## Cronfa - Swansea University Open Access Repository

This is an author produced version of a paper published in:
The Economic History Review

Cronfa URL for this paper:
http://cronfa.swan.ac.uk/Record/cronfa27688

## Paper:

Stevens, M. (2016). London creditors and the fifteenth-century depression. The Economic History Review, 69(4), 1083-1107.
http://dx.doi.org/10.1111/ehr. 12282

This item is brought to you by Swansea University. Any person downloading material is agreeing to abide by the terms of the repository licence. Copies of full text items may be used or reproduced in any format or medium, without prior permission for personal research or study, educational or non-commercial purposes only. The copyright for any work remains with the original author unless otherwise specified. The full-text must not be sold in any format or medium without the formal permission of the copyright holder.

Permission for multiple reproductions should be obtained from the original author.
Authors are personally responsible for adhering to copyright and publisher restrictions when uploading content to the repository.
http://www.swansea.ac.uk/library/researchsupport/ris-support/

# London Creditors and the Fifteenth-Century Depression Dr Matthew Frank Stevens, FHistS. 

Swansea University


#### Abstract

Evidence of debts owed to Londoners, and contested before the royal Court of Common Pleas, allows an examination of the role of London creditors in the English depression of the fifteenth century and a reassessment of its causes. Here we examine four main issues. What is the nature of the Court of Common Pleas evidence (section I)? What were the three main forms of credit offered by Londoners - unsecured cash loans, sales of goods on credit, and written instruments called bonds (section II)? What is yielded by decadal analysis of Londoners' extension of credit in the fifteenth century making direct comparisons with Pamela Nightingale's published Statute Merchant and Staple data (section III)? What defines, in modern economic terms, the claim of so called 'monetarist' historians that credit was actively withdrawn during the depression, and how is this verified by the actions of London creditors (section IV)? It is concluded that the records of the Court of Common Pleas provide the detailed evidence monetarist historians have previously lacked both to prove that Londoners actively withdrew credit during the fifteenth century and to demonstrate that they employed pure equilibrium credit rationing in order to do so.


In 1939 Michael Postan wrote a short but extremely influential survey of the fifteenth century for the Economic History Review's 'Revisions in Economic History Series'. In this article he pointed out that during the century the population dwindled and so

# This is a PRE-PUBLICATION DRAFT only. See the published version for reference. Economic History Review 2016. 

agricultural output waned and seigniorial incomes dropped, at a time when, as a consequence of war, 'Most of the outlying branches of English foreign trade were lopped off, one after another. ${ }^{1}$ Postan's claim that we ought to understand demographic decline as being central to England's fifteenth-century economic stagnation continues to cast a long shadow over the historiography of the period, and for most economic historians it remains valid in substance, if not in quite the form and detail in which he articulated it. ${ }^{2}$

Nevertheless, much effort has been invested into the construction of alternative interpretations of the mid fifteenth-century economic crisis. First, in 1962, Tony Bridbury argued that historians ought to focus not on absolute levels of output and on the landlords' income but on per capita income and the rising standards of living which, for many, may have accompanied demographic decline. ${ }^{3}$ Then, from the 1970 s to 1990 s, in the so-called 'Brenner debate', neo-Marxist historians attempted to recast the century as a painful but progressive transition from feudal to capitalist modes of production. ${ }^{4}$ But neither of these bodies of work have undermined substantially Postan's position that the economic depression of the fifteenth century was most directly a result of demographic decline.

The more enduring challenge to Postan's work has come from Pamela Nightingale, John Day and others, who argue it was actually a shortage of silver coinage, leading to deflation and a withdrawal of credit at all levels, that was chiefly responsible for the English experience of the economic depression of the fifteenth century, in

[^0]conjunction with demographic decline. ${ }^{5}$ In short, Nightingale and other so-called 'monetarist historians', have taken as a starting point the modern economic concept of the Irvine Fisher equation, which elegantly expresses that the less total currency there is in circulation, the greater the velocity with which that currency must circulate through the economy ( $\mathrm{PT}=\mathrm{MV}$ where $\mathrm{P}=$ average price, $\mathrm{T}=$ total volume of transactions, $\mathrm{M}=$ total money supply, $\mathrm{V}=$ velocity of circulation). ${ }^{6}$ That is to say, when fewer coins are in circulation, each coin must change hands more frequently in order to sustain the gross domestic product (expressed as $\mathrm{PT} / \mathrm{M}=\mathrm{V}$, a decline in M causing a corresponding increase in V). However, when the total number of coins is too small to service realistically all of the potential transactions, two effects result: first, the economy will necessarily shrink until the remaining currency can service it, in short, a liquidity crisis; and second, deflation occurs, whereby the buying power of each remaining coin increases, which can make the remaining coins impractically overvalued for daily transactions. ${ }^{7}$

Monetarist historians have argued that monetary contraction explains the collapse and stagnation of the fifteenth-century English economy because, as a result of a chronic shortage of silver bullion, the crown all but ceased to mint new silver pennies, halfpennies, and farthings from the later fourteenth century to the late fifteenth century, while English silver specie dwindled due to natural wastage (that is, clipping, loss, etc.) and export to the continent where its relatively high silver content lent itself to profitable

[^1]debasement and re-minting. Thus, in 1351 there were about 56 pence in circulation per head of the population, but by 1422 this had fallen to just 13 pence per head, leading to frequent complaints to parliament about the poor state of the coinage and the lack of small change, and ultimately to a withdrawal of credit. ${ }^{8}$ Conversely, economic recovery came when new coinage eventually reversed deflationary trends and induced the renewed extension of credit. ${ }^{9}$

This monetarist interpretation of the fifteenth century depression as being primarily the result of a shortage of specie has proved to be extremely controversial. It has a possible weakness, in so far as it presupposes that credit, which can potentially offset a lack of coinage by elastically adding liquidity or enhancing the velocity of specie circulation, was withdrawn rather than extended as mint output fell. That is to say, monetarists argue that money supply and credit supply were directly linked, whereas Postan's followers believe them to have been inversely linked; the total value of transactions in an economy being a combination of the specie, plus credit, changing hands. ${ }^{10}$ The recent and path breaking work of both demographically minded and monetarist historians has affirmed that medieval society made regular use of credit at all levels. ${ }^{11}$ But this work done little to resolve questions over just how extensive this use of credit was at any given time.

The key issue for historians is whether or not there was a direct or an inverse correlation of change in money supply and amount of credit available. Monetarists offer

[^2]the explanation that credit is overwhelmingly withdrawn when creditors, aware of a shortage of specie, become wary that their potential debtors may not be able to find the coin to repay them. ${ }^{12}$ This withdrawal would have been effected, first and foremost, by London creditors, who dominated trade in realm's economic hub, precipitating a credit crisis that then radiated outwards like 'ripples...into the countryside'. ${ }^{13}$ Parallels, if somewhat tenuous, have even been drawn with the early 1990s recession, and could similarly be drawn with the 2008 liquidity crisis. ${ }^{14}$ Postan, and other demographically minded historians such as Hatcher and Bailey either ignore or minimise the importance of shortages of coin, and Bolton has carefully articulated the view that the extensive use of credit would have negated the effects of a shortage of coin. ${ }^{15}$

One key problem in determining the role of credit is that unambiguous evidence about its use is scarce. As Bolton recently lamented in Money in the Medieval English Economy, surprisingly, 'there is only one known surviving set of English mercantile accounts for the late Middle Ages, those of Gilbert Maghfeld, a failed London ironmonger in the reign of Richard II...After that, we have to wait for the Paston letters from about 1440 onward and the letters and papers of the Cely family from the 1460s and 1480s...[which offer at best]...passing comments about the shortage of coin and a lack of buyers' for agricultural produce. ${ }^{16}$ Nightingale has written extensively about Maghfeld's accounts, and his declining profits at a time of weak mint output. ${ }^{17}$ In her most

[^3]This is a PRE-PUBLICATION DRAFT only.
See the published version for reference. Economic History Review 2016.
comprehensive study, she has attempted to use the records of relatively high value (generally over £10) debts in default recognized under the Statutes Merchant and Staple and deposited with Chancery, to prove that credit was withdrawn by Londoners from $1400 .{ }^{18}$ However, these articles have provoked continued disagreement. ${ }^{19}$ Maghfeld's accounts are possibly unrepresentative, and an unknown proportion of debts in default recognized under the Statutes Merchant and Staple were non-commercial penal bonds for example, to secure a marriage settlement- to be enforced only in the event of nonperformance, and anyway involved amounts which were too large to represent most every-day mercantile transactions. ${ }^{20}$ Likewise, Briggs has recently attempted to engage in this debate through the evidence of rural credit as seen in manor courts in the period 1400-1480 but agnostically concluded that 'legal and institutional changes' mean that 'uncertainty remains, about the direction and degree of chronological change in numbers of new rural credit transactions. ${ }^{, 21}$

There are three main reasons why this debate has been so hard to resolve. First, little evidence has been available for analysis which links changes in credit usage to changes in mint output or demographic decline in a manner which cannot be either reinterpreted or dismissed as coincidental by either monetarists or demographically minded historians. Second, despite the centrality of London's influential merchantcreditors to the economy, little attempt has been made to assess the ways and means by which Londoners extended or withdrew credit. Third, while the monetarists assert that

[^4]creditors withdrew, or more accurately scaled back, credit, how this was done has not yet been explained in modern economic terms.

However, there is evidence available; that is, the records of the royal Court of Common Pleas, document class CP 40, in the National Archives. Drawing on these data, we examine four main issues. What is the nature of the Court of Common Pleas evidence (section I)? What were the main forms of credit offered by Londoners (section II)? What is yielded by a decadal analysis of Londoners' extension of credit in the fifteenth century -making direct comparisons with Nightingale's published Statute Merchant and Staple data (section III)? What defines, in modern economic terms, the monetarist claim that credit was 'withdrawn' during the depression, and how is this verified by the actions of London creditors (section IV)? The records of the Court of Common Pleas provide the detailed evidence that monetarist historians have previously lacked both to prove that Londoners actively withdrew credit during the fifteenth century and to define how they went about doing so.

## I

The Court of Common Pleas was a national venue for interpersonal litigation which sat at Westminster. It had four man sorts of jurisdiction over cases begun by original writ from chancery: real actions of ownership and possession in land; personal actions such as debt, account or covenant concerning single or aggregate sums of 40 s . or more; mixed real and personal actions such as ejectment from lands under lease; and finally trespass actions such as assault and theft. ${ }^{22}$ The court held four annual terms of

[^5]
## This is a PRE-PUBLICATION DRAFT only.

See the published version for reference. Economic History Review 2016.
roughly one to two months each and usually offered adjournments on a term to term basis, making for a lethargic process in which it regularly took a year or more to resolve a case. ${ }^{23}$ About 9,400 legal actions were in progress during each of the court's four annual law-terms in 1400, falling to about 4,500 in 1450 and to about 3,800 in 1501, but with an increasing proportion at each interval having moved beyond the administrative mesne process stage to reach the stage of pleading before the justices, that is, a ratio of 22:1, 13:1, and 5:1 cases in progress to cases plead, respectively. ${ }^{24}$ This means that annually, as a very rough estimate, the king's justices heard the detailed pleading of about 1,700 cases in 1400 , about 1,400 cases in 1450 , and about 3,000 in 1501 . Among these lawsuits, cases laid in London - that is, arising from disputed agreements or events alleged to have taken place within the city - consistently comprise 12 to 14 per cent of litigation; Londoners pursued on average 28 lawsuits per thousand residents in the fifteenth century, as compared with 2 to 4 lawsuits per thousand residents in most English counties. ${ }^{25}$ Among these, 80 per cent of Londoners' lawsuits were economically-orientated actions of debt, detinue or account, as opposed to only about half among non-Londoners, reaffirming Londoners' central role in the national economy. ${ }^{26}$

The Centre for Metropolitan History, within the Institute of Historical Research, University London, carried out a major Arts and Humanities Research Council funded project entitled 'Londoners and the law: pleadings in the Court of Common Pleas, 1399$1509^{\prime}$ (LATL) in order to make a substantial sample of these records available for

[^6]analysis. ${ }^{27}$ Active from 2006 to 2009, the LATL project, identified all pleaded cases relating to London (either laid in London or involving a London litigant) within four main sample periods, $1399-1409,1420-9,1445-50$, and $1460-8$, plus the outlying years 1480 and 1500; that is, thirty-eight years all together. ${ }^{28}$ All of these London-related lawsuits, 6,321 in total, have since, with the help of the Marc Fitch Fund, been edited and published by British History Online as a searchable, English-language calendar. ${ }^{29}$ This calendared dataset includes the names over 30,000 individuals and the details of nearly 8,000 alleged events, such as assaults, thefts, or debts meeting or exceeding the $40 s$. minimum-value threshold for cases to be heard before the Court of Common Pleas. Among the calendared events are 4,684 alleged credit transactions cited in 3,870 cases of alleged debt, some cases citing multiple transactions of the same or different debt types. ${ }^{30}$

Debt cases were overwhelmingly brought using variations of the praecipe writ:
debt on an unsecured cash loan; debt on a sale of goods on credit; or debt as recorded in a written instrument, usually a bond. ${ }^{31}$ Each pleaded case specifies the litigants' names; the value of the debt; where and when the debt was contracted; when payment was due; and in instances of sales of goods on credit, a list of the items bought. Further, after the 1413 Statute of Additions, plaintiffs were required to supply each defendant's status or occupation and his/her county and place of residence, or risk being nonsuited. ${ }^{32}$ This

[^7]
# This is a PRE-PUBLICATION DRAFT only. See the published version for reference. Economic History Review 2016. 

fostered a culture of litigation in which plaintiffs routinely elected to supply all of this information for both themselves and their defendants.

This detailed personal information allows the identification of a sample of transactions in which a Londoner was a creditor, or plaintiff; that is, 2,571 disputed credit agreements by loan, sale of goods or bond, cited in 2,027 cases. ${ }^{33}$ Because the franchise of the city of London included the right of city officials to hear all cases between two Londoners in the city's own courts, when a Londoner appeared before the Court of Common Pleas it was normally in a suit against a non-Londoner, most often as a plaintiff. ${ }^{34}$ Thus the data presented here is overwhelmingly that of credit relationships between London creditors and non-London debtors, providing a barometer of the city's relationship with the national economy.

Table 1. The LATL dataset

| All cases <br> in dataset | All cases citing <br> credit transactions | All credit <br> transactions | London <br> creditors, <br> cases | London <br> creditors, <br> transactions |
| :--- | :--- | :--- | :--- | :--- |
| 6,321 | 3,870 | 4,684 | 2,027 | 2,571 |

Source: Mackman and Stevens, eds, ‘Court of Common Pleas'.

## II

The disputed point between monetarists and Postan's followers may be simplified as the question 'Was credit withdrawn by Londoners as a consequence of a liquidly

[^8]
## This is a PRE-PUBLICATION DRAFT only.

See the published version for reference. Economic History Review 2016.
crisis?' Yet little consideration has been given to the variety of forms in which credit was actually available. There were, in fact, notable differences between the credit arrangements typically described as loans, sales of goods, and bonds. Each pertained to debts of a different average value, each was to be repaid over a different period of time (Tables 2-5), and, as discussed in Section IV below, the usage of each altered independently in response to economic stress.

Table 2. London creditors' loan, sale of goods, and bond values in shillings

| Years | Loan |  |  |  | Sale of goods |  |  |  | Bond |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | no. | mean | median | mode | no. | mean | median | mode | no. | mean | median | mode |
| 1390-99 | 8 | 183 | 71 | 40 | 37 | 331 | 160 | 40 | 59 | 782 | 320 | 400 |
| 1400-09 | 26 | 108 | 55 | 40 | 55 | 143 | 60 | 40 | 118 | 587 | 200 | 400 |
| 1410-19 | 14 | 107 | 37 | 93.33 | 36 | 208 | 70 | 40 | 176 | 425 | 150 | 40 |
| 1420-29 | 24 | 85 | 22 | 40 | 45 | 141 | 77 | 40 | 209 | 308 | 171 | 200 |
| 1430-39 | 11 | 51 | 21 | $\mathrm{MM}^{\text {a }}$ | 25 | 320 | 52 | 40 | 115 | 380 | 160 | 66.66 |
| 1440-49 | 37 | 105 | 40 | 200 | 104 | 221 | 116 | 40 | 364 | 340 | 195 | 400 |
| 1450-59 | 36 | 152 | 40 | 40 | 79 | 133 | 67 | 40 | 283 | 454 | 213 | 400 |
| 1460-69 | 41 | 123 | 40 | 40 | 55 | 144 | 100 | 40 | 326 | 407 | 180 | 200 |
| 1470-79 | 10 | 118 | 42 | 200 | 23 | 191 | 55 | 40 | 117 | 334 | 200 | 400 |
| 1480-89 | 1 | 11 | 11 | 11 | 5 | 126 | 100 | $\mathrm{MM}^{\text {b }}$ | 13 | 229 | 133 | $M^{\text {d }}$ |
| 1490-1500 | 9 | 33 | 24 | 60 | 33 | 298 | 113 | $\mathrm{MM}^{\text {c }}$ | 87 | 368 | 165 | 400 |
| All data 1390-1500 | 217 | 112 | 40 | 40 | 497 | 198 | 81 | 40 | 1867 | 405 | 193 | 400 |

Notes: $\mathrm{MM}=$ multimodal.
${ }^{\mathrm{a}} 4.33 \mathrm{~s}$. / 12 s .
${ }^{\mathrm{b}} 40 \mathrm{~s}$. / 86.66s. / 100s.
${ }^{\mathrm{c}} 60 \mathrm{~s}$. / 240s. / 317.75s. / 380s.
${ }^{\mathrm{d}} 100 \mathrm{~s}$. / 133.33s.
Source: Mackman and Stevens, eds, 'Court of Common Pleas'.

The cash loan, described as a single or aggregate sum borrowed (mutuatus fuisset), was typically the lowest value debt transaction, often just equal to or even below (if grouped with other debts) the $40 s$. threshold required for prosecution at Common Pleas and only irregularly exceeding $£ 10$ (Table 2) -the value of the least-valuable quarter of Statute Merchant and Staple certificates assessed by Nightingale. ${ }^{35}$ The mean value of London creditors’ loans in the LATL dataset is about $£ 5$. In addition to standalone transactions, cash loans were also often alleged to have accompanied sales of goods on credit. These may occasionally have been a fictitious means of raising the aggregate sum of an alleged debt to the $40 s$. threshold for prosecution at Common Pleas. For example, in 1421 London mercer Thomas Turnour sought a debt from John Botall of Nottingham, arising from a 1408 sale of two ells of linen cloth for $22 s .8 d$. and a 1411 sale of 2 kerchiefs of lawn for $12 s$., allegedly accompanied by a cash loan of $5 s .4 d$., sufficient to bring the aggregate debt to precisely $40 s .{ }^{36}$ But usually the sale of goods alone exceeded the 40s.threshold for litigation, as when in 1464 William Havelok sought from a 'pedlar' of Bury St Edmunds $£ 30$ for wine, plus $£ 10$ arising from a cash loan. ${ }^{37}$ Similarly, loans were also alleged, although less frequently, to have accompanied the sealing of one or more bonds, as when in 1460 London gentleman Robert Enges plead that London butcher William Ordo owed him $43 s .4 d$. on a bond, plus $16 s .8 d$.for a cash loan agreed on the same day. ${ }^{38}$ While some creditors probably extended lines of credit to

[^9]This is a PRE-PUBLICATION DRAFT only.
See the published version for reference. Economic History Review 2016.
particular debtors primarily in the form of cash loans, lawsuits much less frequently reflect this than they do mixed credit in cash and goods, or repeated sales of goods on credit (see below). For example, in 1461 London citizen and fishmonger Robert Derlyngton, alleged that he had loaned Prior John Grannysden of the priory of St James at Tandridge (Surrey) moneys totalling $£ 646 s .9 \mathrm{~d}$. for 'the use and profit' of the priory on four occasions between May 1458 and December 1460, and supplied the priory with fresh and salt fish determined by an accounting to be worth a total of $£ 2715 s .51 / 2 d .{ }^{39}$

Loans had a relatively short repayment period. Between 1390 and about 1430 most Londoners' loans cited in litigation stipulated a payment deadline, and these were typically five months or less from the making of the loan. From the 1430s onwards, loans were, in over 80 per cent of instances, described as payable upon request (solvendum eidem X cum inde requisitum fuisset). The legal threshold for failure to pay 'upon request' was not clearly defined, but in practice the post-request payment period would have been no less than the time required for a plaintiff to lay an action of debt before a court with competence and jurisdiction plus a defendant's maximum period of admissible delay (e.g. essoins for illness) before appearing before the court, perhaps as little as a few weeks in a county or borough court and a few months at Common Pleas, although significantly longer delays could sometimes be orchestrated. ${ }^{40}$ Only once, in a case involving a particularly high value transaction of $£ 26$, does the creditor of an alleged loan specify multiple repayment instalments, over eleven months. ${ }^{41}$

[^10]This is a PRE-PUBLICATION DRAFT only.
See the published version for reference. Economic History Review 2016.
Table 3. London creditors' loans, terms of payment

| Years | All loans <br> with <br> payment <br> data | Loans <br> stipulating one <br> payment date | Mean payment <br> period in <br> months ${ }^{a}$ | Loans <br> stipulating <br> multiple <br> payment dates | Loans payable <br> on request | Per cent <br> payable <br> on request |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| $1390-99$ | 8 | 7 |  |  |  |  |
| $1400-09$ | 26 | 21 | 4 | - | 1 | 13 |
| $1410-19$ | 14 | 13 | 3 | - | 1 | 19 |
| $1420-29$ | 24 | 18 | 5 | - | 6 | 7 |
| $1430-39$ | 11 | 2 | 3 | - | 9 | 25 |
| $1440-49$ | 37 | 4 | 5 | - | 32 | 82 |
| $1450-59$ | 36 | 1 | 3 | - | 39 | 86 |
| $1460-69$ | 41 | 2 | - | - | 9 | 97 |
| $1470-79$ | 10 | 1 | - | - | 9 | 90 |
| $1480-89$ | 1 | - | - | 1 | 100 |  |
| $1490-1500$ | 9 | - |  |  | 1 | 100 |
|  |  |  |  |  |  |  |
| All data | 217 | 69 |  |  |  | 68 |
| $1390-1500$ |  |  |  |  |  |  |

Notes: ${ }^{a}$ Stipulated payment periods of 1-30 days have been calculated as one month. Source: Mackman and Stevens, eds, ‘Court of Common Pleas’.

Sales of goods on credit tended to involve larger amounts than loans. While the mode value of sales was similar to loans, being 40 s . throughout the fifteenth century, the mean value of Londoners' sales of goods on credit in the LATL dataset is over $£ 10$, twice the mean value of loans. As illustrated by Turnour v. Botall, cited above, Londoners’ lawsuits brought on debts arising from sales of goods on credit are often illustrative of lines of credit extended to repeat customers. ${ }^{42}$ A typical is lawsuit is that in which London citizen and skinner John Norys alleged in 1461 that Sir Edward Broke, Lord Cobham, owed him £25 3s. 4 d. arising from a December 1454 accounting of debts

[^11]
# This is a PRE-PUBLICATION DRAFT only. See the published version for reference. Economic History Review 2016. 

outstanding, plus four further sales of peltry and gowns to Lord Cobham as recently as March $1456 .{ }^{43}$

Table 4. London creditors' sales of goods, terms of payment
Notes: ${ }^{a}$ Stipulated payment periods of 1-30 days have been calculated as one month.

| Years | All sales <br> with <br> payment <br> data | Sales <br> stipulating one <br> payment date | Mean payment <br> period in <br> months $^{a}$ | Sales <br> stipulating <br> multiple <br> payment dates | Sales <br> payable <br> on <br> request | Per cent <br> payable <br> on <br> request |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| $1390-99$ | 37 | 19 | 4 |  |  |  |
| $1400-09$ | 55 | 29 | 5 | 1 | 17 | 46 |
| $1410-19$ | 36 | 27 | 3 | - | 26 | 47 |
| $1420-29$ | 45 | 30 | 3 | - | 9 | 25 |
| $1430-39$ | 25 | 2 | 9 | 1 | 14 | 31 |
| $1440-49$ | 104 | 16 | 4 | - | 23 | 92 |
| $1450-59$ | 79 | 4 | 26 | - | 88 | 85 |
| $1460-69$ | 55 | 7 | 4 | - | 75 | 95 |
| $1470-79$ | 23 | 1 | - | - | 48 | 87 |
| $1480-89$ | 5 | - | - | 22 | 96 |  |
| $1490-1500$ | 33 | 1 |  |  | 5 | 100 |
|  |  |  |  |  | 33 | 100 |
| All data |  |  |  |  |  |  |
| $1490-1500$ | 497 | 136 |  |  | 360 | 72 |

Source: Mackman and Stevens, eds, 'Court of Common Pleas’.

The typical payment period for a sale of goods on credit was similar to that of a loan. Between 1390 and about 1430 most Londoners' sales on credit cited in litigation stipulated a payment deadline, typically five months or less from the day of sale. As was

[^12]
## This is a PRE-PUBLICATION DRAFT only.

See the published version for reference. Economic History Review 2016.
the case with loans, from the 1430s onwards sales were, in over 80 per cent of instances, described as payable upon request. When payment deadlines were specified, payment schedules were very occasionally set out. Two such cases appear in the LATL dataset, both arising from transactions made before 1430, and both allowing just two instalments leading to full payment within a year. ${ }^{44}$

The third and most commonly cited form of credit relationship detailed in cases at Common Pleas was a debt recorded in a 'bond', a formal written instrument bearing the debtor's seal and usually described as a 'scriptum', within which the debtor 'granted himself to be bound and obliged by his certain writing obligatory' (per quoddam scriptum suum obligatorium concessisset se teneri et obligari). ${ }^{45}$ The mode value of bonds cited in London creditors’ fifteenth-century lawsuits was $£ 20$, or ten times the mode value of loans and sales of goods (Table 5). The mean value of all bonds in the LATL dataset is similarly about $£ 20$, or four times that of loans and twice that of sales of goods, but decadal means could be as high as $£ 29$ in $1400-9$ and $£ 39$ in the 1390 s.

[^13]
## This is a PRE-PUBLICATION DRAFT only. See the published version for reference. Economic History Review 2016.

Table 5. London creditors' bonds, terms of payment and prosecution of cases brought on multipl

| Years | All <br> bonds <br> with <br> payment <br> data | Bonds stipulating one payment date |  | Mean <br> payment period in months ${ }^{a}$ | Bonds stipulating multiple payment dates ${ }^{b}$ |  | Payable on request |  | Paya <br> the $b$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | no. | per cent of all bonds |  | no. | per cent <br> of all <br> bonds | no. | per cent of all bonds | no. ${ }^{\text {c }}$ |
| 1390-99 | 57 | 48 | 84 | 5 | 9 | 16\% | - | - | - |
| 1400-09 | 112 | 101 | 90 | 5 | 9 | 8\% | 2 | 2\% | - |
| 1410-19 | 174 | 160 | 92 | 8 | 10 | 6\% | 4 | 2\% | - |
| 1420-29 | 203 | 190 | 94 | 7 | 12 | 6\% | 1 | 0.5\% | - |
| 1430-39 | 115 | 115 | 100 | 20 | - | - | - | - | - |
| 1440-49 | 351 | 338 | 96 | 9 | 12 | 3\% | 1 | 0.3\% | - |
| 1450-59 | 280 | 276 | 99 | 7 | 4 | 1\% | - | - | - |
| 1460-69 | 319 | 307 | 96 | 7 | 11 | 4\% | 1 | 0.3\% | - |
| 1470-79 | 114 | 112 | 98 | 8 | 2 | 2\% | - | - | 2 |
| 1480-89 | 13 | 13 | 100 | 30 | - | - | - | - | 4 |
| 1490-1500 | 88 | 77 | 88 | 7 | 7 | 9\% | 4 | 5\% | 1 |
| All data |  |  |  |  |  |  |  |  | - |
| 1390-1500 | 1,813 | 1,737 |  | 8 | 76 | 4\% | 13 | 1\% |  |

[^14]What makes the significance of bond values difficult to assess is the bond's diverse uses beyond the mercantile sphere, arising from the simplicity and versatility of the instrument. ${ }^{46}$ The text of a 'simple bond' described the obliged party's obligation to the obligee, or creditor. The obliged debtor's seal was applied to the document to make it sufficient for the creditor-plaintiff to plead 'specialty' in a lawsuit for recovery of the debt. The practical importance of specialty to the litigants was the prohibition of the debtor in such lawsuits from offering a general denial and compurgation -that is, a lawsuit-terminating oath denying the debt assisted by eleven compurgators- as defendants were wont to do in response to accusations of a debt arising from a loan or sale of goods. ${ }^{47}$ Bonds allowed creditors a greater degree of security, by disallowing compurgation and thereby limiting the debtor to a narrow range of defences at common law, principally to the claims that the bond had already been paid, that the bond was a forgery, that the debtor had been underage or under duress at the time of the bond's making, or, most importantly, that it had been made null and void by the fulfilment of some associated condition.

A simple bond contained no 'nullifying condition' (that is, a statement of something which, when done, would void the debt or obligation) on the document itself, only instructions for feasance (that is, instructions to pay or to do something) written on the face of the bond, but such a condition was sometimes recorded on an indenture made on the same or a subsequent day stipulating a series of payments or actions required for defeasance (that is, required to make void the debt or obligation)..$^{48}$ Also, the face value of a simple bond might

[^15]be greater than payment value of the nullifying condition on the indenture. ${ }^{49}$ In effect, this transformed the simple bond into a penalty device designed to deter nonfeasance. More common even than simple bonds were bonds endorsed with their nullifying terms of defeasance, referred to interchangeably as 'conditional bonds' or 'penal bonds'. In the fifteenth century, before the rise of actions of assumpsit, or actions seeking compensation from defendants who failed to complete an agreed undertaking, the use of conditional bonds was fundamental to securing the completion of contracts, either commercial or noncommercial. ${ }^{50}$ The diverse conditions with which penal bonds were endorsed are known to us because defendants being sued for payment of penal bonds often asked that the bond be audited (that is, read aloud) before the court. While a defaulting debtor was liable to pay the face value of his bond, irrespective of any partial fulfilment of the condition, the sum sought by plaintiffs varied between the unpaid portion of the conditional sum and the bond's full penal face value. ${ }^{51}$ An avaricious plaintiff might even sue a writ of debt against a defendant for the face value of a penal bond plus the unpaid conditional sum required by the associated agreement, as London citizen and brewer John Spenser pled in two lawsuits brought against the executors of Sir Simon Felbryg of Norfolk, in 1445, for unpaid bonds and unpaid rents on London properties. ${ }^{52}$ Lastly, penal bonds might have nullifying conditions which were commercial, as when reflecting credit for cash or goods; semi-commercial, as when requiring the obliged party to demise certain lands or rents; or even non-commercial, as when requiring respectful behaviour or participation in arbitration between parties. ${ }^{53}$

[^16]It is this diversity of bonds which has led to strong criticisms of their use as a gauge of the health of fifteenth-century economy. ${ }^{54}$ However, when the endorsements of conditional bonds on which London plaintiffs brought lawsuits were audited, we can see that they were overwhelmingly commercial or semi-commercial in nature, with nullifying conditions most often requiring the payment of monies. Also, bonds were individually negotiated, and their face value, where greater than the sum required by the nullifying condition, had to be realistic and proportional for both parties to agree to it. Where known, the face, or 'penalty', value of London plaintiffs' bonds normally bore a direct relationship to the sum required by the endorsed nullifying condition, for example the face value being equal to or double the sum specified in the condition, perhaps reflecting the presumed credit worthiness of the debtor. ${ }^{55}$

Bonds almost universally stipulated a due date for payment of their face value (that is, separate from conditions endorsed or on associated indentures) throughout the fifteenth century (Table 5). The mean period between the making of a bond in the LATL dataset and its due date was typically around seven to eight months, and in some decades perhaps a year or more, with generally less than 10 per cent stipulating multiple repayment dates on their face. This was substantially longer than the five months or less creditors allowed debtors for the repayment of loans or payment for goods sold on credit, before those transaction types shifted to the use of 'payable on request' contracts in the 1430s. Moreover, the interval between the making of a bond and the due date of its face value probably underestimates the total payment period available to debtors adhering faithfully to agreed conditions of defeasance. Where the endorsed defeasance of penal bonds is known, the due date of the face value often corresponds with the due date of the first of a series of instalments stipulated in

[^17]the nullifying condition. ${ }^{56}$ This allowed the creditor to begin seeking payment of the face value of the bond at the first instance of the debtor defaulting on any defeasance payment.

In summary, London creditors were discerning about how they used the credit devices available to them. If a would-be debtor needed a small amount of money to purchase diverse items, a creditor might well lend coins, to a sum of about $£ 5$. A London wholesaler or tradesman might offer a gentlemen or redistributor (for example, a peddler or chapman) a line of credit for medium sized transactions to a sum of about $£ 10$. When the volume of credit requested was relatively large -that is, about $£ 10$ or more- or the would-be debtor's creditworthiness questionable, a bond would be drawn up.

Generally speaking, small to medium loans and sales of goods would have comprised the bulk of Londoners' transactions, if not necessarily the majority of the total value of credit they extended. Hence, the impression given by LATL data, that transactions secured by a bond were most frequent (Table 2), inverts the reality of everyday business in the city, where smaller transactions would have predominated. As Nightingale discovered from the 1390s account book of the London ironmonger Gilbert Maghfeld, he never employed bonds in any more than 36 per cent of his credit arrangements in even his most rocky financial years, and did so much less often in better times. ${ }^{57}$ As the records of Common Pleas indicate, creditors were disproportionately likely to go to law to recover debts which were relatively large and which they had gone to the trouble and expense of recording in a written instrument specifically so that they might enjoy the advantages of pleading specialty should recovery at law become necessary. In contrast, the more day-to-day, lower-value, and shorter-term loans and sales of goods on credit may serve as a better barometer of changes to the credit market

[^18]than either bonds or the high-value certificates of Statute Merchant and Staple assessed by Nightingale. ${ }^{58}$

## III

An examination of Londoners' fifteenth-century credit transactions, assessed through the setting out of a series of decadal data points, illuminates the relationships between the mean values of loans, sales of goods on credit, and bonds, jointly and severally, and the changing trajectory of the broader economy. This data must be assessed with an awareness of the innate bias of the LATL dataset. It is based on a calendar of lawsuits plead in four main sample periods, 1399-1409, 1420-9, 1445-50, and 1460-8, plus the outlying years 1480 and 1500, and so likely inflates mean vale and payment periods for transactions furthest in advance of the sample years (especially the 1430s and 1480s). Nevertheless, it allows a comparison with Nightingale's decadal data of the mean value, and sum value, of debts in default recognized under the Statutes Merchant and Staple and deposited with chancery. ${ }^{59}$


Figure 1. Decadal totals of credit, Statutes Merchant and Staple
Source: Nightingale, 'Gold, credit and mortality', p., 1084, Figure 2

[^19]

Figure 2, Decadal average value of debts in default, Statutes Merchant and Staple
Source: Nightingale, 'Gold, credit and mortality', p. 1087, Figure 4.


Figure 3. Sum of the average value of London creditors' loans, sales of goods, and bonds Source: Table 2; Mackman and Stevens, eds, 'Court of Common Pleas'.


Figure 4. English mint output in kilograms of silver minted
Notes: ${ }^{a}$ In these years most production was from the Calais mint.
${ }^{b}$ Re-coinage and devaluation.
Source: Spufford, Money and its use, Appendix III

Nightingale is the chief proponent of the monetarist interpretation of the fifteenthcentury depression, in which a lack of silver coinage is posited to have led to a destructive withdrawal of credit. This is best illustrated by her analysis of debts in default recognized under the Statutes Merchant and Staple. She has hypothesized a positive relationship between decadal fluctuations in the average value of individual debts (Figure 2) and changes in mint output, which reflect the level of the total money supply, when interpreted with sensitivity to episodes of elevated mortality among creditors and to changes in the level of agricultural wages, which reflect consumer welfare. ${ }^{60}$ Additionally she has assessed the total value of all Statute debts in default on a decadal basis (Figure 1). It is impossible to detail the whole of Nightingale's narrative here, but it is sufficient to summarize her main points, with reference to Figures 1 and 2, so that informed comparisons may be made with the LATL data in Figure 3. Figure 4 indicates mint output.

Nightingale suggests that mint output in the final decade of the fourteenth century had already slumped below a level sufficient to meet England's needs. ${ }^{61}$ The years $1400-9$ then witnessed a further 70 per cent decline in mint output combined with heightened mortality of about five to eight per cent among creditors, leading to less money in circulation and fewer wealthy merchants to lend and borrow it, depressing average debt values. The 1410s saw a debasement and re-coinage of silver pennies together with further heightened mortality, having the potential to increase per capita coin supply; and, average Statute debt values did increase in this period. ${ }^{62}$ But, Nightingale cites a 40 per

[^20]cent decline in decadal total credit in default, and the relatively small amount of silver recoined, as evidence of an economy-damaging withdrawal of credit driven by a 'failing circulation of silver, ${ }^{63}$ In the 1420s the average value of debts in default continued to rise, but Nightingale again emphasizes a further decline in the total value of credit in default in her source as evidence of a further withdrawal of credit exacerbated by exceptional mortality in 1423-4, which 'provoked a crisis of confidence'. ${ }^{64}$ As a result of a sharp increase in silver minting in the late 1420s and early 1430s, the average value of Statute debts peaked in 1430-9. Nightingale points out that Blatcher estimated that this was similarly a medium-term high point for the value of suits before the courts of King's Bench and Common Pleas, an estimation borne out by comparison with the LATL data in Figure 3. Nightingale attributes smaller average debt values in the 1440s to a sharp reduction in London mint output from 1436 and the closure of the Calais mint in 1440, making the period 1441-5 the nadir of mint output in the fifteenth century. ${ }^{65}$ A temporary increase in mint output in the 1450s contributed to a short-term increase in average debt values, but in 1464-5 the crown resorted to a re-coinage and 20 per cent devaluation of silver specie. ${ }^{66}$ Nightingale emphasizes that from 1470-95 the total number of certificates of Statute debts in default, and their annual total value, continued to fall, attributing this to continued, inadequate minting of silver coinage. She does not comment on the rise in the average value of individual Statute debts during this period. ${ }^{67}$ Finally, she argues that

[^21]
## This is a PRE-PUBLICATION DRAFT only.

 See the published version for reference. Economic History Review 2016.under Henry VII, in the 1490s and particularly from 1497, silver bullion supply was improved, mint output improved and economic recovery was stimulated. ${ }^{68}$

Nightingale's work also conveys a secondary narrative regarding the increasing share of Statute debt in default featuring a London creditor. Londoners increased their share of Statute debts from about 22 per cent at the opening of the fourteenth century, to about 31 per cent in the 1330s, 50 per cent in the 1390s -even though 'prominent London merchants suffered bankruptcy, and their failure dragged down others with them'- 52 per cent in the $1420 \mathrm{~s}, 70$ per cent in the 1450 s , and 83 per cent in the decade 1500-9..$^{69}$ This narrative reinforces the earlier work of Derek Keene, who surveyed debt cases before the Court of Common Pleas in 1424 and 1570, and found that the proportion of cases laid in London, that is arising from agreements alleged to have been made in London, rose from about 26 per cent in 1424 to about 65 per cent in $1570 .{ }^{70}$

Overall, the LATL data (Figure 3), follows same general trends identified by Nightingale in her assessment of debts in default recognized under the Statutes Merchant and Staple (Figures 1 and 2). ${ }^{71}$ Figure 3 displays the sum of the decadal average values of loans, sales of goods on credit, and bonds agreed by London creditors. The decadal growth or decline of average transaction values in Figures 2 and 3 is remarkably similar, especially for the 1390 s and 1400 s, and again for the 1420 s to 1470 s.

With these trends in mind, the LATL data in Figure 3 is, if anything, in greater harmony with Nightingale's narrative of economic decline relative to mint output than the average decadal values of Statute debt displayed Figure 2. In particular, the sum of

[^22]London creditors' average loan, sale of goods on credit, and bond values from the LATL dataset fell across the decades 1400-19, which witnessed the debasement of silver coinage, weak mint output, and high mortality. Likewise, the sum of Londoners' average transaction values declined in the 1480s, in line with continued low mint output. In each of these periods the average value of Statute debts increased, when we might instead have expected the value of Statute debts to have fallen in response to a low mint output, and Nightingale has chosen to emphasize alternatively a decline in the decadal total credit value of all Statute debts in default. Thus, as the agreement between Figures 2 and 3 shows, there is a clear correlation between mint output and transaction values, undoubtedly enhanced by the reality that from that the 1420s onwards the majority of creditors in Statute debts were Londoners.

## IV

While the harmony of the LATL data with Nightingale's own narrative and data reaffirms our understanding of the contours the depression, that alone does not validate the monetarists' core assertion that these changes occurred because creditors actively withdrew credit in a context of falling mint output. Testing this proposition requires the specification of the mechanics of that 'withdrawal' in modern economic terms, based on the narrative of events that monetarists have articulated. This can be done using the LATL data.

Nightingale acknowledges that most decades in which she sees a reduction in silver specie supply as leading to a withdrawal of credit, there were also high levels of

## This is a PRE-PUBLICATION DRAFT only. See the published version for reference. Economic History Review 2016.

mortality. But she singles out the year 1400 as the first point at which the total value of credit in Statute debts in default declined faster than population, that is, a 40 per cent decline in total credit in default; and likewise, the average value of individual Statute debts fell from about $£ 70$ in the 1390 s to less than $£ 57$ in $1400-9 .{ }^{72}$ Further, she identifies the failure of the average value of debts to return to previous levels in the following years, as they did in the years immediately following 'the two great epidemics of 1349 and 1362', as indicating that 'monetary factors had by 1400 become more significant than mortality in causing the contraction of credit'.$^{73}$ In brief, the decade $1400-9$ is held up as evidence of the two pillars of the monetarist interpretation of the fifteenth-century depression. First, the 'monetary factors' referred to are the weak mint output and reduced money supply, leading to economic contraction because the necessary velocity with which the remaining specie would need to have circulated to service all transactions was untenably high. ${ }^{74}$ This is best illustrated by the fall in the total credit value of Statute debts in default. Second, the fall in the average value of individual debts together with the long duration of the subsequent economic contraction, as viewed through Statute debts, is illustrative of the failure of credit to compensate, elastically, for either the silver specie shortage or the increased velocity of specie circulation required to offset it. ${ }^{75}$

Moving beyond Nightingale's own argument, this scenario suggests that from about 1400 lenders began to engage in what economists refer to as 'credit rationing' in which there were potential debtors seeking credit and willing to pay the necessary transaction

[^23]costs to attain it, but who nevertheless were not always able to attain credit. Creditors, fearful of adverse selection in which only the least creditworthy borrowers would assent to higher transaction costs, and now unable to determine the default risk of potential debtors due to their inconsistent capacity to attain sufficient silver specie to repay their debts, began to safeguard their own liquidity by granting credit to only a portion of potential debtors. That is to say, creditors were responding to what economists call the 'transaction motive' in which creditors retain money in hand so as to complete their own essential transactions, and the 'asset motive' in which creditors retain money as an appreciating asset under deflationary conditions. ${ }^{76}$ Further, the chronic shortage of specie throughout the fifteenth century created a long-term defect in the credit market sufficient to give rise to equilibrium credit rationing in its pure form (see below), which steadily underfunded the economy and drove down gross domestic product until that market defect was rectified by increased silver specie supply. As Nightingale has reported of the actions of failed London ironmonger, Gilbert Maghfeld, 'despite growing demand...Maghfeld's consciousness that his cash flow was diminishing made him reduce the scale of his transactions', namely by 'cutting the amount of credit he gave for commercial transactions' ${ }^{77}$

Importantly, in pure equilibrium credit rationing, because creditors cannot gauge the credit worthiness of potential debtors, they reduce the total volume of credit which they extend by simply offering credit to fewer debtors. ${ }^{78}$ They do not necessarily reduce the size of individual credit transactions. This would explain the otherwise contradictory

[^24]trends of average Statute debt values rising in the 1400s, 1410s, and 1480s, while the total value of Statute debts in default in each decade declined sharply (Figures 1 and 2).

At its most basic, pure equilibrium credit rationing is a reduction in supply. In contrast, demographically focused historians such as Postan, and his more recent successors such as Hatcher and Bailey, simply attributed economic contraction to a reduction of demand, precipitated largely by a fall in population. ${ }^{79} \mathrm{We}$ are able to test these competing views of falling credit supply versus falling credit demand using the detailed LATL transaction data. As credit markets move toward equilibrium, where credit supply is less than demand, creditors are at liberty to increase transaction costs, that is, to offer credit on terms more favourable to themselves (see below); conversely, where supply is greater than demand creditors are forced to lower transaction costs. If creditors began to ration credit from the early fifteenth century, thereby artificially creating a longterm and economy-crippling shortage of credit, then the terms of LATL credit transactions should become self-evidently more favourable to creditors over time. ${ }^{80}$ If a declining population led to falling demand, debtors should have received credit on terms increasingly favourable to themselves as creditors competed for market share.

The terms by which London creditors in the LATL dataset offered credit clearly did become more favourable to creditors in the early fifteenth century, as the depression deepened. Interest data, the primary measure of market adjustment in modern credit markets, is not available for Londoners' medieval transactions, as interest was usually

[^25]calculated as part of the agreed debt value because it was technically illegal on religious grounds. ${ }^{81}$ However, changes to the terms of repayment are extremely instructive.

London creditors in the LATL dataset almost universally negotiated more favourable terms of repayment across the century. Loans and sales of goods on credit both saw a dramatic increase in the proportion of transactions designated payable on request in the first half of the century, as lenders began to make credit less readily available (Tables 3 and 4). Some 13 to 19 per cent of loans were designated 'payable on request' in 13901409, falling to 7 per cent in 1410-9, with lenders perhaps taking heart in Henry IV's effective end of the civil war and Welsh rebellion which had followed his usurpation, as well as the re-coinage cited by Nightingale (Table 3). ${ }^{82}$ But, as the depths of the depression hit in the 1420s, combined with the severe mortality of 1423-4, the proportion of loans deemed payable on request rose to 25 per cent in 1420-9, then to 82 per cent in 1430-9, and ultimately to between 90 and 100 per cent of all loan transactions in 1450$1500 .{ }^{83}$ Changes to the repayment terms of sales of goods follow a similar pattern, with 46-7 per cent of sales of goods being payable on request in 1390-1409, falling to 25 per cent in 1410-9, but then rising to 31 per cent in 1430-9 and further to $85-100$ per cent thereafter.

Designating loans or sales of goods as payable on request offered the creditor two main advantages. First it empowered the creditor to demand immediate repayment of a debt should the creditor find him or her own self in need of cash. Second, should the debtor become insolvent, it allowed the creditor to sue for reclamation of the debt, at

[^26]Common Pleas or elsewhere, immediately upon a debtor's failure to meet a demand for repayment. The latter could prove an indispensable advantage when a debtor came publically into financial difficulty, as when a debtor was imprisoned as a result of another creditor's litigation. For example, in Trinity term 1402 London brewer John Clerk plead that German 'merchant' Everard Stepyng owed him 100s. on a bond. ${ }^{84}$ Stepyng, delivered to the court from the city of London's Newgate prison, acknowledged that he owed Clerk the debt, and so was committed to the Fleet debtors' prison, whereupon the sheriffs of London reported that Stepyng had been incarcerated in Newgate prison because he had already been found liable in thirteen other debt suits. Similarly, in Jenks' partial reconstruction of the 1461-2 lost London Sheriffs' Court proceedings, using primarily documents querying why persons had been incarcerated by the court, 95 debtors (or groups of debtors) were defendants concerning 182 debts, and just ten (11 per cent) of these debtors were defendants concerning 68 ( 37 per cent) debts. ${ }^{85}$ Clearly, a debtor becoming insolvent could induce something akin to a run on the bank, and speed of litigation could be of the essence for creditors hoping for repayment against a debtor's dwindling assets.

It is self-evident that debtors who borrowed money or purchased goods on credit, even when the debt was designated payable on request, would have agreed with the creditor on an expected timeframe for payment, before which they would not have anticipated the creditor calling in the debt under normal circumstances. This was probably similar to the repayment period which continued to be stipulated for some loans and sales of goods. But the normalisation of such debts as payable on request, from the

[^27]
## This is a PRE-PUBLICATION DRAFT only. See the published version for reference. Economic History Review 2016.

1430s, must have made it exceedingly difficult for the debtors of London creditors to trade effectively, as they were themselves often creditors to less affluent persons. For example, we can imagine a trickledown effect in which the above discussed pedlar of Bury St Edmunds or the German merchant would themselves have extended credit on only a payable on request basis, to ensure their own liquidity. ${ }^{86}$

Further detailed evidence of credit rationing and liquidity protection by lenders is visible in the dynamic relationship between the average values of loans, sales of goods on credit, and bonds (Figure 3). As described above, when viewed across the century, sales of goods were typically twice the value of loans, and bonds were twice the value of sales of goods. The driving force behind changes in the sum of the mean values of these transaction types in each decade of the century was change in average bond value. But, against the backdrop of shifting bond values, the relationship between the more every day transactions of loans and sales of goods fluctuated markedly, as creditors rationed credit for sales of goods even more strictly than cash loans (Figure 3).

In periods of economic contraction, as indicated by falling average bond values, the mean value of loans increased relative to the mean value of sales of goods. For example, across the decades 1400-1429 the mean value of sales of goods was only 1.6 times that of loans, and in 1400-9 and the mean value of sales of goods was just 1.3 times that of loans (Table 2). In periods of what might best be called partial recovery, for example in the 1430 s, the value of sales of goods was 6.3 times that of loans and in 1500 it was nine times that of loans. Even if the limited data for these years, furthest in advance of LATL sample periods, somewhat exaggerates these trends, they nevertheless suggest that

[^28]creditors under stress preferred lending cash to selling goods. Presumably, they felt making cash loans could more quickly increase their own liquidity. This conclusion is reinforced by Nightingale's assessment of Maghfeld's accounts, in which she discovered that the London ironmonger reacted to the faltering economy of the 1390s by reducing the total value of his transactions by half, and by attempting to replace his falling profits by money lending. ${ }^{87}$ Between 1390 and 1395 he increased the share of credit he offered in cash money, as opposed to sales of goods, from only about a quarter of credit he extended to 95 per cent of credit he extended..$^{88}$ Maghfeld, faced with bankruptcy, may represent an extreme example of restructuring, but the LATL data of London creditors reaffirms that further rationing credit for sales of goods and engaging in more potentially liquidity-generating money lending was a typical response to crisis.

Terms of repayment for bonds in the LATL dataset also became more favourable to creditors in the first half of the fifteenth century. The main indicator of this is a decrease in the proportion of single bonds with multiple payments stipulated on their face, and an increase in the proportion of all debt cases brought on multiple bonds made the same day. A bond with full details of payment written on the face of the instrument, especially where indicating multiple instalments, was almost inevitably a simple bond, with no agreed penalty for nonfeasance. In contrast, the preponderance of bonds made during the century were penal bonds, with a single due date on the face and endorsed conditions of defeasance, often including multiple defeasant payments totalling a substantially lower sum (see above, Section II). The proportion of all bonds in the LATL dataset described in litigation as having multiple payments on their face declined from 16 per cent in 1390-

[^29]This is a PRE-PUBLICATION DRAFT only. See the published version for reference. Economic History Review 2016.

1 to 6 per cent in 1410-29, and then remained just 4 per cent or less until recovering to 9 per cent in 1490-1500 (Table 5).

More problematic still for debtors was the corresponding increase in creditors' use of multiple penal bonds relating to the same debt, made on the same day; that is, the recording of each of multiple instalments towards the payment of a sum agreed on a single day as a separate debt with a separate penal bond. If several of these fell into arrears, they might be the subject of a single lawsuit for the total of their face, or penalty, values. For example, in 1480 Eleanor, the former wife and executrix of the late London tailor John Martyn, and her new husband, Henry John, alleged that Prior Thomas Banys of Folkston Priory owed them $£ 256 s .8 d$. as the unpaid residue of five separate bonds, all made on 13 March 1465, one having been due each Michaelmas thereafter. ${ }^{89}$ Overall, the proportion of London creditors' actions of debt on a bond or bonds, in which the plaintiff(s) sought repayment of multiple bonds made on the same day, rose dramatically during the first decades of the depression, from just two per cent in the 1390s to as high as 17 per cent in 1410 s and 20 per cent in the 1430s, as renewed lending during the partial recovery of the latter decade was subject to creditors' new stricter lending regime (Table 5). The proportion then settled to $7-13$ per cent in the following decades (save in the small sample of the 1480s) as a new trend followed, in which creditors brought multiple lawsuits against the same debtor.

From at least the middle of the century, particularly astute creditors increasingly brought a separate lawsuit for each of several bonds made on the same day. This raised litigation costs but also increasing the chance of a judgement against a defendant should

[^30]
## This is a PRE-PUBLICATION DRAFT only.

See the published version for reference. Economic History Review 2016.
he or she make a procedural error or fail to appear in person, or by attorney, to process each lawsuit in each law term after the initial pleading, for example, by failing to appear before a jury at assize. This was the tactic adopted by London citizen and draper John Drope, who in 1465 brought two consecutively recorded cases, on two separate bonds, against Coventry dyer John Pope. ${ }^{90}$ Each bond was made on 26 August 1462 for a face value of $£ 2510$ s., one being due at the feast of St Bartholomew 1463 and the other at the same feast in 1464. Drope was successful in both actions and awarded debt recovery, damages, and costs in each.

The use of multiple penal bonds with sequential due dates comprising instalments towards a single sum of agreed credit, as opposed to a single penal bond with a face value payable at the first instalment date, was significant enough to lead to an increase in the decadal mean payment period of bonds across the century, from about five months in the decades 1390-1409 to about eight months thereafter (Table 5), keeping in mind the less reliable LATL data of the 1430s and 1480s. Further, the making of separate bonds for an increasing number of instalments towards a single sum of agreed credit may slightly reduce the decadal data of mean bond values from perhaps the 1470s onwards. In these decades, the proportion of single cases brought on multiple bonds fell, and the use of multiple related cases, like those of Drope V. Pope, increased.

As a test of whether credit was withdrawn in the fifteenth century or demand simply slumped with demographic decline, the increasingly lender-empowering terms by which Londoners extended credit strongly suggest that credit was rationed to such an extent that demand exceeded supply. New modes of doing business emerged during a dynamic

[^31]This is a PRE-PUBLICATION DRAFT only. See the published version for reference. Economic History Review 2016.
period of economic contraction, throughout the 1390s and 1420s. From the 1430s most loans and sales of goods were agreed under the condition of payment on request, while creditors regularly succeeded in recording larger sums of credit in multiple penal bonds, corresponding to separate payments towards an agreed sum. It is unlikely that these stricter terms of borrowing would have been accepted by a shrinking pool of borrowers with an abundance of creditors to choose from, as the position of demographically minded historians suggests. The duration over which these practices remained in effect, abating if at all only from the 1490s, thus indicates that London creditors engaged in pure equilibrium credit rationing in response to a long-term structural defect in the market, as pointed to by the work of monetarist historians.

## V

This article highlights the records of the Court of Common Pleas as a new and detailed source of data, reflecting the broad contours of the fifteenth-century depression through the loans, sales of goods, and bonds by which Londoners extended credit. More importantly, the data presented here demonstrates both that London creditors actively withdrew credit during the century, potentially damaging the wider economy, and that they may have done so in response to a liquidity crisis. Londoners' credit rationing, across the range of principal transaction types available to them, is illustrated by the rise of supply-side dictated unforgiving lending practices such as insistence on payable on request credit, would have radiated outwards from London, like 'ripples...into the countryside' ${ }^{91}$ Credit-hungry lesser merchants, as redistributors buying from Londoners,

[^32]would have been forced to mimic these terms when themselves extending credit in order to hedge against the possibility that their own debts might be called in. Together, the use of payable on request credit, and London creditors' tendency to offer smaller sales of goods on credit and larger loans (relative to one another) for quick cash profit in periods of economic stress, suggests an enhanced transaction motive and asset motive consistent with a liquidity crisis. Confirming these conclusions regarding creditors' anxiety to increase their own liquidity is the first appearance of a handful of bonds in the last decades of fifteenth century which describe the debt as payable to the bearer of the bond or bill (Table 5), a provision common to informal bills under law merchant, but having no power under common law, which supported remedy for only the original creditor. ${ }^{92}$ Overall, even as Londoners rationed credit and sought to increase their own liquidity, a shortage of silver specie would have been only the most significant of factors influencing their behaviour within a broader context Postan's demographic decline amid recurrent pestilence and war -meaning a shrinking customer base. But the evidence presented here demonstrates that London creditors' actions were consistent with the monetarist assertion that credit was restricted England's financial capital, potentially crippling the realm's economy.

## Footnote references

Aston, T. H. and Philpin, C. H. E., eds., The Brenner debate: agrarian class structure and economic development in pre-industrial Europe (Cambridge, 1985).
Baker, J. H., 'The law merchant and the common law before 1700', Cambridge Law Journal, 38 (1979), pp. 295-322.
Baker, J. H., An introduction to English legal history (London, 4th edn 2002).
Beattie, C. and Stevens, M. F., eds., Married women and the law in premodern northwest Europe, (Woodbridge, 2013).
Blatcher, M., The Court of King's Bench: a study in self help (London, 1978).

[^33]
## This is a PRE-PUBLICATION DRAFT only. See the published version for reference. Economic History Review 2016.

Bolton, J., 'Was there a 'Crisis of Credit' in fifteenth-century England?', British Numismatic Journal, 81 (2011), pp. 144-164.
Bolton, J., Money in the medieval English economy, 973-1489 (Manchester, 2012).
Bridbury, A. R., Economic growth: England in the later Middle Ages (London, 1962).
Briggs, C., 'The availability of credit in the English countryside, 1400-1480', Agricultural History Review, 56 (2008), pp. 1-24.
Briggs, C., Credit and village society in fourteenth-century England (Oxford, 2009).
Clark, G., 'The long march of history: farm wages, population, and economic growth, England, 1209-1869', Economic History Review, 60 (2007), pp. 97-135.
Day, J., ‘The Great Bullion Famine of the fifteenth century', Past and Present, 79 (1978), pp. 3-54.
Dimmock, S., The origin of capitalism in England, 1400-1600 (Leiden, 2013).
Hastings, M., The Court of Common Pleas in fifteenth-century England: a study of legal administration and procedure (Ithaca, 1947).
Hatcher, J. and Bailey, M., Modelling the Middle Ages: the history and theory of England's economic development (Oxford, 2001).
Hatcher, J., 'The great slump of the mid-fifteenth century', in R. Britnell and J. Hatcher, eds., Progress and problems in the Medieval England (Cambridge, 1996) pp. 237-272. Jenks, S., 'Picking up the pieces: cases presented to the London Sheriffs' Courts between Michaelmas 1461 and Michaelmas 1462', Journal of Legal History, 29 (2008), pp. 99145.

Jones, N. L., God and the moneylenders: usury and law in early modern England (Oxford, 1989).
Keene, D., 'Changes in London's economic hinterland as indicated by debt cases in the Court of Common Pleas', in J. A. Galloway, ed., Trade, urban hinterlands and market integration, c.1300-1600 (London, 2000), pp. 59-81.
Kowaleski, K., Local markets and regional trade in medieval Exeter (Cambridge, 1995).
Mackman, J. and Stevens, M.F., eds., ‘Court of common pleas: the National Archives, CP40-1399-1500' (2010) http://www.british-history.ac.uk/source.aspx?pubid=1272 (accessed on 1 Feb. 2015).
McGovern, W. M., 'Contract in medieval England: the necessity for quid pro quo and a sun certain', American Journal of Legal History, 13 (1969), pp. 173-201.
McNall, C., 'The business of statutory debt registries, 1283-1307', in P. R. Schofield and N. J. Mayhew, eds., Credit and debt in medieval England, c.1180-c. 1350 (Oxford, 2002), pp. 68-88.
Miskimin, H. A., 'Monetary movements and market structure- forces for contraction in fourteenth-century and fifteenth-century England', Journal of Economic History, 24 (1964), pp. 470-90.

Munro, J., 'Review: Money in the medieval English economy, 973-1489' (2013)
http://eh.net/book reviews/money-in-the-medieval-english-economy-973-1489/ (accessed on 12 March 2015).
Nightingale, P., 'Monetary contraction and mercantile credit in later medieval England', Economic History Review, 2nd ser., XLIII (1990), pp. 560-75.
Nightingale, P., 'The growth of London in the medieval English economy', R. Britnell and J. Hatcher, eds., Progress and problems in medieval England: essays in honour of Edward Miller, Cambridge, 1996), pp. 89-106.

## This is a PRE-PUBLICATION DRAFT only. See the published version for reference. Economic History Review 2016.

Nightingale, P., 'England and the European depression of the mid-fifteenth century', Journal of European Economic History, 26 (1997), pp. 631-56.
Nightingale, P., 'Money and credit in the economy of late medieval England', in D. Wood, ed., Medieval money matters (Oxford, 2004), pp. 51-71.
Nightingale, P., Trade, money and power in medieval England (Aldershot, 2007).
Nightingale, P., 'Gold, credit, and mortality: distinguishing deflationary pressures on the late medieval English economy’, Economic History Review, 63 (2010), pp. 1081-1104. Nightingale, P., 'A crisis of credit in the fifteenth century, or of historical interpretation?', British Numismatic Journal, 83(2013), pp. 149-163.
Postan, M. M., 'Private financial instruments in medieval England', Vierteljahrschrift für Sozial- und Wirtschaftsgeschichte, 23 (1930), pp. 26-75.
Postan, M.M., 'Revisions in economic history: IX.- the fifteenth century', Economic History Review, 1st ser., IX (1939), pp. 160-7.
Postan, M.M., The medieval economy and society: an economic history of Britain in the Middle Ages (London, 1972).
Rigby, S. H., English society in the later Middle Ages: class, status and gender (Houndmills, 1995).
Rigby, S. H., The overseas trade of Boston in the reign of Richard II: Lincoln Record Society 93 (Woodbridge, 2005).
Schofield, P. R. and Lambrecht, T., eds., Credit and the rural economy in north-western Europe, c.1200-c. 1850 (Turnhout, 2009).
Seabourn, G., Royal regulation of loans and sales: monkish superstition and civil tyranny (Woodbridge, 2003).
Spufford, P., Money and its use in medieval Europe (Cambridge, 1988).
Steglitz, J. E. and Weiss, A., 'Credit rationing in markets with imperfect information', American Economic Review, 71 (1981), pp. 393-410.
Stevens, M. F., 'Failed arbitrations before the Court of Common Pleas: cases relating to London and Londoners, 1400-1468', Journal of Legal History, 31 (2010), 21-44.
Stevens, M. F., 'Londoners and the Court of Common Pleas in the fifteenth century', in
M. Davies and J. S. Galloway, eds., London and beyond: essays in honour of Derek Keen (London, 2012), pp. 217-37.
Stevens, M. F., 'London women, the courts and the 'Golden Age': a quantitative analysis of female litigants in the fourteenth and fifteenth centuries', London Journal, 37 (2012), pp. 67-88.
Stevens, M. F., 'London's married women, debt litigation and coverture in the Court of Common Pleas', in C. Beattie and M. F. Stevens, eds., Married women and the law in premodern northwest Europe (Woodbridge, 2013), pp. 115-32.
Teeven, K., 'Proving fifteenth century promises', Osgoode Hall Law Journal, 24 (1986), pp. 121-39.
Tobin, J., 'Liquidity preference as behavior towards risk' Review of Economic Studies, 25 (1958), pp. 65-86.

Official publications
Statutes of the Realm, 12 vols. (Her Majesty's Stationary Office, 1810-28),


[^0]:    ${ }^{1}$ Postan, 'Revisions', p. 163.
    ${ }^{2}$ Bolton, Money, p. 260; Hatcher and Bailey, Modelling the Middle Ages, pp. 21-65.
    ${ }^{3}$ Bridbury, Economic Growth.
    ${ }^{4}$ Aston and Philpin, eds., The Brenner Debate; more recently, Dimmock, The Origin of Capitalism.

[^1]:    ${ }^{5}$ Day, 'The Great Bullion Famine'; Gold coins were minted in an attempt to offset silver shortages, but they failed to compensate. See Miskimin, 'Monetary movements' and Nightingale, 'Gold, credit, and mortality'.
    ${ }^{6}$ On the Fisher equation see Rigby, English Society, pp. 957-7; see, for more recent versions of it, Munro, 'Review: Money'.
    ${ }^{7}$ Nightingale, 'Money and credit'; Nightingale, ‘Gold, credit, and mortality'.

[^2]:    ${ }^{8}$ Summarized in Bolton, Money, pp. 227-57.
    ${ }^{9}$ See chiefly Nightingale, 'England and the European depression', and, more recently, Nightingale, 'Gold, credit, and mortality'. For Nightingale's collected essays see, Nightingale, Trade, Money and Power. ${ }^{10}$ On medieval 'gross domestic product' see Bolton, Money, pp. 124-8.
    ${ }^{11}$ Briggs, 'The availability of credit'; Briggs, Credit and Village Society. Schofield and Lambrecht, eds.., Credit and the Rural Economy; Bolton, Money; Nightingale, Trade, Money and Power; Nightingale, 'Gold credit and mortality'.

[^3]:    ${ }^{12}$ For example, Nightingale, 'Gold, credit and mortality', esp. pp. 1100; Nightingale, 'Money and credit', esp. pp. 56-66.
    ${ }^{13}$ Nightingale, 'Money and credit', pp. 67-8.
    ${ }^{14}$ Ibid., pp. 53, 68.
    ${ }^{15}$ For a summary see, Bolton, Money, pp. 261-63, 268-95; Postan, 'Revisions'; Postan, The Medieval Economy and Society; Hatcher and Bailey, Modelling the Middle Ages.
    ${ }^{16}$ Bolton, Money, pp. 258-9; on Maghfeld see Rigby, The Overseas Trade of Boston, pp. 240-2.
    ${ }^{17}$ Nightingale, 'Money and credit'.

[^4]:    ${ }^{18}$ Nightingale, 'Gold, credit and mortality', pp. 1093-4.
    ${ }^{19}$ Bolton, 'Was there a 'crisis of credit'"; Nightingale, 'A crisis of credit'.
    ${ }^{20}$ Bolton, Money, 276-9. See also, Postan, 'Private financial instruments', 35-8; Kowaleski, Local Markets and Regional Trade, pp. 212-20; and McNall, 'The business of statutory debt registries, pp. 68-88.
    ${ }^{21}$ Briggs, 'The availability of credit', pp. 1, 23.

[^5]:    ${ }^{22}$ Hastings, Common Pleas, p. 16.

[^6]:    ${ }^{23}$ Stevens, ‘Failed arbitrations', p. 26.
    ${ }^{24}$ Stevens, 'Londoners and the Court of Common Pleas', p. 228, table 12.1.
    ${ }^{25}$ Ibid., pp. 228, 231-5.
    ${ }^{26}$ Ibid., p. 241.

[^7]:    ${ }^{27}$ AHRC award ref. AR119247.
    ${ }^{28}$ The National Archives (TNA), Public Record Office, CP40/555, 559, 560, 562-569, 571-572, 574, 576580, 582-583, 585, 587, 590, 592, 594, 636-667, 669-675, 736-746, 748-759, 796-829, 871-874, 951954. Seventeen additional rolls, 556-558, 561, 570, 573, 575, 581, 584, 586, 588-589, 591, 593, 595, 668 and 747, fell within the sample periods, but were designated 'unfit for production' by the TNA. No roll exists for Easter term 1461, likely due to civil war, or Michaelmas 1464, likely due to plague.
    ${ }^{29}$ Mackman and Stevens, eds., ' Court of Common Pleas'.
    ${ }^{30}$ In 13 instances, a bond is explicitly stated to secure a sale of goods, and so adding loans, sales of goods and bonds together yields a total of 4.698 .
    ${ }^{31}$ Baker, An Introduction, pp. 57-8, 321-5, 540-1 (specimen writ).
    ${ }^{32}$ Statute of Additions, 1 Hen. V, c.5, Statutes of the Realm, vol.2, p. 171.

[^8]:    ${ }^{33}$ In 10 instances, a bond is explicitly stated to secure a sale of goods, and so adding loans, sales of goods and bonds together yields a total of 2,581 .
    ${ }^{34}$ Londoners, nevertheless, increasingly sued other Londoners, in 5\%-10\% of their LATL-calendared lawsuits c. 1400 , in $16 \%$ c. 1450 and $17 \%$ c. 1500 . Stevens, 'Londoners and the Court of Common Pleas', pp. 239-40.

[^9]:    ${ }^{35}$ Nightingale, 'Gold, credit and mortality', 1087.
    ${ }^{36}$ TNA, CP40/640, rot.109d; and similarly, regarding 40s. for spices plus an loan, TNA, CP40/754, rot.091d.
    ${ }^{37}$ TNA, CP40/811, rot.119; and similarly TNA, CP40/651, rot,223d.
    ${ }^{38}$ TNA, CP40/798, rot. 123.

[^10]:    ${ }^{39}$ TNA, CP40/802, rot. 124.
    ${ }^{40}$ Stevens, 'Failed arbitrations', pp. 26-7.
    ${ }^{41}$ TNA, CP40/741, rot. 456.

[^11]:    ${ }^{42}$ TNA, CP40/640, rot.109d.

[^12]:    ${ }^{43}$ TNA, CP40/802, 285d.

[^13]:    ${ }^{44}$ TNA, CP40/659, rot.121; TNA CP40/669, rot. 126.
    ${ }^{45}$ Often, from the later fifteenth century, scriptum was replaced by 'billa', all else remaining the same.

[^14]:    Notes: ${ }^{a}$ Stipulated payment periods of 1-30 days have been calculated as one month.
    ${ }^{b}$ That is, multiple payment dates on the face of the bond, irrespective of any endorsed conditions of defeasance.
    ${ }^{c}$ No per cent is given because these all stipulate either a single or multiple payment dates.
    Source: Mackman and Stevens, eds, 'Court of Common Pleas'.

[^15]:    ${ }^{46}$ Postan, 'Private financial instruments'.
    ${ }^{47}$ McGovern, 'Contract in medieval England'.
    ${ }^{48}$ For example, Shore V. Asshby, TNA, CP40/873, rot.124.

[^16]:    ${ }^{49}$ For example, Rasyn V. Clapoull, TNA, CP40/645, rot. 109.
    ${ }^{50}$ Teeven, 'Proving fifteenth century promises'; Baker, An Introduction, pp. 329-41.
    ${ }^{51}$ For example, Staverton V. Parmenter, TNA, CP40/953, rot.304; Fayreford V. Hert, TNA, CP40/823, rot.219d.
    ${ }^{52}$ TNA, CP40/736, rot. 465.
    ${ }^{53}$ TNA. CP40/828, rot.127; CP40/874, rot. 143 (failure hold to a farm); CP40/874, rot. 632 (unpaid rents); TNA, CP40/657, rot. 310 (avoiding another's wife); Stevens, 'Failed arbitrations'.

[^17]:    ${ }^{54}$ See above, note 20.
    ${ }^{55}$ For example, TNA, CP40/562, rot. 458 and rot. 535 d. (equal); CP40/562, rot. 311 and rot. 319 (double).

[^18]:    ${ }^{56}$ For example, Staverton V. Parmenter, TNA, CP40/953, rot.304; Fayreford V. Hert, TNA, CP40/823, rot.219d.
    ${ }^{57}$ Nightingale, 'Money and credit', pp. 62-4.

[^19]:    ${ }^{58}$ Nightingale, 'Gold, credit and mortality'.
    ${ }^{59}$ Ibid., p. 1087.

[^20]:    ${ }^{60}$ See Nightingale, 'Gold, credit and mortality', p. 1083, 'Figure 1, Decadal mortality of the creditors' and related text.; Clark, 'The long march'.
    ${ }^{61}$ Ibid., p. 1092.
    ${ }^{62}$ Ibid., p. 1093.

[^21]:    ${ }^{63}$ Ibid., p. 1093.
    ${ }^{64}$ Ibid., pp. 1093, 1096.
    ${ }^{65}$ Ibid., p. 1098; Blatcher, The Court of King's Bench, p. 168.
    ${ }^{66}$ Ibid., p. 1098-9.
    ${ }^{67}$ Ibid., p. 1099.

[^22]:    ${ }^{68}$ Ibid., pp. 1099-2000.
    ${ }^{69}$ Ibid., pp. 1087, 1092, 1098, 1100; Nightingale, 'Money and credit', pp. 56-9.
    ${ }^{70}$ Keene, ‘Changes in London's economic hinterland', pp. 64, 66-7.
    ${ }^{71}$ Nightingale, 'Gold, credit and mortality', p. 1087.

[^23]:    ${ }^{72}$ Nightingale, ‘Gold, credit and mortality', pp. 1093-4.
    ${ }^{73}$ Ibid., p. 1093.
    ${ }^{74}$ See above, the discussion of the Irvine Fisher Identity. Se also, Nightingale, 'Money and credit', p. 55.
    ${ }^{75}$ Monetarists argue that credit enhances velocity, which has limited elasticity, without supplementing money supply [Nightingale, 'Money and credit', p. 55]. Demographists argue that credit did contribute to money supply. Unless credit provision expanded at known crisis points, such as $1400-9$, this is a mute point.

[^24]:    ${ }^{76}$ Tobin, 'Liquidity preference'.
    ${ }_{78}^{77}$ Nightingale, 'Money and credit', p. 59.
    ${ }^{78}$ Stiglitz and Weiss, ‘Credit rationing', pp. 408-9.

[^25]:    ${ }^{79}$ Hatcher and Bailey, Modeling the Middle Ages, pp. 190-2.
    ${ }^{80}$ Limited by enhanced adverse selection. Stiglitz and Weiss, ‘Credit rationing', pp. 393-4.

[^26]:    ${ }^{81}$ Nightingale, 'Money and credit', p.52; and, as cited there, Postan, 'Private financial instruments', p.31; Jones, God and the Moneylenders, pp.114-5; Seabourn, Royal Regulation, pp.25-70.
    ${ }_{82}^{82}$ Nightingale, Gold, credit and mortality', p. 1093.
    ${ }^{83}$ Ibid., p. 1096.

[^27]:    ${ }^{84}$ TNA, CP40/566, rot. 337.
    ${ }^{85}$ Jenks, 'Picking up the pieces', pp.120-145.

[^28]:    ${ }^{86}$ TNA, CP40/811, rot.119; TNA, CP40/566, rot. 337.

[^29]:    ${ }^{87}$ Nightingale, ' Money and credit', p.56.
    ${ }^{88}$ Ibid., p. 57.

[^30]:    ${ }^{89}$ TNA, CP40/872, rot.409d.

[^31]:    ${ }^{90}$ TNA, CP40/814, rot. 121 and 122.

[^32]:    ${ }^{91}$ Nightingale, 'Money and credit', pp.67-8.

[^33]:    ${ }^{92}$ For example, TNA, CP40/952, rot.178d.; Baker, 'The law merchant', pp.304-6.

