, concluded that, although the *rente viagère* was not in itself (*ex forma*) usurious, it was nonetheless immoral and illegitimate, for reasons similar to those cited by Geoffrey of Trani. He declared illicit any *rente* that was not strictly tied to real estate.²

The following year (1251), however, Pope Innocent IV declared that *rentes* were not usurious, and were legitimate contracts of sale, provided that the annual payments were based on 'real' properties.³ Furthermore, in two treatises, one written around 1253 and the other twenty years later, around 1270, Hostiensis (Henry Cardinal of Susa) rejected all of Geoffrey of Trani's arguments and endorsed Innocent IV's decree.⁴ In issuing his *Quodlibets* in 1276, Henry of Ghent became the last important theologian to reject the *rente* contract as usurious. His arguments, echoing those of Geoffrey of Trani, that it involved 'the sale of money, which is non-vendible' and promoted immoral hopes of gain, well in excess of the principal, immediately provoked hostile reactions, even within his own University of Paris.⁵ Shortly thereafter, in 1278, Giles of Lessines justified the return on *census* contracts on the grounds that 'future things over a period are not estimated to be of such value as things collected in an instant [in the present].'⁶ By this date, almost every theologian regarded the *census* as a contract of purchase and sale (*emptio in forma*) involving the licit purchase of future streams of income or usufruct from property; and others, such as the Dominican Roland of Cremona, argued that,

¹ Desportes, *Reims et les Rémois*, pp. 127-8 and n. 226.

² Geoffrey of Trani (Gottofredo da Trani), *Summa super titulis Decretalium*, X 5.19 *de usuris*, n. 12; and William of Rennes, gloss on *Summa Sancti Raymundi de Peñiafort de Poenitentia et Matrimonio*, 2.7 *de usuris*: both analysed in F. Veraja, *Le origini della controversia teologica sul contratto di censo nel 13 secolo* (Rome, 1960), pp. 30-43; B. Schnapper, 'Les rentes chez les théologiens et les canonistes du XIII^e au XVI^e siècles', in *Études d'histoire du droit canonique dédiées à Gabriel le Bras*, ed. G. Vedel (Paris, 1965), i. 966-7.

³ Innocent IV, *Commentaria super libris quinque Decretalium*, ad X 5.19.6 *In civitate*, n. 2: analysed in Veraja, *Origini della controversia*, pp. 36-43; and Schnapper, 'Les rentes chez les théologiens', pp. 966-7.

⁴ Hostiensis, *In Decretalium libros commentaria*, ad X 5.19.6 *In civitate*, and *Summa aurea*, ad X 5.19 *de usuris*: both analysed in Veraja, *Origini della controversia*, pp. 43-7.

⁵ Quotation from Schnapper, 'Les rentes chez les théologiens', p. 970 (analysis, pp. 969-72); see also Langholm, *Economics in the Medieval Schools*, pp. 249-73; Veraja, *Origini della controversia*, pp. 50-2, 55-81.

⁶ Veraja, *Origini della controversia*, pp. 89-99; Noonan, *Scholastic Analysis of Usury*, pp. 155-7; Langholm, *Economics in the Medieval Schools*, pp. 310-17.

because the uncertainty of the buyer's date of death made the return on a *rente* uncertain, the contract was not usurious. Most contended, as had Innocent IV, that the legitimacy of such contracts should be judged against the canon law on 'just price' rather than on usury, especially if the annual payments were made in kind rather than money.¹ In the late thirteenth and early fourteenth centuries, numerous Scholastic treatises – written by Gervais de Mont Saint-Eloi, Matthew d'Aquasparta, Godfrey of Fontaines, Richard of Middleton, and Alexander Lombard, among others – endorsed both the *census* and the related *rente* contracts.²

The principle governing the theological discussion was that anyone who purchased a *rente* was denied the right to demand repayment of the principal sum, so long as the seller or *débirentier* honoured the obligation to make the annual annuity payments for which he had pledged all of his assets. If *crédirentiers* were given the right of redemption, their *rentes* became merely a sinful device to cloak a usurious loan. Thus, since the *rente* was not to be repaid, no loan was involved, and, to quote the Leuven theologian Leonardus Lessius (d. 1623), 'where there is no loan there is no usury' (*ubi non est mutuum, ibi non est usura*).³ A *crédirentier* who wished to regain some or all of the principal had to find a third party willing to buy the *rente*, with its annual income, often at a discount.⁴ Only when reliable, efficient secondary markets developed, with untrammelled rights of negotiability and low transaction costs, would the public find *rentes* to be an attractive investment.

The more pressing issue in the later Middle Ages was the right of redemption on the part of the seller, especially *débirentier* municipalities. Their problems were aggravated during the Hundred Years War (1337-1453), with its economic contractions and periodic economic crises, caused not only by the fighting but also by plague and other disruptions to the international economy, when many municipalities found themselves without sufficient revenues to meet their annual rent charges. Thus, they sought the legal right to redeem them. Goslar had claimed that right as early as 1283, Ghent in 1288, Cologne around 1300, and subsequently so did a few other towns in France, Imperial Germany, and the Low Countries: Vienne in 1360, Vienna in 1360, Amiens in 1393, Tournai in 1410, Brussels in 1436, and Paris in 1441. In most other municipalities, however, redemptions were difficult to achieve without consent from the *crédirentiers*, who were generally reluctant to surrender this guaranteed source of income. In the later

¹ Veraja, *Origini della controversia*, pp. 106-11, 125-31; Schnapper, 'Les rentes chez les théologiens', pp. 969-72; Langholm, *Economics in the Medieval Schools*, pp. 249-73.

² Veraja, *Origini della controversia*, pp. 69-73, 101-24, 131-95; Schnapper, 'Les rentes chez les théologiens', pp. 969-72; Noonan, *Scholastic Analysis of Usury*, pp. 154-70.

³ Quoted in R. de Roover, *Leonardus Lessius als economist: de economische leerstellingen en van de latere scholastiek in de Zuidelijke Nederlanden* (Brussels, 1969), p. 11; see also, p. 26.

⁴ See Schnapper, *Les rentes au XVI^e siècle*, pp. 50-61.

fourteenth century, theologians in Vienne strongly objecting to such redemptions on principle, cited the injury to ecclesiastical institutions dependent on income from *rentes*.¹

In 1416, when the council of Constance was asked to determine the status of *rentes* and of the right of redemption, all of the commissioners consulted, seven jurists and four theologians, ruled that *rentes* were licit and that the *débirentier* had the right to redeem them, provided that the amount equalled at least the nominal purchase value. Finally, three papal bulls, influenced by the debates at Constance, issued by Martin V (r. 1417-31) (*Regimini*, 1425), Nicholas V (r. 1447-55) (*Sollicitudo pastoralis*, 1452), and Calixtus III (r. 1455-8) (*Regimini*, 1455) overcame any remaining moral, legal, and ecclesiastical doubts. Martin V's bull, confirmed by Calixtus III, limited the validity of *rentes* to those based on real estate. Thus, the crucial bull was Nicholas V's, which recognized the validity of *rentes* based merely on the assets or patrimony of the vendor, and which had been influenced by the *quodlibet* that Willem II Bont of Leuven issued in 1451 in refutation of Henry of Ghent's *Quodlibets*.² According to these bulls, *census* or *rente* contracts were licit under three conditions: that the contracts be tied to real estate, or to other real property; that the annual return or annuity payments not exceed 10 per cent of the capital sum (almost never observed); and that the *débirentier* (but not the *crédirentier*) have an unrestricted right of redemption.

Fortunately for the financial future of western European municipalities – and for the financial revolution – the theological controversy sparked by the resort of northern French towns to *rentes* in order to finance their long-term debts was resolved in their favour. The historical literature suggests that the taint of usury disappeared only with issue of the three fifteenth-century papal bulls.³ Other than resolving the issue of redemption, however, the bulls did little more than ratify the decrees that Innocent IV had issued less than twenty-five years after the experiment with *rentes* began.

The first documented issue of municipal *rentes* took place at Troyes, the leading town of the Champagne Fairs, just before 1228, when several Artesian financiers from Arras and St Quentin acknowledged

¹ Fryde, 'Public Credit', pp. 530-1; H. Van Werveke, *De Gentsche stadsfinanciën in de middeleeuwen* (Brussels, 1934), pp. 283-90; Schnapper, 'Les rentes chez les théologiens', pp. 973-4; Schnapper, *Les rentes au XVI^e siècle*, pp. 62-4, 130-3.

² Schnapper, 'Les rentes chez les théologiens', pp. 977-87; Schnapper, *Les rentes au XVI^e siècle*, pp. 65-9; Noonan, *Scholastic Analysis of Usury*, pp. 160-1, 206-8, 230-7; P. Godding, 'Wilhelmi Bont Lovaniensis de redditibus perpetuis et ad vitam (1451)', *Tijdschrift voor rechtsgeschiedenis/Revue d'histoire du droit/The Legal History Review*, lviii (2000), 262-7. The maximum rates actually ranged from 1/10 (10.0 per cent) to 1/14 (7.14 per cent).

³ See Usher, *Early History of Deposit Banking*, p. 137; Fryde, 'Public Credit', p. 531; H. Van der Wee, 'Monetary, Credit, and Banking Systems', in *The Cambridge Economic History of Europe: V: The Economic Organization of Early Modern Europe*, ed. E. E. Rich and C. Wilson (Cambridge, 1975), pp. 303-4.

the purchase of a series of *rentes viagères*.¹ Four years later, in December 1232, Troyes sold a further 32 *rentes viagères*, 26 of them to financiers from Rheims. The more interesting provisions allowed each *crédientier* to sell his *rentes* to a third party; or, on his death, to transfer his claim to his wife, who would receive half of the annual income.² In 1235, the commune of Auxerre also issued *rentes viagères*, many of them, too, bought by Rheims financiers.³ The earliest extant financial accounts from Arras, from October 1241 to February 1244, indicate that it sold £2,500 *parisis* in *rentes viagères* at 1/6.5 (that is, at 15.4 per cent) for one or two lives; and that the annual payments on such *rentes* accounted for 75 per cent of Arras's debt charges.⁴ Many other northern French towns soon followed suit: Roye in 1260; Calais in 1263; Saint-Riquier in 1268; and Saint-Omer in 1271.⁵

In the quasi-independent French county of Flanders to the north, Douai, the leading Flemish cloth manufacturer during the thirteenth century, was the first town to issue *rentes*. Georges Espinas discovered a document in its archives, dated about 1250, containing a list of 'rentes que li ville doit a hiretage' (that is, *rentes héritables*), and another, dated March 1270, concerning *rentes viagères*. After Douai was forcibly incorporated into the French kingdom in 1305, it continued to issue *rentes héritables*, but was not allowed to sell *rentes viagères* without royal permission. Those sold were marketed chiefly in Arras, Tournai, and Valenciennes, and were transferable to the buyer's wives, children, and sometimes grandchildren.⁶

To the north, Flemish-speaking Ghent, which began to sell *lijfrenten* in 1275, also found most of its buyers (for sales amounting to £1,600 *parisis*) in Arras, whose bankers converted their short-term debt claims into longer-term *renten*. Ghent's sale of *erfelijk renten* began in July 1288, when Count Guy de Dampierre issued an ordinance stipulating that Flemish municipalities had the right to sell (and redeem) *renten*, which he undertook to guarantee.⁷ The guarantees, however, probably did not extend beyond using his coercive powers to ensure that the town governments met their annual rent charges. Bruges, too, was heavily indebted to bankers from Arras, especially members of the Crespin family. In 1298, they held almost half of Bruges's steeply mounting financial obligations: £157,093 *parisis* of a total debt of £346,880 *parisis*, of which £124,307 were in 'usurious loans' and

¹ P. Bougard and C. Wyffels, *Les finances de Calais au XIII^e siècle* (Brussels, 1966), pp. 56-9. I am indebted to James Tracy for this reference.

² Desportes, *Reims et les Rémois*, pp. 127-9; Fryde, 'Public Credit', pp. 533-4.

³ Desportes, *Reims et les Rémois*, p. 128.

⁴ P. Bougard, 'L'apogée de la ville (1191-1340)', in P. Bougard, Y.-M. Hilaire, and A. Nolibos, *Histoire d'Arras* (Arras, 1988), pp. 61-2. In medieval Europe, percentages were always expressed as fractions.

⁵ Van Werveke, *Gentsche stadsfinanciën*, pp. 164-71, 282-90; Tracy, *Financial Revolution*, pp. 13-15.

⁶ G. Espinas, *Les finances de la commune de Douai, des origines au XV^e siècle* (Paris, 1902), pp. 314-56 (quotation, p. 315); see also Fryde, 'Public Credit', p. 536.

⁷ Van Werveke, *Gentsche stadsfinanciën*, pp. 164-71, 282-90.

£32,787 in *lijfrenten* (20.9 per cent).¹ Far less important were issues of *erfelijk renten*.²

Much of Flanders was then under French military occupation, as a consequence of the count's determination to subdue the mercantile oligarchies that had long governed the principal Flemish towns; that policy, dating from 1275, brought him into conflict with his suzerain, the king of France. Ostensibly responding to complaints from unfranchised guild artisans, Guy and his mother, Countess Marguerite of Constantinople (r. 1244-78) overthrew the so-called XXXIX of Ghent in that year. The other ruling oligarchies, Douai, Lille, Bruges, and Ypres, immediately sought French royal protection, and the parlement of Paris restored the XXXIX to office, on condition that it submit to external financial audits. In 1289, Philip IV installed a French governor to rule Flanders, and placed the municipal governments under royal protection. Two years later, in 1291, the parlement of Paris permitted the Flemish municipalities to suspend further payments to holders of 'rentes à vie' who had received more than their original investment, 'jusques à tant que la commune sera délivrée des debtes'; and by 1294, Ghent ceased sales of *renten* and payments of rent charges for the next three decades.³

In 1296-7, Count Guy again abolished the Ghent XXXIX and allied with Philip's chief enemy, Edward I of England (r. 1272-1307), whose revenues came chiefly from taxes on wool exports to Flanders, Europe's leading cloth producer. In response, Philip invaded Flanders, seizing half the county in 1297 and the remainder in 1300. The Flemish townsmen and textile-guild militias rose in revolt, and two years later, in 1302, they vanquished the French at the battle of Kortrijk, a victory that allowed guildsmen to enter the municipal governments. Philip IV, however, soon overpowered them and, in 1305, by the truce of Athis-sur-Orge, he annexed the towns of Lille and Douai and imposed large indemnities on the Flemings, who then rejected the truce and did not make peace with France until 1320.⁴

Although Ypres resumed payment of rent-charges on its *lijfrenten*, in 1311-2, Ghent did not do so nor resume the sale of *renten* – and only

¹ See A. Derville, 'La finance Arrageoise: usure et banque', in *Arras au moyen âge: histoire et littérature*, ed. M.-M. Castellani and J.-P. Martin (Arras, 1994), pp. 40-1; but his calculations of the data differ from mine, cited here, and taken from *De rekeningen van de stad Brugge, 1280-1319*, ed. C. Wyffels and J. de Smet (Ghent, 1965-71), I: 1280-1302, 509-67, doc. 10, for 14 Sept. 1297-23 Dec. 1298. See also Fryde, 'Public Credit', pp. 476, 494-7, 538-9.

² In the account for Sept. 1297 to Dec. 1298, the total payments made to holders of *rentes viagères* or *lijfrenten* (*redditus ad vitam*) amounted to £3,154. 5s. 11d. *parisis* (225 persons, including Robert and Baldwin Crespin and Jehan Boinebroke); but payments for *rentes héréditaires* (*redditu hereditario* or *rente yretaule*) were only £99 (4 persons): Wyffels and De Smet, *Rekeningen van de stad Brugge*, i. 551.

³ See Bigwood, *Régime juridique*, i. 120-3, 578; ii. 299-300 (doc. no. 17); Schnapper, 'Les rentes chez les théologiens', p. 972; Fryde, 'Public Credit', p. 538.

⁴ Nicholas, *Medieval Flanders*, pp. 186-202, 212-24; H. Nowe, *La bataille des éperons d'or* (Brussels, 1945), pp. 13-113; Fryde, 'Public Credit', pp. 496-7, noting that the Flemings paid the French king £869,000 *parisis* between 1305 and 1330.

erfelijk renten – until 1325, in the middle of another civil war, the Revolt of Maritime Flanders (1323-8), in which it refused to take part.¹ In almost every year thereafter, until 1390, when the annual treasurer's accounts cease to be available for a decade, Ghent sold small amounts of *renten*. The annual revenues from these sales, from standard loans and other debt contracts, and annual expenditures on annuity payments, *renten* redemptions, and loan payments are given in Tables 1 and 2.

The most remarkable event recorded in Ghent's fourteenth-century municipal accounts took place in the fiscal year 1346-7, on the eve of the Black Death: the issue of *lijfrenten* worth £21,295 *parisis*, almost thirty times the value of *erfelijk renten* sold that year; but these *lijfrenten* were an involuntary conversion of short-term loans.² During the 'Artevelde era' (1335-49), when Ghent was ruled by a weaver-led guild regime, it dominated Flanders, defying the count, Louis de Nevers (r. 1322-46), while antagonizing the other leading Flemish towns.³ These circumstances may explain the other remarkable feature of this financial experiment: that almost all of the *renten* were sold outside Flanders, in the Brabantine drapery towns of Brussels and Leuven. Such sales posed, however, the risk that foreign creditors could, in their native towns, seek the seizure of Ghent merchants and their goods to enforce payment of annual rent charges, a privilege that Ghent did not accord to its own citizens.⁴ Subsequently, in the fourteenth century, Ghent sold only two more issues of *lijfrenten*, in more modest amounts; £2,311 *parisis* in 1349-50 and £1,232 *parisis* in 1355-6. Although a few sales are later recorded in Hainaut, there is no evidence that, in normal years, Ghent was dependent on external sources to finance its municipal debts. In the more peaceful period stretching from 1350 through the early 1370s, the sale of *erfelijk renten* provided, on average, only 3.65 per cent of Ghent's municipal revenues.⁵ Late

¹ *Comptes de la ville d'Ypres de 1267 à 1329*, ed. G. Des Marez and E. De Sagher (Brussels, 1909-13), i. 376 (1311-2), 397-403 (1312-3); and for arrears on *rentes* in 1309-10, see pp. 296, 304-6; see also Fryde, 'Public Credit', p. 539. Since no other municipal accounts were published before the destruction of Ypres' archives in the First World War, no further accounts are available until 1408, when the set of duplicate copies for the *Chambre des Comptes*, now housed in the national archives in Brussels, commence. The published sources for Ghent's municipal accounts are provided in Tables 1 and 2; and so far I have analysed its accounts for only the fourteenth century. For the fifteenth century, see M. Boone, *Geld en macht: de Gentse stadsfinanciën en de Bourgondische staatsvorming (1384-1453)* (Ghent, 1990), pp. 60-7, 163, and Table 11 (sales of *lijf-* and *erfrenten*, but only for the years 1453-61). This book regrettably pays almost no attention to this form of civic finances. But see also M. Boone, 'Plus deuil que joie: Les ventes de rentes par la ville de Gand pendant la période bourguignonne: entre intérêts privés et finances publiques', *Credit Communal: bulletin trimestriel*, clxxvi (1991-2), 3-24.

² Van Werveke, *Gentsche Stadsfinanciën*, pp. 282-90; Fryde, 'Public Credit', pp. 539-40.

³ See D. Nicholas, *The Van Artevelde of Ghent: The Varieties of Vendetta and the Hero in History* (Ithaca, 1988), pp. 19-98; Nicholas, *Medieval Flanders*, pp. 219-24.

⁴ See Fryde, 'Public Credit', pp. 528, 540.

⁵ *De rekeningen der stad Gent: Tijdvak van Jacob Van Artevelde, 1336-49*, ed. N. De Pauw and J. Vuylsteke (Ghent, 1874-85), ii. 21-2, 190-6; iii. 397-445; *Gentse stads- en baljuwsrekeningen (1351-64)*, ed. A. Van Werveke (Brussels, 1970), pp. 26, 92, 140, 188, 226-42, 261, 317, 377, 453, 497, 550, and 659; Van Werveke, *De Gentsche stadsfinanciën*, pp. 282-90.

fourteenth-century municipal accounts indicate that the normal rate of return on *erfelijk renten* was 12.5 per cent.

A different, more interesting picture emerges from the municipal finances of the small towns, in particular Aalst (Alost), of eastern Imperial Flanders, mid-way between Ghent and Brussels. The role of *renten* in Aalst's finances for the period from 1395-6 (the year of the first extant account) to 1549-50 is shown in Table 3.¹ There are fewer gaps than in the Ghent accounts, and almost all of the extant accounts are complete. The table provides the following data: first, quinquennial means of the revenues derived from the annual sales of both *erfelijk renten* and *lijfrenten*; second, the percentages of total revenues accounted for by the sales of each type of *renten*; third, the annual municipal disbursements on both annuity payments and redemptions; fourth, the percentage of total municipal expenditures each year accounted for by these *renten* payments; fifth, the total annual surpluses or deficits; sixth, annual revenues from the sale of tax-farms for the excise taxes (*assises*, *accijnzen*) on the consumption of beer, wine, grain, bread, textiles, and other commodities; and seventh, the total expenditures on *renten* (annuities and redemptions) as a percentage of such annual excise tax-farm revenues.

Only in calamitous years of plague and war such as 1439-40 and 1453-4 do *renten* expenditures exceed revenues from tax-farms; and, for the first half of the sixteenth century, they rarely total more than 40 per cent. On the other hand, both receipts from, and payments made for, *renten* usually account for a higher proportion of municipal revenue and expenditure than in fourteenth-century Ghent. If *erfelijk renten* were the predominant form in Ghent, *lijfrenten* were more important in Aalst, usually by a 50:1 ratio. Finally, the market for *lijfrenten* was remarkably broad given the small size of the town. For example, the account for 1402-3 records annuity payments to 769 recipients.

The evidence from the municipal accounts of Ghent and Aalst (and from Leuven in Brabant) confirms a dichotomy in the source of the annual payments for the two major kinds of *rentes*, first noticed by Bruno Kuske.² In accordance with the popes' rulings, payments for *rentes héritables* (*erfelijk renten*) had to be derived from real estate or some other form of immobile property; but those for *rentes viagères* (*lijfrenten*) were derived from excise or consumption taxes, or from annual sales of tax-farms (*pachten*) for such *accijnzen*. Note that tax was levied on consumption of products of the land: wine, beer, grain, bread, meat, herring, wool and linen textiles, charcoal, and wood, as indicated in Table 3.

In the neighbouring, though economically less developed, duchy of

¹ Municipal treasurer's accounts, Brussels, Algemeen Rijksarchief, Rekenkamer (Chambre de Comptes), Aalst Stadsrekeningen (1395-1550): nos. 31,412-553.

² Kuske, *Schuldenwesen der deutschen Städte*, pp. 27-45.

Brabant to the east, two textile-manufacturing towns sold *renten* from the early fourteenth century: Brussels (the capital) from about 1307 and Leuven from 1315. Unfortunately, no medieval municipal accounts are available for Brussels; those for Leuven, available only from 1345, do not supply adequate data on municipal finances before 1356, when evidence for the sales of *lijfrenten* and *erfelijk renten* are available in voluminous detail.¹ Leuven's municipal government sold the former at rates that also averaged 12.5 per cent; and, following the standard practice in the Low Countries, it financed the annual *renten* payments from the sale of excise-tax farms.

At the higher comital and ducal levels of government, first the counts of Holland, from 1316, and then the counts of Flanders, from the time of Louis de Male (r. 1346-84), also raised public funds from the sales of *renten* secured against *aides* and other payments received from the towns. These counts chose, however, to have the municipal governments sell the *renten* on their behalf for two reasons: first, because they had already established effective market procedures, with a reliable corps of financial agents; second, and more important, to quote Edmund Fryde, because 'few medieval princes could be trusted to pay annuities for a long period to a mere money-lender.'² The practice was followed by the counts of Hainaut, the dukes of Brabant, and the dukes of Burgundy, after their partial unification of the Low Countries in 1433-5. Both municipal and princely *renten* were sold freely to willing buyers, with the few exceptions noted previously, without the coercion that characterized Italian, later French and Habsburg public finance. In the course of the fourteenth and fifteenth centuries, most other towns in France, the Low Countries, and Germany adopted *rentes* as an increasingly important, if not the primary, vehicle for public finance.³

Most late medieval northern European towns that did so tried to claim the right to redeem *rentes* whenever they wished. In November 1520, imperial edicts issued by Emperor Charles V granted this right to municipalities throughout the duchy of Brabant and, in February 1528, to those throughout the county of Flanders. *Reichspolizei-ordnungen* issued in 1530, 1548, and 1577 applied the principle to towns situated east of the Rhine.⁴ By the early sixteenth century, the Habsburg

¹ Van Uytven, *Stadsfinanciën*, pp. 196-231; and for some annual lists of *lijfrenten*, see also Tables XIVA and B (1377-8), pp. 209-10; XV (1389), p. 213; XVI (1391), pp. 217-18; XVII (1396 and 1407), p. 221; XVIII (1429-30), p. 223; XIX (1492), pp. 225-7. The rates (Table XIII, pp. 199-200) were from 10.00 to 14.29 per cent. See also the treasurer's accounts in Leuven, Stedelijk Archief, Archief van het Oude Regime, stadsrekeningen 1345-1600, nos. 4986-5224.

² Fryde, 'Public Credit', p. 436 (quotation), and p. 496.

³ See Fryde, 'Public Credit', pp. 436-9, 502-26, 540-53; Kuske, *Schuldenwesen der deutschen Städten*, p. 55; G. Parker, 'The Emergence of Modern Finance in Europe, 1500-1750', in *The Fontana Economic History of Europe: II: The Sixteenth and Seventeenth Centuries*, ed. C. Cipolla (London, 1974), pp. 567-70; Hocquet, 'City State', pp. 91-2; Tracy, *Financial Revolution*, pp. 13-14.

⁴ Schnapper, *Les rentes au XVI^e siècle*, pp. 132-3 (and n. 53); Van der Wee, 'Monetary, Credit, and Banking Systems', p. 304; Fryde, 'Public Credit', pp. 542-53.

Emperor, French kings, and princes in the Low Countries had all affirmed their powers to regulate municipal public finances, especially *rentes*, and the municipal taxes that were used to pay annual rent charges. But this method of financing governments still remained municipal, because only municipalities sold *rentes*, so that the national institutions required for a funded, permanent public debt had yet to be created. Despite the precocity of northern municipalities in utilizing *rentes* for their public finances, the first national monarchy to establish a permanent, funded national debt based on *rentes*, by the early sixteenth century, was in southern Europe: not Italy, of course, which became unified as a national monarchy only in 1870, but the newly unified Habsburg kingdom of Spain.

NOTES TO TABLES 1A and 1B:

* Debt payments: the sum of annual annuity payments, redemptions of *renten*, and repayments of bonded loans. The accounts rarely distinguished clearly between such payments, grouping all under the expenditure accounts entitled *van schulde ende van renten*.

Many of the town accounts or *stadsrekeningen* for fourteenth-century Ghent are missing; many of these still surviving are fragmentary; and in some cases the town treasurer failed to fill in the total sum of receipts and or expenditures. With so many lacunae, these quinquennial means should be used with some considerable reservation. As an alternative, Table 2 provides extant data for individual years from 1352 to 1373, relatively peaceful years.

SOURCES:

Gentsche stads- en baljuwsrekeningen, 1280-1336 / Comptes de la ville de Gand, 1280-1336, ed. J. Vuylsteke, in the series *Oorkondenboek der stad Gent, eerste afdeeling: Rekeningen [Cartulaire de la ville de Gand, première série: Comptes]* (Ghent, 1900). The accounts begin, in fact, only in 1314-15; and many are fragmentary.

De rekeningen der stad Gent: Tijdvak van Jacob Van Artevelde, 1336-49, ed. N. De Pauw and J. Vuylsteke (Ghent, 1874-85); I: 1336-9; II: 1340-5; III: 1345-9.

Gentse stads- en baljuwsrekeningen (1351-64), ed. A. Van Werveke, Koninklijke Academie voor Wetenschappen, Letteren en Schone Kunsten van België, Koninklijke Commissie voor Geschiedenis (Brussels, 1970), with an introduction by H. Van Werveke.

Gentse stads- en baljuwsrekeningen (1365-76), ed. D. Nicholas and W. Prevenier, Koninklijke Academie van België, Koninklijke Commissie voor Geschiedenis (Brussels, 1999).

De rekeningen der stad Gent: Tijdvak van Philips van Artevelde, 1376-89, ed. J. Vuylsteke (Ghent, 1893).

The manuscript sources may be found in: Stadsarchief Gent, Stadsrekeningen, series 400 (continuing into the early modern era).

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In view of the successful use of *rentes* in so many municipalities in north-western Europe, one may wonder why the economically and politically powerful Italian city states made no use of them in the later-medieval era, especially cities still relying on short-term floating debt rather than the *monte* system. The first Italian issue of *rentes*, in the form of life annuities paying 14 per cent, took place in Venice, in 1536, but sold by the mint (*Zecca*) rather than the municipality. Then, in 1571, during the war with the Ottomans, the mint issued perpetual but redeemable annuities at 8 per cent. They turned out to be a temporary device: from 1577 to 1600, the municipality spent more than ten million ducats to redeem all of the outstanding annuities that the mint had issued in its own name.¹

The Italian experience is the more surprising in the light of the late medieval history of municipal public finances in the towns of the Crown of Aragon, including Catalonia, whose finances were also markedly different from those in the municipalities of neighbouring Languedoc. The Aragonese municipal finances, in fact, provided the model that Habsburg Spain adopted for its national public debt. The *rente* or *census* contract, under the name of *censal* or *censuale*, had long been used in Aragon as an instrument of private finance; it first came under Crown regulation in 1264. Barcelona and other Catalan towns, in return for their agreement in 1325 to raise royal *aides*, gained the 'right' to borrow or raise funds themselves, but only with royal assent: it was refused once, in 1363. Though the date of the first issue of *censals* is unknown, Barcelona sold two forms during its financial crisis of the late 1320s and 1330s, certainly after its war with Genoa in 1330-1: the *censal mort*, a perpetual, hereditary annuity with an annual payment of 7.14 per cent;² and the *violari* (*censal vitalicio*), a life annuity (commonly for two lives) with an annual payment, exactly double, of 14.29 per cent. Alzira sold *censals* and *violaris* from 1351; Valencia from 1355; and both Gandía and Gerona from 1359.³ The same year, in return for financial support in the war with Castile, Peter IV, king of Aragon and count of Barcelona (r. 1319-87), reconfirmed the towns' privileges to raise funds by issuing interest-bearing loans (*usuras e mogubells*) and

¹ See Lane, 'Public Debt and Private Wealth', pp. 317-25.

² Y. Roustit, 'La consolidation de la dette publique à Barcelone au milieu du XIV^e siècle', *Estudios de historia moderna*, iv (1954), 48-52, incorrectly ascribes the origins to Venetian public finance which was still based on forced loans, or *prestiti*; and Usher, *Early History of Deposit Banking*, pp. 139-75, 346-60, makes no mention of the sales of *censals* and *violaris* before 1359, incorrectly stating, on p. 151, that Barcelona's permanent funded debt commenced in that year. See also J. Broussolle, 'Les impositions municipales de Barcelone de 1328 à 1462', *Estudios de historia moderna*, v (1955), 1-164, indicating (pp. 22-31) that the Genoese war was responsible for establishing the excise taxes that were used to finance the *censals*.

³ A. Furió, 'Crédito y endeudamiento: el *censal* en la sociedad rural valenciana (siglos XIV-XV)', in *Señorio y feudalismo en la península Ibérica (ss. XII-XIX)*, ed. E. Sarasa Sánchez and E. Serrano Martín (Zaragoza, 1993), i, 501-34, esp. pp. 515-16.

TABLE 2. Ghent: Revenues from the Sales of *Erfelijk Renten* and *Lijfrenten*,
1352-73
in ponden payment £40 payment = £12 parisis = £1 groot Flemish

Years: 15 Aug.	Page	<i>Renten</i> : £ payment	Total Revenue £ payments	<i>Renten</i> as % of Total
1352-3	26	[3,065.558]	n.a.	
1353-4	92	3,035.700	62,049.600	4.89
1354-5	140	2,930.188	65,517.875	4.47
1355-6	188	[2,762.279]	n.a.	
July-Aug. 1356	232	4,015.054	37,066.321	10.83
1356-7	261	[2,348.938]	n.a.	
1357-8	317	2,343.167	89,168.779	2.63
1358-9	377	2,380.000	39,023.133	6.10
1360-1	453	6,247.942	138,719.171	4.50
1361-2	497	3,340.833	103,346.908	3.23
1362-3	550	2,380.083	67,790.200	3.51
1364-5	659	2,068.167	63,904.258	3.24
1365-6	7	3,077.129	95,417.163	3.22
1366-7	34	2,568.113	99,814.221	2.57
1367-8	58	2,547.667	94,592.063	2.69
1368-9	85	2,606.054	109,102.738	2.39
1369-70	102	2,766.000	91,148.758	3.03
1372-3	127	2,925.125	83,793.738	3.49
TOTAL		45,231.220	1,240,454.925	3.65

SOURCES:

Gentse stads- en baljuwsrekeningen (1351-64), ed. A. Van Werveke, Koninklijke Academie voor Wetenschappen, Letteren en Schone Kunsten van België, Koninklijke Commissie voor Geschiedenis (Brussels, 1970), with an introduction by H. Van Werveke.

Gentse stads- en baljuwsrekeningen (1365-76), ed. D. Nicholas and W. Prevenier, Koninklijke Academie van België, Koninklijke Commissie voor Geschiedenis (Brussels, 1999).

censals mortis and *violaris*, and by levying excise or consumption taxes to fund the annual payments.¹ By the 1360s, the issues had become a standard feature of Aragonese municipal finances. In Alzira, the capital value of *censals* issued rose from £26,750 Barcelonese in 1351-75 to £386,403 in 1376-1400.² With few exceptions (Perpignan in 1359 and 1376), the municipalities sold the *censals* without compulsion; and like many northern towns, they retained the right to redeem them at will.³ The *censals* could also be resold to third parties, though only through the agency of municipal officials and notaries public.⁴ By the fifteenth century, *censals* had displaced floating debts of short-term loans in most of the Aragonese municipalities.⁵

In neighbouring Castile-Léon, King Henry II (r. 1333-79) authorized the first issue of similar *censals*, sometime after 1368. By the fifteenth century, according to Abbott Payson Usher, even though 'they became commercialized and were used as a fiscal resource', we have 'no knowledge of the amounts issued or the rates of interest paid', and no such information has been provided in subsequent monographs on Castilian financial history.⁶

The history of Spain's permanent funded debt begins in 1489, when King Ferdinand II of Aragon (r. 1479-1516) and Queen Isabella of Castile (r. 1474-1504) sold a series of hereditary, perpetual, and redeemable *rentes*, known as *juros de heredad*, to finance the war with Granada that led to the quasi-unification of their territories in 1492.⁷ These issues paid 10 per cent, while subsequent ones paid between 3 and 7 per cent, and were funded by royal excise taxes from the *rentas ordinarias*. From the beginning of continuous records, in 1504, to the end of Ferdinand's reign in 1516, Spain's funded debt rose modestly, from 2.996 million ducats (*escudos* of 375 silver *maravedis*) to 3.586 million ducats. Between the accession of Charles V as emperor in 1519 (abdicated 1556) and the death of his son Philip II in 1598, the debt ballooned to 80.040 million ducats,⁸ much of which was held abroad.

¹ For Barcelona, see Usher, *Early History of Deposit Banking*, pp. 349-53, 357. These rates were in effect in the budget of 1360-1, when the sale of both types of *rentes* accounted for 33.86 per cent of Barcelona's revenues, while the annual payment on the *rentes* (£5,274.45 for *censals* and £14,419.53 for the *violaris*) accounted for 36.3 per cent of total expenditures. In 1376, the king authorized sales of *rentes* at 1/11 (9.09 per cent) and 1/12 (8.33 per cent); but by 1394, Barcelona was paying only 6.25 per cent.

² Furió, 'Crédito y endeudamiento', Table III, p. 521. In 1401-25, Alzira's new issues amounted to a total of only £72,650; but in Cullera, to a sum of £328,282.

³ Roustit, 'Dette publique', pp. 65-7. The rate of return was 1/14 (7.14 per cent).

⁴ *Ibid.*, pp. 68-72.

⁵ See Usher, *Early History of Deposit Banking*, pp. 360-95.

⁶ *Ibid.*, pp. 167-8; J. H. Elliott, *Imperial Spain, 1469-1716* (New York, 1964), pp. 172-99; J. Gelabert, 'Castile: 1504-1808', in *Rise of the Fiscal State*, ed. Bonney, pp. 207-12; G. Tortella and F. Comin, 'Fiscal and Monetary Institutions in Spain (1600-1900)', in *Transferring Wealth*, ed. Bordo and Cortés-Conde, pp. 140-8.

⁷ Usher, *Early History of Deposit Banking*, p. 168; Elliott, *Imperial Spain*, p. 186. The word *juro* means 'I swear'.

⁸ Van der Wee, 'Monetary, Credit, and Banking Systems', pp. 373-6, table 28. See also Usher, *Early History of Deposit Banking*, table 7, p. 169, which shows a rise in the Spanish funded debt from 4.320

Despite its primacy in becoming the first national monarchy to establish a permanent funded debt, based on marketable annuities, and despite its considerable success in creating one of such magnitude, Habsburg Spain cannot claim credit for providing the foundations for the modern financial revolution. One may cavil that the debt was not the responsibility of Habsburg Spain, but rather of one of its components, albeit by far the largest: the kingdom of Castile. The far more important reason, however, is that not all of this debt arose from the voluntary purchase of annuities. On three occasions, in 1557, 1575, and 1596, Philip II's government defaulted on the interest payments owing on short-term loans known as *asientos*, and compelled the creditors to exchange them for the much-lower-yielding 5 per cent perpetual but redeemable *juros al quitar*; and in 1557, the first conversion led to a fall in the market price of *juros* from par (100) to 80.¹ The costs of servicing this Castilian debt became an increasingly severe burden, consuming 65 per cent of the revenues from the *rentas ordinarias* by 1543, and 75 per cent by 1584.² Nevertheless, the Castilian government never defaulted on its annuity annual payments for the *juros al quitar*. The financial record of the annuity payments and the ease with which *juros* could be transferred to foreigners living abroad explain why they became such a favoured international investment vehicle.

According to Paul Cawès and Earl Hamilton, the first national monarchy to create the required institutions for a permanent funded national debt was France. In September 1522, on behalf of Francis I (r. 1515-47), the chancellor, Antoine Duprat, received from a consortium of Paris merchants the sum of £200,000 *tournois* from the sale of *rentes* issued by the *Prévôt des marchands et échevins* (aldermen) of the Hôtel de Ville, which paid the annual annuities of 8.33 per cent from its administration of specified royal excise (consumption) taxes and *gabelles*.³

There are several grounds on which to dispute this claim. First, the debt was again not national: its structure showed that investors still preferred to lend to municipal rather than state governments, in the expectation that the city of Paris could be compelled to honour its financial obligations, whereas the Crown could not. Second, many of the *rentes* purchased in the sixteenth century were in reality forced loans. Third, resistance to the right of redemption of *rentes* remained stronger in France than elsewhere in northern Europe: only in 1539 did

million ducats in 1515 to one of 76.540 million ducats in 1598; and A. Castillo, 'Dette flottante et dette consolidée en Espagne de 1557 à 1600', *Annales: Économies, sociétés, civilisations*, xviii (1963), 745-59 (especially graph II, p. 757), which provides a third set of figures: from 5 million ducats in 1515 to 83 million ducats in 1600.

¹ R. T. Davies, *The Golden Century of Spain, 1501-1621* (London, 1937; repr. New York, 1961), p. 181.

² Elliott, *Imperial Spain*, pp. 198-9; Gelabert, 'Castile', pp. 207-12; Tortella and Comin, 'Fiscal and Monetary Institutions', pp. 140-8.

³ See Hamilton, 'Origin and Growth', pp. 118-19; and Cawès, 'Les commencements du crédit public en France', pp. 97-123, 825-65; *Revue d'économie politique*, x (1896), 407-79. See also Schnapper, *Les rentes au XVI^e siècle*, pp. 151-4; M. Wolfe, *The Fiscal System of Renaissance France* (New Haven, 1972), pp. 91-123.

Francis I, by royal decree, extend to towns throughout the kingdom, and to the Crown itself, the restricted right to redeem *rentes* secured on buildings and vacant properties. The parlement of Paris limited the right of redemption to thirty years from the date of issue, and extended the limit to sixty years only in 1548.¹ Fourth, although *rentes* were assignable in France to third parties, the cumbersome and costly procedure required both parties (or their attorneys) to appear before a licensed notary public. As a result, during the sixteenth and early seventeenth centuries, no true secondary market existed in these securities, which were not negotiable by any modern definition of the term.² Finally, the Crown's frequent failure to make the annual payments on the various *rentes* drastically reduced their values; and in the 1570s, for example, the very few buyers demanded discounts of 50 per cent.³

Throughout the sixteenth century, the French state mismanaged its new financial instrument; and it continued to rely heavily on interest-bearing loans, many of them also forced, imposed despite its continued denunciation of usury, as late as 1576. According to Martin Wolfe, Francis I 'did not like this form of credit [the *rente*] and he used it sparingly'. During his reign, his infrequent sales of *rentes* raised only £725,000 *tournois* (equal to just one year's *gabelles*). Even though the annuity rate of 8.33 per cent was lower than the rates paid on short-term debts, the Crown feared that perpetual annuity payments would reduce and permanently alienate its revenues.⁴ His successor, Henry II (r. 1547-59), took an opposite view and, during his twelve-year reign, he raised £6.8 million *tournois* from national sales of royal *rentes*. From 1553, they were issued almost every year, along with periodic forced loans; the sales from 1554, amounting to £3.1 million *tournois*, were forced upon wealthy Parisians in defiance of the parlement.⁵ Henry was also responsible, in 1555, for establishing the infamous *Grand Parti de Lyon*, which converted £3.4 million *tournois* of short-term debts into a consolidated fund, to be repaid in 41 instalments (at 5 per cent *quarterly*) at each of the quarterly Lyons Fairs. In November 1557, after defeat at the battle of St Quentin, the Crown temporarily suspended payments. After peace was restored at Cateau-Cambresis in April 1559, a proposed new *Petit Parti*, totalling £11.7 million *tournois* (at 8 per cent), was unsuccessful, and both debt conversions and interest payments ceased with Henry's death in July 1559.⁶

¹ Cf. Schnapper, *Les rentes au XVI^e siècle*, pp. 62-3, 130-3, p. 281, that from 1548, in effect, all *rentes* finally became redeemable at the will of the *débirentier* issuer.

² Schnapper, *Les rentes au XIV^e siècle*, pp. 284-5.

³ Wolfe, *Fiscal System of Renaissance France*, p. 163; Tracy, *Financial Revolution*, pp. 109-10.

⁴ Wolfe, *Fiscal System of Renaissance France*, pp. 91-3 (quotation on p. 93), 115-16; J. Dent, *Crisis in Finance: Crown, Financiers, and Society in Seventeenth-Century France* (Newton Abbot, 1973), pp. 46-9.

⁵ Wolfe, *Fiscal System*, p. 111. Under his successors, Francis II (r. 1559-60) and Charles IX (r. 1560-74), *rentes* amounting to another £25.9 million *tournois* were sold, some of which were also compulsory purchases.

⁶ Cawès, 'Crédit public en France' (1895), pp. 831-47; Wolfe, *Fiscal System of Renaissance France*, pp. 109-13; Parker, 'Emergence of Modern Finance', pp. 570-2.

Hardly more successful was the next royal experiment, the contract of Poissy of October 1561, by which Charles IX (r. 1560-74) compelled the clergy to pay the Crown annually £1.6 million *tournois* from their lands for six years, to repay debts owing on the *Grand Parti*; and then, during the next ten years, to pay an additional £1.3 million *tournois* annually, to fund £7.56 million *tournois* in *rentes*, including new issues and arrears in annuity payments. Of the total sum demanded, £22.6 million *tournois* over sixteen years, only small amounts were either paid or redeemed. After the outbreak of the Wars of Religion in 1562, which led many clergy to default on their annual payments, 'à cause de la misère et calamité des guerres',¹ Charles IX imposed a new series of forced loans and also compelled wealthy Parisians to buy new issues of *rentes*, on the grounds that previous loans had shown that 'they were rich enough.'²

In 1598, when the Wars of Religion had ended in victory for Henry IV (r. 1589-1610), *rentes*, valued at £157 million *tournois*, accounted for over half of the royal debts: £297 million in total; and payments on much of that debt were in arrears.³ From 1600, his chief minister, Maximilien de Béthune, duke of Sully, cancelled *rentes* lacking a verifiable claim, ceased to pay off many of the arrears, spent budget surpluses to redeem some *rentes*, and forced other *rentiers* and debt holders of the *Grand Parti* to reduce their claims. In 1601, he reduced the annuity payments on *rentes* from 8.33 per cent to 6.25 per cent; in 1634 the rate was reduced to 5.55 per cent.⁴ A comparison with interest rates on short-term royal loans is instructive: from 1631 to 1657, the annual average rate was 25.88 per cent.⁵

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The experiences of Spain and France buttresses Tracy's claim that the birthplace of the modern financial revolution was instead the Habsburg Netherlands. From at least 1482, the States of Holland, along with other provinces of the Habsburg Netherlands, had sponsored the issue of *renten* against specific provincial tax revenues, even if, as in the past, they were sold by each province's municipalities.⁶ A report to Charles

¹ Cawès, 'Crédit public en France' (1896), p. 463.

² Wolfe, *Fiscal System of Renaissance France*, p. 115 (quotation); Schnapper, *Les rentes au XVI^e siècle*, pp. 151-6; Tracy, *Financial Revolution*, pp. 109-10. More than a dozen forced loans were imposed from 1547 to 1584. From 1562 to 1571, total sales of *rentes* amounted to £16.850 million *tournois*; and from 1572 to 1586, approximately another £27 million *tournois* in *rentes* were sold.

³ Schnapper, *Les rentes au XVI^e siècle*, pp. 151-6; Wolfe, *Fiscal System of Renaissance France*, pp. 110-15, 233; Cawès, 'Crédit public en France' (1896), pp. 461-79.

⁴ Wolfe, *Fiscal System of Renaissance France*, pp. 233-5; R. Bonney, *The King's Debts: Finance and Politics in France, 1589-1661* (Oxford, 1981), pp. 19, 57-8.

⁵ See Bonney, *King's Debts*, table VII, pp. 315-16; and Dent, *Crisis in Finance*, pp. 44-64. In 1415-17, interest rates on short-term loans to the French king were about the same: 25 per cent; Fryde, 'Public Credit', p. 483.

⁶ See J. Tracy, *Emperor Charles V, Impresario of War: Campaign Strategy, International Finance, and Domestic Politics* (Cambridge, 2002), pp. 254-63; and Tracy, *Financial Revolution*, pp. 28-70.

V's government on Holland's finances for the fiscal years 1521 to 1530 indicates that revenues from the sales of *renten* accounted for 6.73 per cent of the province's total income, 67.0 per cent of which came from subsidies, taxes voted by the States. The annuity rate on *losrenten* was still 6.25 per cent, the prevailing rate from the mid-fifteenth century.¹

An important change took place in December 1542, on the outbreak of war with France, when Lodewijk van Schore, president of the council of state for the regent, Mary of Hungary (r. 1530-56), convinced the States General to agree to new financial expedients (*nieuwe middelen*): a 10 per cent tax on income from both real property (including *renten*) and trade and a 1 per cent *ad valorem* tax on exports, to enable the seventeen provinces to fund new issues of *renten*, while retaining the existing excise taxes on consumption, on items such as beer, wine, and cloth. Tracy shows that the States, as Mary predicted, 'took control of the new revenues', which allowed them 'to create a new type of long-term debt [in *renten*], resting on secure foundations and capable of vast expansion'.² So successful were the new *renten* (issued at 6.25 per cent) and the taxes used to fund them, that by 1548 Holland's government had redeemed the issues of 1542-4, to the relief of everyone constrained to buy them as a public duty in time of war. The success persuaded Mary, in October 1552, to forgo coercion in marketing *renten* within Holland; elsewhere, at Bruges for example, *renten* had been sold within a free market. In contrast to France's fiscal misfortunes, the Habsburg States did not suspend payments on any of its *renten* before the outbreak of the revolt in the Netherlands in 1568, which led to the creation of the Republic of the United Provinces, better known as the Dutch Republic, with the Union of Utrecht in 1579.³ Subsequently, it would establish a better claim for creating the foundations of a national public debt, in the context of the modern financial revolution, since the Habsburg Netherlands was not a national state, but a collection of seventeen provinces.

The success of the *renten* issued in the Habsburg Netherlands and of the *juros al quitar* issued in Habsburg Spain rested upon the development of secondary financial markets following the opening of the Antwerp bourse in 1531. Trade there in *juros* and *renten* became one of the principal activities of South German merchant-banking houses led by the Fuggers, Welsers, Höchstetters, Herwarts, Imhofs, and Tuchers.⁴ As Herman Van der Wee comments, the sixteenth-century

¹ Tracy, *Financial Revolution*, pp. 30-2. See table 4, p. 62, for the series of Holland's *renten*, labelled series A to N, secured by the *beden* from 1515 to 1534 (and issued by Amsterdam and five other leading cities).

² Quotations from Tracy, *Charles V*, p. 267; and Tracy, *Financial Revolution*, pp. 74-5.

³ Tracy, *Charles V*, pp. 263-8; Tracy, *Financial Revolution*, pp. 71-94, 108-38. For *renten* funded by the States of Holland in 1543, 1544, and 1549, see table 6, p. 89; for the subsequent *renten* from 1552 to 1565 (15 issues), with interest rates alternating between 6.25 and 8.33 per cent, see table 7, p. 94.

⁴ R. Ehrenberg, *Capital and Finance in the Age of the Renaissance: A Study of the Fuggers and Their Connections*, trans. from the German by H. M. Lucas (New York, 1928; repr. New York, 1963), pp.

‘age of the Fuggers and [then] of the Genoese was one of spectacular growth in public finances’.¹ In 1608, a second bourse for international trade in both commodities and securities was established in Amsterdam, capital of the United Provinces in the northern Netherlands. Such secondary markets depended in turn upon the adoption in the Habsburg Netherlands between 1537 and 1543 of fully fledged negotiability: legal sanctions to protect the property rights of third-party creditors (assignees) and to permit discounting of bills without running afoul of the usury laws.

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The road to negotiability lay through the evolution of a second instrument of credit, the bill of exchange, which replaced the earlier *instrumentum ex causa cambii* or *lettre de foire* of the Champagne Fairs. According to Raymond de Roover, thirteenth-century Italian merchants had created the bill of exchange to provide another method of evading the usury ban. It achieved this objective by disguising the interest rate within an exchange rate that was ‘artificially’ raised in favour of the ‘lender’.² In his view, however, one seldom noted in the literature, this financial operation ‘increased both trouble and expense’, so that ‘the practical result of the usury prohibition, intended to protect the borrower, was to raise the cost of borrowing’.³

Whereas the *instrumentum ex causa cambii* was a formal, notarized loan contract, the bill of exchange was an informal letter of payment that concerned financial transactions between two principals in one city and their two agents in a second, foreign city. The principal merchant or financier in the first city (the *taker* or *prenditore*), having received investment funds or funds for remittance from the second principal (the *deliverer* or *datore*), ‘drew’ a bill (*cambium*) upon his resident *payer* agent in the second city, instructing him to make payment on his behalf to the *deliverer’s* *payee* agent.⁴ If the first city was, say, Florence, and the second London, the letter would specify the receipt of funds in florins and stipulate repayment in pounds sterling, at a

248-80.

¹ Van der Wee, ‘Monetary, Credit, and Banking Systems’, pp. 375-6; see also H. Van der Wee, ‘European Banking in the Middle Ages and Early Modern Period (1476-1789)’, in *A History of European Banking*, 2nd ed., ed. H. Van der Wee and G. Kurgan-Van Hentenrijk (Antwerp, 2000), pp. 152-80.

² See, esp., R. de Roover, ‘Le contrat de change depuis la fin du treizième siècle jusqu’au début du dix-septième’, *Revue belge de philologie et d’histoire*, xxv (1946-7), 111-28; *L’évolution de la lettre de change, XIV^e-XVIII^e siècles* (Paris, 1953), pp. 1-76; ‘New Interpretations of the History of Banking’, *Journal of World History*, ii (1954), 38-76; and ‘Early Banking before 1500 and the Development of Capitalism’, *Review of the History of Banking*, iv (1971), 1-16.

³ R. de Roover, *The Rise and Decline of the Medici Bank, 1397-1494* (Cambridge, MA, 1963), p. 13. See also J. H. Munro, ‘Bullionism and the Bill of Exchange in England, 1272-1663: A Study in Monetary Management and Popular Prejudice’, in *The Dawn of Modern Banking*, ed. Center for Medieval and Renaissance Studies, UCLA (New Haven, 1979), pp. 169-240.

⁴ For examples, see de Roover, *Money, Banking, and Credit in Mediaeval Bruges*, pp. 56, 72.

specified exchange rate, on a specified date (*usance*), usually three months after the bill had been drawn. For the bill to be valid, the *payee* (*beneficiario*) agent had first to present the bill to the *payer* (*pagatore*) agent, in order to obtain his written assent, in the form of words acknowledging ‘acceptance’ on the back; then he had to present it a second time, for redemption, on the maturity date. After receiving the funds, the *payee* agent in London bought a second bill of exchange (*recambium*), drawn upon a Florentine merchant banker (*payer*), in order to remit the funds to the original *deliverer*; and he instructed the *acceptor-payer* to make payment in florins to the *deliverer* as the designated *payee*, at a specified exchange rate on the English pound sterling.

So far as theologians and canon lawyers were concerned, there was nothing inherently usurious about bills of exchange, so long as the second set of exchange rates was not predetermined, so that the *deliverer* bore the risk that the rates might alter adversely. However, if both sets of rates on both the *cambium* and the *recambium* were fixed, the contract was clearly usurious, and was known as *cambio secco* (‘dry exchange’).¹ Some regarded the bill of exchange simply as an *emptio-venditio* contract for the purchase and sale of foreign bank balances. But some secular authorities, the English in particular, regarded any bills of exchange with grave suspicions: as ‘dampnable bargaynes groundyt in usurye’, as stated in the preamble to a statute of 1489 that provided new measures for a more vigorous enforcement of the anti-usury laws.²

The bill of exchange was not only a loan instrument but also a remittance contract that ‘transferred funds’, or more accurately, effected payments between distant cities without any movement of precious metals between them, as demonstrated in the previous example. The risk of losses in transporting precious metals – from robbery by land, piracy at sea, and confiscation by government – grew dramatically from the 1290s with the rise in the warfare throughout the Mediterranean basin and western Europe that ultimately led to the Hundred Years War.³ The rising costs of financing such warfare, whether offensive or defensive, led to the combination of monetary and

¹ See R. de Roover: ‘What is Dry Exchange? A Contribution to the Study of English Mercantilism’, *Journal of Political Economy*, lii (1944), 250-66; R. de Roover, ‘Scholastic Economics: Survival and Lasting Influence from the Sixteenth Century to Adam Smith’, *Quarterly Journal of Economics*, lxiix (1955), 161-90; R. de Roover, ‘Cambium ad Venetias: Contributions to the History of Foreign Exchange’, in *Studi in onore di Armando Saponi*, ed. Istituto Editoriale Cisalpino (Milan, 1957), i. 631-48; Noonan, *Scholastic Analysis of Usury*, pp. 175-92.

² In: Statute 3 Henrici VII. c. 6: in *Statutes of the Realm*, ed. Great Britain, Record Commission (T. E. Tomlins, J. Raithby, et al.) (London, 1810-22), ii. 514.

³ J. H. Munro, ‘Industrial Transformations in the North-West European Textile Trades, c.1290-c.1340: Economic Progress or Economic Crisis?’, in *Before the Black Death: Studies in the ‘Crisis’ of the Early Fourteenth Century*, ed. B. M. Campbell (Manchester and New York, 1991), pp. 110-48; J. H. Munro, ‘The “New Institutional Economics” and the Changing Fortunes of Fairs in Medieval and Early Modern Europe: The Textile Trades, Warfare, and Transaction Costs’, *Vierteljahrschrift für Sozial- und Wirtschaftsgeschichte*, lxxxviii (2001), 1-47.

fiscal policies and economic ‘nationalism’ known as bullionism:¹ the ban on the export of gold and silver bullion and the demand that it be taken to the state’s mint for coinage, at the merchant’s cost, part of which constituted the mint’s profit. Anyone who violated such ordinances faced the risk of confiscation and a steep fine; and while some could purchase exemptions, they still incurred higher export costs.

Debasements, which reduced the precious metal contents of silver and gold coins, fuelled the bullionist mentality and further impeded the international flow of precious metals. Philip IV of France, after a century of monetary stability, resumed the practice in 1296, primarily to finance his wars with Flanders and England, and he thereby inaugurated two hundred years of *guerres monétaires* throughout western Europe.² Medieval debasements were more fiscal than monetary in nature, because most were designed to increase the mint’s coinage output and thus its seigniorage revenues: a tax on the quantity of precious metals coined. To achieve this objective, the mint offered merchants, in exchange for their bullion (in coin or ingots), a quantity of debased coin whose official (‘face’) value was greater than the official value of the better-quality coins delivered to the mint, or greater than the value that foreign mints offered in purchasing bullion. So long as the merchants quickly spent their debased coins, before the almost inevitable inflation ensued, they also profited from debasements. A variation of this monetary policy was to counterfeit better coins minted in neighbouring states: that is, to produce imitations that contained a lesser quantity of precious metal. Therefore, to protect their own mints and their coinage supplies, most princes or states responded to foreign debasements by prohibiting the import of foreign coins for domestic circulation, requiring their sale to the state’s mint as bullion, banning the export of bullion – and often, also, by engaging in their own debasements. Gresham’s law, which states that ‘bad money drives out good’, explains the essence of debasements and mint policies in later medieval western Europe.³

¹ The best example of both bullionism and economic nationalism, expressing a virulent hostility to many foreigners, ‘our cruell enmyes’, can be found in the fifteenth-century English tract *The Libelle of Englyshe Polycye: A Poem on the Use of Sea-Power*, ed. G. F. Warner (Oxford, 1926), esp. pp. 8 (quotation), 15-16, 18-24, 29-33, 44.

² See R. Cazelles, ‘Quelques reflexions à propos des mutations monétaires de la monnaie royale française (1295-1360)’, *Le moyen âge*, lxxii (1966), 83-105, and 251-78; C. M. Cipolla, *The Monetary Policy of Fourteenth-Century Florence* (Berkeley, 1982), pp. 31-46, 63-85; P. Spufford, *Money and Its Use in Medieval Europe* (Cambridge, 1988), pp. 267-396; and J. H. Munro, ‘Bullion Flows and Monetary Contraction in Late-Medieval England and the Low Countries’, in *Precious Metals in the Later Medieval and Early Modern Worlds*, ed. J. F. Richards (Durham, NC, 1983), pp. 97-158.

³ See J. H. Munro, ‘Gresham’s Law’, in *The Oxford Encyclopedia of Economic History*, ed. J. Mokyr et al. (New York, 2003), ii. 480-1. If someone acquires two silver coins with the same face value and purchasing power, but with different silver contents, he should spend the inferior coin and hoard or export the superior coin. The Elizabethan financier Sir Thomas Gresham (1519-73) was not responsible for this famous law, which dates from the fourteenth century. Examples, in numerous late medieval monetary ordinances from England, Flanders, and France, are cited or reproduced in J. H. Munro, *Wool, Cloth, and Gold: The Struggle for Bullion in Anglo-Burgundian Trade, 1340-1478* (Brussels and Toronto, 1973), esp. pp. 11-41, 53-63, 70-92, 100-7, 155-70. See also H. Van Werveke, ‘Currency

The most rigorous bullionist legislation was implemented in medieval England, with a significant if indirect influence on the origins of negotiability. From the *Statutum de Moneta Magnum* of 1282, the import of all foreign coins – not just counterfeits – for domestic circulation was prohibited, a ban that remained in force as late as the sixteenth century.¹ Similarly, Crown and parliament together banned the export of silver bullion (including foreign silver coin) and plate from December 1278, the export of gold bullion from January 1307, and finally, from January 1364, the export of all bullion and all coins, gold and silver, including legal tender English coins (except coins exported under costly royal licences). Continuously re-enacted, the 1364 ban remained in force until 1663.² Other medieval western European states permitted the export of legal-tender coins and reserved their bans for bullion, that is, demonetized precious metals, excluding specified types of plate and jewellery.³

The benefit of employing bills of exchange to make international payments without shipping bullion and specie over long distances, thereby reducing both risks and high costs, was obvious to an Elizabethan pamphleteer, known only as ‘Mr Tavernor’. In his tract on ‘the insatiable vice of usury, and drye exchaunge’, written about 1570, he asserted that ‘marchauntes naturall exchaunge was first divided and used by the trewe dealing marchauntes immediately after that princes did inhibit the cariadge of Gould and silver out of their Realmes’.⁴ Risks were not eliminated entirely, because bullion and specie had to be supplied when conducting trade with towns not equipped with bills-of-exchange banking facilities, for example in eastern Europe, and when settling trade deficits or other adverse payments balances.

Furthermore, the bill of exchange itself involved the risks of repudiation or non-payment. Not being a bond or a notarized contract, the bill had no standing in medieval law; and to enforce payment, when a bill was dishonoured, was difficult. Third parties who accepted bills in payment for other transactions were at even greater risk; even though bills of exchange and letters obligatory (promissory notes) were often assigned in payment to third parties, they had not yet become a negotiable means of payment, and they would not become fully negotiable in western Europe until the 1540s.

Manipulation in the Middle Ages: The Case of Louis de Male, Count of Flanders’, *Transactions of the Royal Historical Society*, 4th ser., xxxi (1949), 115-27.

¹ *Statutes of the Realm*, i. 219. Earlier, in April 1275, the Statute of Westminster (3 Edward I, c. 15) had banned the importation of all suspected counterfeit or other defective coins, requiring them to be turned over and sold for their bullion contents to the office of the Royal Exchanger.

² For an explanation of all these ordinances and statutes, see Munro, ‘Bullionism and the Bill of Exchange’, pp. 187-205, 216-39 (tables, with a chronological list).

³ On this see Munro, *Wool, Cloth, and Gold*, pp. 11-64, 181-6; J. H. Munro, ‘Billon – Billoen – Billio: From Bullion to Base Coinage’, *Belgisch tijdschrift voor filologie en geschiedenis/ Revue belge de philologie et d’histoire*, lii (1974), 293-305.

⁴ *Tudor Economic Documents*, ed. R. Tawney and E. Power (London, 1924), iii. 362 (doc. no. III.5).

As Eric Kerridge rightly states, ‘assignability is not negotiability.’¹ A fully negotiable instrument of credit must be made payable to bearer or payable to order, permitting transfer by written endorsement to a third party without the consent or knowledge of the original debtor (the principal); the bearer or assigned holder must have the legal right, upon default, to sue the original debtor or earlier assignees, in his own name, for full payment, and to enforce a legal claim for damages; and his legal claim must supersede anyone else’s named in the bill. Schnapper contends that French *rentes* were not negotiable credit instruments during the sixteenth and seventeenth centuries because they lacked a bearer or order clause.² Similarly, Kirshner denies that Florentine *crediti di monte* were negotiable, by modern definitions, even though transferable by assignment (by *cessio juris*), by the seller himself or by his attorneys, at the *monte*’s offices.³ The transfer carried with it the liabilities attached to the original owner or creditor. Kirshner comments that the modern ‘holder-in-due-course’ doctrine, by which the transferee gains rights superior to the transferor’s, ‘would have scandalized Florentine jurists’; that such commercial operations ‘never replaced the Roman technique of assignment that was critical to the operations of the secondary market in *monte* credits’. Lastly, the Florentine government controlled the circulation of *crediti di monte* ‘by barring foreigners from acquiring or otherwise holding them’ (except during the crisis of the 1420s).⁴

For fifteenth-century Genoa, Jacques Heers notes that shares in the public debt (*luoghi*) were traded, sold, mortgaged, and used as collateral, as in Florence. They could be transferred by verbal or written order at the office of the procurator, provided that the head of the family holding the *luoghi* had not specified in writing that they were not to be (*alienare aut vendere*, a common prohibition designed to protect their viability as security for dowries). Finally, although foreign merchants are recorded as purchasers of *luoghi*, most of them seem to have been residents: Tuscans, Venetians, and Catalans were conspicuous by their absence from the *compere* registers.⁵

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¹ See E. Kerridge, *Trade and Banking in Early Modern England* (Manchester, 1988), p. 72. See also: M. Postan, ‘Credit in Medieval Trade’, *Economic History Review*, 1st ser., i (1928), 234-61; M. Postan, ‘Private Financial Instruments in Medieval England’, *Vierteljahrschrift für Sozial- und Wirtschaftsgeschichte*, xxiii (1930), 26-75; F. Beutel, ‘The Development of Negotiable Instruments in Early English Law’, *Harvard Law Review*, li (1938), 813-45; J. M. Holden, *The History of Negotiable Instruments in English Law* (London, 1955), pp. 11-36.

² Schnapper, *Les rentes au XIV^e siècle*, pp. 284-5.

³ J. Kirshner, ‘Encumbering Private Claims to Public Debt in Renaissance Florence’, in *The Growth of the Bank as Institution and the Development of Money-Business Law*, ed. V. Piergiovanni (Berlin, 1993), pp. 19-75 (quotations from pp. 26, 29).

⁴ Kirshner, ‘Encumbering Private Claims’, pp. 58, 29, respectively; see also Molho, *Florentine Public Finances*, pp. 141-52.

⁵ Heers, *Gènes au XV^e siècle*, pp. 97-110, 147-55, 180-1.

The first major step, though only a step, towards modern negotiability took place in supposedly backward fifteenth-century England: in the verdict of a London law court (1436) concerning the transfer of a 'bearer' bill of exchange. Strongly influencing the verdict were English mercantile practices and related legal institutions that developed from the thirteenth century in response to a third set of financial impediments: those that the Crown imposed upon money-changing and thus deposit banking. As Raymond Bogaert contends, deposit banking with lending developed in Greece during the early fourth century BC from the activities of professional money-changers, known as *trapezites* and goldsmiths, known as *argyropatês* (L. *argentarius*), who exchanged 'foreign' for domestic coins. The transition from money-changer and coin dealer to banker is well known. Because money-changers and goldsmiths had to be able to safeguard their valuable inventories, many also offered the additional service of safeguarding the moneys, precious metals, and valuables of their mercantile clients. They soon learned that, by maintaining a sufficiently high reserve ratio (usually a third), they could safely lend out the remainder, in short-term interest-bearing loans. They could also allow clients who maintained deposit accounts to make transfer payments, on verbal or by written instructions. By the third century BC, Athenian bankers routinely provided giro transfers, written orders of payment, and, in effect, cheques (documented by 254 BC).¹ Such explanations for the role of money-changers in the origins of medieval Italian deposit and transfer banking are familiar from the works of de Roover, confirmed recently by Reinhold Mueller and Van der Wee.² From the mid-twelfth century in northern Italy – in Genoa, and then in Lombard towns – money-changers were serving as private bankers, in the same fashion, even if they had to obtain government licences to practise their trade in exchanging foreign for domestic coins and in selling bullion to the mints.³ Medieval debasements and frequent scarcities of coinage promoted the growth of deposit banking in Italy, because bank-transfer payments – *moneta di banco*, to the Italians – economized on the use of coin and provided a better guarantee of full payment, when so many coins were debased, counterfeit, or clipped. By 1294, deposit and transfer banking can also be found in Flanders, at Lille; and if Italians then predominated, indigenous Flemish money-changer-bankers had become prominent by the 1360s.⁴

¹ R. Bogaert, 'Banking in the Ancient World', in *A History of European Banking*, 2nd ed., ed. H. Van der Wee and G. Kurgan-Van Hentenrijk (Antwerp, 2000), pp. 27-31.

² See de Roover, *Medici Bank*, pp. 77-141; de Roover, *Money, Credit, and Banking in Mediaeval Bruges*, pp. 198-219, 247-92; Van der Wee, 'European Banking', pp. 74-87; R. Mueller, 'The Role of Bank Money in Venice, 1300-1500', *Studi Veneziani*, new series, iii (1979), 47-96; Mueller, *Venetian Money Market*, pp. 3-120.

³ On deposit banking and usury, see Noonan, *Scholastic Analysis of Usury*, pp. 171-5; de Roover, *Medici Bank*, pp. 10-20.

⁴ See de Roover, *Money, Credit, and Banking in Mediaeval Bruges*, pp. 202-4; Van der Wee, 'European Banking', pp. 74-87; and J. M. Murray, 'Cloth, Banking, and Finance in Medieval Bruges', in *Textiles of the Low Countries in European Economic History*, ed. E. Aerts and J. H. Munro (Leuven,

In England, however, from 1222, and probably earlier, money-changing and trade in bullion was a strictly enforced royal monopoly exercised by the Royal Exchanger. To enforce the bullionist statutes, he posted officials in every town, authorized with the aid of the sheriff to suppress private trade in precious metals, to purchase or confiscate foreign coins, and to deliver them to the Tower of London mint for recoinage. So long as the royal monopoly remained in force, until the 1640s, England lacked private deposit banking in the form available in Italy, and also in medieval Flanders, at least until the early fifteenth century.¹

That such restrictions over coinage had adverse effects on private deposit banking, even in the economically advanced Low Countries, can be shown in the monetary policies of duke Philip the Good of Burgundy (r. 1419-67) after he unified their coinages in 1433-5.² Fearing that money-changers acting as deposit bankers threatened the integrity of the ducal mints and coins, by circulating debased and counterfeit foreign coins and buying coin and bullion for export, Philip and his successors repeatedly prohibited deposit and transfer banking: in 1433, 1467, 1480, and 1489.³ The prohibitions also revealed a fear of bankers; for in 1433 Philip declared it unlawful for anyone 'whether a money-changer or not, to have a bank in order to receive the money of merchants and to make their payments, under the penalty of banishment for three years'.⁴ Similarly, the prohibition of 1489 contended that frequent bank 'failures have wrought utter ruin among all classes of people, but especially among the merchants'.⁵ According to Van der Wee, 'the few deposit and clearing-banks once operating in Antwerp and Bergen-op-Zoom had disappeared before the end of the [fifteenth] century.' Effective banking re-emerged only slowly in the Low Countries, in late sixteenth-century Antwerp and seventeenth-century Amsterdam, with the *kassiers*, or 'cash-keepers', who 'combined manual exchange with deposit banking'.⁶

Even if the royal exchangers prevented the emergence of English deposit banking before the mid-seventeenth century – a contentious hypothesis – indigenous merchant-banking, with bills of exchange and

1990), pp. 24-31; E. Aerts, 'Money and Credit: Bruges as a Financial Centre', in *Bruges and Europe*, ed. V. Vermeersch (Antwerp, 1992), pp. 57-71.

1 See *Annals of the Coinage of Great Britain and Its Dependencies: From the Earliest Period of Authentic History to the Reign of Victoria*, ed. R. Ruding (London, 1840), ii. 138-9.

2 See P. Spufford, *Monetary Problems and Policies in the Burgundian Netherlands, 1433-96* (Leiden, 1970), pp. 1-10, 17-28, 31-46, 150-8; Munro, *Wool, Cloth, and Gold*, pp. 93-126.

3 De Roover, *Money, Banking, and Credit in Mediaeval Bruges*, pp. 236-46, 331-52. See also H. Van der Wee, *The Growth of the Antwerp Market and the European Economy, Fourteenth-Sixteenth Centuries* (The Hague, 1963), ii. 85-7, 105-9, 355-8; Van der Wee, 'Monetary, Credit, and Banking Systems', pp. 302, 312, 323-4, 361-2.

4 De Roover, *Money, Banking, and Credit in Mediaeval Bruges*, p. 339 n. 51.

5 *Ibid.*, pp. 339-40.

6 See Van der Wee, 'Monetary, Credit, and Banking Systems', pp. 323-4; for a similar verdict, see de Roover, *Money, Banking, and Credit in Mediaeval Bruges*, pp. 340-1, 351.

letters obligatory, had been available since at least the mid-fourteenth century;¹ and in the late sixteenth century, rudimentary forms of bank-lending were undertaken by merchants, brokers, scriveners (notaries public who drew up letters obligatory and bonds), and goldsmiths. As members of a guild of jewellers chartered in 1327, who also acted as illicit dealers in precious metals, goldsmiths were the most logical of the group to become bankers.² But, according to A. D. Richards, until the 1630s, their banking activities were the least prominent of the four, and the scriveners were the most important.³ As late as 1627, the Crown was prosecuting London goldsmiths for illegally ‘acting as exchangers and buying and selling bullion, selecting the best money and melting it down [for export]’.⁴

The breakdown of royal authority during the Civil War of the 1640s, when, furthermore, a desperate Charles I (r. 1625-49) confiscated bullion that merchants had left on deposit with London’s Tower Mint, may have been the key factor in the transformation of London’s goldsmiths into fully fledged bankers, certainly after the Restoration and accession of Charles II (r. 1660-85). By the 1690s, they were actively engaged in both deposit and transfer and bills banking, including discounting, using four forms of negotiable credit: cheques, promissory notes, bills of exchange, and their own banknotes.⁵

In the medieval era, the lack of Italian-style deposit banks had not prevented English merchants from making transfer payments, but it had spurred them to devise other ways of meeting their need for a negotiable credit instrument, albeit unsuccessfully until the mid-fifteenth century. The first, which dates to the late twelfth century, was to effect ‘coinless payments’ through assignable or transferable bills that passed from hand to hand, increasingly in the form of informal holographs.⁶

The use of such transferable bills or credit notes posed an obvious problem not easily resolved: namely, that third parties receiving such bills had no readily available, low-cost means of enforcing payment in cases of default. English merchants had the means of transferring

¹ See Postan, ‘Financial Instruments’, pp. 62-75; and more specific evidence in J. H. Munro, ‘English “Backwardness” and Financial Innovations in Commerce with the Low Countries, 14th to 16th Centuries’, in *International Trade in the Low Countries (14th-16th Centuries): Merchants, Organisation, Infrastructure*, ed. P. Stabel, B. Blondé, and A. Greve (Leuven, 2000), pp. 122-44.

² See R. D. Richards, *The Early History of Banking in England* (London, 1929; reissued 1958), pp. 1-22, 92-131; Van der Wee, ‘European Banking’, pp. 243-7; and J. R. Anonymus, ‘The Goldsmith Bankers’, in *Money and Banking in England: The Development of the Banking System, 1694-1914*, ed. B. L. Anderson and P. L. Cottrell (London, 1974), pp. 159-65.

³ Richards, *Early History of Banking*, pp. 15-16.

⁴ *A Bibliography of Royal Proclamations of the Tudor and Stuart Sovereigns, 1485-1714*, ed. R. Steele and J. Lindsay (Earl of Crawford) (London, 1910), i. 178 (no. 1512: 25 May 1627).

⁵ Richards, *Early History of Banking*, pp. 23-91; D. Coquillette, ‘The Mystery of the New Fashioned Goldsmiths: From Usury to the Bank of England (1622-94)’, in *The Growth of the Bank as Institution and the Development of Money-Business Law*, ed. V. Piergiovanni (Berlin, 1993), pp. 91-117.

⁶ See Postan, ‘Credit in Medieval Trade’, pp. 1-27; Postan, ‘Private Financial Instruments in Medieval England’, pp. 26-75; Munro, ‘English “Backwardness” and Financial Innovations’, pp. 105-67.

formal, notarized debts: in particular those known as ‘recognizances’ (*reconisaunce enroulee*) that had been registered in the rolls of a mayor’s court, according to the provisions of the statute Acton Burnell of 1283 (*Statutum de Mercatoribus*), which gave creditors the power to compel debtors to register their loans as bonds before the mayors of London, York, Bristol, other ‘good towns’, and fair courts.¹ Such assignments of debt, however, obliged the two parties to draw up a new notarized, sealed, and enrolled recognizance at considerable cost. If the original debtor subsequently defaulted, the third-party creditor could file suit in a common law court only if armed with a notarized, unrevoked power of attorney to justify his claim. Even then, success was bought at considerable cost in time – long delays were common – and money.

According to Michael Postan, later medieval English common law courts became ‘increasingly hostile’ to the assignment of such debts. They recognized the validity only of debt transfers that involved ‘a common interest’ between assignor and assignee, generally limited to assignments that satisfied ‘a pre-existing debt’ between them.² Therefore, Postan implicitly argues, rising transaction costs as well as rising legal costs forced most merchants to resort to such low-cost holographs as the letter obligatory (promissory note) and the bill of exchange, both of them without standing in common law courts.³

During the later Middle Ages, however, a legal alternative to the common law for commercial transactions slowly evolved: an international code known as law merchant, as expounded in the treatise *Lex Mercatoria* (c.1280). According to J. H. Baker, law merchant was ‘not so much a corpus of mercantile practice or commercial law as an expeditious procedure especially adapted for the needs of men who could not tarry for the common law’. It differed from common law in being speedier, with lower transaction costs, especially in forgoing the time-consuming common-law practice of ‘wager of law’, a compurgation by which eleven witnesses were required to swear a formal oath to deny a specific debt obligation.⁴ In 1285, Edward I established a law-merchant court in London composed of foreign merchants empowered to settle their own commercial disputes. In 1303, in issuing *Carta Mercatoria* to regulate relations with the Hanse and other foreign merchants, he stipulated that all merchants were entitled to receive ‘speedy

¹ *Statutes of the Realm*, i. 53-4 (11 Edward I: 12 Oct. 1283).

² See Postan, ‘Financial Instruments’, pp. 38-52, esp. pp. 46-7; Holden, *Negotiable Instruments*, pp. 13-14; W. S. Holdsworth, *A History of English Law* (London, 1903-66), v. 534-45.

³ See Postan, ‘Financial Instruments’, pp. 42-61, contending that ‘common law courts made the emergence of fully negotiable paper impossible,’ so that ‘the transfer of obligations was fraught with cumbersome formalities’ (p. 45). See P. Nightingale, ‘Monetary Contraction and Mercantile Credit in Later Medieval England’, *Economic History Review*, 2nd ser., xlii (1990), 560-7, contending that recognizances continued to play an important, if diminishing role, in later medieval English commercial and financial transactions.

⁴ J. H. Baker, ‘The Law Merchant and the Common Law before 1700’, *Cambridge Law Journal*, xxxviii (1979), 295-322; and P. Teetor, ‘England’s Earliest Treatise on the Law Merchant’, *American Journal of Legal History*, vi (1962), 182-31.

justice' by law merchant (*sine dilatione, secundum legem mercatoriam*); and that, in a dispute between foreign and domestic merchants, half of the jury should consist of foreigners.¹ Finally, in 1353, Edward III (r. 1327-77) incorporated law merchant into statutory law in parliament's Ordinance of the Staples. The ordinance established fifteen Staple Courts, in English ports, to settle disputes among merchants, both domestic and foreign, who traded there; and it stipulated that they were to function solely 'by the Law Merchant ... and not by the Common Law of the Land', without interference from royal justices or other legal officers.² That medieval England was the first principality to produce such mercantile legislation is less remarkable than it may seem, for no medieval princes were so dependent on the taxation of foreign trade for their incomes as were the first three Edwards.

As the role of staple or law-merchant courts in handling disputes over bills of exchange and other credit instruments is well known, only the culminating legal case related to issues of negotiability need be considered here: *Burton v Davy*, adjudicated by the mayor of London's law-merchant court between August and November 1436.³ The dispute concerned a disputed bearer bill of exchange, and its underlying debt, drawn in Bruges on 10 December 1435, for redemption in London on 14 March 1436. In Bruges, the two principals were Thomas Hanworth, the 'deliverer', and John Audley, the 'taker', who had received from Hanworth funds in Flemish pounds *groot* for the purchase of Flemish merchandise. Their two agents in London were Elias Davy, the payer, on whom Audley had drawn the bill for payment for £30 sterling; and John Burton, the payee designated by Hanworth. The fifth party was John Walden, the 'bearer' to whom Burton had transferred the bill. When Davy refused to redeem the bill on its maturity, Walden brought the suit before the mayor's court on 10 August 1436, 'with a supplication made in the name of the aforementioned John Burton, according to the Law Merchant'.⁴ Since English law-merchant courts had not yet established a precedent to give the 'bearer' of a bill independent legal standing, Walden had to ask Burton to act as the nominal plaintiff against Davy; but Burton, apart from

¹ N. S. B. Gras, *The Early English Customs System: A Documentary Study of the Institutional and Economic History of the Customs from the Thirteenth to the Sixteenth Century* (Cambridge, MA, 1918), pp. 260-1; *Munimenta Gildhallae Londoniensis: Liber Albus, Liber Custumarum et Liber Horn*, ed. H. T. Riley (London, 1859-62), II. i: *Liber Custumarum*, pp. 207-8; and *Foedera, conventiones, literae, et acta publica*, ed. T. Rymer (London, 1709-12), II. ii. 747-8 (reconfirmation by Edward II, 8 Aug. 1328).

² 27 Edward III stat. 2, in *Statutes of the Realm*, i. 332-43.

³ See Postan, 'Private Financial Instruments', pp. 33-54; Nightingale, 'Monetary Contraction and Mercantile Credit', pp. 560-7; J. H. Munro, 'The International Law Merchant and the Evolution of Negotiable Credit in Late-Medieval England and the Low Countries', in *Banchi pubblici, banchi privati e monti di pietà nell'Europa preindustriale: Amministrazione, tecniche operative e ruoli economici*, ed. D. Puncuh and G. Felloni (Genoa, 1991), i. 49-80; Munro, 'English "Backwardness" and Financial Innovations', pp. 129-50.

⁴ For the texts of this case, see *Select Cases Concerning the Law Merchant*, ed. H. Hall (London, 1908-32), iii: 117-19 (Latin and French, with English translations).

supplying testimony, played no further role in the suit. Burton, as the designated payee, was obligated by commercial custom to present the bill to Davy for acceptance, as soon as possible after receiving it from Bruges, and certainly well before ‘usance’, or its maturity. If Davy had never formally ‘accepted’ the bill, Burton could never have legitimately transferred it to Walden, who similarly would never have agreed to receive it. Furthermore, if Davy had refused to accept the bill, Burton could not have been the plaintiff, according to the medieval custom. Instead, as the deliverer’s payee-agent, he would have immediately – well before the maturity date – informed his principal, Thomas Hanworth, who, as the deliverer, would have taken legal action against the other principal, the taker and drawer of the bill, John Audley. Finally, if Davy had accepted the bill, but then refused to redeem it, and if Walden, as the ‘bearer’, had been merely a collection agent for Burton, Burton’s lawsuit would not have involved Walden. Walden’s legal role can be explained only by the fact that as the ‘bearer’ holding the bill on maturity, he was its current owner, and was rebuffed on submitting it for redemption.¹

The mayor, John Mitchell, after hearing the witnesses and ruling that the case fell under the jurisdiction of his court and not the common law courts, issued his verdict in favour of the supplicant, without actually naming him, and also of ‘John Walden, the bearer of the same letter [of exchange]’, who ‘is held, reputed, and admitted in place of the said supplicant, according to the Law Merchant’. Davy was required to pay the full amount of the bill plus 20s. in damages, ‘according to the Law Merchant and the custom aforesaid ... and to the force, form, and effect of the said letter’.

Although this verdict was not binding on English courts, did not inspire any royal legislation, and did not establish any legal conditions for modern negotiability, it did provide a vital precedent to allow the bearer of a dishonoured bill of exchange to sue, on its maturity, for both payment and damages.² None of the subsequent legal evidence indicates that a bearer in similar circumstances required support from the payee, as in *Burton v Davy*, to launch a suit against the acceptor (payer), for payment and damages. English commercial records from the later fifteenth century show that bearer bills had become common-

¹ See J. S. Rogers, *The Early History of the Law of Bills and Notes: A Study of the Origins of Anglo-American Commercial Law* (Cambridge, 1995), pp. xi-xiv, 1-11, 44-68, who presents these counter-arguments to refute the significance of *Burton v Davy*. See further points in my rebuttal in Munro, ‘English “Backwardness” and Financial Innovations’, pp. 145-50. For the legal procedures to be followed with dishonoured or non-accepted bills, see de Roover, *Lettre de change*, pp. 92-3; de Roover, *Medici Bank*, p. 140; and G. Malynes, *Consuetudo vel Lex Mercatoria, or The Ancient Law Merchant* (London, 1622), republished in facsimile by Walter Johnson and Theatrum Orbis Terrarum (Amsterdam, 1979), pp. 398-404.

² For an exaggerated claim that *Burton v Davy* did establish the conditions of modern negotiability, see Beutal, ‘Negotiable Instruments’, p. 831; and for a more modified view that *Burton v Davy* met at least two of the conditions for modern negotiability, especially the ability of the person holding the bill *pro tempore* to sue upon it, see Holden, *Negotiable Instruments*, pp. 24-5.

place.¹ In 1524-5, Henry VIII (r. 1509-47) transferred jurisdiction over most commercial cases from the Staple and mayors' courts to the royal Court of Admiralty; but, as James Rogers has shown, common law courts were handling some cases that involved bills of exchange, or their underlying debt obligations, from the 1560s, with no apparent conflicts with law-merchant procedures.²

* * * * *

The real importance of *Burton v Davy* was its indirect but substantial influence on the first European state legislation to establish the judicial conditions for modern negotiability: in three major ordinances passed by the States General of the Habsburg Netherlands, between 1537 and 1543. The route, however, was circuitous, possibly by way of Lübeck, the hub of the Hanseatic League, whose merchants traded extensively with London, Bruges, and Antwerp. In May 1499, Lübeck's law-merchant court rendered a verdict concerning the rights of the bearer in a disputed bill in a case virtually identical to *Burton v Davy*; and in March 1502, it confirmed the verdict.³ Five years later, in 1507, a law-merchant court in Antwerp, after hearing a case involving a dishonoured bearer bill, known as *letter obligatory*, issued a *turba* or judgement that, in Van der Wee's words, 'granted the bearer of writings obligatory the same rights as the original creditor [payee] with regard to the prosecution of an insolvent debtor'. Previously, Antwerp merchants seeking to enforce payments on debts assigned to third parties had been obliged, in their lawsuits, 'to obtain an explicit authority from the original creditor', revocable at any time.⁴ The text, however, does not indicate that the bearer had *superior* rights, over those of the payee, in suing for payment, a 'holder in due-course' condition for modern negotiability; and of course the same observation may be made about *Burton v Davy*. If the London verdict was not cited as a precedent in the Antwerp court, the plaintiff, an English cloth merchant, should have been familiar with its provisions. The English cloth trade, it should be noted, had played by far the most crucial role in the rise of the Antwerp market in the fifteenth century; and by the early sixteenth century, Antwerp (1511-15) was receiving about 70 per cent of all

¹ See esp. A. Hanham, *The Celys and Their World: An English Merchant Family of the Fifteenth Century* (Cambridge, 1985), pp. 187-202: with bills or drafts drawn on the Bruges *wisselaers* (money-changers) Collard De May and John Newenton, in 1477-9; and various documents in *The Cely Letters, 1472-88*, ed. A. Hanham (London, 1975).

² See *Select Pleas in the Court of Admiralty*, ed. R. Marsden (London, 1894-7), i. lvii, 38-41 (doc. 8), 62-3 (doc. 26); and ii. 73, 127; Beutel, 'Negotiable Instruments', pp. 833-4; Rogers, *Early History of the Law of Bills*, pp. 54-68.

³ See P. Jeannin, 'De l'arithmétique commerciale à la pratique bancaire: l'escompte aux XVI^e-XVII^e siècles', in Puncuh and Felloni, *Banchi pubblici, banchi privati*, i. 95-116, and M. North, 'Banking and Credit in Northern Germany in the Fifteenth and Sixteenth Centuries', in *ibid.*, ii. 809-26.

⁴ Quotations from Van der Wee, 'Money, Credit, and Banking Systems', p. 325. See also H. Van der Wee, 'Anvers et les innovations de la technique financière aux XVI^e et XVII^e siècles', *Annales: Economies, Sociétés, Civilisations*, xxii (1967), 1067-89.

English woollen exports.¹ The current restrictions on deposit and transfer banking in the Netherlands made a legal decision on negotiable transfers welcome in this international mercantile community.

Subsequently, in 1527 in Flanders, the municipal court of Bruges rendered an almost identical decision: stating that ‘the bearer had all the rights of a principal’ in suing defaulting debtors to claim payment on commercial bills.² A decade later, on 7 March 1537, the States General codified the decisions in legislation, and then produced a supplementary law on 31 October 1541. Unlike the legal precedents, the legislation enabled the bearer to sue not only the original debtor but also every prior assignor of the note for the full payment (including the payee), and to take advantage of judicial procedures to enforce such payments throughout the Netherlands. The legislation meant that all commercial paper, whether made out to bearer or transferred by written assignment, was fully negotiable and convertible into other assets, without the costly participation or even knowledge of the original principals. In other words, merchants were now able to achieve full liquidity – exchanging paper credit assets for cash or bank deposits – without having to pay a significant premium in doing so.³

In 1543, the States General enacted another law that had an equal importance in the establishment of modern negotiability: an amendment of the usury legislation to permit interest payments of up to 12 per cent per annum on all debts and commercial bills, and thus to restrict the term usury to mean interest payments in excess of this limit.⁴ In England, Henry VIII’s parliament enacted similar legislation in 1545, though with a limit of 10 per cent. After Edward VI’s parliament repealed the statute in 1552, ‘forasmuche as Usurie is by the worde of God utterly prohibited, as a vyce moste odyous and detestable’,⁵ Elizabeth I’s parliament restored it in 1571.⁶

This legislation had great significance for the history of modern financial institutions. Effective financial negotiability requires the discounting of credit instruments. Anyone selling or transferring a financial claim, whether in a bill of exchange or in a promissory note, before the stipulated date of maturity, has to accept a lesser payment than the

¹ See Van der Wee, *Antwerp Market*, ii. 45-9, 67-9, 73-83, 119-36, 183-6, 342-4; Munro, ‘English “Backwardness” and Financial Innovations’, pp. 113-20, 150-6.

² Usher, *Early History of Deposit Banking*, pp. 98-9.

³ For the text, see *Recueil des ordonnances des Pays Bas, deuxième série, 1506-1700*, ed. C. Laurent, M. J. Lameere, and H. Simont (Brussels, 1907), iv. 15-17, 34-5, 330. See analyses in Van der Wee, *Antwerp Market*, ii. 340-9; Van der Wee, ‘Money, Credit, and Banking Systems’, pp. 322-32.

⁴ Van der Wee, *Growth of the Antwerp Market*, ii. 352: the ordinance was accompanied by an imperial edict of Charles V.

⁵ Statute 37 Henrici VIII, c. 9 (1545) and Statute 5-6 Edwardi VI c. 20, in *Statutes of the Realm*, iii. 996; iv. I. 155.

⁶ 13 Elizabeth I, c. 8 (1571), in *Statutes of the Realm*, iv. I. 542. Subsequently, with a gradual fall in the real rate of interest, the ‘usury ceiling’ was lowered to 8 per cent in 1623, to 6 per cent in 1660, and finally to 5 per cent in 1713, remaining at that low level until 1854; Richards, *Early History of Banking in England*, pp. 19-20.

face value, to compensate for the interest forgone between the date of sale and maturity. To discount bills openly would previously have rendered the seller of the note subject to prosecution for usury, and would have rendered the transaction unenforceable at law. Van der Wee, who discovered the first documented example of discounting in Europe, dated 1536, in an English merchant's letter obligatory drawn on the Antwerp market, demonstrates that discounting evolved more slowly than might have been expected. It became widespread only after formal written assignments by endorsement on the back of bills became customary in the late sixteenth century. According to Van der Wee, endorsements brought the 'definitive solution', for they 'excluded any arguments about the identification of the assigning debtor' and thereby ensured that 'liability was no longer limited to the latter, but extended to all previous endorsers'; and, furthermore, many preferred endorsed bills to bearer bills, because the latter could readily fall into the wrong hands, through loss or theft, and be cashed.¹

In 1608, Antwerp's magistrates published an official compilation of commercial customs, known as the *Costuymen*, which included all the provisions on negotiability, endorsement, and discount that had developed in the Netherlands over the sixteenth century.² That influenced the composition of the even more famous treatise *Consuetudo vel Lex Mercatoria*, or *The Ancient Law Merchant*, which Gerard Malynes published in London, in 1622. In describing the commerce of the Merchants Adventurers in Antwerp, Amsterdam, and Hamburg, he states that they may use a bearer bill to 'buy other commodities therewith, as if it were with readie money, the time onely considered'; or, if a merchant 'will have readie money for these Bills, he may sell them to other merchants that are moneyed men, and abating for the interest for the time, and ... according to the rate, as they can agree'. In England, however, 'this laudable custome [of discounting] is not practised'.³ Surprisingly, Malynes mentions endorsement only obliquely, a subject that the English writer John Marius treats in great detail, along with discounting and other aspects of negotiability, in his 1651 treatise on *Advice Concerning Bills of Exchange*, which also analyses the use of 'inland bills' between English cities. According to Holden, many of Marius's commentaries were applied in common law proceedings.⁴ In 1628, the chief justice, Sir Edward Coke, had declared that the law merchant 'is part of the lawes of this realme'.⁵ Holden also contends

¹ Quotation in Van der Wee, 'Antwerp Market', ii. 348, and p. 350, for the discounted English bill (Kitson papers); see also pp. 346-53; Van der Wee, 'European Banking', pp. 185-95.

² Van der Wee, 'Monetary, Credit, and Banking Systems', pp. 327-31.

³ Malynes, *Lex Mercatoria*, p. 99. See also Van der Wee, 'European Banking', pp. 180-97, 243-7.

⁴ See Malynes, *Lex Mercatoria*, p. 103, concerning assignments of 'Billes Obligatorie', when 'the lawfull assignee shall bee of Record, and registered also upon the Bill'. See also, Holden, *Negotiable Instruments*, pp. 42-6, 73-80; Richards, *Early History of Banking*, pp. 44-7, esp. p. 45 n. 1, citing Chief Justice Sir John Holt's comment in *Ward v Evans* (1702) that Marius's *Advice* is 'a very good book'.

⁵ Kerridge, *Trade and Banking*, p. 72.

that Coke's successors transferred more and more jurisdiction over commercial cases from the admiralty to common law courts; but, as noted earlier, common law courts had handled several such cases from the 1560s. In rendering its verdict on *Woodward v Rowe*, in 1666, the court repeated Coke's dictum, in declaring that all endorsed and bearer bills of exchange were fully 'transferable within the custome of merchants' and that 'the custome is good enough generally for any man, without naming him merchant'; in 1693, the court ruled in *Williams v Williams* that explicit details of law merchant did not have to be provided, because 'it is sufficient to say that such a person *secundum usum et consuetudinem mercatorum* drew the bill.'¹

Such evidence would seem to refute the commonplace notion that England did not establish the legal conditions for negotiability until the beginning of the eighteenth century. This view is, however, partially true, insofar as it concerns both statute law and letters obligatory, more commonly known, in the seventeenth century, as promissory notes. Though some judges were willing to treat them in the same fashion as bills of exchange, many were not. On three occasions – in 1653, 1669, and 1673 – the house of lords refused assent to bills that would have made promissory notes fully negotiable by endorsement.² The reasons may be understood in verdicts that the chief justice, Sir John Holt, rendered, in 1702 and 1703, in two cases involving promissory notes. He contended that the plaintiffs had failed to prove that these notes were commercial, so that they might be treated 'within the custom of merchants'. As Rogers comments, although 'Holt's decisions were entirely understandable, they obviously were not well received'.³ In 1704, parliament repudiated his verdicts in the Promissory Notes Act: to make all such notes and bills fully negotiable, whether to bearer or to order by endorsement, 'according to the custom of merchants, as is now used upon Bills of Exchange'.⁴ *Burton v Davy*, one should remember, had concerned only bills of exchange.

* * * * *

When this issue of negotiability was resolved in English law, what became the British financial revolution had already begun, though it would not be complete for over half a century. If England 'had no system of long-term borrowing to match those of its neighbours',

¹ Quotations from Holden, *Negotiable Instruments*, pp. 33, 36; see also pp. 73-80; Rogers, *Early History of the Law of Bills*, pp. 125-50.

² Holden, *Negotiable Instruments*, pp. 80-3.

³ Quotations in Rogers, *Early History of the Law of Bills*, pp. 183-4. See Malynes, *Lex Mercatoria*, p. 101: 'The Civile Law, and the Law Merchant, do require that the Bill shall declare for what the debt groweth, either for Merchandize, or for Money, or any other lawfull consideration.'

⁴ 'An Act for Giving Like Remedy Upon Promissory Notes as is Now Used Upon Bills of Exchange.' 3 & 4 Anne c. 8 (1704), in *Statutes of the Realm*, viii, 355-6. See also, Holden, *Negotiable Instruments*, pp. 55-6, 79-80; Rogers, *Early History of the Law of Bills*, pp. 177-86.

should one attribute the revolution to the accession of the Dutch prince of Orange, as king William III (William and Mary), after the better-known Glorious Revolution of 1688-9?¹ Despite the long-standing connections between the two countries, the United Provinces had not provided a model until it won its independence from Spain in 1609. The exigencies of war had forced the republican government to resume the compulsory purchase of *renten*, while frequently suspending annuity payments, practices that ceased after 1609 and were not resumed with the resumption of war in 1621, when *losrenten* were sold at the traditional rate of 6.25 per cent, and *lijfrenten* at 12.5 per cent. By 1655, interest rates had been reduced to 4 per cent and, according to Hart, the United Provinces could 'borrow more cheaply than any other government – except perhaps certain city states – on bonds that were bought on a voluntary basis', and which were 'held by a large group of domestic investors'.² Many English observers were praising the Dutch financial system as the one to emulate.

There are two significant features in seventeenth-century Dutch public finances. The first was the vital importance of the Amsterdam bourse as a secondary financial market for trade not only in Dutch *losrenten* (and debentures called *obligatiën*) but also in other European *rentes* and public debt certificates.³ The second was the almost complete shift to issues of *losrenten* after the grand pensionary, Johan de Witt, applying an early form of probability theory, demonstrated in 1671 that the sale of *lijfrenten* without taking account of the age of the designated nominee, especially if he was an infant, would be costly for the government.⁴ De Witt's calculation influenced the British decision, from 1711, to issue only perpetual but redeemable annuities, whereas France's public debt continued in the eighteenth century to be heavily based on *rentes viagères*.⁵ Nevertheless, Hart, who warns against

¹ Dickson, *Financial Revolution*, p. 42.

² Hart, 'The Devil or the Dutch', pp. 286-7. For public debt in seventeenth-century Holland, see also Tracy, *Financial Revolution*, pp. 193-217; J. de Vries and A. van der Woude, *The First Modern Economy: Success, Failure, and Perseverance of the Dutch Economy, 1500-1815* (Cambridge, 1997), pp. 94-122; J. Riley, *International Government Finance and the Amsterdam Capital Market, 1740-1815* (Cambridge, 1980), pp. 68-82; M. 't Hart, 'The Merits of a Financial Revolution: Public Finance, 1550-1700', in *A Financial History of the Netherlands*, ed. M. 't Hart, J. Junker, and J. Luiten van Zanden (Cambridge, 1997), pp. 11-36; M. 't Hart, 'The United Provinces, 1579-1806', in *Rise of the Fiscal State*, ed. Bonney, pp. 309-26. See also W. Fritschy, 'A "Financial Revolution" Revisited: Public Finance in Holland during the Dutch Revolt, 1568-1648', *Economic History Review*, lvi (2003), 57-89.

³ Riley, *Amsterdam Capital Market*, pp. 74-110; V. Barbour, *Capitalism in Amsterdam in the 17th Century* (Ann Arbor, 1963), pp. 81-4; Ehrenberg, *Capital and Finance*, pp. 359-62; L. Neal, *The Rise of Financial Capitalism: International Capital Markets in the Age of Reason* (Cambridge, 1990), pp. 16-19, 26-30, 36-43, 141-65; P. Dehing and M. 't Hart, 'Linking the Fortunes: Currency and Banking, 1550-1800', in *Financial History of the Netherlands*, ed. Hart, Junker, and van Zanden, pp. 52-5; S. Homer and R. Sylla, *A History of Interest Rates*, 3rd rev. ed. (New Brunswick, 1991), pp. 147-63.

⁴ J. de Witt, *Waerdije van lijfrenten naer proportie van losrenten* (The Hague, 1671). He advocated that *lijfrenten* be sold instead at 7.143 per cent (1/14), with higher rates for older buyers and lower rates for children. See Riley, *Amsterdam Capital Market*, pp. 74-5, 110.

⁵ See P. T. Hoffman, G. Postel-Vinay, and J.-L. Rosenthal, *Priceless Markets: The Political Economy of Credit in Paris, 1660-1870* (Chicago, 2000), p. 71; D. Weir, 'Tontines, Public Finance, and Revolution in France and England, 1688-1789', *Journal of Economic History*, xlix (1989), 95-124; F. Velde and D.

exaggerating the Dutch influence on England's financial revolution, points out that the Bank of England made a major contribution, whereas the *Wisselbank van Amsterdam* played no role in the Dutch debt; and he also stresses that the Dutch debt, largely borne by Holland, was provincial rather than national.¹

Nor is there any evidence that William III exerted a personal influence over England's financial revolution, other than burdening England with the costs of his wars with Louis XIV (r. 1643-1715), which necessitated the establishment of a permanent funded debt. It began in January 1693 with the Million Pound Loan, which, apart from a 10 per cent tontine provision, was a self-liquidating lifetime annuity, paying the high rate of 14 per cent, funded by additional excise taxes on beer, vinegar, cider, and brandy. Subsequent borrowing was also funded from excise and customs duties. From 1694 to 1697, the directors of the new Bank of England laid the true foundations for the financial revolution by lending the government £1.2 million, at the then attractive rate of 8 per cent, in order to secure their monopoly on joint-stock banking, raising the funds by selling Bank stock. Though redeemable on one year's notice from 1706, the loan was in fact perpetual. In 1698, the New East India Company made a similar 8 per cent perpetual loan to secure its charter, as did the newly merged United East India Company in 1709. From 1704 to 1710, the exchequer also issued irredeemable annuities, both 'long annuities' for 99 years (at between 6.6 and 6.25 per cent) and 'short annuities' for 32 years (at 9.0 per cent), and, from 1710 to 1714, a series of highly popular lottery loans. Meanwhile, in 1711, the newly formed South Sea Company bought up £9.47 million in short-term floating debts and converted them into so-called perpetual stock with a 5 per cent return; and in 1720, it converted another £13.99 million in other loans and annuities into 5 per cent perpetual stock, a venture that led to its collapse in 1721 in the famous 'Bubble'. Thereafter, while redeeming £6.5 million in South Sea stock and annuities, the Bank of England, on behalf of the government, issued several series of redeemable 'stock', many containing the popular lottery provisions, with generally lower rates of interest: 5.0 per cent in 1721, 3.0 per cent in 1726, 4.0 per cent in 1726-8, 3.5 per cent in 1731, 3.0 per cent from 1731 to 1745, and 4.0 per cent from 1746 to 1748.

Finally, between 1749 and 1752, the chancellor of the exchequer, Sir Henry Pelham, began to convert all outstanding debt and annuity issues – those not held by the Bank of England, the East India Company, and the reconstituted South Sea Company – into the Consolidated Stock of the Nation, popularly known as Consols. Those holding

Weir, 'The Financial Market and Government Debt Policy in France, 1746-93', *Journal of Economic History*, lii (1992), 1-39; Homer and Sylla, *Interest Rates*, pp. 169-73 (and table 15, p. 172).

¹ Hart, 'The Devil or the Dutch', pp. 46-9.

the new Consols, irredeemable until 1757, received 3.5 per cent from Christmas 1750 and 3.0 per cent from Christmas 1757, at which time the 4.0 per cent South Sea Stock was also converted.¹ Consols were fully transferable and negotiable, marketed on both the London Stock Exchange and the Amsterdam bourse; along with Bank of England and East India Company stock, they were the major securities traded on the London Stock Exchange in the late eighteenth and early nineteenth centuries. Though Consols were both perpetual but redeemable annuities, thus identical to Dutch *losrenten*, their instant and long-enduring popular success was attributable to the firmly held belief, abroad as well as at home, that the government would not exercise its option to redeem them. In fact, these Consols were not called until 1888, when the chancellor of the exchequer, Sir Edward Goschen, taking advantage of a sustained fall in interest rates, converted them into 2.75 per cent Consols, with the provision that they be converted into 2.5 per cent Consols in 1903.² Unchanged to this day, they continue to trade on the London Stock Exchange, with a value of £53.31 on 24 June 2003, and thus a yield of 4.69 per cent (the coupon divided by the market price).

The result of the financial revolution was a remarkably stable and continuously effective form of public finance, which achieved an unprecedented reduction in the costs of government borrowing: from 14 per cent in 1693 to 3 per cent in 1757. Public finances based on *rentes* had always been cheaper to maintain than interest-bearing loans, and perpetual *rentes* cheaper than life *rentes*. Nor did perpetual *rentes* permanently alienate the government's revenues as long as the government had the right to redeem them at par. Many European governments issued *rentes* rather than bonds with stipulated redemption dates because they were relieved of the obligation to redeem their debts and thus to refinance them. They could redeem them when changes in interest rates made it advantageous to do so.

Despite the seemingly low yields, both the affluent and those of modest means came to see *rentes* or annuities as an attractive investment, readily available and readily negotiable. That Consols, or *rentes* in general, were more marketable, with lower transaction costs, may explain why so many preferred holding them to higher interest-bearing loans, bonds, or debentures. For that reason, Consols and other negotiable annuities provided the most important form of collateral for

¹ See Dickson, *Financial Revolution in England*, pp. 39-75, 90-121, 129-56, 177-98, 204-45, 522-33; P. G. M. Dickson and J. Sperling, 'War Finance, 1689-1714', in *The New Cambridge Modern History*: VI: *The Rise of Great Britain and Russia, 1699-1725*, ed. J. S. Bromley (Cambridge, 1970), pp. 284-315; E. V. Morgan and W. A. Thomas, *The Stock Exchange: Its History and Functions* (London, 1962), pp. 11-57; Neal, *Rise of Financial Capitalism*, pp. 14-19.

² See Dickson, *Financial Revolution*, pp. 486-520; Morgan and Thomas, *Stock Exchange*, pp. 42-78; R. Michie, *The London Stock Exchange: A History* (Oxford, 1999), pp. 1-69; C. K. Harley, 'Goschen's Conversion of the National Debt and the Yield on Consols', *Economic History Review*, 2nd ser., xxix (1976), 101-6.

short-term borrowing, especially for merchants and industrialists during the Industrial Revolution, when bonds and debentures often traded at high discounts. Some investors, with mixed portfolios, may have found the fixed maturity dates of bonds and debentures attractive, but not when interest rates were falling, as they were in the eighteenth century, and again in the later nineteenth century.¹

These factors, along with others examined in this study, resolve an apparent paradox: why, in early modern Europe, rates on long-term or perpetual annuities were so much lower than short-term interest rates, whereas the opposite is now true. Currently (24 June 2003), the yield on 90-day Canadian Treasury bills is 3.11 per cent; on 10-year Canada bonds, 4.34 per cent; and on 30-year Canada bonds, 5.01 per cent. In eighteenth-century Britain, the primary explanation for the low yields on Consols may have been their exceptional value as business collateral. Douglass North and Barry Weingast, however, after citing a considerable number of forced loans that the Stuarts had exacted during the seventeenth century, contend that the real reason for the financial revolution's success in achieving such low interest rates was the Glorious Revolution: in particular, the new parliamentary government's success in eliminating both coercion in public borrowing and defaults in debt payments.² Conversely, as already noted earlier, the predominant reason for such higher interest rates on short-term loans or bonds elsewhere in Europe was the risk premium, with a far higher probability of default than on *rentes*; and sometimes as well a premium that investors required to comply with compulsory loans. A third reason, valid even in England and the Netherlands to the very late seventeenth century, was the premium that a lender demanded to compensate for the social stigma still attached to usury.

One might well contend, however, that the sixteenth-century Protestant Reformations had made usury a dead letter in the Netherlands and England, especially after the amendments to their usury legislation; and many would thus maintain that the financial revolution, in providing such manifest financial advantages, had nothing to do with circumventing the usury problem. Certainly both major leaders of the Reformation, Martin Luther (1483-1546) and John Calvin (1509-64), did reject the canon law on usury; but they considered interest payments to be licit only for investment loans, with a stipulated limit of 5 per cent. Calvin stated that 'it is a very rare thing for a man to be honest and at the same time a usurer' and recommended that all habitual usurers be expelled from the church.³ Many of his followers, along

¹ Long-term interest rates consistently had a downward trend. See Homer and Sylla, *Interest Rates*, pp. 89-143, especially table 11 (pp. 137-8), and chart 2 (p. 140).

² D. North and B. Weingast, 'Constitutions and Commitment: The Evolution of Institutional Public Choice in Seventeenth-Century England', *Journal of Economic History*, xlix (1989), 803-32.

³ G. Harkness, *John Calvin: The Man and His Ethics* (New York, 1958), p. 201; R. Bainton, *The Reformation of the Sixteenth Century* (Boston, 1952), pp. 247-50.

with Anabaptists and Lutherans, criticized usury as strongly as any Catholic; an English Puritan divine later commented that ‘Calvin deals with usurie as the apothecarie doth with poyson.’¹ In Holland, the Calvinist synod had decreed in 1581 that no banker should ever be allowed to take communion (bread and wine);² and in England, as Sir Richard Tawney remarks, the ‘soul-corrupting’ taint of usury remained strong within the public’s memory, as ‘clerical conservatism continued to repeat such [anti-usury] doctrines down to the eve of the Civil War.’³ In 1660, the Restoration parliament passed the ‘Act for the Restraining of Excessive Usury’ to reduce the limit on interest payments from 8 to 6 per cent, contending that the higher rate had led to the ‘great discouragement of Ingenuity and industry ... of this Nation’. It prescribed triple forfeiture of the ‘value of the Moneys, Wares, and Merchandize soe Lent’ above the new rate. Heading its list of presumed usurers were ‘Scrivenors and Scrivenor Brokers’, who, in arranging loans for clients, were also subject to a fine of £20 and six months’ imprisonment for exacting a fee of more than 5s. per £100 lent.⁴

Whether or not public opinion about usury and bankers had improved by the 1690s, the subsequent British ‘financial revolution’ marked the culmination of an institutional evolution in European public finance that may be traced back, by way of the Netherlands, to the financial innovations of thirteenth-century French and Flemish towns: in their resort to *rentes*, as an attractive and morally acceptable alternative to interest-bearing loans, at a time when the Church was resuscitating its vigorous attack on usury. Thus, the responses to the prohibition of usury promoted rather than retarded European economic progress. The centuries-long evolution of the European financial revolution provides another example of a socio-economic institution that, as Joseph Schumpeter contends, is one ‘of a large group of surviving features from earlier ages that play such an important part in every concrete social situation’, and is thus ‘an element that stems from the living conditions, not of the present, but of the past’, a form of historical path-dependency.⁵

The financial revolution also involved other important forms of negotiable credit, particularly discountable exchequer bills, which the Bank of England introduced in 1696; and governments of this and subsequent eras also relied heavily upon negotiable bills of exchange in

1 Cited in R. Tawney, *Religion and the Rise of Capitalism: A Historical Study* (London, 1926), p. 94; and Noonan, *Scholastic Analysis of Usury*, pp. 365-7.

2 Parker, ‘Emergence of Modern Finance’, p. 538.

3 T. Wilson, *A Discourse upon Usury by Way of Dialogue and Orations* [1572], with an historical introduction by R. H. Tawney (New York, 1925), pp. 106-34, esp. p. 117; Tawney, *Religion and the Rise of Capitalism*, pp. 91-115, 132-9, 178-89.

4 Statute 12 Charles II c. 13, in *Statutes of the Realm*, v. 327-8. See also Richards, *Early History of Banking*, p. 17; Coquillette, ‘From Usury to the Bank of England’, pp. 94-9.

5 J. Schumpeter, *Imperialism and Social Classes: Two Essays* (New York, 1955), p. 65.

transmitting funds and effecting payments abroad. The origins of this instrument of credit can also be traced to the thirteenth century, as a means of circumventing not only the ban on usury but also political impediments to bullion flows and international payments. England's important if limited contribution to the development of negotiability in bills of exchange in the fifteenth century may be seen as a mercantile response to state monetary restrictions that had prevented the development of deposit banking. To this day, bills of exchange, though having evolved from their medieval form into international 'acceptances', remain crucial to international commerce and finance. Annuities, however, have largely disappeared from European public finance, as governments, during the twentieth century, reverted to short-term loans and bonds.

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TABLE IA. Ghent's Civic Revenues and Expenditures: Loans, *Erfelijk Renten*, and *Lijfrenten*, 1314-15 to 1389-90
 Quinquennial means in ponden payment: £40 payment = £12 parisis = £1 groot Flemish = 24od groot Flemish

Years: 15 Aug.	Loans £ payment	<i>Renten:</i> <i>Erfelijk</i> Sales £ payment	<i>Renten:</i> <i>Lijfrenten</i> Sales £ payment	Total Debt Receipts £ payment	Total Revenues £ payment	Debts as % of Total Revenues	Debt Repayments £ payment
1316-20	6,478.50			6,478.50	77,168.73	8.40	54,967.50
1321-5					52,929.98		19,829.81
1326-30	4,916.94	2,701.11		7,618.05	66,492.81	11.46	12,487.34
1331-5		2,819.00		2,819.00	82,603.77	3.41	8,884.82
1336-40	42,140.04	2,214.93		44,354.97	101,197.46	43.83	8,870.54
1341-5	12,827.54	1,129.04		13,956.58	98,280.97	14.20	10,508.68
1346-50	18,318.33	2,222.65	23,660.11	44,200.97	160,391.84	27.56	17,499.36
1351-5		3,035.70		3,035.70	62,049.60	4.89	
1356-60	283.33	2,690.09	1,338.35	4,311.78	55,086.08	7.83	2,886.56
1361-5	283.17	3,577.40		3,872.74	121,033.04	3.20	8,429.39
1366-70	561.20	2,712.99		3,274.19	98,014.99	3.34	43,822.96
1371-5	507.67	2,925.13		3,432.79	83,793.74	4.10	20,027.40
1376-80	295.00	2,773.75		3,068.75	103,790.15	2.96	5,470.81
1381-5	4,391.75	540.00		4,931.75	89,977.67	5.48	5,300.00
1386-90	2,346.00	4,834.00		7,180.00	84,787.67	8.47	3,865.50

TABLE IB. Ghent's Civic Revenues and Expenditures: Loans, *Erfelijk Renten*, and *Lijfrenten*, 1314-15 to 1389-90
 Quinquennial means in ponden payment: £40 payment = £12 parisis = £1 groot Flemish = 240d groot Flemish

Years: 15 Aug.	<i>Renten:</i> Payments:* <i>Erfelijk Renten</i> £ payment	<i>Renten:</i> Payments:* <i>Lijfrenten</i> £ payment	Total Debt Payments £ payment	Total Expenditures £ payment	Deficit or Surplus £ payment	Debt Payments as % of Total Expenditures
1316-20			54,967.50	76,519.23	649.50	71.83
1321-5			19,829.81	53,305.17	-375.19	37.20
1326-30	158.00		12,645.34	63,661.82	2,830.98	19.86
1331-5	6,533.73		15,418.54	81,958.89	644.88	18.81
1336-40	121.25		8,991.79	105,886.84	-4,689.38	8.49
1341-5	0.00		10,508.68	91,118.47	7,162.49	11.53
1346-50	4,276.01		21,775.38	163,182.09	-2,790.26	13.34
1351-5		1,238.01	1,238.01	55,997.21	6,052.60	2.21
1356-60		240.00	6,980.67	54,195.13	891.41	12.88
1361-5			51,929.39	123,106.31	-2,072.46	42.18
1366-70			43,822.96	98,896.20	-880.21	44.31
1371-5			20,027.40	83,523.68	270.74	23.98
1376-80	17.76		5,488.57	115,669.92	2,530.11	4.75
1381-5			5,300.00	120,916.67	-30,939.00	4.38
1386-90			3,865.50	88,068.33	-3,280.67	4.39

TABLE 3A. Aalst Civic Revenues and Expenditures: The Role of Hereditary and Life-Rents (*Erfelijk Renten* and *Lijfrenten*) in Decennial Means, 1391-1400 to 1541-50

Values in livres parisis: £12 ponden parijs = £1 pond groot Flemish = £3.333 pond payment = 240d groot Flemish

Years:	<i>Erfelijk Renten</i> £ parisis	<i>Lijfrenten</i> £ parisis	Total <i>Renten</i> £ parisis	Total Revenues £ parisis	<i>Renten</i> sales as % of Total Revenues	<i>Renten: Erfelijk</i> Annuity Payments £ parisis	<i>Renten: Lijfrenten</i> Annuity Payments £ parisis
1391-1400 ^a	57.271	1,029.55	1,086.82	6,451.54	16.85	21.450	3,437.60
1401-10	60.846	1,917.31	1,978.15	8,616.94	22.96	10.665	5,091.51
1411-20	62.263	1,511.74	1,574.00	9,553.61	16.48	24.867	5,191.00
1421-30	62.583	1,348.02	1,410.60	9,608.01	14.68	29.659	5,256.32
1431-40	64.562	2,218.92	2,283.48	9,347.05	24.43	27.401	5,870.38
1441-50	62.078	169.00	231.08	9,081.30	2.54	24.342	5,180.49
1451-60	60.964	376.97	437.93	8,211.64	5.33	24.342	4,100.70
1461-70	60.192	406.11	466.30	10,074.68	4.62	24.342	3,169.99
1471-80	58.583	2,045.54	2,104.12	12,638.23	15.76	24.342	2,513.03
1481-90	9.349	2,612.86	2,622.21	12,685.61	20.39	24.342	2,510.34
1491-1500	41.679	312.00	353.68	12,076.95	2.85	24.342	4,071.70
1501-10	41.679	128.00	169.68	11,371.61	1.44	24.342	3,727.63
1511-20	41.679	0.00	41.68	10,965.36	0.38	218.627	2,906.98
1521-30	41.579	1,786.50	1,828.08	12,662.47	14.16	308.847	3,095.78
1531-40	41.429	709.40	750.83	12,769.85	5.70	296.380	3,806.18
1541-50	41.429	2,030.10	2,071.53	16,246.733	12.16	428.010	3,725.59

SOURCE: Algemeen Rijksarchief Brussel, Rekenkamer, registers nos. 31,412 (1395) to 31,552 (1550).

TABLE 3B. Aalst Civic Revenues and Expenditures: The Role of Hereditary and Life-Rents (*Erfelijk Renten* and *Lijffrenten*) in Decennial Means, 1391-1400 to 1541-50

Years:	Additional <i>Renten</i> Payments £ parisis	Total <i>Lijffrenten</i> Payments £ parisis	Total Annuity Payments £ parisis	Total Expenditures £ parisis	<i>Renten</i> Payments as % of Total	Surplus or Deficit £ parisis	Total ^b Assise Farm Revenues £ parisis	<i>Renten</i> Payments as % of Total Assises
1391-1400 ^a		3,437.60	3,459.05	6,435.40	53.75	16.15	4,754.13	72.76
1401-10		5,091.51	5,102.18	8,990.78	56.75	-423.16	5,809.83	87.82
1411-20		5,191.00	5,215.87	9,659.13	54.00	-105.52	6,712.66	77.70
1421-30		5,256.32	5,285.98	9,720.38	54.38	-112.37	6,441.26	82.06
1431-40		5,870.38	5,897.78	9,348.65	63.09	-1.61	6,407.36	92.05
1441-50		5,180.49	5,204.83	9,131.97	57.00	-50.66	7,724.07	67.38
1451-60		4,100.70	4,125.04	8,265.56	49.91	-53.92	6,375.01	64.71
1461-70		3,169.99	3,194.33	10,224.63	31.47	-149.96	8,206.72	39.18
1471-80	1,384.71	3,897.74	3,922.08	13,362.93	29.03	-724.70	8,999.73	43.58
1481-90	1,370.29	3,880.63	3,904.97	14,897.56	27.30	-2,211.95	8,270.63	47.40
1491-1500		4,071.70	4,096.04	13,219.85	31.12	-1,142.91	10,138.45	40.40
1501-10		3,727.63	3,751.98	11,871.39	31.69	-499.78	9,397.40	39.95
1511-20		2,906.98	3,125.60	11,460.39	27.31	-495.04	9,296.25	33.67
1521-30	197.98	3,293.75	3,602.60	14,243.26	25.45	-1,580.79	9,577.50	38.09
1531-40	7.60	3,813.78	4,110.15	14,247.08	29.07	-1,477.23	10,007.00	41.36
1541-50	78.90	3,804.49	4,232.50	19,600.67	21.75	-3,353.93	12,434.64	34.14

^a Mean of 1396 and 1400.

^b Assise Revenues: the total revenues derived from the annual sale of excise-tax farms, for the taxes levied on the consumption of wine, beer, grain, bread, meat, herring, wool and linen textiles, charcoal, wood, and other such commodities. (*Assise = Accijnzen*).

SOURCE: Algemeen Rijksarchief Brussel, Rekenkamer, registers nos. 31,412 (1395) to 31,552 (1550).