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Usury, Calvinism, and Credit in Protestant England: from the
Sixteenth Century to the Industrial Revolution

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JEL Classifications: B11; G18; G28; H30; N13; N23; N43; N94

Abstract:

This study analyses the impact of Protestantism on interest rates in England from the 16th century to the Industrial Revolution. One of many myths about the usury doctrine – the prohibition against demanding anything above the principal in a loan (*mutuum*) – is that it ceased to be observed in Reformation Europe. As several authors have demonstrated, however, early Protestant Reformers, beginning with Luther, had essentially endorsed the long established Scholastic usury doctrines. The one major exception was Jean Calvin. Though retaining a strong hostility against usury, he permitted interest on commercial loans, while forbidding ‘usury’ on charitable loans to the needy. That view may have been partly responsible for a crucially important breach in civil support of the usury doctrine. The first, in 1540, was an imperial ordinance for the Habsburg Netherlands permitting interest payments up to 12%, but only for commercial loans. In England, Henry VIII’s Parliament of 1545 enacted a statute permitting interest payments up to 10% (on all loans); any higher rates constituted usury. But, in 1552, a hostile Parliament, with radical Protestants, revoked that statute, and revived it only under Elizabeth, in 1571. Since the maximum rate was also taken to be the minimum, subsequent Parliaments, seeking to foster trade, reduced that rate: to 8% in 1624, to 6% in 1651 (ratified 1660-61), and to 5% in 1713: maintained until the abolition of the usury laws in 1854.

The consequences of legalizing interest payments, but with ever lower maximum rates, had a far-reaching impact on the English economy, from the 16th century to the Industrial Revolution. The first lay in finally permitting the discounting of commercial bills. Even if medieval bills of exchange had permitted merchants to disguise interest payments in exchange rates, the usury doctrine nevertheless required that they be non-negotiable, held until maturity, since discounting would have revealed the implicit interest. Evidence for the Low Countries and England demonstrates that discounting, with legal transfers either by bearer bills or by endorsement, with full negotiability, began and became widespread only after the legalization of interest payments in both countries. The importance for Great Britain can be seen in the primary role of its banks during the Industrial Revolution: in discounting commercial bills, foreign and domestic, in order to finance most of the working capital needs for both industry and commerce.

The second is known as the Financial Revolution; and its late introduction into England, from 1693, was in part due to the limits imposed on interest rates. In its final form (1757), it meant the establishment of permanent, funded, national debt based not on the sale of interest-bearing bonds but on perpetual annuities or *rentes*. The origins can be found in 13th-century northern France and the Low Countries in reaction to the vigorous intensification of the anti-usury campaign by the new mendicant orders, the Franciscans and Dominicans. Fearing for their mortal souls, many merchants refused to make loans and chose to finance town governments instead by purchasing municipal *rentes* (annuities). In 1250, Pope Innocent IV ruled that no usury was involved, because those buying *rentes* could never demand redemptions. Instead, they were licitly purchasing future streams of income. Continuing debates were not finally resolved until the issue of three 15th-century papal bulls (supporting Innocent IV). By the 16th century, the finances of most western Europe states had become largely dependent on selling both life and perpetual annuities.

England was thus a late-comer, in importing this system of public finance. Fully immune to the usury laws, this Financial Revolution permitted the English/British governments to reduce borrowing costs from 14% in 1693 to just 3% in 1757, so that the British economy could finance both ‘guns and butter’, without crowding out private investments. Furthermore, since these annuities (Consols) were traded internationally on both the London and Amsterdam stock exchanges, they were a popular form of secure investments, which became, with land, the most widely-used collateral in borrowing for the fixed capital needs of the Industrial Revolution.

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Usury, Calvinism, and Credit in Protestant England: from the Sixteenth Century to the Industrial Revolution

The Usury Problem in Reformation Europe and Protestant England

One of the many enduring myths about the ecclesiastical usury doctrine is that it ceased to be observed in Protestant lands from the sixteenth century. In essence, the sin of usury was to exact any pre-determined payment beyond the principal in any loan of money or other like commodities (known as *fungibles*). Like so many myths, this one contains a kernel of truth; but we find in fact a mixture of both continuity and change in the reception of the usury doctrine in Reformation Europe, especially in Protestant England. Both the elements of continuity and change in the usury doctrine had profound if rather unexpected impacts on the economic development of early-modern England, up to and including the Industrial Revolution era.

Over the last century, at least three renowned historians have presented major challenges to that myth about the observance of the usury doctrine in Protestant England. The first, and certainly, the most famous was Richard Tawney, in two books published in the 1920s: his edition, with a long and learned preface, of the *Discourse Upon Usury* [1572] (1925), by the Elizabethan statesman Thomas Wilson; and his far better known *Religion and the Rise of Capitalism* (1926).¹ The second is Norman Jones's monograph on *God and the Moneylenders* (1989), in many respects the most valuable study of the three.² The third and most recent is Eric Kerridge's highly polemical monograph on *Usury, Interest, and the Reformation* (2002), which, despite some valuable insights, and a wealth of documentation, does scant justice to either Tawney or Jones.³

All three authors stress the continuity of doctrinal opinion on the usury question from the late-medieval Scholastic era through the sixteenth and early seventeenth centuries, in both continental Europe and England. Indeed, Kerridge boldly states that 'the Protestant reformers were all substantially orthodox concerning usury and interest', and that 'the Reformation made no real or substantial change to fundamental Christian teachings about usury, or to any of the Christian attitudes to it, remedies for it, or laws against it.'⁴ That view needs to be seriously re-evaluated – and that is a major purpose of this current study.

The origins of the usury doctrine in medieval Europe: the heritage of the Old and New Testaments

Such an evaluation of Kerridge's strong verdict depends upon a proper understanding of how the usury doctrine had evolved in early Christian and then medieval Europe. One must begin with the treatment of the usury problem in both the Old (Hebrew) and New Testaments, if only to disprove another common myth: that the usury doctrine was a creation of early-medieval Christian Europe. For both the Protestant Reformers and the laity concerned with the usury question, the most familiar texts remained those found in

¹ Richard Tawney, 'Historical Introduction to: Thomas Wilson, *A Discourse Upon Usury By Way of Dialogue and Orations* [1572] (New York: Harcourt Brace & Co., 1925); Richard Tawney, *Religion and the Rise of Capitalism* (New York: Harcourt Brace & Co, 1926; reprinted New Brunswick, NJ: Transaction Publishers, 1998).

² Norman L. Jones, *God and the Moneylenders: Usury and Law in Early Modern England* (Oxford: Basil Blackwell, 1989).

³ Eric Kerridge, *Usury, Interest and the Reformation*, St. Andrews Studies in Reformation History (Aldershot, Hants. and Burlington, VT: Ashgate Publishing, 2002).

⁴ Kerridge, *Usury*, p. 23.

bible. The most ancient strictures against usury are to be found in the ancient Jewish kingdoms of Israel and Judah, as recorded in three of the five books of the Pentateuch (Torah), and later in the book of the great prophet Ezekiel. The following quotations are all taken from the King James version of the bible (1611), texts very familiar to seventeenth-century English Protestants.

According to Biblical traditions, the Pentateuch books were composed by Moses, possibly sometime in the thirteenth century BCE; and these commandments were purportedly those that God had dictated directly to him. In the second book, Exodus 22: 25, we find this commandment:

If thou lend money to any of my people that is poor by thee, thou shalt not be to him as an usurer, neither shalt thou lay upon him usury’.

The third book, Leviticus 25: 35 - 37, provides a very similar passage:

And if thy brother be waxen poor, and fallen in decay with thee; then thou shalt relieve him: yea, though he be a stranger, or a sojourner; that he may live with thee. Take thou no usury of him, or increase: but fear thy God; that thy brother may live with thee. Thou shalt not give him thy money upon usury, nor lend him thy victuals for increase.

A similar if more explicit passage, but one limiting the usury ban to Israelites (Jews), is found in Deuteronomy 23: 19-20, the fifth and final book of the Pentateuch:

Thou shalt not lend upon usury to thy brothers; usury of money, usury of victuals, usury of any thing that is lent upon usury. Unto a stranger thou mayest lend upon usury; but unto thy brother thou shalt not lend upon usury: that the Lord thy God may bless thee...

The actual dating of the Pentateuch remains highly controversial; but some scholars contend that Deuteronomy may date from the seventh century BCE, and that Leviticus, at least in its final form, dates from a later era, from or shortly after the Babylonian Captivity of 586 - 538 BCE.⁵

The final and by far the most hostile reference to usury in the Old Testament also comes from the time of the Babylonian Captivity. It is attributed to the great prophet Ezekiel (ranked third after Isaiah and Jeremiah), who was the spiritual leader of the Jews from the destruction of Jerusalem in 586 BCE to about

⁵ *Exodus 22: 25, Leviticus 25: 35 - 37, and Deuteronomy 23:19-20.* For the most modern translations, see the *New International Version of the Bible* (2010), online, at <http://www.otgateway.com/>. (1) *Exodus 22:25.* ‘If you lend money to one of my people among you who is needy, do not treat it like a business deal; charge no interest.’ (2) *Leviticus 25: 35-37:* If any of your fellow Israelites become poor and are unable to support themselves among you, help them as you would a foreigner and stranger, so they can continue to live among you. Do not take interest or any profit from them, but fear your God, so that they may continue to live among you. You must not lend them money at interest or sell them food at a profit. 38 ; (3) *Deuteronomy 23:19 - 20:* ‘Do not charge a fellow Israelite interest, whether on money or food or anything else that may earn interest. You may charge a foreigner interest, but not a fellow Israelite, so that the LORD your God may bless you in everything.’ For these texts, see Haym Soloveitchik, ‘Usury, Jewish Law’, in Joseph Strayer, et al., eds. *Dictionary of the Middle Ages*, vol. XII (New York: Charles Scribners Sons/MacMillan, 1989), pp. 339-40; Barry Gordon, ‘Lending at Interest: Some Jewish, Greek, and Christian Approaches, 800 BC - AD 1000’, *History of Political Economy*, 14 (1982), 407-15. Subsequent codifications of Jewish law made clear that the Pentateuch’s usury bans applied only to fellow Jews, and not to gentiles.

571 BCE. In book 18.13, he condemns usury in the following fashion:⁶

He who 'hath given forth upon usury, and hath taken increase: shall he live? He shall not live ... he shall surely die'.

The only specific stricture against usury to be found in New Testament is Jesus' statement in Luke 6:35:⁷ a far milder one than Ezekiel's, and much more in accordance with those found in the Pentateuch.⁸

But love ye your enemies, and do good, and lend, hoping for nothing again; and your reward shall be great ...

But a more apt reference is the story, recounted in both Matthew 21: 12-13 and Mark 11: 15, of how Jesus, on entering the Temple in Jerusalem, 'overthrew the tables of the money-changers', condemning those responsible for making the Temple 'a den of robbers'. The significance of this passage is that, even in this era, virtually all money-changers were deposit-bankers who lent funds at interest (usury).⁹

Subsequently, in a popular Hellenistic Christian text of the early second century CE, the *Revelation* or *Apocalypse of Peter*, we find a far more strident view of usury, much more akin to Ezekiel's condemnation. In his vision, Peter records that he saw a '[squalid] place of punishment', and then:¹⁰

⁶ Book of Ezekiel 18.13. The most modern translation is given in the *New International Version of the Bible* (2010) [<http://www.otgateway.com/ezekiel.htm>]: ' He [who] lends at interest and takes a profit. Will such a man live? He will not. Because he has done all these detestable things, he is to be put to death.'

⁷ For the version in the *New International Version* (2011), for Luke 6:35: 'But love your enemies, do good to them, and lend to them without expecting to get anything back. Then your reward will be great...'

⁸ But consider the far more ambiguous 'parable of the talents' found in both Matthew 25:26-28 and Luke 19:22-26, in which Jesus condemns a servant who, having received a talent (or pound), hoarded rather than investing it, thus provoking this response: 'Thou wicked and slothful servant ... Thou oughtest therefore to have put my money to the exchangers, and then at my coming I should have received mine own with usury' ['recovered what is mine with interest': in *New International Version* (2011)]. See next note.

⁹ Deposit-and-transfer banking, with fractional-reserve lending, had arisen everywhere in the ancient and medieval worlds from money-changing. For its Greek origins in the fourth century BCE, with professional *trapezites* and *argyropatês* (L. *argentarius*, goldsmiths), and its diffusion in the ancient world, see Raymond Bogaert, 'Banking in the Ancient World', in Herman Van der Wee and G. Kurgan-Van Hentenrijk, eds., *A History of European Banking*, 2nd edn. (Antwerp: European Investment Bank: Mercatorfonds, 2000), pp. 13-70, esp. pp. 27-31. See Jesus' parable of the talents' in the previous note.

¹⁰ This tract now exists in two texts: in Greek (the Akhmin fragment, discovered in 1886, and found in Upper Egypt, now in the Cairo Gizeh MS), and Coptic (Ethiopia). The most modern translation is given in J. K. Elliott, 'The Apocalypse of Peter', in his *The Apocryphal New Testament: A Collection of Apocryphal Christian Literature in an English Translation* (Oxford: Clarendon Press, 1993), pp. 591-615, with this quotation on p. 606. Other versions, with minor variations, are given in: Allan Menzies, ed., *The Ante-Nicene Fathers: Translations of the Writings of the Fathers Down to A.D. 325*, vol. 10: *Original Supplement to the American Edition*, American Reprint of the Edinburgh Edition (Edinburgh: T & T Clark; Grand Rapids, MI: Wm. B. Eerdmans Publisher, 1990), pp. 141-47 (quote on p. 146); Montague R.

In another great lake full of foul pus and blood and boiling mire stood men and women up to their knees. And these were the ones who lent money and demanded usury upon usury.

The evolution of the usury doctrine in western Christianity: from the Council of Nicea (325 CE) to the Scholastic doctrines of the later Middle Ages

In essence, the Christian interpretation of the usury doctrine developed from being merely a sin against charity, as clearly indicated in passages cited from three of the Pentateuch books and from Luke in the New Testament, to become a sin against commutative justice, and finally, by the thirteenth century to be considered as a truly mortal sin against Natural Law, and thus directly a sin against God's will.¹¹ The first official Christian pronouncements against usury were delivered in 325 CE by the Council of Nicea, which was Christianity's first ecumenical council. Its prohibition applied, however, only to the clergy, and was viewed only as a sin against charity. Not until the late eighth century did a succession of Carolingian church councils (768 - 814 CE) apply the usury ban to all the laity as well, and as a much more vile sin.

Previously, and not long after Nicea, we find a far harsher and far more general condemnation of usury, one directly influenced by Ezekiel, and not by the Pentateuch's views as a sin against charity. Using almost identical words as those of Ezekiel, the bishop of Milan, St. Ambrose (339-397), unequivocally stated: 'if someone takes usury, he commits violent robbery [*rapina*], and he shall not live.'¹² That statement is included in Gratian's famous codification of the Church's canon law, known as the *Decretum (Concordia discordantium canonum)*, compiled between 1130 and 1140, which became a fundamental bulwark of the

James, trans. and ed., *The Apocryphal New Testament, Being the Apocryphal Gospels, Acts, Epistles, and Apocalypses, with Other Narratives and Fragments* (Oxford: Clarendon Press), 1924; reprinted (1975), pp. 505-21 (text on p. 510). Cited, with a different text, in Gordon, 'Lending at Interest', p. 406.

¹¹ The following discussion is based principally upon the following publications: John T. Noonan, *The Scholastic Analysis of Usury* (Cambridge, Mass.: Harvard University Press, 1957); Odd Langholm, *Price and Value in the Aristotelian Tradition: A Study in Scholastic Economic Sources* (Bergen and Oslo; and New York, 1979); Odd Langholm, *Wealth and Money in the Aristotelian Tradition: A Study in Scholastic Economic Sources* (Bergen, 1983); Odd Langholm, *The Aristotelian Analysis of Usury* (Bergen and Oslo; and New York, 1984); Odd Langholm, *The Legacy of Scholasticism in Economic Thought: Antecedents of Choice and Power* (Cambridge and New York, 1998); Odd Langholm, *Economics in the Medieval Schools: Wealth, Exchange, Value, Money and Usury According to the Paris Theological Tradition, 1200 - 1350*, Studien und Texte zur Geistesgeschichte des Mittelalters, vol. 19 (Leiden and New York, 1992); T.P. McLaughlin, 'The Teaching of the Canonists on Usury (XII, XIII and XIV Centuries)', *Mediaeval Studies*, 1 (1939), 81-147; and 2 (1940), 1-22; Raymond de Roover, 'Scholastic Economics: Survival and Lasting Influence from the Sixteenth Century to Adam Smith,' *Quarterly Journal of Economics*, 69 (1955), 161-90; reprinted in Julius Kirshner, ed., *Business, Banking, and Economic Thought in late Medieval and Early Modern Europe: Selected Studies of Raymond de Roover* (Chicago, 1974), pp. 306-35; Raymond de Roover, 'Les doctrines économiques des scolastiques: à propos du traité sur l'usure d'Alexandre Lombard,' *Revue d'histoire ecclésiastique*, 59 (1964), 854 - 66; Raymond de Roover, *La pensée économique des scolastiques: doctrines et méthodes* (Montreal and Paris, 1971). I am also indebted to: Lawrin Armstrong, *Usury and the Public Debt in Early Renaissance Florence: Lorenzo Ridolfi on the 'Monte Comune'*, Pontifical Institute of Mediaeval Studies, Studies in Medieval Moral Teaching 4 (Toronto, 2003).

¹² Quoted in Langholm, *Legacy of Scholasticism*, p. 59: 'Si quis usuram accipit, rapinam facit; vita non vivit'. (From *De bono mortis*, 12:56, CSEL 321/1, p. 752).

anti-usury campaign that ensued from the church councils of Lateran III (1179) and Lateran IV (1215).¹³

Throughout this long era, however, the true core of the usury doctrine lay in the provisions on loan contracts contained in the Justinian Code of Roman Law (*Corpus juris civilis*), in particular *The Digest*, compiled from 529 to 533 CE, under the Emperor Justinian (r 527 - 565).¹⁴ The particular loan contract that came to be regarded as usurious was the *mutuum*, which literally meant that ‘what was thine becomes mine’, in that the ownership of the money or fungible goods (wheat, wine, etc.) specified in the contract was transferred from the lender to the borrower, but only until the maturity of the loan. What became crucial for the thirteenth-century and subsequent interpretations of the usury doctrine were the glosses on *The Digest’s* entry on *mutuum* that several canonists incorporated into Gratian’s *Decretum*: those of Paucapalea in 1165, Simon of Bismiano in 1179, and Huguccio in 1187. In the glossators’ view, all the benefits or ‘fruits’ from the use of the moneys or goods in the loan, up to its maturity, belonged entirely and solely to the borrower, so that any exaction of payment beyond the principal constituted theft, and thus usury, as in St. Ambrose’s famous dictum that usury was *rapina*. This definition of usury, it must be noted, applied only to *mutuum* contracts (including sales-credit contracts): those that contained a specific and pre-determined rate of return – i.e., interest, by the modern definition – payable on the contract’s maturity. It must also be observed that these canonical glossators and subsequent theologians rejected those provisions of the Justinian Code concerning the *foenus* loan contract with the added *stipulatio* that permitted a ‘premium’ to be charged for the use of such moneys or fungible goods, payable on the loan’s maturity.¹⁵

That basic principle of the *mutuum* fully explains how and why the medieval and early-modern Church distinguished between illicit and fully licit returns on investments: why the exaction of interest on a loan was a mortal sin, while the payment of rent from the use of land or any physical property, and any profits earned from investments in an enterprise – such as a *commenda* contract, a *compagnia* (partnership contract) or a joint-stock company – were fully acceptable. In these investment contracts, the investor retained the full ownership of his capital, and was therefore entitled to a valid return. This analysis makes clear that the usury prohibition had nothing to do with so-called ‘consumption loans’, but pertained to all *mutuum* loan contracts, without distinction. Indeed the full and final evolution of the Scholastic usury doctrine took place during the Commercial Revolution era, from the later twelfth to early fourteenth centuries,

¹³ See Markus Denzel, ‘The Curial Payments System of the Late Middle Ages and the Sixteenth Century: Between Doctrine and Practice’, in Francesco Ammannati, ed., *Religione e istituzioni religiose nell’economia europea, 1000 - 1800/Religion and Religious Institutions in the European Economy, 1000 - 1800*, Atti delle “Settimana di Studi” e altri convegni, no. 43, Istituto Internazionale di Storia Economica “Francesco Datini” (Florence: University of Firenze Press, 2011), pp. , contending that the anti-usury campaign had begun with the persecution of the heretical Cathars, who had accepted and defended usury; but the actual Albigensian Crusade, launched by Innocent III, did not begin until 1208.

¹⁴ Compiled chiefly by the Roman lawyer Tribonian, the *Corpus iuris civilis* consists of: the *Code* (12 books) of 528-29; the *Digest* or *Pandects* (50 books) and *Institutes* (4 books) of 529-33; and the *Novellae post codicem constitutiones*, compilations of later Imperial legislation, from 535 to 565. See Herbert F. Jolowicz and Barry Nicholas, *Historical Introduction to the Study of Roman Law*, 3rd edn.(Cambridge and New York: Cambridge University Press, 1972), pp. 478-515.

¹⁵ Noonan, *Scholastic Analysis of Usury*, p. 40: citing the Justinian *Codex*, 4:32:3; the *Digest*, 40:16:121; and *Institutiones*, 3.14.12; and Jolowicz, *Roman Law*, pp. 284-86 (also specifying that the *mutuum* itself permitted no payment beyond redemption of the principal. Roman law had permitted interest payments on commercial loans up to 12 percent. See p. 000 below.

when the vast majority of loans (by number and value) were made for such profit-oriented commercial and industrial enterprises. Indeed, the widespread use and popularity of such commercial loans provoked canonist and Scholastics into refining the justification for the usury ban.

Responsible for the final evolution of the usury doctrine during this era were the so-called Scholastics (theologians) of whom the most renowned were St. Albert the Great, or Albertus Magnus (1193 or 1206 - 1280), and St. Thomas Aquinas (1225- 1274). One of their most important contributions was to utilize the philosophical texts of Aristotle (384 - 322 BCE), which had been only recently re-introduced into Europe, from the Islamic world: especially the *Nicomachean Ethics* in 1246-47 (revised in 1260) and his *Politics*, in the 1260s. The principal text, from the latter, is worth quoting in full, because of its great influence in later medieval and early modern Europe: ¹⁶

The most hated sort [of money-making], and with the greatest reason, is usury [τόκος], 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, 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.

Thus, the first principle that became central to all the Scholastic doctrines was the sterility of money, because money – incapable of ‘breeding’ – has only one ‘natural’ use: to serve as medium of exchange. The second important and related principle was that any failure to observe that sole natural purpose was a violation of Natural Law, which, according to the Scholastics, willfully contradicted the Will of God. As the foregoing analysis makes clear, however, no such assumption of ‘sterility’ can be found in the definitions of the *mutuum* in either the Justinian Code or Gratian’s *Decretum*.

Yet, the Church’s reliance on Aristotle’s views and his concept of Natural Law was a far more effective tool in convincing the laity of the intrinsic evils of usury than citing arcane provisions of the Justinian Code and the *Decretum*. Another effective Scholastic argument was the very commonplace observation that usury was the ‘Theft of Time, which belongs only to God’. Not even the most renowned Scholastics or canon lawyers ever explained, however, why exacting a return based on time, in a loan, as interest is always reckoned, was a mortal sin, while demanding rent for the use of physical property, also reckoned by time, was perfectly legitimate.¹⁷ That the true difference between these two forms of investment returns was the retained ownership of capital proved to be incomprehensible for most people.¹⁸

In this respect, St. Thomas Aquinas’s major and singular contribution to the Scholastic usury

¹⁶ Benjamin Jowett, trans. and ed., *The Politics of Aristotle: Translated Into English*, 2 vols., vol. I: *Introduction and Translation* (Oxford, 1885), p. 19: *Politics*, Book I.10. 1258b. See, for Aristotle and the following: Gordon, ‘Lending at Interest’, pp. 406-26.

¹⁷ Noonan, *Scholastic Analysis*, pp. 19, and 43, citing in particular William of Auxerre (1160-1129), who found this argument useful for condemning usury in sales-credit contracts (with implicit interest) whose form and construction was not covered by the definition of *mutuum* contracts. Such interest-bearing sales contracts were first condemned as usurious by Pope Alexander III (1159-1181).

¹⁸ The same principle is found in modern commercial law, in western Europe and North America: so that any profits or investment returns on capital derived from a loan are taxed in the hands of the borrower, not the lender.

doctrine lay in his distinction between fungibles in a loan of money (or foodstuffs) – as specified in the Justinian Code – and non-fungibles in the loan of real estate or physical property. In the former, the borrower's use of the money (fungibles) necessarily involved the consumption of what was lent, so that his repayment must be no more than the like, identical quantity of the same undifferentiated commodity (coins, wheat, wine, etc); but in the latter, the specific, distinct, and non-fungible property lent was not consumed in its use and was itself returned to the lender, with a payment for that use and possible deterioration of that same property.¹⁹

The medieval canonical *extrinsic titles*: were they ‘loopholes’ to permit charging interest?

Finally, we must consider the so-called ‘loopholes’: in the form of what the Church and canon law called *extrinsic titles*, which seemingly provided exemptions from the usury bans. Only two major titles were fully accepted by the medieval Church, in full accordance with the principles of commutative justice – equality in exchange – so that the lender was entitled to make a compensatory claim for actual damages that he had suffered, from having made the loan. But such compensation was legitimate only for damages that had occurred *after* the loan contract had been issued.²⁰ The first such title was *poena detentori* or *mora*: a penalty imposed for late payments: i.e., those made after the specified maturity date of the loan. Any tacit agreement between lender and borrower to make a late payment was usurious (*in fraudem usurarum*). The second was *damnum emergens*: compensation for any losses that the lender had incurred, again only *after* having made the loan: e.g., any costs arising from an unanticipated emergency, such as a fire or storm or acts of brigandage that destroyed the lender's property, forcing him to borrow funds to restore that property.²¹ Such subsequent damages and their actual costs had to be proved in court, if necessary.

The third *extrinsic* title, proposed by some but rejected by most theologians, was *lucrum cessans*, which literally means ‘cessant gains’. This may be seen, in modern economics, as opportunity cost: in that a merchant who lent money to another had to forgo some potential gains that he could have otherwise derived from some other, alternative, but fully licit form of investments, in property rents or profits.²² The basic problem with this title, and the reason for its rejection by most theologians, was that such a claim for compensation could easily have been seen as pre-determined and fixed, so that it did not meet the required conditions of a *post-lending loss*, under commutative justice. Furthermore, it embodied an almost explicit contention that money was fruitful (in alternative investments) and not ‘sterile’. For these reasons, most medieval theologians (including especially Thomas Aquinas), most popes, and canon lawyers refused to

¹⁹ See the sources cited in n. 11 above, and also p. 000 above.

²⁰ See the sources cited in n. 11 above, and John Munro, ‘The Medieval Origins of the Financial Revolution: Usury, *Rentes*, and Negotiability’, *The International History Review*, 25:3 (September 2003), 505-62.

²¹ See the publications of Noonan and Langholm cited in n. 11 above.

²² The most widely cited text for the concept of *lucrum cessans* is the following observation by Henry of Susa (Cardinal Hostiensis) sometime before 1271: ‘If some merchant, who is accustomed to pursue trade and the commerce of fairs, and there profit from, has, out of charity to me, who needs it badly, lent money with which he would have done business, I remain obliged to his *interesse*, provided that nothing is done in fraud of usury... and provided that the said merchant will not have been accustomed to give his money in such a way to usury.’ Noonan, *Scholastic Analysis of Usury*, p. 118, citing Hostiensis [*In Decretalium libros commentaria*, ad X 5.19.16, n.4, vol. V, fols. 58vb-59ra. (repr. in 2 vols. Turin, 1965)].

accept *lucrum cessans* as a legitimate *extrinsic title* to exact any return above the principal.²³ According to Odd Langholm, the Catholic Church first judged this doctrine to be fully acceptable only as late as 1642, but even then it is not clear that the title was valid if it applied from the beginning of the loan contract.²⁴

An increasingly common late-medieval term for all these extrinsic titles, designating any licit claim to payment beyond the principal (including also *donum*, as a gratuitous gift from the borrower), was *interesse*, from which the modern term interest is derived.²⁵ All of these titles refer to payments demanded and agreed upon only after the loan contract had been negotiated, and often only after the redemption date. And thus none of these terms constitutes what modern economists consider to be interest: i.e., the pre-determined rate of return that is clearly specified, in a written contract, for a loan with a specific date of maturity and redemption. And that is also, of course, precisely what the Church meant by usury.

A summary of the usury myths and their refutation, for medieval and early-modern Europe

We may now summarize the refutation of the standard myths about usury in the society of medieval and early-modern Christian Europe. The widespread prevalence of the following myths, into current-day literature, had led the renowned economist Charles Kindleberger to state sardonically that usury ‘belongs less to economic history than to the history of ideas’.²⁶ First, the abhorrence of usury, and severe strictures against usury, long-predated Christianity and have remained in force in much of the non-European world, especially Islamic, to the present day.²⁷ Second, the usury prohibition applied not just to charitable

²³ See Noonan, *Scholastic Analysis of Usury*, pp. 118-21, 31-32, 249-68; and Langholm, *Economics in the Medieval Schools*, p. 51, for Robert of Courçon’s rejection of *lucrum cessans* in 1208; and p. 246, for St. Thomas Aquinas’ rejection (ca. 1266-73).

²⁴ Langholm, *Aristotelian Analysis of Usury*, pp. 25-26; 98-110; and Langholm, *Legacy of Scholasticism*, p. 75, citing Juan de Lugo (of Salamanca)’s 1642 treatise *De iustitia et iure*, as one finally accepted by canon lawyers. For a prominent sixteenth-century treatise favouring *lucrum cessans*, by Leonardus Lessius of Leuven (1554-1623), see Raymond de Roover, *Leonardus Lessius als economist: de economische leerstellingen en van de latere scholastiek in de Zuidelijke Nederlanden*, Mededelingen van Koninklijke Academie voor Wetenschappen, Letteren en Schone Kunsten van België, Klasse der Letteren, XXXI (Brussels, 1969), p. 3-15, 23-27.

²⁵ According to Noonan, *Scholastic Analysis*, p. 118, a twelfth-century Bologna lawyer named Azo was the first to compress the Roman law term ‘quod interest’ – what remains, lies between, or differs from (from *intersum*) – into the substantive *interesse*, to mean any licit payment beyond the principal; and this concept was further developed by his student Roland of Cremona. See Langholm, *Economics in the Medieval Schools*, p. 88.

²⁶ Charles Kindleberger, *A Financial History of Western Europe* (London: 1984; reissued Oxford and New York: Oxford University Press, 1993), p. 41.

²⁷ The usury doctrine was not enforced in the realms of the Greek and Russian Orthodox Churches, perhaps because of the supremacy of the secular state over the Church, in contrast to the worlds of western Christianity and Islam. The Prophet Muhammad (c. 570 - 632 CE) was himself deeply influenced by both the Old and New Testaments, and was thus familiar with these commandments against usury. We find a very similar prohibition against usury in Islam’s holy scriptures, the Qur’an (Koran), strictly maintained to the present day. The Arabic term for usury is *ribâ*, literally ‘excess’. *The Qur’an Online*: <http://quran.com/1>.

consumption loans, but all to all loans, and specifically concerned investment loans, especially from the twelfth century. Third, the usury doctrine applied to any and all interest – any payment whatsoever beyond the principal lent – and not to so-called ‘extortionate’ interest. Fourth, the so-called *extrinsic titles* were by no means ‘loopholes’ to evade the usury doctrine, but were fully in accordance with its intrinsic concept of commutative justice (equality in exchange); and, above all, no such titles permitted a *pre-determined* rate of interest to be imbedded, from the outset, in any loan contract.

Fifth, the commonplace view that usury transgressions were rarely prosecuted in the courts, civil or ecclesiastical is really irrelevant. To be sure, possibly only so-called ‘flagrant usurers’ (merchants and bankers), had to fear legal prosecutions, though they were more frequent than is commonly thought.²⁸ Furthermore, many merchants often found it simple to disguise interest in loan contracts, especially by specifying the amount of repayment to be a sum in excess of that actually lent. But even if usury could be hidden from secular authorities, it could never be hidden from God – or so most of the very devout Christian society then believed. Certainly most Christians in medieval and early-modern Europe firmly believed in and truly feared God’s punishment for usury: i.e., eternal damnation in Hell (or later, at least temporarily, in Purgatory), with unbearable, unremitting agony.

One of the most eloquent verdicts on the real costs of the public belief in the usury doctrine may be found in Lawrence Stone’s monograph on Elizabethan and thus Protestant England:²⁹

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 the 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.

The Protestant Reformation: the sixteenth-century Reformers’ views on usury

The aforementioned thesis of Eric Kerridge concerning the views on usury held by the sixteenth-century Protestant Reformers must now be re-examined. In his admirable review of Kerridge’s monograph,

Sura 2 - Al-Baqara (MADINA) : Verse 275: ‘Those who eat Ribâ [usury] will not stand [on the Day of Resurrection] except like the standing of a person beaten by Shaitân (Satan), leading him to insanity. That is because they say: ‘Trading is only like Ribâ [usury]’, whereas Allâh has permitted trading and forbidden Ribâ [usury]. So whosoever receives an admonition from his Lord and stops eating Ribâ (usury) shall not be punished for the past; his case is for Allâh [to judge]; but whoever returns to Ribâ [usury], such are the dwellers of the Fire -- they will abide therein’. Sura 2 - Al-Baqara (MADINA) : Verse 276. ‘Allâh will destroy Ribâ [usury] and will give increase for Sadaqât [deeds of charity, alms, etc.] And Allâh likes not the disbelievers, sinners’. See Seth Ward, ‘Usury, Islamic Law’, in Joseph Strayer, et al., eds. *Dictionary of the Middle Ages*, vol. XII (New York: Charles Scribners Sons/MacMillan, 1989), pp. 340-41; Abraham L. Udovitch, ‘Bankers without Banks: Commerce, Banking, and Society in the Islamic World of the Middle Ages’, in Fredi Chiappelli, Center for Medieval and Renaissance Studies, UCLA, ed., *The Dawn of Modern Banking* (New Haven and London; Yale University Press, 1979), pp. 256-58.

²⁸ For example see the evidence cited in Munro, ‘Financial Revolution’, pp. 512-13.

²⁹ Lawrence Stone, *The Crisis of the Aristocracy, 1558 - 1641* (Oxford: The Clarendon Press, 1965; reissued with corrections, 1979), p. 529.

Prof. Lawrin Armstrong states that: ‘The virtue of Kerridge’s book is to show on the basis of the sources how thoroughly the reformers reproduced and perpetuated the vocabulary, categories and arguments of the scholastic anti-usury analysis.’³⁰

Certainly very traditional are the views of the founder of the Reformation, Martin Luther (1483-1560), or at least those views expounded in the documents that Kerridge has supplied.³¹ In one such document, Luther categorically stated that:³²

Where one lends money and demands or takes therefore more or better, that is usury, condemned by all the laws. Therefore, all those who take five, six or more in the hundred from the loan of money, they are usurers.

Similar are the views of the contemporary German Swiss reformer Huldreich Zwingli (1484-1531).³³

God bids us give our worldly goods to the poor and needy without return ... and then he bids us lend without usury.... For this reason, everyone who as much tolerates a licensed Jew or other usurer, so art thou a thief or robber.

To be sure, many of the reformers’ statements (German and otherwise) concerning the usury doctrine seem to be ambiguous, but not when they are shown to be the long accepted extrinsic titles that were fully

³⁰ Lawrin Armstrong, ‘Review of Eric Kerridge, *Usury, Interest and the Reformation*’ in *Journal of Early Modern History: Contacts, Comparison, Contrasts*, 8:1-2 (2004), 180-84 (quotation on p. 181).

³¹ Historians are far from unanimous on Luther’s views concerning usury. See Roland Bainton, *The Reformation of the Sixteenth Century* (Boston: Beacon Press, 1952; revised edn, 1985), pp. 247-50, contending that Luther’s views did not differ substantially from those of Calvin, whose innovations are discussed below (pp.). But elsewhere he stresses Luther’s innate conservatism on the usury doctrine, in supporting canon law, with ‘one exception’: permitting elderly investors to engage ‘in loans not in excess of 5 percent’, but only in commercial ventures in which the lender-investor risked loss. Such investments were thus not *mutuum*-loans, and thus not in contravention of Scholastic doctrines. See Roland Bainton, *Here I Stand: a Life of Martin Luther* (New York: Abingdon Press, 1950; reissued New York: Meridian, 1995), pp. 236-38. See also Gerhard Brendler, *Martin Luther: Theology and Revolution*, trans. Claude Foster, Jr., (New York: Oxford University Press, 1991), pp. 369-71, suggesting that Luther’s anti-Semitism, and not just adherence to canon law, influenced his hostility to usury. The contention in Jones, *God and the Moneylender*, pp. 14-15, that Luther supported interest-bearing loans for support of the church and the poor is not substantiated by Bainton; but, according to Jones and others cited here, Luther did not accept Old Testament dictums on usury as binding. Jones also contends (p. 15), without documentary evidence, that Luther endorsed the right of secular magistrates to ‘regulate interest for the good of the community’.

³² Kerridge, *Usury*, p. 96: doc. no. 8: from Martin Luther, *An die Pfarrherrn wider den Wucher zu predigen Vermanung* (1540): in *Alle Bücher und Schrifften*, 8 vols. (Jena, 1555-58), VII, fo. 397-99.

³³ Kerridge, *Usury*, p. 106, doc. no. 13: from Zwingli, *Von göttlicher und menschlicher Gerechtigkeit wie die zemmen und standind*: from *Huldrych Zwingli’s Werke*, ed. M. Schubert and J. Schulthess, Vol. I (Zurich, 1828-42), pp. 438-39.

in accordance with Scholastic doctrines (as *interesse*).³⁴ Both Tawney and Jones are usually also clear in distinguishing between the reformers' opposition to usury in a loan contract (*mutuum*) and their acceptance of other fully licit returns on capital invested: in land (rent); in commercial enterprises, as equity (profits), and in *rentes* (annuities). They are, however, generally less clear on the exact nature of the traditional extrinsic titles for licit payments beyond the principal, especially concerning *lucrum cessans*.

The worst offender is Kerridge himself, especially in contending that both the medieval Catholic and early modern Protestants churches condemned only 'usury', while accepting 'interest', which he defines as those covered by the so-called *extrinsic titles*. But he fails to explain that the only accepted and licit *extrinsic titles* were those concerning losses that occurred only after the loan had been transacted and that were thus not predetermined, as in the modern definition of interest. Kerridge also errs in asserting that *lucrum cessans* – which certainly does not meet that test – was accepted by both the medieval Scholastics and the sixteenth-century reformers.³⁵

The only reformer's text on this issue that appears in Kerridge's documentary appendix is one by Luther's less well known German compatriot Philipp Melanchthon (1497 - 1560):

But of emergent loss and cessant gain [*de damno emergente et lucro cessante*] before delay on the loan, the laws in fact give no action, unless it be stipulated in the contract what is to be paid by way of interest.... My answer is: It is licit to make stipulations about interest payable before delay [*quanti interest damni emergentis etiam ante moram*].

A careful reading of this text – on which Kerridge does not comment – provides a reference only to *damnum emergens* and only before 'delay' [*mora*], i.e., before the required late payments, and certainly not from the inception of the contract. Even worse, Kerridge fails to distinguish between *mutuum* loans and other licitly profit-bearing financial instruments – certainly not as clearly as do Jones and Tawney. He also fails in not clearly distinguishing between the transfer of the capital's ownership in a *mutuum* and its retention as equity in other financial contracts; Tawney and Jones also fail to make this crucial distinction. The only reformer to have done so is once again Melanchthon, who otherwise issues a traditional condemnation of usury, citing also the sterility of money.³⁶

³⁴ Not discussed in this study is the famous 'triple contract' or 'five-percent contract'. As explained and defended in Johannes Eck's *Tractatus de contractu quinque de centum* (1515), it consisted of a profit-sharing partnership or *societas* contract – always perfectly licit; an insurance contract (also licit), insuring the principal investment in the *societas*; and a sales contract by which the future uncertain gain from the partnership is sold and converted into a certain five-percent return (disputed). Though it became widely accepted in the sixteenth-century, many Catholic theologians still opposed it as usurious (because the gain was certain). Furthermore, there is no evidence that English theologians had ever discussed this continental contract. See Noonan, *Scholastic Analysis*, pp 205 -17, and p. 367; and Jones, *God and the Moneylenders*, pp. 11-15, which discusses the views of only continental theologians.

³⁵ Kerridge, *Usury*, pp. 7-11, 40-43. For the same error, see also Jones, *God and the Moneylender*, p. 14.

³⁶ Kerridge, *Usury*, p. 101 and 103: extracts from documents nos. 10 and 11, from P. Melanchthon, *Enrarratio Psalmi Dixit Dominus (Operum, vol. II, pp. 772-73)* and *Definitiones Appellationum in Doctrina Ecclesiae usitatarum, in Operum, vol. I, fo. 356*.

In making loans, such gain demanded over and above the principal, merely on account of the lending itself, is really and truly usury.... But to claim usury is expressly forbidden. ...Taking usuries is gaining at another's expense, because the loan has transferred outright ownership, and in fact the thing is not by nature productive. Therefore the gain is not fair.

Calvin and Calvinists: new views on usury in sixteenth and seventeenth centuries

Kerridge's bold statement on the unity of traditional Catholic and Protestant views on usury is also incorrect in not fully taking account of writings by that other major Reformation leader, the French lawyer Jean Calvin (1509 - 1564), whose publication of the *Institutes of the Christian Religion* in 1536 had such a powerful impact in spreading the Reformation, especially in France, the Low Countries, and England.³⁷ Kerridge dismisses him by saying that 'Calvin had little to say that was both new and significant', which is certainly untrue.³⁸ In a letter to Sachinus in 1545, Calvin stated: 'I do not consider that usury is wholly forbidden among us, except it be repugnant to justice and charity'.³⁹ His most explicit if conditional acceptance of 'usury' or interest payments, by the modern definition, can be found in his *Praelectiones in Libris Prophetiarum Jeremias, Epistolae et Responsa* (1575), and in his collected *Opera*, vol. X. In the former, he posed this question, in making a loan to a rich man: 'Why should the lender be cheated of his just due, if the money profits the other man and he be the richer of the two'.⁴⁰ In summary, Calvin did permit interest payments, but only on commercial loans; and he required the following restrictions on lending at interest: (1) 'that usury never be demanded of poor and needy men'; (2) 'that he who lends be not addicted to his gain and profit', while maintaining proper regard for his poorer brethren; (3) 'that no condition inserted or put into the covenant of the loan [be] other than is agreeable to Christ's commandment'; (4) 'that he who borrows ... may gain as much or more by the money than he who lends'; (5) that we must not 'measure equity by the iniquity of the race of mankind, but by God's word alone'; (6) that 'covenants drawn up [involving loans] stand rather to the good than to the harm of the commonwealth'; and, finally, (7) 'that we exceed not the maximum rate or limit laid down in any country or commonwealth'.⁴¹

Calvin's views were influenced by the contemporary French jurist Charles du Moulin (1500-1566), who, in his *Tractatus contractum et usurarum* (published in 1547), similarly denied that all loans were to be condemned as usurious and who similarly contended that, in lending to a rich merchant, the lender was

³⁷ Jean Calvin, *Institutes de la religion chrestienne*, 4 vols. (Paris: Société d'Édition 'Les Belles Lettres', 1961); Jean Calvin, *Institutes of the Christian Religion*, 2 vols. (London: Westminster Press, 1960). See the views on Calvin in Noonan, *Scholastic Analysis of Usury*, pp. 365-70, which do not differ from those expressed here.

³⁸ Kerridge, *Usury*, p. 23.

³⁹ Georgia Harkness, *John Calvin: The Man and His Ethics* (New York, 1958), pp. 201-10. See also André Bieler, *La pensée économique et sociale de Calvin* (Geneva, 1959); Andrew Pettegree, Alastair Duke, and Gillian Lewis, eds., *Calvinism in Europe, 1540 - 1620* (Cambridge and New York: Cambridge University Press, 1994).

⁴⁰ Cited in Kerridge, *Usury*, p. 45, from Calvin, *Praelectiones*, p. 170.

⁴¹ Kerridge, *Usury*, pp. 94-95, doc. no. 7: from Calvin, *Epistolae et Responsa* (Geneva, 1575); and *Sermon XXVIII*, in *Opera*, vol. X, part 1; Jones, *God and the Moneylender*, pp. 18-120; Tawney, 'Introduction to *Discourse Upon Usury*', p. 118, citing the same sources.

entitled to a share of the borrower's gain, even more clearly implying than did Calvin that money as capital is in itself fruitful and productive; and, in accepting the validity of *lucrum cessans*, he rejected the Aristotelian concept of the sterility of money. Indeed, he contended that lending at interest benefited society, since merchants and tradesmen could not engage in their enterprises without borrowed capital.⁴²

Some of Calvin's followers, especially Peter Baro (1534-1599) and Heinrich Bullinger (1504-1575), Zwingli's successor, repeated his more liberal views, when preaching in sixteenth-century western Europe.⁴³ So did the German reformer Martin Bucer (1491-1551), though more of a Lutheran, while a refugee in England, holding a chair at Cambridge University. Noting that ancient Roman Law had permitted 12 percent interest on business loans, and that currently some countries permitted interest rates, though restricted, on such loans, he also argued that lending was vital for the prosperity of the current economy and society. While one must obey Christ's dictum in lending freely to the poor, there was no such necessity in lending to the rich, for which the lender then had a perfect right to a just return.⁴⁴ By far the hardest opponent of the Scholastic doctrines, and veritable defender of 'usury' was the French Calvinist Claude Saumaise (1588-1653), but he published his tracts in a later era.⁴⁵

Nevertheless, Calvin's statements are often ambiguous, and he was frequently expressed a more general hostility to lending, as usury. In his *Institutes*, he stated that 'it is a very rare thing for a man to be honest and at the same time a usurer'.⁴⁶ Subsequently, he also advocated the expulsion of all habitual usurers from the Church.⁴⁷ Indeed, in Holland, the Calvinist synod of 1581 had decreed that no banker should ever

⁴² Du Moulin was a devout French Catholic, whose works were still prohibited by the papal Index. See Jean-Louis Thireau, *Charles du Moulin (1500-1586): Etude sur les sources, la méthode, les idées politiques et économique d'un juriste de la Renaissance*, Travaux d'Humanisme et Renaissance no. CLXXVI (Geneva: Droz, 1980), pp. 348-400; Jones, *God and the Moneylender*, pp. 15-17; and Noonan, *Scholastic Analysis*, pp. 367-70.

⁴³ According to Tawney, 'Introduction to the *Discourse on Usury*', pp. 119-20. For Bullinger, see also Kerridge, *Usury*, p. 129, doc. no. 22: from Bullinger, *Sermonum Decades quinque de potissimis Christianae Religionis captibus* (Zurich, 1577): 'If anyone put money out to another, wherewith he buys himself a farm, a manor, lands or vineyards for his own husbandry and gain, I see no reason why a good and honest man may not reap some lawful commodity of the advance of his money, just as the letting and setting of a farm'.

⁴⁴ Jones, *God and the Moneylender*, pp. 20-24. See also Kerridge, *Usury*, pp. 69-70; and especially pp. 91-92, doc. no. 6, from *Enarrationum in Evangelia Matthaei, Marci et Lucae* (1527): 'If thy brother be not thus in need, and, on the contrary is well able to repay the loan, and, out of his gain, some usury on the loans, who, I ask, will deny his benefactor that reward?'.

⁴⁵ Noonan, *Scholastic Analysis*, pp. 370-73. Saumaise (Salmasius), after being forced to flee France, subsequently taught in Holland and Sweden.

⁴⁶ Harkness, *Calvin*, pp. 201-10.

⁴⁷ Noonan, *Scholastic Analysis of Usury*, pp. 365-67.

be admitted to communion service.⁴⁸ In early seventeenth-century England, a Protestant divine (Calvinist) named Roger Fenton (1565-1615), in his *A Treatise of Usurie*, commented that ‘Calvin dealt with usury as the apothecarie doth with poyson’; but as a strong opponent of ‘usury’, Fenton was evidently biased in that view.⁴⁹

Clearly, in the sixteenth and early seventeenth centuries, most followers of Luther and Calvin were more hostile to usury than were contemporary Catholics in continental Europe, and generally more hostile than Calvin himself had been.⁵⁰ For example, as late as the 1620s, the eminent English jurist Edward Coke (1552-1634), made Elizabeth I’s Solicitor General in 1592, unequivocally stated, in pure Scholastic fashion, that by former parliamentary statutes ‘all usury is damned and prohibited’, and that ‘usury is not only against the law of God and the laws of the realm, but against the laws of Nature’.⁵¹ According to Tawney, Protestant preachers of this era were unceasing in their condemnation of the ‘soul-corrupting’ taint of usury, up to the Civil War and Commonwealth-Protectorate era (1642 - 1660).⁵²

Thus, despite the concessions, some explicit, but some grudging to be sure, that Calvin had offered, many or even most early Protestants, especially in England, had both inherited and fully maintained, indeed with some considerable ferocity, the long-traditional Scholastic view that usury was a vile, mortal sin, one ‘against Nature’.

Modifications of the usury prohibition in sixteenth-century legislation: the Low Countries and England

As the eloquent quotation from Lawrence Stone should indicate, the major cost of a continued prohibition against usury in Protestant Europe had been higher interest rates – higher than in any regimes that permitted legal payments of interest, even if regulated. A very major institutional factor that contributed to such a reduction in interest rates was such secular legislation in mid-sixteenth century Europe, laws that marked the most significant breach yet with the usury doctrine. Whether or not that breach had been influenced by the new Calvinist views on interest has yet to be determined; but it is noteworthy that the first such breach took place shortly after the publication of Calvin’s *Institutes*.

⁴⁸ Geoffrey Parker, ‘The Emergence of Modern Finance in Europe, 1500-1750’, in Carlo Cipolla, ed., *The Fontana Economic History of Europe*, Vol. II: *Sixteenth and Seventeenth Centuries* (New York, 1974), p. 538.

⁴⁹ Roger Fenton, *A Treatise of Usurie, Divided Into Three Books: the first defineth what is usurie, the second determineth that to be unlawful, the third removeth such motives as persuade men in this age that it may be lawfull* (London, 1612): electronic resource in the University of Toronto library. Cited in Tawney, ‘Introduction to the *Discourse Upon Usury*’, p. 118; Tawney, *Religion and the Rise of Capitalism*, p. 94; and in Kerridge, *Usury*, p. 32 and n. 40 (but with the incorrect date of 1611).

⁵⁰ See n. 31 above.

⁵¹ Edward Coke, *The Institutes of the Lawes of England*, 4 vols. (London, 1628-44), vol. 3, cap. no. 70, pp. 151-52: and further, that ‘the suppression of usury tendeth to the honour of God’. Cited also in Kerridge, *Usury*, p. 56.

⁵² Tawney, ‘Historical Introduction to *Discourse upon Usury*’, pp. 106-34, esp. p. 117; Tawney, *Religion and the Rise of Capitalism*, pp. 91-115, 132-39, 178-89.

That first breach was an ordinance that Emperor Charles V (r 1519-1556) issued on 4 October 1540, evidently with the support of the *Staten Generaal* of the Habsburg Netherlands, to make interest payments legal up to a limit of 12 percent throughout the Low Countries, but only on commercial loans.⁵³ As noted earlier, that was the permissible rate for commercial loans under ancient Roman Law. All ‘contracts and obligations’ stipulating any higher rates were considered to be usurious (*voor woekerie*).⁵⁴ That led to the modern view that usury is excessive interest. To be sure, the Low Countries were then still loyal to Rome and thus nominally Catholic; but no one can deny the serious inroads that Protestantism, especially Calvinism, was then making and the role that it subsequently played in the Revolt of the Netherlands (1568-1609) against Spanish Catholic rule.

Five years later, in 1545, the English Parliament of Henry VIII followed suit in a statute that, for the first time in English history,⁵⁵ also made interest payments legal, but only up to the lower limit of 10 percent. His statute made no distinctions, however, between commercial and other loans.⁵⁶ This English statute was enacted nine years after Henry VIII’s break with Rome (1536), so that we may consider this to be an act of ‘Protestant’ England, though its Protestantism in this era is still highly disputed, especially with considerable

⁵³ MM. J. Lameere and H. Simont, eds., *Recueil des ordonnances des Pays Bas, deuxième série, 1506 - 1700*, Commission Royale d’Histoire, 6 vols., Vol. IV: *jan. 1536 - dec. 1543* (Brussels: J. Goemaere, 1907), pp. 232-38: text of the usury ordinance on p. 235: ‘ordonneren ende statuteren by desen dat gheen coopluijden hanterende ... niet en sullen mogen geven ‘t gelt op frayt opgewin hoogere dan den pennick twaelf op ‘t hondert voor den jaer ende daeronder, nae’t gewin dat hy waerschuwelijck souden mogen emploieren ‘t selve gelt in coopmanschap...’. See also Herman Van der Wee, *The Growth of the Antwerp Market and the European Economy (fourteenth-sixteenth centuries)*, 3 vols. (The Hague, 1963), Vol. II, 352, evidently citing the same ordinance, but providing an incorrect date of 1543.

⁵⁴ Lameere-Simont, *Recueil*, IV, 235: ‘verclarende alle contract ende obligatien by de welcke men soude mogen nemen groeter gewin dan voorschreven es voor woekerie.’ Note Luther’s German term for usury as *Wucher*: ‘Wo man Geld leihet und dafür mehr oder bessers fodderts nimpt, das ist Wucher in allen Rechten verdampt’. Kerridge, *Usury*, doc. no. 8, p. 97 (*An die Pfarrherren wider den Wucher*, 1540).

⁵⁵ In England, the first statute concerning usury, while leaving prosecution to ecclesiastical courts, was the Statute or Provisions of Merton, in 126 (20 Hen. III, c. 5): published in see Great Britain, Record Commission (T. E. Tomlins, J. Raithby, et al.), eds., *Statutes of the Realm*, 6 vols. (London, 1810-22), Vol. I, p. 5. In 1275, Edward I, by the (undated) *Statutum de Judeismo* forbade Jews from engaging in any form of usury. *Ibid.*, p. 221. When Edward I expelled all Jews from England in 1290, the king cited this ban and the contention that the Jews were now ‘contriving a worse sort of usury’ as the justification. See A. E. Bland, P. A. Brown, and R. H. Tawney, eds., *English Economic History: Select Documents* (London: G. Bell, 1914), doc. no. 8, pp. 50-51. In the early Tudor era, previous statutes upheld the civil enforcement of the traditional ecclesiastical bans against usury: 3 Hen. VII, c. 6 (1487): ‘An Acte Agaynst Usury and Unlawfull Bargaynes’, including ‘drye exchange’; and its amended version in 11 Hen. VII, c. 8 (1495), ‘An Acte agaynst Usurye’, which also forbade selling goods and rebuying them later at a lower price. *Statutes of the Realm*, II, pp. 514 and 574.

⁵⁶ Statute 37 Hen. VIII (1545), c. 9, *Statutes of the Realm*, vol. III, p. 996: ‘An Acte against Usurye’: specifying that ‘no person or persons.. by way or meane of any corrupte bargayne, loone, or eschaunge chevisaunce.. shall have receyve accepte or take, in lucre or gaynes, for the forbearinge or givinge daye of paymment of one hole yere of and for his money ... above the some of tenne poundes in the hundred, and so after that rate...’

persecution of Calvinists, Lutherans, and Anabaptists. Furthermore, Henry's daring 'usury' statute proved to be very short lived, and did not long survive his death. In 1552, the far more radical Protestant government of John Dudley, Duke of Northumberland (r1551-53), ruling for Henry's successor Edward VI (r1547-1553), had Parliament repeal Henry's statute, contending that: 'Forasmuche as Usurie is by the worde of God utterly prohibited, as a vyce moste odyous and detestable'.⁵⁷ According to Tawney, that repeal was undertaken at the urging of such radical reformers as Latimer, Ponet, Lever, and Crowley.⁵⁸

Not until 1571 did Parliament and Henry's daughter Elizabeth (r 1558-1603) dare to restore her father's statute – or rather, the major features of that statute – with the same name.⁵⁹ Contending that the statute of Edward VI (5 & Ed. VI c.20) 'for repressing of Usurie .. hath not done so muche good as was hoped it shoulde' – evidently because it was unenforceable, the new statute repeated the key provisions of the 1545 statute: that any contracts undertaken for 'the payment of any Principall or Money to be lent... for any Usurye in lendynge ... above the Rate of Tenne Poundes for the Hundred for one yere shalbe utterly voyde'. Nevertheless, those who framed this statute were determined to prove their religious *bona fides* in opposing usury in principle by stating (Part IV) that:

Forasmuch as all Usurie being forbydden by the Lawe of God is synne and detestable, bee it enacted That all Usurie, Loane, and forbearing of Money by way of Loane, Chevysaunce, Shyfte Sale of Wares Contracte or other Doynge whatsoever for Gayne ... above the Summe of Tenne Poundes for the Loane or Forbearinge of a Hundred Poundes for one yere ... shall be forfayte so much as shalbe reserved by way of Usurie above the Principall of any Money so to be lent.

We should remember that Dr. Thomas Wilson's famous *Discourse on Usury*, an eloquent diatribe against the 'Damnable Sin of Usury', in all its forms, was written shortly before and published just after this Parliament; and that Wilson was no dogmatic cleric but a very secular person, as a Member of Parliament (for Lincoln), Master of the Court of Requests, Secretary of State, and also, for a brief period, Ambassador to the Netherlands.⁶⁰ Furthermore, the immensely influential Lord Burghley (William Cecil: 1520-1598), Lord Treasurer and Elizabeth's chief advisor, remaining hostile to usury, had initially opposed this legislation, but he finally relented on the grounds that if usury was inescapable then it had to be regulated.⁶¹

⁵⁷ 5 & 6. Edw. VI, c. 20 (1552): 'A Byll against Usurie': in *Statutes of the Realm*, vol. IV, p. 155: also specifying that no one 'shall lende, give, sett owte, delyver or forbear any somme or sommes of moneye... for anny manner of Usuries, encrease, lucre, gayne or interest to be had receyved or hoped for, over and above the somme or sommes so lent... uppon payne of forfeiture the valewe aswell of the somme or sommes so lent... as allso of the Usurie, encrease, gayne or interest thereof, and allso uppon payne of emprysonement.'.. Henry VIII's statute had prescribed triple forfeiture of the combined value of principal and interest for loans made above 10 per cent.

⁵⁸ Tawney, 'Introduction', p. 131.

⁵⁹ Statute 13 Elizabeth I, c. 8 (1571), in *Statutes of the Realm*, vol. IV, p. 542-543.

⁶⁰ Tawney, 'Introduction', pp. 2, pp. 105-117, citing Wilson's comment that 'there be some such laws made by the Pope as be right godly' (p. 113). See also Jones, *God and the Moneylenders*, pp. 24-42.

⁶¹ Jones, *God and the Moneylenders*, pp. 34-42, 55-77. Burghley also agreed with the Calvinist principle that lending to the rich, if they gained from such loans, was permissible (p. 40).

Some of the crown's concern about the validity of this act is reflected in its conclusion, which stipulated that it was to endure for only five years, unless ratified by following Parliaments.⁶² Some other admittedly obscure passages in this act have led to some modern confusion, in particular (or evidently) the words in the usury ban: 'after [above] the Rate of Tenne Poundes in the Hundred *or under* for a yeare'. Richard Tawney interpreted that to mean that rates under ten percent were also declared to be usurious, so that the statute had stipulated this was to be both a minimum and maximum rate.⁶³ But such a reading is not only untenable but incredible. For why would the crown, in an 'Acte agaynst Usurie', specify a *minimum* rate of interest? Somewhat more astutely, Norman Jones, also thought that loan transactions for interest rates under ten percent were also deemed to be usurious, *unless* transacted through the Court of Orphans.⁶⁴ A closer reading of the statute does not, however, justify either of these interpretations. Even less justifiable, indeed ludicrous, is Eric Kerridge's assertion that the 'usury laws' of Henry VIII and Elizabeth were designed only to regulate *interesse*, i.e., the extrinsic titles for payment, as defined by medieval Scholastics.⁶⁵ If so, then why would Edward VI's government have Parliament abolish Henry VIII's 'usury' statute, in 1552?

Nevertheless, despite the other criticisms, we may well agree that both Tawney and Jones were not far off the mark in asserting that, in the following years, the ten percent rate stipulated in the statute did indeed become both a minimum and a maximum rate of interest.⁶⁶ Jones further asserts that a deeper underlying motive for the statute was to lower interest rates. In contending that 'the usury statute of 1571 did lower rates', he offers evidence that the average rate of interest had been about 30 percent in the 1560s, that such rates then fell to an average fell of 20 percent during the 1570s, and to ten per cent, by the eve of Elizabeth I's death and James I's succession in 1603.⁶⁷

Furthermore, for Europe more generally, a now classic study by Homer and Bordo has demonstrated that interest rates experienced a slow but steady decline, in real terms, from the sixteenth to eighteenth

⁶² *Statutes of the Realm*, vol. IV, p. 543. On this see Jones, *God and the Moneylender*, pp. 103-04. In 1598, Parliament finally made the statute permanent. On royal proclamations affirming the statute, see Paul L. Hughes and James F. Larkin, eds., *Tudor Royal Proclamations*, 2 vols. (New Haven and London: Yale University Press, 1964), Vol. II, pp. 485-86.

⁶³ Tawney, 'Historical Introduction', pp. 160-66. The word 'or under' should be taken to mean under one hundred pounds, not the rate itself (in this author's opinion).

⁶⁴ For a detailed discussion of this statute, Jones, *God and the Moneylenders*, pp. 55-77; and for this particular point, p. 63. That interpretation evidently stems from this passage in the act: 'Provided alway, That this Statute doth not extend nor shalbe expounded to extend unto any Allowaunces or Paymentes for the finding of Orphanes according to the ancient Rates of Customs of the Citie of London...' in *Statutes of the Realm*, Vol. IV, p. 542, clause VII).

⁶⁵ Kerridge, *Usury*, pp. 73-74.

⁶⁶ Tawney, 'Introduction', pp. 155-72; Jones, *God and the Moneylenders*, pp. 91-115. Both note that there is no record of any royal or ecclesiastical prosecutions for usury concerning loans with rates under ten percent.

⁶⁷ Jones, *God and the Moneylenders*, pp. 76 - 90, and pp. 116-17; he also cites (p. 79), the interest rates for 1600, as recorded in Stone, *Crisis of the Aristocracy*, p. 530.

centuries.⁶⁸ More detailed evidence for the sixteenth century Low Countries, but limited to the period up to the Revolt of the Netherlands (1568- 1609), shows an even more dramatic decline in nominal interest rates.⁶⁹

Jones's major contribution to this ongoing debate has been to document changes in both attitudes towards usury and in subsequent legislation on usury, which progressively lowered the maximum interest rates, paralleling if not necessarily promoting the historic downward shift in real interest rates.⁷⁰ To be sure, he fully admits the validity of Tawney's comments on the continuing fulminations of conservative clerics against usury, in principle, and in all forms, 'attacks that reached a crescendo in the early seventeenth century, a conservative response to hard economic times.' But he also adduces considerable evidence to show that, by the early seventeenth century, the prevailing views had become those more in accordance with a grudging acceptance of interest on genuine investment loans, in particular those that benefited both parties, as expounded in the writings of Calvin, du Moulin, and Bucer, and more currently, of Gerard de Malynes (fl. 1586 - 1626), an English trade commissioner in the Spanish Netherlands. More and more of English society now viewed usury as extortionate interest, rather than interest per se; and they were also now determined to lower the maximum market and legal rates of interest.

Another very influential set of views were those expounded by Sir Francis Bacon (1561-1626), who served both Elizabeth but especially James I: as Solicitor General (1607), Attorney General (1613), and Lord Chancellor (from 1618). To be sure, he is often quoted as saying that 'Usury is the certainest Meanes of Gaine, though one of the worst'.⁷¹ Yet he also fully recognized that the nation's economic well being depended upon legal lending at interest. Reconciling those views, he contended, as did Burghley and so many others, that if interest (usury) must be permitted it must also be regulated, with the objective of lowering rates. He and others were now arguing that high interest rates were injurious to both agriculture and commerce, that such rates discouraged lending for less profitable enterprises, while concentrating wealth in fewer hands, and thus breeding 'public poverty'. In reply to those who feared that lower legal rates would lead to a flight of capital to the Netherlands, they argued that, on the contrary, the very prosperity of the Netherlands at this time was largely due to its lower interest rates. It is noteworthy that all such arguments were presented on purely economic grounds, with scant attention paid to religious considerations (except

⁶⁸ Sidney Homer and Richard Sylla, *A History of Interest Rates*, 3rd rev. edn (New Brunswick, 1991), pp. 89-143, especially Table 11 (pp. 137-38), and Chart 2 (p. 140). At the same time, we should note that real rates, as well as nominal rates, declined with the Price Revolution era, from ca. 1520 to ca. 1650, but, in the following century, to ca. 1750, any decline in nominal rates may have been offset by the deflationary trends of this era.

⁶⁹ In the Low Countries, *nominal* rates of interest, for short term public loans, were falling during the sixteenth century: in Flanders, from 20.5 percent in 1511-15 to 11.0 percent in 1566-70; and on the Antwerp market, again from 20 percent in 1511 to 10 percent in 1550 (but 14 percent in 1555) Van der Wee, *Antwerp Market*, vol. I: *Statistics*, Appendix 45/2, pp. 525-27.

⁷⁰ For much of the following, see Jones, *God and the Moneylenders*, pp. 145-57, 175-78.

⁷¹ Essay no. 34, 'Of Riches', in Brian Vickers, ed., *The Major Works of Francis Bacon* (Oxford: Oxford University Press, 2002), p. 411. See also Daniel Coquillette, 'The Mystery of the New Fashioned Goldsmiths: From Usury to the Bank of England (1622-1694)', in Vito Piergiovanni, ed., *The Growth of the Bank as Institution and the Development of Money-Business Law*, Comparative Studies in Continental and Anglo-American Legal History vol. 12 (Berlin, 1993), pp. 94-99, citing also a similar statement from John Blaxton, *The English Usurer* (London, 1634).

some who cited Biblical injunctions on charity, but no longer the detailed Scholastic doctrines).⁷²

Many times, in the course of the early seventeenth century, many members of Parliament presented petitions and then conducted fierce debates in both the Lords and the Commons – in 1604, 1606, 1608, 1614, 1620-21 – with the goal of lowering the maximum interest rates.⁷³ Finally, they achieved their long-sought victory, in the Parliament of 1624, in statute 21 James I, c. 17 (also called ‘An Acte agaynst Usury’), which reduced the maximum rate of interest from ten to eight percent.⁷⁴ Significantly, the act began by citing the ‘very great abatement in the value of Land and other the Marchandises Wares and Commodities of this Kingdome’, which ‘abatement’ was blamed on high interest rates, specifically ten percent, to the detriment of those ‘Men unable to pay their Debtes and contynue the maintenance of Trade’, so that, with ‘their Debt dailie increasing they are inforced to sell their Landes and Stockes at very lowe rates, to forsake the use of Merchandize and Trade... and some become unprofitable Members of the Commonwealth’. No mention is made – for the first time in such a parliamentary statute – of any religious arguments against ‘usury’.⁷⁵

Subsequently, the post-Civil War Commonwealth Parliament of 1651 (Cromwell) reduced the maximum rate to 6 percent, a rate confirmed in the new Restoration Parliaments of 1660 and 1661 (Charles II); and finally, in 1713, Parliament reduced the maximum rate once more: to 5 percent. That rate was maintained until 1854, when Parliament finally abolished the usury laws, i.e., the legal maximum interest rates.⁷⁶

⁷² Jones, *God and the Moneylenders*, pp. 183-86. Another prominent voice of this era was Thomas Culpepper, author of *A Tract Against Usurie Presented to the High Court of Parliament*, using the same arguments.

⁷³ See Jones, *God and the Moneylenders*, pp. 145-57, 175-98. For the debates, see *Journal of the House of Commons* (Great Britain, History of Parliament Trust, London: 1802), Vol. I: 1547 - 1629); *Journal of the House of Lords* (Great Britain, History of Parliament Trust, London: 1767-1830), Vol. I: 1509-1577; Vol. II: 1578-1614; Vol. III: 1620-1628. See in particular, in vol. III, ‘An Act against Usury’, [returned to the Commons] in the debates for 3 - 24 April 1624. These documents are all available from *British History Online*, at: <http://www.british-history.ac.uk/subject.aspx?subject=6&gid=44>

⁷⁴ *Statutes of the Realm*, vol. IV: pp. 1223-24. The act specified a triple forfeiture of both principal and interest for those convicted of demanding and accepting interest payment above eight percent.

⁷⁵ *Ibid.*, p. 1224: the act concluded by stating, however, ‘That no Wordes in this Law contayned shalbe construed or expounded to allow the practise of Usurie in point of Religion or Conscience’. See Jones, *God and the Moneylenders*, p. 193-94, contending that a committee struck out the proposed the long traditional words that ‘All usury is forbidden by the law of God’, contending that such issues should be left to the Divines (Protestant ministers). See Jones, *God and the Moneylenders*, p. 197, stating that this act, ‘marks the official end of the medieval usury law in England’. See also the debates in *The House of Commons Journal*, vol. I, pp. 610-12 (May 1621), 679-91 (March - April 1624: esp. p. 691, for 27 April: ‘An Act against Usury’: passed).

⁷⁶ Commonwealth Act (1651: all the Commonwealth acts were declared null with the Restoration in 1660); confirmed by 12 Charles II, c. 13 (1660) and 13 Charles II, Stat. 1, c. 14 (1661); 12 Anne, Stat. 2, c. 16 (1713); and the repeal of the usury laws, in 17 & 18 Victoria c. 90 (1854). For the later statutes, see R. D. Richards, *The Early History of Banking in England* (London: P. S. King, 1929; New York: A. M. Kelly, 1965), pp. 19-20.

The English usury laws and credit in early modern England

Collectively, this parliamentary legislation from 1571 to 1713 did have a profound and positive influence in fostering economic growth in early-modern and Industrial-Revolution England, especially by expanding the supply of credit, both private and public. First, one may readily contend that any measures that led, directly or indirectly, to a general reduction in market rates of interest would have promoted commerce and economic growth in general; but many historians would rightly object to bestowing such credit on mere parliamentary legislation.

For the particular purposes of this study, the significance of this parliamentary legislation lies rather in its importance for the use of two specific financial instruments: discounted bills of exchange (acceptance bills) and the subsequent adoption of continental *rentes* (annuities) in English government finance. For the first of these instruments, the importance of the legislation was in the legal endorsement of interest rates, albeit limited rates. For the second instrument, the contrary importance lay in the legal limits imposed on those rates.

THE BILL OF EXCHANGE: The evolution of the modern Acceptance Bills

The development of the bill-of-exchange, the creation of Italian merchants engaged in long-distance trade, during the later thirteenth and fourteenth centuries, was one of their greatest achievements and most important contributions, not just to commerce and finance, but to the expansion of the European economy: indeed, the beginnings of the Great Divergence between East and West. In essence, the bill of exchange, which came to known as ‘acceptance bills’, from the seventeenth century (to the present), was a combined loan and transfer instrument that permitted merchants to finance trade between distant cities and also to remit or transfer funds, but in more general terms to finance all forms of European commerce.⁷⁷

For such international financial transactions, the bill of exchange (*cambium*) required two principals in one city and their two agents in a distant, foreign city. One principal (A: the *datore* or *rimettente*) furnished or lent funds to the other principal (B: the *prenditore* or *traente*), in the local currency of their city – e.g., Florentine florins. Principal A did so by ‘buying’ from Principal B a bill of exchange that B ‘drew’ for payment on his agent C, the payor (*pagatore*) in some foreign city, for payment in the local currency of that city: e.g., pounds *groot* Flemish, in Bruges. The bill was drawn to be payable to Principal A’s agent there, in Bruges, agent D, the payee (*beneficiario*), who, on receiving the bill in the mail presented it for acceptance to agent C; and once C had accepted the bill, he was legally bound, by the Law Merchant, to make full payment on the specified maturity date. Agent D, on receiving payment, then purchased a return bill (*recambium*) from another merchant, who drew the bill for payment on his agent (or his own principal) in Florence, to be made payable, in florins, to merchant Principal A. Note that both of these transactions were conducted in the local currency of the two cities concerned, thus obviating the costly and dangerous necessity

⁷⁷ See, in particular, Markus A. Denzel, ‘The European Bill of Exchange: Its Development from the Middle Ages to 1914’, in Sushil Chaudhuri and Markus A. Denzel, eds., *Cashless Payments and Transactions from the Antiquity to 1914*, Beiträge zur Wirtschafts-und Sozialgeschichte, no. 114 (Stuttgart: Steiner Verlag, 2008), pp. 153-94; and Denzel, ‘The Curial Payments System’, pp. ; John Munro, ‘Bullionism and the Bill of Exchange in England, 1272-1663: A Study in Monetary Management and Popular Prejudice’, in Center for Medieval and Renaissance Studies, University of California (Fred Chiappelli, director), ed., *The Dawn of Modern Banking* (New Haven and London: Yale University Press, 1979), pp. 169-239.

of physically transporting precious metals between the two cities.

Since the bill of exchange served dual functions, we can readily discern the two principal factors that explain its origins. The first was the spreading stain of destructive international warfare across western Europe and the entire Mediterranean basin, from the 1290s, through the subsequent Hundred Years' War era (1337-1453), with the growing risks of piracy, brigandage, confiscation, and theft. A related problem was the economic nationalism and protectionism that such conflicts promoted, especially in the form of 'bullionist' policies designed to prevent the export of precious metals and to direct bullion into the rulers' mints, all the more so since coining metals provided them with an important source of profit, known as seigniorage, that proved important in financing warfare.⁷⁸

The Medieval Bill of Exchange and the constraints of the usury doctrine.

An equally important factor was the impact of the usury prohibition on its use and diffusion, at least according to Raymond de Roover.⁷⁹ He contended that merchants used this contract specifically to evade the usury ban prohibition by including and 'disguising' interest payments in elevated exchange rates. But the Church was never deceived in this respect. Theologians did not, in fact, consider the *cambium* to be a *mutuum*, but rather a licit purchase of funds in a foreign bank or foreign merchant's account.⁸⁰ In any event, merchants could profit from a bill of exchange only by purchasing a *recambium*, or return bill, for which the exchange rate and thus the profit was uncertain. Yet the European bill of exchange did offer advantages that the comparable Arabic contract, known as the *suftaja* (or *suftadja*) never did. Though long predating the Italian bill of exchange, the latter never involved the exchange of currencies and hence this opportunity for profit.⁸¹ Of much greater importance was the very important role that European bills of exchange played in financing international trade, from the later thirteenth century, and also in increasing the income velocity of money, by obviating the international transport of precious metals, during which those metals would have lain idle.

Nevertheless, as de Roover fully admitted, the usury ban still posed one serious impediment, in preventing commercial bills of all kinds from becoming fully negotiable credit instruments, for reasons

⁷⁸ Munro, 'Bullionism and the Bill of Exchange', pp. pp. 169-239; John 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*, 88:1 (2001), 1 - 47. One of Elizabeth I's advisers, named Taverner, contended (1570) that 'marchauntes naturall exchange was first devised and used by the trewe dealing marchauntes immediately after that princes did inhibit the cariadge of gould and silver out of their Realmes'. In Richard Tawney and Eileen Power, eds., *Tudor Economic Documents*, 3 vols. (London, 1924), vol. III, no. iii.5, p. 362.

⁷⁹ See de Roover's publications cited in note 11, above.

⁸⁰ See the arguments cited in Munro's publications in nn. 20, 77-78 above.

⁸¹ Such transactions were undertaken by all parties in dinars and dirhams, the almost universal gold and silver coinages of the medieval Arabic world in which the *suftaja* contract was used – from Granada to Baghdad. See Eliyahu Ashtor, 'Banking Instruments Between the Muslim East and the Christian West', *Journal of European Economic History*, 1:3 (Winter 1972), 553 - 73, esp. pp. 553-58, 567-73; Udovitch, 'Bankers without Banks', pp. 265-73; Abraham Udovitch, *Partnership and Profit in Medieval Islam* (Princeton: Princeton University Press, 1970).

explained in the following analysis. The usury ban dictated, in essence, that such bills had to be held for redemption only on the specified date of maturity.

The origins of discounting in the sixteenth century: the importance of the usury legislation

From the sixteenth century, however, bills of exchange and similar commercial bills were no longer held to maturity, but came to be more and more commonly sold in advance of maturity, necessarily at discount. In that form, they were then transferred as fully negotiable credit instruments – either in bearer form or as endorsed bills – to various other and many other merchants before being finally redeemed (for cash, goods, or services) on the stipulated maturity date. Anyone who sold bills before the date of maturity was necessarily required to do so at some negotiated rate of discount, simply because no rational merchant would have bought such a bill for its full, face value, only to collect the same amount on maturity, thus forgoing the implicit interest involved in this credit transaction. Obviously, during the medieval era discounting bills, by this procedure, by so openly revealing the interest involved in these exchange transactions, would have been seen as a violation of the usury ban.

As Van der Wee has demonstrated, the innovation and then the spread of discounting commercial bills, of all kinds, did not really take place until after the Habsburg government had, in 1540, made interest payments fully legal (up to 12 percent, as noted).⁸² The same may be said for Protestant England, though the real spread of discounting evidently took place considerably later, in the seventeenth century⁸³. Without any doubt, the legalization of interest, despite the legal limits on rates imposed in Protestant countries, was a major and vital factor in making commercial bills fully negotiable (and not just transferable), and thus capable of expanding the supplies of mercantile credit and money itself. But it was not the only factor.

The Coming of Negotiability of Commercial Bills

The other related legal condition concerned the full negotiability of commercial bills (bills of exchange and letters obligatory, or promissory notes): legislation to provide full recognition of the right of third parties, those who had bought the bills from previous holders, to collect the full stipulated amount on maturity, and without any legal disputes. As contended in earlier publications, the first important step

⁸² Herman Van der Wee, 'Monetary, Credit, and Banking Systems', in E.E. Rich and Charles Wilson, eds., *The Cambridge Economic History of Europe*, Vol. V: *The Economic Organization of Early Modern Europe* (Cambridge, 1975), pp. 320-25; Van der Wee, 'Anvers et les innovations de la technique financière aux XVIe et XVIIe siècles', *Annales: E.S.C.*, 22 (1967), 1067-89, republished as 'Antwerp and the New Financial Methods of the 16th and 17th Centuries', in Herman Van der Wee, *The Low Countries in the Early Modern World*, trans. by Lizabeth Fackelman (Cambridge: Cambridge University Press, 1993), pp. 145-66; Van der Wee, 'European Banking in the Middle Ages and Early Modern Period (476-1789)', in Herman Van der Wee and G. Kurgan-Van Hentenrijk, eds., *A History of European Banking*, 2nd edn. (Antwerp, 2000), pp. 152-80; Van der Wee, *Antwerp Market*, II, pp. 349-95. He notes that the first record of such a discounted bill in Antwerp was dated 1536 (Kitson papers, in Cambridge), but he also contends that discounting, with endorsements, became general only much later.

⁸³ John H. Munro, 'English "Backwardness" and Financial Innovations in Commerce with the Low Countries, 14th to 16th Centuries', in Peter Stabel, Bruno Blondé, and Anke Greve, eds., *International Trade in the Low Countries (14th - 16th Centuries): Merchants, Organisation, Infrastructure*, Studies in Urban, Social, Economic, and Political History of the Medieval and Early Modern Low Countries, no. 10 (Leuven-Apeldoorn, 2000), pp. 105-67. See also Munro, 'Financial Revolution', pp. 505-62.

towards establishing legal negotiability had taken place in the London Mayor's law-merchant court in October 1437.⁸⁴ This important legal decision concerned a formal bill of exchange transaction between English merchants: two agents in Bruges, and two principals in London. The Bruges agent was John Audley, who, as the *taker* or *drawer*, drew the bill for payment upon his master Elias Davy in London, instructing Davy as the *drawee/acceptor/payer* of the bill, to pay the designated *payee*, 'John Burton or the bearer of this letter of payment' the sum of £30 sterling in London, on the following 14 March 1436. When the bearer of the bill, John Walden, presented it for payment, Davy refused to accept it – he dishonoured the bill. Citing the precedents of the international Law Merchant,⁸⁵ the Mayor ruled that the bearer who presented the bill had the same rights and legal standing as the stipulated payee (Burton), and thus ordered to Davy to pay Walden the full amount owing, plus all legal costs.⁸⁶

That law-merchant court verdict served as a precedent not only for subsequent English legal cases, but also – in all likelihood – for similar law-merchant cases concerning redemption of bearer bills, and involving English merchants, at Lübeck in 1499 (reconfirmed in 1502);⁸⁷ in Antwerp, in 1507;⁸⁸ and in Bruges, in 1527.⁸⁹ Herman Van der Wee has rightly emphasized that, despite earlier civic-court precedents, Europe's first national legislation to recognize the full legal rights of bearers or other such third parties in commercial bills took place in the Habsburg Low Countries, in a series of Imperial ordinances enacted in March and May 1537 and October 1541. They permitted the bearer to sue any and all prior assignors of the note for the full payment, and established these principles of financial assignment, with full legal guarantees

⁸⁴ Munro, 'Financial Innovations', pp. 105-67; Munro, 'New Institutional Economics', pp. 1 - 47; Munro, 'Origins of the Financial Revolution', pp. 505-62.

⁸⁵ For the origins and development of Law Merchant in England (from 1275), see John Munro, 'The International Law Merchant and the Evolution of Negotiable Credit in Late-Medieval England and the Low Countries', in Dino Puncuh, ed., *Banchi pubblici, banchi privati e monti di pietà nell'Europa preindustriale* (Genoa, 1991), pp. 49 - 80; and Munro's other publications cited in nn. 20, 77, 78, and 83 above.

⁸⁶ See the documents in Hubert Hall, ed., *Select Cases Concerning the Law Merchant*, 3 vols. (London, 1908-32), vol. III: *Central Courts, Supplementary, AD. 1251 - 1779*, Selden Society Publications Vol. 49, 1932 (London, 1932), pp. 117-19 (Latin and French, with English translations).

⁸⁷ Pierre Jeannin, 'De l'arithmétique commerciale à la pratique bancaire', in Dino Puncuh and Giuseppe Felloni, eds., *Banchi pubblici, banchi privati e monti di pietà nell'Europa preindustriale: Amministrazione, tecniche operative e ruoli economici*, Atti della società Ligure di storia patria, new series, vol. 31, 2 vols. (Genoa, 1991), vol. I, pp. 95 - 116: citing Wilhelm Ebel, *Forschungen zur Geschichte des lübischen Rechts*, I: *Dreizehn Stücke zum Prozess-und Privatrecht* (Lübeck, 1950), p. 135.

⁸⁸ See the publications of Van der Wee cited in n. 82 above.

⁸⁹ Abbott Payson Usher, *The Early History of Deposit Banking in Mediterranean Europe*, vol. I: *The Structure and Functions of the Early Credit System: Banking in Catalonia: 1240-1723*, Harvard Economic Studies, vol. 75 (Cambridge, Mass., 1943; reissued New York, 1967), pp. 98-9, citing a document in Louis Gilliodts-Van Severen, ed., *Coutume de la ville de Bruges*, Commission Royale d'Histoire (Brussels, 1875), II, no. 127, p. 318. See also Raymond de Roover, *Gresham on Foreign Exchange: an essay on early English Mercantilism* (Cambridge, MA: Harvard University Press, 1949), pp. 117-52, citing the text of the ordinance of the 1537 Estates General discussed below in n. 90.

and protection for the bearer, on a fully national basis.⁹⁰ In England, the rulings of law courts – first law-merchant courts and then common-law courts – had as much validity, in establishing commercial law, as did Parliamentary statutes. In fact, Parliament did not enact similar formal legislation until as late as 1702-03: in the Promissory Notes Act, which made all promissory notes fully transferable, whether to order by endorsement or to bearer, ‘according to the custom of merchants ... as is now used upon Bills of Exchange’.⁹¹

For early modern England, the vital economic importance of discounting commercial bills, formally transferred from one party to another by endorsement, which became both a formal and customary procedure by the early seventeenth century, cannot be underestimated. In Great Britain, the primary role that both English and Scottish banks played in financing the Industrial Revolution was in discounting a wide variety of commercial bills: acceptance bills, inland bills, promissory notes. That was especially true in supplying industry, commerce, and agriculture with their requirements for short-term working-capital, which was then relatively more important than fixed capital formation.⁹²

In financing international trade, upon which global economic growth so vitally depended, international acceptance banking -- i.e., discounting – remained a vitally important function of most European banks, large and small. On the eve of World War I, the three leaders by annual volume of acceptances were now German banks or banks of German origin: the Dresdner Bank, with £14.4 million sterling, Kleinwort & Sons (a German bank in England), £13.6 million; the Discontogesellschaft of Berlin, £12.5 million, and H. Henry Schröder & Co. (another German bank in England), £11.6 million.⁹³

RENTES (annuities) and the English ‘Financial Revolution’

If England’s acceptance of some legal rate of interest, from the time of Elizabeth I (i.e., from 1571) proved to be so important for its subsequent development of its financial and commercial institutions, the

⁹⁰ Van der Wee, ‘Credit and Banking Systems’, p. 326: ‘...in this way, the various transferring creditors remained jointly responsible for payment’; Van der Wee, *Growth of the Antwerp Market*, II, p. 344. Usher, *Deposit Banking*, pp. 98-9; and De Roover, *Gresham*, pp. 117-52. For the texts (in Flemish) of the 1537 and 1541 Imperial decrees, see Lameere and Simont, *Recueil des ordonnances des Pays Bas*, Vol. IV, pp. 15-17 (7 Mar 1537), 34-35 (25 May 1537), and pp. 329-31 (31 Oct. 1541). The original documents are in the Algemeen Rijksarchief van België, Rekenkamer, no. 110, fols. 218, 240, 243.

⁹¹ ‘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, pp. 355-56. See also James Milnes Holden, *The History of Negotiable Instruments in English Law* (London: The University of London, 1955), pp. 55, 73-80; Van der Wee, ‘Credit and Banking Systems’, pp. 347-49; Richards, *Banking*, pp. 44-6; Eric Kerridge, *Trade and Banking in Early Modern England* (Manchester: Manchester University Press, 1988), pp. 71-5; and James Steven Rogers, *The Early History of the Law of Bills and Notes: A Study of the Origins of Anglo-American Commercial Law* (Cambridge: Cambridge University Press, 1995), pp. 183-5; Munro, ‘The International Law Merchant’, pp. 49 - 80.

⁹² Rondo Cameron, ‘Banking in England’, in Rondo Cameron, ed., *Banking in the Early Stages of Industrialization: A Study in Comparative Economic History* (New York: Oxford University Press, 1967), pp. 15-59.

⁹³ Stanley Chapman, *The Rise of Merchant Banking* (London and Boston: Allen & Unwin, 1984), Table 7.2, p. 121.

imposition of maximum interest rates was also important for the development another so-called ‘Financial Revolution’: a system of national government finance based not on interest-bearing loans but on the sale of annuities, known as *rentes* on the continent. In England, it began with the Glorious Revolution of 1688. The initial importance of the Glorious Revolution was the overthrow of the Catholic king James II (r 1685-1688) and his replacement by and with the joint rule of his Protestant daughter Mary II (r 1689-1694) and her husband William III (1689-1702), a Dutch Calvinist prince and the *stadhouder* of five of the seven United Provinces, also known as the Dutch Republic. Since he had many Dutch financial advisors, one may well conjecture that they imported into England the legal and institutional foundations of what became its permanent, funded, national debt: beginning with the Million Pound Loan of 1693 (in fact, a life-time annuity) and the creation of the Bank of England in 1694 (providing a permanent loan of £1.2 million, later increased to a total of £11.689 million), and completed by ‘Pelham’s Conversion’ and consolidation of the entire national debt, from 1749-1757, into the Consolidated Stock of the Nation (Consols), in the form of perpetual annuities. The role of William’s early government in this ‘financial revolution’ is quite clear, because his ascension also engaged England in his ongoing and extremely expensive war with France, under the reign of Louis XIV (r. 1643-1715), and his successors.⁹⁴

That debt was national, because it was the responsibility of the nation itself, but especially of its Parliament, and not that of the king personally. It was funded, because Parliament voted specific taxes to finance the annual payment costs of the national debt. And it was permanent because it was in the form, as just noted, of *perpetual* though state-redeemable annuities, with no interest-bearing loans or bonds (having specific maturity dates).

England was indeed a very late-comer in adopting this form of public finance, which had begun in the early thirteenth century, in the northern French counties, including Flanders. From there it spread into the subsequent Burgundian and Habsburg Low Counties, and was adopted by the young Dutch Republic, from the 1580s. Indeed, it became the prevalent form of public finance in the kingdom of France itself, in Habsburg Spain (from the 1492 unification), and in many of the German principalities of the Habsburg Holy Roman Empire, certainly by the sixteenth century.⁹⁵

The thirteenth-century anti-usury campaign and the origins of the European rentes

⁹⁴ See in particular Peter G. M. Dickson, *The Financial Revolution in England : a Study in the Development of Public Credit, 1688-1756* (London: Macmillan, 1967), pp. 3-75; Munro, ‘Origins of the Financial Revolution’, pp. 505-62.

⁹⁵ Marc Boone, Karel Davids, and Paul Jannssens, eds., *Urban Public Debts: Urban Government and the Market for Annuities in Western Europe (14th-18th Centuries)*, Studies in European Urban History, 1100-1800, no. 3 (Turnhout: Brepols, 2003); James D. Tracy, *A Financial Revolution in the Habsburg Netherlands: Renten and Renteniers in the County of Holland, 1515 - 1565* (Berkeley-London, University of California Press, 1985); C. J. Zuiderduijn, *Medieval Capital Markets: Markets for Renten, State Formation, and Private Investment in Holland (1300 - 1550)*, Global Economic History Series, vol. 2 (Leiden and Boston: Brill, 2009); Marjolein ‘t Hart, ‘The Merits of a Financial Revolution: Public Finance, 1550 - 1700’, in Marjolein ‘t Hart, Joost Junker, and Jan Luiten van Zanden, eds., *A Financial History of the Netherlands* (Cambridge and New York: Cambridge University Press, 1997), pp. 11-36; Oscar Gelderblom and Joost Jonker, ‘Public Finance and Economic Growth: the Case of Holland in the Seventeenth Centuries’, *Journal of Economic History*, 71:1 (March 2011), 1-39; Munro, ‘Origins of the Financial Revolution’, pp. 505-62.

As contended in a previous publication,⁹⁶ the thirteenth-century origins of this ‘financial revolution’ can be found in the reaction to the vigorous intensification of the anti-usury campaign, especially following Lateran IV, held in 1215. Along with a full endorsement of the anti-usury provision of Lateran III (1179), prescribing the onerous punishment of excommunication for all unrepentant usurers, Lateran IV provided two additional important features. First, it launched a vicious attack on Jewish money-lenders, for their supposed ‘treachery’ and ‘cruel oppression’ in extorting ‘oppressive and excessive interest’, i.e., beyond variously imposed legal limits, chiefly enacted for pawn-broking, whose practice by non-Christians had long been accepted, in many European countries, though barely tolerated.⁹⁷ This attack made the sin of usury appear all the more heinous, to a largely anti-Semitic public. Second, this council now required all Christians to make annual confessions to priests, including confessions of usury.

Those two provisions were crucial in allowing two new priestly preaching orders to conduct so successfully the ensuing anti-usury campaign. The first was the Franciscans, or the Order of Friars Minor, founded c.1206-10 (by St. Francis of Assisi); and the second was the Dominicans, or Order of Friars Preacher, founded in 1216 (by St. Dominic). These mendicant friars supplemented the Lateran decrees with their own lurid, utterly diabolic *exempla*: horrifying stories about the ghastly, agonizing fates awaiting all usurers in the eternal fires of Hell. Endorsing these dire preachings was the most famous literary tract of this era: the *Divine Comedy* of the Florentine Dante Alighieri (1265-1321), which placed usurers in the lower depths of Hell, as ‘the last class of sinners that are punished in the burning sands’.⁹⁸

The impact of the Franciscan and Dominican preaching orders also served to convince most secular governments of their sworn duty to enforce the anti-usury bans, with harsh, pitiless vigour. Further strengthening the anti-usury campaign were the papal *Decretales* that Pope Gregory (r1227-1241) issued in 1234. They commanded all Christian rulers to expel all usurers and to nullify all wills and testaments of unrepentant usurers. Furthermore, any priests who permitted Christian burials of usurers were themselves to be punished as usurers.

Even earlier, from the 1220s, many northern French towns had resorted to a novel form of public finance that attracted funds from investors who now feared the consequences of engaging in interest-bearing loan contracts.⁹⁹ According to Pierre Desportes’ history of late-medieval Rheims, local clerics had threatened the local bourgeoisie with a veritable ‘reign of terror’, and the irredeemable loss of their immortal souls if they were to engage in usury.¹⁰⁰ In his study of thirteenth-century Flanders, Georges Bigwood asserted that

⁹⁶ See Munro, ‘Origins of the Financial Revolution’, pp. 505-62.

⁹⁷ One major exception was medieval England: see n. 55 above.

⁹⁸ Canto XVII of *Inferno*, in Dante Alighieri, *The Divine Comedy*, Carlyle-Okey-Wicksteed translation, ed. C.H. Grandagent, Modern Library Editions (New York, 1950), p. 93.

⁹⁹ The first recorded town to do was Troyes, the major town of the Champagne Fairs, just before 1228, and again in 1232. Subsequently, similar sales of *rentes* are recorded in the treasurer’s accounts of many neighboring towns, in Artois, Picardy, and Flanders, from the following indicated dates: Rheims (1234), Auxerre (1235), Arras (1241), Douai (ca. 1250), Roye (1260), Calais (1263), Saint-Riquier (1268), Saint-Omer (1271), and Ghent (before 1275). See Munro, ‘Financial Revolution’, pp. 524-27.

¹⁰⁰ Pierre Desportes, *Reims et les Rémois au XIIIe et XIVe siècles* (Paris: A & H Picard, 1979), pp. 126, 131.

‘the struggle against usury was energetically and remorselessly conducted’ by the Church, town governments, and the counts of both Flanders and Artois.¹⁰¹

The alternative investment contract that these merchants and financiers chose to pursue, with the active encouragement of the town governments, was the *rente*: the purchase, with a fixed capital sum, of a life-time or perpetual stream of income. Once the capital had been furnished to the government in buying such *rentes*, the buyer could never request the return of his capital. A direct link between the thirteenth-century anti-usury campaign and the resort to *rentes* or annuities in urban (and subsequently in territorial) public finances can be seen in various ecclesiastical diatribes against such *rente* contracts that soon followed. In 1250-51, however, Pope Innocent IV (r 1243-1254) responded to these critics by declaring the new *rente* contracts to be fully licit (as were any real-estate rent contracts) on the grounds that they were not loans, because they never had to be repaid, but instead legitimate ‘contracts of sale’, in purchasing a future stream of income. Nevertheless, his views were not universally accepted; and not until the fifteenth-century were they finally and fully ratified by three papal bulls: those of Martin V (*Regimini*, 1425), Nicholas V (*Sollicitudo pastoralis*, 1452), and finally, Calixtus III (*Regimini*, 1455).¹⁰²

Government financing of rentes: the imposition of excise taxes

One particularly contentious issue was the fiscal source to be used for financing the annual annuity payments and any redemptions. Since these three fifteenth-century papal bulls had clearly stipulated that the *rente* contract had to have the characteristics of a standard real estate contract, these bulls also stipulated that such payments had to be based on the incomes derived from such real properties. The Church and canon lawyers accepted the contention that excise taxes on the consumption of such standard staples as bread, meat, fish, textiles, beer and wine all met this test, because they were all products, directly or indirectly, of the land or real property. The town accounts of the Low Countries, in the late-medieval and early-modern eras, prove that such excise taxes were the sole source of revenues used to finance life-rents (*lijfrenten*), while real-estate rental incomes were more commonly used to finance perpetual rents (*erfelijk renten*), reserving property taxes and other direct taxes to finance other expenditures. Certainly, excise taxes – which everyone, or all urban inhabitants, rich and poor alike, had to pay – were the much more regressive, and effectively transferred income from the lower to the upper strata of society (i.e., those owning *rentes*). Indeed, excise taxes became the major source of municipal income throughout the Low Countries from the later thirteenth and fourteenth centuries, to the French Revolution.¹⁰³

¹⁰¹ Georges Bigwood, *Le régime juridique et économique du commerce de l'argent dans la Belgique du moyen âge*, Academie Royale de Belgique, Classe des Lettres, vol. XIV, 2 vols. (Brussels: Academie Royale, 1921-22), Vol. I, p. 567; also pp. 568-603. See also Carlos Wyffels, ‘L’usure en Flandre au XIII^e siècle’, *Revue belge de philologie et d’histoire/Belgisch tijdschrift voor filologie en geschiedenis*, 69:4 (1991), 853-71.

¹⁰² See Munro, ‘Financial Revolution’, pp. 505-62.

¹⁰³ John Munro, ‘The Usury Doctrine and Urban Public Finances in Late-Medieval Flanders (1220 - 1550): Rentes (Annuities), Excise Taxes, and Income Transfers from the Poor to the Rich’, in Simonetta Cavaciocchi, ed., *La fiscalità nell’economia Europea, secoli XIII - XVIII/ Fiscal Systems in the European Economy from the 13th to the 18th Centuries*, Atti della ‘Trentanovesima Settimana di Studi’, 22 - 26 aprile 2007, Fondazione Istituto Internazionale di Storia Economica ‘F. Datini’, Prato, Serie II: Atti delle ‘Settimane de Studi’ e altri Convegni no. 39 (Florence: Firenze University Press, 2008), pp. 973-1026.

England, however, was again tardy in introducing this form of continental taxation – and the reasons for such tardiness and the tardy introduction of its own ‘financial revolution’ have yet to be fully explained.¹⁰⁴ Not until July 1643, shortly after the outbreak of the Civil War between Parliament and the Crown (1642-1651), did the ‘Long Parliament’, under the leadership of John Pym, accept this form of taxation, in order to finance its military engagements.¹⁰⁵ Such taxation of course became permanent. Furthermore, from the 1660s, with the Restoration of the Monarchy (Charles II, in 1660), but also with the onset of the era of so-called ‘New Colonialism’, the English government was receiving growing revenues from import duties on such colonial products as tobacco, tea, sugar, rum, Indian cotton textiles, timber, and iron, in addition to the long traditional duties on wine imports. The combination of excise taxes and the new customs duties soon became the principal mechanism for financing the government, and thus provided the necessary means for financing England’s subsequent Financial Revolution, from the 1690s, and its numerous wars. In the later eighteenth-century, the sum of excise and import-customs duties on such consumables accounted for about 78.8 percent of the ‘Major Taxes’ (accounting for over 90 percent of total taxes), while direct taxation (chiefly the land tax) accounted for only 21.2 percent.¹⁰⁶

State redemption of rentes (annuities) and their negotiability

The other major issue considered by the three fifteenth-century papal bulls was the redemption of civic and state *rentes*. In accordance with the papal edict of Innocent IV in 1250-51, they stipulated that the issuers (sellers) had the sole right to redeem all their *rentes*, at their own discretion; for if the buyer could demand redemption then *rentes* would become usurious loans. Otherwise, *rentes* were totally free from the taint of usury. The papal bulls nevertheless obligated the issuer-sellers to redeem their *rentes* for the full principal or ‘par’ value – but obviously in nominal and not real terms. The problem for the buyers remained an obvious one: if they wanted to regain some or all of the capital invested in *rentes*, they would have to seek some third party to buy that claim from them. Since perpetual *rentes* were by their nature heritable, they also came to be considered transferable to such third parties.¹⁰⁷

The final resolution of this problem was found with the full, complete establishment of the legal principles of negotiability, first, as indicated earlier, in the Habsburg Netherlands in the years 1537 to 1541.

¹⁰⁴ One may contend that until the early seventeenth century customs revenues, first from wool and then from cloth export taxes, had generally proved sufficient to obviate institutional reforms in both national taxation and public borrowing. For the most recent investigation of these complicated issues, see Patrick O’Brien, ‘The Nature and Historical Evolution of an Exceptional Fiscal State and Its Possible Significance for the Precocious Commercialization and Industrialization of the British Economy from Cromwell to Nelson’, *Economic History Review*, 2nd ser., 64:2 (May 2011), 408-46.

¹⁰⁵ See Maurice Ashley, *Financial and Commercial Policy Under the Cromwellian Protectorate* (Oxford: Oxford University Press, 1934; revised edn: London: Frank Cass and Co. Ltd, 1962), chapter VII: ‘Taxes, ii. Excise’, pp. 62-71; Patrick O’Brien and Paul Hunt, ‘The Emergence and Consolidation of Excises in the English Fiscal System before the Glorious Revolution’, *British Tax Review*, 1 (1997), 35-58; Patrick O’Brien, ‘The Political Economy of British Taxation’, *Economic History Review*, 2nd ser., 41:1 (Feb. 1988), 1-32; William Ashworth, *Customs and Excise: Trade, Production and Consumption in England, 1640 - 1845* (Oxford and New York: Oxford University Press, 2003).

¹⁰⁶ O’Brien, ‘Political Economy of British Taxation’, pp. 8-17, esp. Table 5, p. 11.

¹⁰⁷ Munro, ‘Origins of the Financial Revolution’, pp. 505-62.

By that time, the Antwerp *beurs* (*bourse*), established in 1531, was becoming an international market for European *rentes*, especially for the Spanish Habsburg version known as *juros*. Subsequently, the Amsterdam *beurs*, founded in 1608, came to serve this very same function.¹⁰⁸ So did the London Stock Exchange, which began, in the mid 1690s, as an informal association of stock jobbers in the coffee houses of Exchange Alley; in 1760, a group of 150 brokers founded their own club to sell stocks; and in March 1801 this group reconstituted themselves more formally as the London Stock Exchange.¹⁰⁹

The Importance of the English Financial Revolution for the Industrial Revolution

These financial developments and their link to the usury laws had a very considerable importance for Great Britain's future economic development, especially during the Industrial Revolution era. In the first place, this Financial Revolution was successfully established without any conflicts with the current usury legislation, for the very simple reason that the annuities composing the national debt – all in the form of perpetual annuities from 1721 – were not loans, within the meaning of the usury statutes. As noted earlier, Parliament had lowered the legal maximum limit on interest rates to just five percent in 1713, a limit that remained in force until the abolition of the usury laws in 1854. Second, the legal status of these government annuities (Consols) as fully negotiable credit instruments, fully marketable on the London and Amsterdam exchanges, made them far more attractive investment instruments than were any comparable state bonds, which lacked such conditions of negotiability, and thus lacked ready liquidity. Third, because of these features, the government was able to reduce the costs of state borrowing from the 14.0 percent paid on the 1693 Million Pound Loan (annuity) to just 3.0 percent, with the successful completion of Pelham's Conversion (into the Consolidated Stock of the Nation) in 1749 - 57. Since the state always has the first call on any available investment funds – in order to finance the defence of the nation -- that reduction greatly benefitted investments in the private sectors by eliminating the well known 'crowding out' effects of government borrowing. Fourth, the great success of these fully negotiable Consols made them the most popular form of bank collateral for businessmen, merchants, and industrialists who constantly needed to borrow funds, especially for their working capital needs. Without the Financial Revolution there would not have been an Industrial Revolution – or so some might claim.¹¹⁰

¹⁰⁸ James Riley, *International Government Finance and the Amsterdam Capital Market, 1740-1815* (Cambridge and New York: Cambridge University Press, 1980), pp. 74-110; Larry Neal, *The Rise of Financial Capitalism: International Capital Markets in the Age of Reason* (Cambridge and New York, 1990), pp. 16-19, 26-30, 36-43, 141-65; Pit Dehing and Marjolein 't Hart, 'Linking the Fortunes: Currency and Banking, 1550 - 1800', in Marjolein 't Hart, Joost Junker, and Jan Luiten van Zanden, eds., *A Financial History of the Netherlands* (Cambridge and New York: Cambridge University Press, 1997), pp. 52-55. By 1639, the *Beurs* was trading 360 commodities; but specific evidence for trading in government *renten* is unavailable until financial crisis of 1672-73.

¹⁰⁹ Ranald Michie, *The London Stock Exchange: a History* (Oxford and New York: Oxford University Press, 1999), pp. 15-36; E. Victor Morgan and W. A. Thomas, *The Stock Exchange: Its History and Functions* (London: Elek Books, 1962), pp. 11-78. See also Jeremy Atack and Larry Neal, eds., *The Origin and Development of Financial Markets and Institutions from the Seventeenth Century to the Present* (Cambridge and New York: Cambridge University Press, 2009).

¹¹⁰ Munro, 'Origins of the Financial Revolution', pp. 505-62. The 'financial revolution' was not, of course, a fully sufficient cause of but rather a necessary condition for the ensuing Industrial Revolution.

APPENDIX:¹¹¹

CALVINISM IN THE INDUSTRIAL REVOLUTION: the role of the dissenters

Among the English Protestants who were the most vociferous in condemning usury were certainly the Calvinists. For the Calvinists and related sects were the most radical of the Protestants in seventeenth-century England, and the most hostile critics of usury were certainly the radicals. For reasons not yet fully understood, their hostility to usury per se either came to an end or was much abated by the end of the civil war era and the commencement of the Restoration. If we regard their anti-usury stance as having been, essentially, hostile to the essential tenants of modern capitalism, and certainly contrary to the later doctrines of the Classical School of Economics,¹¹² their singular and powerful role in the Industrial Revolution era is all the more remarkable. To understand that radical transition, we have to understand the striking changes in fortunes that Calvinists experienced in the seventeenth century.

The very prominent role of that the English Calvinists sects, and the Scottish Presbyterians, played in the English civil war (1642-53), Commonwealth, and Protectorate eras, especially during the rule of Oliver Cromwell (b. 1599; Lord Protector, 1653-58) is too well known to require further elaboration. With the deposition of Cromwell's son, Richard, in 1660 and the restoration of the monarchy under Charles II (r. England: 1660-1685), all those suspected of being Republicans, especially the Calvinists, suffered varying degrees of persecution. Even when not persecuted they suffered significant political restrictions, with the ensuing Restoration Parliaments: the Corporation Act of 1661 and the Test Act of 1673. Together these acts stipulated that anyone seeking to hold any church- or government related positions had to swear oaths to conform to the Thirty-Nine Articles of the Church of England (as established in 1571), and to take communion annually within the established Church of England. Those who refused to do so, were labelled as Non-Conformists or Dissenters. Not all, however, were Calvinists; for this group included other radical Protestant sects known today as Baptists, Quakers, Unitarians, and (later) the Methodists.¹¹³

Then, with the Glorious Revolution of 1688 and the accession of William III their fortunes took a significant if not total turn for the better. As a Dutch Calvinist, William III demanded that the new Parliament pass the Toleration Act of 1689, to protect the religious, if not the political, rights of all Dissenters, except the Unitarians, and, of course, the Catholics. But otherwise all Dissenters (and Catholics) remained fully constrained by the Corporation and Test Acts.

The significance of their peculiar post-1689 situation within England itself is quite simply that these

¹¹¹ This Appendix is supplied only for the Working Paper version of this study, and it will not be included in any final publication of this essay. Though it may offers some interesting and valid insights into the role of Dissenter, chiefly but not entirely Calvinist in their outlooks, this appendix does not fit the overall theme of the earlier part of the paper.

¹¹² We should note that the one Classical Economist who was fervently opposed to usury was Karl Marx, and thus often called the 'last Scholastic'.

¹¹³ For this and the following, see John H. Munro, 'Tawney's Century (1540 - 1640): the Roots of Modern Capitalist Entrepreneurship', in David Landes, Joel Mokyr, and William J Baumol, eds., *The Invention of Enterprise: Entrepreneurship from Ancient Mesopotamia to Modern Times*, Kauffman Foundation Series on Innovation and Entrepreneurship (Princeton: Princeton University Press, 2010), pp. 107-55.

Dissenters or Non-Conformists accounted for a remarkably high proportion of the known or documented successful entrepreneurs of the Industrial Revolution era (from the 1770s) – at least one half. Earlier, they also accounted for about one half of the scientists and technical inventors listed in the Royal Society of England (founded in 1660) and the subsequent Lunar Society of Birmingham (founded in 1764).¹¹⁴ Yet these Dissenters were a very small minority of the English population: with only 1,250 congregations in later eighteenth-century England, comprising between five and certainly under ten percent of the total population.

Historians still disagree on explanations for this remarkable phenomenon; but the recent debate has been summarized and commented on in a recent publication.¹¹⁵ The first and perhaps most obvious explanation for their remarkable economic role is their peculiar minority status, with a half-way measure of toleration, without the burden and true and crushing oppression. Since they remained excluded from any official state-related occupations, and excluded from the normal avenues to power and prestige they now sought to prosper in the alternatives still available to them: landholding and commercial agriculture (for many were gentry, and some aristocrats), but more especially business enterprises in commerce, finance, and industry. Perhaps that minority status drove them all the harder to prove, to themselves, their families, and to society, that such discrimination did not necessarily mean inferior economic and thus social status.

T. S. Ashton has offered a second, and seemingly simpler explanation, though one that begs the question: namely, ‘that broadly speaking, the Nonconformist constituted the better educated section of the middle classes’, especially in being products of the so-called Dissenting Academies: educational institutions that they had been forced to found, in being excluded from all traditional church- and state-sponsored schools and universities.¹¹⁶ Most of these new Academies were modelled after the contemporary Scottish Presbyterian schools and universities, which, according to Ashton, were ‘in advance of that of any other European country of this time’. In contrast to most traditional English schools (both grammar and ‘public’), which still gave primacy to Greek and Latin, Christian theology, philosophy, the Dissenting Academies instead stressed the importance of more practical subjects, such as mathematics, the pure sciences, accounting, surveying, modern languages, but also history (if no more than did the grammar schools). Latin, while still taught in the Academies, was still viewed with suspicion as being the language of the Catholic Church.

In Ashton’s view, and those of many other historians, the educational curriculum of these Academies was far more in tune with the needs of the post-1660 Scientific Revolution and then the post-1770 Industrial Revolution. The Academies certainly benefited from not being constrained by centuries of Church and aristocratic traditions and perceived goals of higher education. Furthermore, they were likely responding to

¹¹⁴ See the sources cited in Munro, ‘Tawney’s Century’, pp. 107-55, especially Robert K. Merton, *Science, Technology, and Society in Seventeenth-Century England*, revised edn. (New York, 1970), pp. 55-79; 112-36.

¹¹⁵ Munro, ‘Tawney’s Century’, pp. 107-55.

¹¹⁶ Thomas S. Ashton, *The Industrial Revolution, 1760 - 1830* (London: 1948; reissued Oxford and New York: Oxford University Press, 1997), pp. 17-21, observing that ‘the growth of industry was connected historically with the rise of groups which dissented from the Church...’ See also Arthur Herman, *How The Scots Invented the Modern World* (New York: Three Rivers Press, 2001), especially chapter 12: ‘Scots in Science and Industry’, pp. 320-44; E.G. West, *Education and the Industrial Revolution* (London: B.T. Batsford, 1975), especially chapter 6, ‘Scottish Elementary Education’, pp. 59-73; and also Rosemary O’Day, *Education and Society, 1500 - 1800: The Social Foundations of Education in Early Modern Britain* (London: Longmans, 1982).

their own perceived market demand: in that most of their students came from predominantly middle-class, business oriented families.

A third explanation lies in the main aspects of the old Weber-Tawney thesis, which has found little favour amongst modern historians, though such hostility (too complex to explain here) is unwarranted, in the view of a minority of scholars.¹¹⁷ The essence of the thesis is the long-term socio-psychological ramifications of three core Calvinist doctrines. The first is Predestination (found as well in St. Augustine, and most forms of Christianity): that God, being omnipotent and omniscient, has determined, now determines, and will determine (outside of Time) the very few Elect who shall enjoy eternal Salvation with God; and that individual mortals are powerless in determining their fate. For the non-Elect, the doctrine of Original Sin meant utter and total condemnation to Hell. Calvin, to be sure, and his sixteenth-century followers, condemned as sinful any attempt to discern signs of such Election. But, in the view of proponents of the Weber-Tawney thesis such a totally bleak and unpalatable doctrine could not survive, in that form, so that, by the seventeenth century, most Calvinists sought out such signs of Election, i.e., of their salvation. Facilitating that goal was the Calvinist doctrine of the Calling: that, in accordance again with God's omnipotence, and the view that world existed as God had ordained it should be, the Christian duty of everyone was to discern his/her true Calling and to honour God by fulfilling that Calling or duty to the best of one's ability. For many later Calvinists, what better sign of Election could there be than success in one's Calling. For those in business – an honourable Calling according to all Calvinists (along with the professions, artisan crafts, etc.) – surely the best measure of success was profit accumulation and the achievement of greater wealth through ingenuity and hard work. For both Weber and Tawney the final aspect of this triad was that of Wordly Asceticism: namely, that in honouring God, everyone's duty was not to enjoy the fruits of such success in material consumption – for that would be to worship Mammon rather than God. Instead, one's obligation was to reinvest those fruits, the accumulated profits, in the enterprises that constituted the Calling. For many economic historians, that is precisely how – with various institutional constraints – entrepreneurs financed the Industrial Revolution.

Though many readers will remain steadfastly unconvinced by such arguments about the role of Calvinist doctrines, as later interpreted, all should take serious account of the differences between England and France in the late seventeenth century. In 1685 – and thus just four years before William III's Toleration Act – King Louis XIV had revoked the 1598 Edict of Nantes, which the Calvinist prince Henry IV of Navarre (r. 1589-1610) had issued, in order to ensure religious toleration for his own co-religionists, and to end the vicious Wars of Religion (1562-1598). In acquiring the throne, after the assassination of Henry III (1589), Henry of Navarre was obliged to accept Catholicism, formally converting in 1593, saying that: 'Paris: c'est vaut une messe'. At the same time, in owing his victory to fellow Calvinists, he was morally and politically obligated to protect their religious rights; but the Catholic clergy never really accepted his Edict. Louis XIV's brutal revocation of that edict soon led to mass expulsions of French Protestants, chiefly Calvinists known as Huguenots, many of whom fled to Protestant Holland, various Protestant German states, but especially to

¹¹⁷ Max Weber, *Die Protestantische Ethik und der Geist des Kapitalismus* (Berlin, 1904-05); reissued in English translation as *The Protestant Ethic and the Spirit of Capitalism*, by Talcott Parsons (New York, 1930). Forward by Richard Tawney and Preface by Max Weber (pp. 1-31); Hartmut Lehmann and Guenther Roth, eds., *Weber's Protestant Ethic: Origins, Evidence, Contexts*, Publications of the German Historical Institute (Cambridge and New York: Cambridge University Press, 1985); Stephen P. Turner, ed., *The Cambridge Companion to Weber* (Cambridge: Cambridge University Press, 2000), in particular Jon Elster, 'Rationality, Economy, and Society', pp. 21-41; Alastair Hamilton, 'Max Weber's *Protestant Ethic and the Spirit of Capitalism*', pp. 151 -71; Stanley Engerman, 'Max Weber as Economist and Economic Historian', pp. 256- 71. See also Tawney, *Religion and the Rise of Capitalism* (n. 21 above)

England. Like the Dissenters, the Huguenots had been disproportionately active in French commerce, banking, and industry – indeed their few remnants continued to dominate French banking (along with Jews) well into the nineteenth century. Huguenot refugees undoubtedly made important economic contributions to the lands in which they settled. In England, for example, they were prominent in the establishment of the Bank of England, in 1694-97.¹¹⁸

Their diaspora was also important in establishing a West European and trans-Atlantic network of very fruitful business connections, which also included both English and English colonial Calvinists. In his impressive monograph on *Merchant Enterprise in Britain* (1992), Stanley Chapman has emphasized as well the unusual economic role of the Dissenters, especially Calvinists, in the Industrial Revolution era: in particular the important gains derived from mercantile connections with co-religionists abroad, both in western Europe and especially in the American colonies.¹¹⁹ Certainly most economists are well aware of the crucial importance of principal-agent relationships that are based on intimate social ties determined by both family and religious connections. As David Landes has commented: ‘In banking [and trade], connections count.’¹²⁰ At the same time, Chapman also contends that economic ideology based on the religious ideologies of Calvinists, Quakers, and Unitarians also played a major role in their commercial-financial successes in the eighteenth and nineteenth centuries.

Thus, in conclusion, this study offers the hypothesis that the intertwined themes of usury and Calvinism played very important roles in English economic development in both pre- and post-Restoration England: first, with the Calvinists’ qualified acceptance of a minimum interest rate, and its impact on both discounting negotiable commercial bills and the adoption of annuities (*rentes*) as the principal form of public finance; and second, their own half-way house of social or rather religious toleration as Dissenters in the later seventeenth century and the Industrial Revolution. While many readers will choose the non-religious reasons – i.e., those not having to do with Calvinism per se – some will still contend that their Calvinism doctrines (as later interpreted, by their own self interest) also played an important role in their very major contributions to the Industrial Revolution.

¹¹⁸ See François Crouzet, ‘The Huguenots and the English Financial Revolution’, in Patrice Higonnet, David Landes, and Henry Rosovsky, eds., *Favorites of Fortune: Technology, Growth, and Economic Development Since the Industrial Revolution* (Cambridge, Mass., Harvard University Press, 1991), pp. 221-66.

¹¹⁹ Stanley Chapman, *Merchant Enterprise in Britain from the Industrial Revolution to World War I* (Cambridge and New York: Cambridge University Press, 1992), pp. 43-47.

¹²⁰ David Landes, *Dynasties: Fortunes and Misfortunes of the World’s Great Family Businesses* (New York: Viking, 2006), p. 8.

List of Sources

Bland, A. E.; P. A. Brown, and R. H. Tawney, eds., *English Economic History: Select Documents* (London: G. Bell, 1914).

Calvin, Jean, *Calvin : Institutes of the Christian Religion*, 2 vols. (London: Westminster Press, 1960).

Calvin, Jean, *Institution de la religion chrestienne*, 4 vols. (Paris: Société d'Édition 'Les Belles Lettres', 1961).

Coke, Edward, *The Institutes of the Lawes of England*, 4 vols. (London, 1628-44): electronic resource in the University of Toronto library.

Dante Alighieri, *The Divine Comedy*, Carlyle-Okey-Wicksteed translation, ed. C.H. Grandagent, Modern Library Editions (New York, 1950).

Elliott, J. K., 'The Apocalypse of Peter', in his *The Apocryphal New Testament: A Collection of Apocryphal Christian Literature in an English Translation* (Oxford: Clarendon Press, 1993), pp. 591-615

Fenton, Roger, *A Treatise of Usurie, Divided Into Three Books: the first defineth what is usurie, the second determineth that to be unlawful, the third removeth such motives as perswade men in this age tht it may be lawfull* (London, 1612): electronic resource in the University of Toronto library.

Gilliodts-Van Severen, Louis, ed., *Coutume de la ville de Bruges*, Commission Royale d'Histoire (Brussels, 1875), II, no. 127, p. 318.

Great Britain, History of Parliament Trust, *Journal of the House of Commons* (London: 1802), Vol. I: 1547 - 1629).

Great Britain, Record Commission (T. E. Tomlins, J. Raithby, et al.), eds., *Statutes of the Realm*, 6 vols. (London, 1810-22).

Great Britain, History of Parliament Trust, *Journal of the House of Lords* (London: 1767-1830), Vol. I: 1509-1577; Vol. II: 1578-1614; Vol. III: 1620-1628.

Hall, Hubert, ed., *Select Cases Concerning the Law Merchant*, 3 vols. (London, 1908-32), vol. III: *Central Courts, Supplementary, AD. 1251 - 1779*, Selden Society Publications Vol. 49, 1932 (London, 1932), pp. 117-19 (Latin and French, with English translations).

Hughes, Paul L.; and James F. Larkin, eds., *Tudor Royal Proclamations*, 2 vols. (New Haven and London: Yale University Press, 1964).

James, Montague R., trans. and ed., *The Apocryphal New Testament, Being the Apocryphal Gospels, Acts, Epistles, and Apocalypses, with Other Narratives and Fragments* (Oxford: Clarendon Press), 1924; reprinted 1975).

Jowett, Benjamin; trans. and ed., *The Politics of Aristotle: Translated Into English*, 2 vols., vol. I: *Introduction and Translation* (Oxford, 1885).

Laurent, C.; M. J. Lameere, and H. Simont, eds., *Recueil des ordonnances des Pays Bas, deuxième série, 1506 - 1700*, Commission Royale d'Histoire, 6 vols., Vol. IV (Brussels, 1907).

Menzies, Allan, ed., *The Ante-Nicene Fathers: Translations of the Writings of the Fathers Down to A.D. 325*, vol. 10: *Original Supplement to the American Edition*, American Reprint of the Edinburgh Edition (Edinburgh: T & T Clark; Grand Rapids, MI: Wm. B. Eerdmans Publisher, 1990).

Tawney, Richard; and Eileen Power, eds., *Tudor Economic Documents*, 3 vols. (London, 1924).

The Holy Bible: King James Version (London, 1611).

Vickers, Brian, ed., *The Major Works of Francis Bacon* (Oxford: Oxford University Press, 2002).

Wilson, Thomas, *A Discourse Upon Usury By Way of Dialogue and Orations* [1572], edited, with an introduction by Richard H. Tawney (New York: Harcourt Brace & Co., 1925).

Secondary Sources:

Armstrong, Lawrin, 'Review of Eric Kerridge, *Usury, Interest and the Reformation*', *Journal of Early Modern History: Contacts, Comparison, Contrasts*, 8:1-2 (2004), 180-84.

Ashley, Maurice, *Financial and Commercial Policy Under the Cromwellian Protectorate* (Oxford: Oxford University Press, 1934; revised edn: London: Frank Cass and Co. Ltd., 1962).

Ashton, Thomas S., *The Industrial Revolution, 1760 - 1830* (London: 1948; reissued Oxford and New York: Oxford University Press, 1997).

Ashtor, Eliyahu, 'Banking Instruments Between the Muslim East and the Christian West', *Journal of European Economic History*, 1:3 (Winter 1972), 553 - 73.

Ashworth, William, *Customs and Excise: Trade, Production and Consumption in England, 1640 - 1845* (Oxford and New York: Oxford University Press, 2003).

Atack, Jeremy; and Larry Neal, eds., *The Origin and Development of Financial Markets and Institutions from the Seventeenth Century to the Present* (Cambridge and New York: Cambridge University Press, 2009).

Bainton, Roland, *Here I Stand: a Life of Martin Luther* (New York: Abingdon Press, 1950; reissued New York: Meridian, 1995).

Bainton, Roland, *The Reformation of the Sixteenth Century* (Boston: Beacon Press, 1952; revised edn with a forward and supplementary bibliography by Jaroslav Pelican: Boston, Beacon Press, 1985).

Bieler, André, *La pensée économique et sociale de Calvin* (Geneva, 1959).

Bigwood, Georges, *Le régime juridique et économique du commerce de l'argent dans la Belgique du moyen âge*, Academie Royale de Belgique, Classe des Lettres, vol. XIV, 2 vols. (Brussels Academie Royale, 1921-

22).

Bogaert, Raymond, 'Banking in the Ancient World', in Herman Van der Wee and G. Kurgan-Van Hentenrijk, eds., *A History of European Banking*, 2nd edn. (Antwerp: European Investment Bank: Mercatorfonds, 2000), pp. 13-70,

Boone, Marc; Karel Davids, and Paul Jannssens, eds., *Urban Public Debts: Urban Government and the Market for Annuities in Western Europe (14th - 18th Centuries)*, Studies in European Urban History 1100-1800 no. 3 (Turnout: Brepols, 2003).

Brendler, Gerhard, *Martin Luther: Theology and Revolution*, trans. Claude Foster, Jr., (New York: Oxford University Press, 1991).

Chapman, Stanley, *Merchant Enterprise in Britain from the Industrial Revolution to World War I* (Cambridge and New York: Cambridge University Press, 1992).

Chapman, Stanley, *The Rise of Merchant Banking* (London and Boston: Allen & Unwin, 1984),

Coquillotte, Daniel, 'The Mystery of the New Fashioned Goldsmiths: From Usury to the Bank of England (1622-1694)', in Vito Piergiovanni, ed., *The Growth of the Bank as Institution and the Development of Money-Business Law*, Comparative Studies in Continental and Anglo-American Legal History vol. 12 (Berlin, 1993), pp. 94-99.

Crouzet, François, 'The Huguenots and the English Financial Revolution', in Patrice Higonnet, David Landes, and Henry Rosovsky, eds., *Favorites of Fortune: Technology, Growth, and Economic Development Since the Industrial Revolution* (Cambridge, Mass., Harvard University Press, 1991), pp. 221-66.

De Roover, Raymond, *Gresham on Foreign Exchange: an essay on early English Mercantilism* (Cambridge, MA: Harvard University Press, 1949).

De Roover, Raymond, 'Scholastic Economics: Survival and Lasting Influence from the Sixteenth Century to Adam Smith,' *Quarterly Journal of Economics*, 69 (1955), 161-90; reprinted in Julius Kirshner, ed., *Business, Banking, and Economic Thought in late Medieval and Early Modern Europe: Selected Studies of Raymond de Roover* (Chicago, 1974), pp. 305-36.

De Roover, Raymond, 'Les doctrines économiques des scolastiques: à propos du traité sur l'usure d'Alexandre Lombard,' *Revue d'histoire ecclésiastique*, 59 (1964), 854 - 66.

De Roover, Raymond, *Leonardus Lessius als economist: de economische leerstellingen en van de latere scholastiek in de Zuidelijke Nederlanden*, Mededelingen van Koninklijke Academie voor Wetenschappen, Letteren en Schone Kunsten van België, Klasse der Letteren, XXXI (Brussels, 1969).

De Roover, Raymond, *La pensée économique des scolastiques: doctrines et méthodes* (Montreal and Paris, 1971).

Dehing, Pit; and Marjolein 't Hart, 'Linking the Fortunes: Currency and Banking, 1550 - 1800', in Marjolein 't Hart, Joost Junker, and Jan Luiten van Zanden, eds., *A Financial History of the Netherlands* (Cambridge and New York: Cambridge University Press, 1997), pp. 37-63.

Denzel, Markus A., 'The European Bill of Exchange: Its Development from the Middle Ages to 1914', in Sushil Chaudhuri and Markus A. Denzel, eds., *Cashless Payments and Transactions from the Antiquity to 1914*, Beiträge zur Wirtschafts- und Sozialgeschichte, no. 114 (Stuttgart: Steiner Verlag, 2008), pp. 153-94.

Markus Denzel, 'The Curial Payments System of the Late Middle Ages and the Sixteenth Century: Between Doctrine and Practice', in Francesco Ammannati, ed., *Religione e istituzioni religiose nell'economia europea, 1000 - 1800/Religion and Religious Institutions in the European Economy, 1000 - 1800*, Atti delle "Settimana di Studi" e altri convegni, no. 43, Istituto Internazionale di Storia Economica "Francesco Datini" (Florence: University of Firenze Press, 2011), pp.

Desportes, Pierre, *Reims et les Rémois au XIIIe et XIVe siècles* (Paris: A & J Picard, 1979).

Dickson, Peter G. M., *The Financial Revolution in England: a Study in the Development of Public Credit, 1688-1756* (London: Macmillan, 1967).

Gelderblom, Oscar; and Joost Jonker, 'Public Finance and Economic Growth: the Case of Holland in the Seventeenth Centuries', *Journal of Economic History*, 71:1 (March 2011), 1-39.

Gordon, Barry, 'Lending at Interest: Some Jewish, Greek, and Christian Approaches, 800 BC - AD 1000', *History of Political Economy*, 14 (1982), 406-26.

Harkness, Georgia, *John Calvin: The Man and His Ethics* (New York, 1958).

Hart, Marjolein 't, 'The Merits of a Financial Revolution: Public Finance, 1550 - 1700', in Marjolein 't Hart, Joost Junker, and Jan Luiten van Zanden, eds., *A Financial History of the Netherlands* (Cambridge and New York: Cambridge University Press, 1997), pp. 11-36

Herman, Arthur, *How The Scots Invented the Modern World* (New York: Three Rivers Press, 2001).

Holden, James Milnes, *The History of Negotiable Instruments in English Law* (London: The University of London, 1955).

Homer, Sidney; and Richard Sylla, *A History of Interest Rates*, 3rd rev. edn (New Brunswick, 1991).

Jeannin, Pierre, 'De l'arithmétique commerciale à la pratique bancaire', in Dino Puncuh and Giuseppe Felloni, eds., *Banchi pubblici, banchi privati e monti di pietà nell'Europa preindustriale: Amministrazione, tecniche operative e ruoli economici*, Atti della società Ligure di storia patria, new series, vol. 31, 2 vols. (Genoa, 1991), vol. I, pp. 95 - 116.

Jolowicz, Herbert; and Barry Nicholas, *Historical Introduction to the Study of Roman Law*, 3rd edn.. (Cambridge and New York: Cambridge University Press, 1972).

Jones, Norman L., *God and the Moneylenders: Usury and Law in Early Modern England* (Oxford: Basil Blackwell, 1989).

Kerridge, Eric, *Usury, Interest and the Reformation*, St. Andrews Studies in Reformation History (Aldershot, Hants. and Burlington, VT: Ashgate Publishing, 2002).

Kindleberger, Charles, *A Financial History of Western Europe* (London: 1984; reissued Oxford and New York: Oxford University Press, 1993)

Landes, David, *Dynasties: Fortunes and Misfortunes of the World's Great Family Businesses* (New York: Viking, 2006).

Langholm, Odd, *Price and Value in the Aristotelian Tradition: A Study in Scholastic Economic Sources* (Bergen and Oslo; and New York, 1979).

Langholm, Odd, *Wealth and Money in the Aristotelian Tradition: A Study in Scholastic Economic Sources* (Bergen, 1983).

Langholm, Odd, *The Aristotelian Analysis of Usury* (Bergen and Oslo; and New York, 1984),

Langholm, Odd, *Economics in the Medieval Schools: Wealth, Exchange, Value, Money and Usury According to the Paris Theological Tradition, 1200 - 1350*, Studien und Texte zur Geistesgeschichte des Mittelalters, vol. 19 (Leiden and New York, 1992).

Langholm, Odd, *The Legacy of Scholasticism in Economic Thought: Antecedents of Choice and Power* (Cambridge and New York, 1998).

Lehmann, Hartmut; and Guenther Roth, eds., *Weber's Protestant Ethic: Origins, Evidence, Contexts*, Publications of the German Historical Institute (Cambridge and New York: Cambridge University Press, 1985).

McLaughlin, T. P., 'The Teaching of the Canonists on Usury (XII, XIII and XIV Centuries)', *Mediaeval Studies*, 1 (1939), 81-147; and 2 (1940), 1-22.

Merton, Robert K., *Science, Technology, and Society in Seventeenth-Century England*, revised edn. (New York, 1970).

Michie, Ranald, *The London Stock Exchange: a History* (Oxford and New York, 1999).

Morgan, E. Victor; and W. A. Thomas, *The Stock Exchange: Its History and Functions* (London: Elek Books, 1962).

Munro, John H., 'Bullionism and the Bill of Exchange in England, 1272-1663: A Study in Monetary Management and Popular Prejudice', in Center for Medieval and Renaissance Studies, University of California (Fred Chiappelli, director), ed., *The Dawn of Modern Banking* (New Haven and London: Yale University Press, 1979), pp.169-239.

Munro, John H., 'The International Law Merchant and the Evolution of Negotiable Credit in Late-Medieval England and the Low Countries', in Dino Puncuh, ed., *Banchi pubblici, banchi privati e monti di pietà nell'Europa preindustriale* (Genoa, 1991), pp. 49 - 80.

Munro, John H., 'English "Backwardness" and Financial Innovations in Commerce with the Low Countries, 14th to 16th Centuries', in Peter Stabel, Bruno Blondé, and Anke Greve, eds., *International Trade in the Low Countries (14th - 16th Centuries): Merchants, Organisation, Infrastructure*, Studies in Urban, Social,

Economic, and Political History of the Medieval and Early Modern Low Countries, no. 10 (Leuven-Apeldoorn, 2000), pp. 105-67.

Munro, John H., '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*, 88:1 (2001), 1 - 47.

Munro, John H., 'The Medieval Origins of the Financial Revolution: Usury, *Rentes*, and Negotiability', *The International History Review*, 25:3 (September 2003), 505-62.

Munro, John H., 'The Usury Doctrine and Urban Public Finances in Late-Medieval Flanders (1220 - 1550): *Rentes* (Annuities), Excise Taxes, and Income Transfers from the Poor to the Rich', in Simonetta Cavaciocchi, ed., *La fiscalità nell'economia Europea, secoli XIII - XVIII/ Fiscal Systems in the European Economy from the 13th to the 18th Centuries*, Atti della 'Trentanovesima Settimana di Studi', 22 - 26 aprile 2007, Fondazione Istituto Internazionale di Storia Economica 'F. Datini', Prato, Serie II: Atti delle 'Settimane de Studi' e altri Convegni no. 39 (Florence: Firenze University Press, 2008), pp. 973-1026.

Munro, John H., 'Tawney's Century (1540 - 1640): the Roots of Modern Capitalist Entrepreneurship', in David Landes, Joel Mokyr, and William J Baumol, eds., *The Invention of Enterprise: Entrepreneurship from Ancient Mesopotamia to Modern Times*, Kauffman Foundation Series on Innovation and Entrepreneurship (Princeton: Princeton University Press, 2010), pp. 107-55.

Neal, Larry, *The Rise of Financial Capitalism: International Capital Markets in the Age of Reason* (Cambridge and New York, 1990).

Noonan, John T., *The Scholastic Analysis of Usury* (Cambridge, Mass.: Harvard University Press, 1957).

O'Brien, Patrick, 'The Political Economy of British Taxation', *Economic History Review*, 2nd ser., 41:1 (Feb. 1988), 1-32

O'Brien, Patrick, 'The Nature and Historical Evolution of an Exceptional Fiscal State and Its Possible Significance for the Precocious Commercialization and Industrialization of the British Economy from Cromwell to Nelson', *Economic History Review*, 2nd ser., 64:2 (May 2011), 408-46.

O'Brien, Patrick; and Paul Hunt, 'The Emergence and Consolidation of Excises in the English Fiscal System before the Glorious Revolution', *British Tax Review*, 1 (1997), 35-58.

O'Day, Rosemary, *Education and Society, 1500 - 1800: The Social Foundations of Education in Early Modern Britain* (London and New York: Longmans, 1982).

Parker, Geoffrey, 'The Emergence of Modern Finance in Europe, 1500-1750', in Carlo Cipolla, ed., *The Fontana Economic History of Europe*, Vol. II: *Sixteenth and Seventeenth Centuries* (New York, 1974).

Pettegree, Andrew; Alastair Duke, and Gillian Lewis, eds., *Calvinism in Europe, 1540 - 1620* (Cambridge and New York: Cambridge University Press, 1994).

Richards, R. D., *The Early History of Banking in England* (London: P. S. King, 1929; New York: A. M. Kelly, 1965), pp. 19-20.

Riley, James, *International Government Finance and the Amsterdam Capital Market, 1740 -1815* (Cambridge and New York: Cambridge University Press, 1980), pp. 74-110

Soloveitchik, Haym, 'Usury, Jewish Law', in Joseph Strayer, et al., eds. *Dictionary of the Middle Ages*, vol. XII (New York: Charles Scribners Sons/MacMillan, 1989), pp. 339-40.

Stone, Lawrence, *The Crisis of the Aristocracy, 1558 - 1641* (Oxford: The Clarendon Press, 1965; reissued with corrections, 1979).

Tawney, Richard, 'Historical Introduction to: Thomas Wilson, *A Discourse Upon Usury By Way of Dialogue and Orations* [1572] (New York: Harcourt Brace & Co., 1925).

Tawney, Richard, *Religion and the Rise of Capitalism* (New York: Harcourt Brace & Co, 1926; reprinted New Brunswick, NJ: Transaction Publishers, 1998).

Thireau, Jean-Louis, *Charles du Moulin (1500-1586): Etude sur les sources, la méthode, les idées politiques et économique d'un jurist de la Renaissance*, Travaux d'humanisme et Renaissance no. 176 (Geneva: Droz, 1980).

Tracy, James D., *A Financial Revolution in the Habsburg Netherlands: Renten and Renteniers in the County of Holland, 1515 - 1565* (Berkeley-London: University of California Press, 1985).

Turner, Stephen P., ed., *The Cambridge Companion to Weber* (Cambridge: Cambridge University Press, 2000).

Udovitch, Abraham L., *Partnership and Profit in Medieval Islam* (Princeton: Princeton University Press, 1970).

Udovitch, Abraham L., 'Bankers without Banks: Commerce, Banking, and Society in the Islamic World of the Middle Ages', in Fredi Chiappelli, Center for Medieval and Renaissance Studies, UCLA, ed., *The Dawn of Modern Banking* (New Haven and London; Yale University Press, 1979), pp. 255-73.

Usher, Abbott Payson, *The Early History of Deposit Banking in Mediterranean Europe*, vol. I: *The Structure and Functions of the Early Credit System: Banking in Catalonia: 1240-1723*, Harvard Economic Studies, vol. 75 (Cambridge, Mass., 1943; reissued New York, 1967).

Van der Wee, Herman, *The Growth of the Antwerp Market and the European Economy (fourteenth-sixteenth centuries)*, 3 vols. (The Hague: Martinus Nijhoff, 1963).

Van der Wee, Herman, 'Anvers et les innovations de la technique financière aux XVIe et XVIIe siècles', *Annales: E.S.C.*, 22 (1967), 1067-89, republished as 'Antwerp and the New Financial Methods of the 16th and 17th Centuries', in Herman Van der Wee, *The Low Countries in the Early Modern World*, trans. by Lizabeth Fackelman, Variorum Series (Aldershot, 1993), pp. 145-66.

Van der Wee, Herman, 'Monetary, Credit, and Banking Systems', in E.E. Rich and Charles Wilson, eds., *The Cambridge Economic History of Europe*, Vol. V: *The Economic Organization of Early Modern Europe* (Cambridge, 1975), pp. pp. 290-393.

Van der Wee, Herman, 'European Banking in the Middle Ages and Early Modern Period (476-1789)', in Herman Van der Wee and G. Kurgan-Van Hentenrijk, eds., *A History of European Banking*, 2nd edn. (Antwerp, 2000), pp. 152-80.

Ward, Seth, 'Usury, Islamic Law', in Joseph Strayer, et al., eds. *Dictionary of the Middle Ages*, vol. XII (New York: Charles Scribners Sons/MacMillan, 1989), pp. 340-41.

Weber, Max, *Die Protestantische Ethik und der Geist des Kapitalismus* (Berlin, 1904-05); reissued in English translation as *The Protestant Ethic and the Spirit of Capitalism*, by Talcott Parsons (New York, 1930).

West, E.G., *Education and the Industrial Revolution* (London: B.T. Batsford, 1975).

Wyffels, Carlos, 'L'usure en Flandre au XIII^e siècle', *Revue belge de philologie et d'histoire/Belgisch tijdschrift voor filologie en geschiedenis*, 69:4 (1991), 853-71.

Zuiderduijn, C. J., *Medieval Capital Markets: Markets for Renten, State Formation, and Private Investment in Holland (1300 - 1550)*, Global Economic History Series, vol. 2 (Leiden and Boston: Brill, 2009).