THE
ECONOMIC HISTORY REVIEW

Economic History Review, 74, 4 (2021), pp. 873–891

'Your flexible friend': the bill of exchange in theory and practice in the fifteenth century†

By JIM BOLTON and FRANCESCO GUIDI-BRUSCOLI*

The bill of exchange was the most important written instrument in the international financial world of the later middle ages. Using the evidence of nearly 2,000 bills of exchange, protested bills of exchange, and letters of advice recorded in the ledgers of Filippo Borromei & Partners of Bruges and London, 1436–8, we argue that it was a far more flexible instrument than has previously been thought. The maturity of bills could be changed by agreement rather than necessarily using the standard usance periods, and payment by instalments occurred, extending the length of the 'loan' considerably. In practice, exchange rates varied from day to day and within the day itself, while bills were offered as sureties for the fulfilment of other contracts. We also confirm the arguments of other historians that the main purpose of this instrument was the transfer of capital back and forth across western Europe, usually along well-known axes such as London to Venice or Bruges to Barcelona, with exchange and re-change playing only a minimal role in the Borromei's operations. As at the Lyon fairs 100 years later, the 'flexible friend' helped make the world of international, regional, and local trade and finance go round.

> Exchange is a very subtle activity to investigate and difficult to imitate and therefore you need a clear head to involve yourself in it and everything depends on understanding it thoroughly.[1]

Writing in Naples in 1458, Benedetto Cotrugli, a humanist and merchant from Ragusa (now Dubrovnik, Croatia), had it right. Investigating fifteenth-century exchange operations does require a clear head and a thorough knowledge of the subject, and as much paper and ink has probably been expended on discussing the functions of bills of exchange as was used in the writing of the hundreds of thousands of these brief documents in the later middle ages. Modern scholars have left us in little doubt of the bills' importance in stimulating local, regional, and international trade in the fourteenth and fifteenth centuries and Munro called them 'the most important achievement in the history of economics'. Bills of

*Authors' Affiliations: Jim Bolton, Queen Mary University of London; Francesco Guidi-Bruscoli, University of Florence.

† Although this is a jointly authored article, Jim Bolton is chiefly responsible for writing the introduction and section I, and Francesco Guidi-Bruscoli for sections II and III; section IV was written together. The authors wish to thank the editor of the *Economic History Review*, the three anonymous referees, and all the colleagues who, at various stages, have engaged in discussions at the seminars where early versions of this article were presented or contributed by reading drafts of this article or by providing bibliographical materials.

[1] Cotrugli, *Libro de l'arte della mercatura*, p. 76.

exchange brought about the 'commercial revolution' of the thirteenth century, according to de Roover, who coined the phrase some 30 years before Lopez used it.[2]

Much of modern research and writing has concentrated either on the study of individual banking companies or on individual international money markets, such as Bruges or Venice.[3] The focus was on the origin and adoption of double-entry book-keeping, on the use of bills of exchange, and on the growth of the international money market and the profits to be made from exploiting the differences in exchange rates between southern and northern Europe. The process of exchange and re-change has been thoroughly explored by de Roover, Spufford, and Mueller, among many others, and will be discussed further in this article in the context of the exchange operations of the Borromei banks (one of the major banks of north-western Europe), to argue that it played only a limited part in them.

In a recent article, Bell et al. used the foreign exchange rates quoted in the letters written to the companies of Francesco di Marco Datini, the merchant of Prato, by his correspondents across Europe between 1388 and 1411 to determine interest rates in medieval western Europe.[4] They compared profits to be made from the practice of exchange and re-change and concluded that these were higher than those to be made from investing in safe assets such as landed property or shares in the debts of Italian city-states and roughly comparable to those from equity investments in commercial and industrial ventures. This is an interesting exercise and it is true that occasionally, when longer or shorter maturities were given, exchange rates (that is, 'interest') were adapted accordingly. In most cases, however, as we will show, exchange rates remained the same notwithstanding the maturity or, conversely, they differed also when all other parameters (date of issue, maturity) were the same, thus making such calculations less meaningful.

In recent years, credit and exchange have been the object of various studies, mainly focused on a later period. Matringe has used part of the extensive Salviati archive to examine the financial and commercial operations of an Italian bank at the Lyon fairs in the 1540s. She argues that in addition to their exchange and commercial dealings the company ran a deposit bank at the fairs: this provided a flexible clearing mechanism that sustained the self-financing of European big business. The credit mobilized through deposit was mostly realized from international trade and exchange but the bank also made loans to local businessmen, to encourage regional trade and industry, which in turn absorbed imports and produced goods for export. 'Despite the pioneering works of de Roover and Mandich', she asserts, 'much yet remains to be done on the two main instruments of commercial credit in the early modern age: exchange and deposit'.[5] This is also true of the fifteenth century when an alleged lack of liquidity supposedly caused by bullion famines and adverse trade balances between northern and

[2] Munro, 'Wechsel', p. 415; Spufford, *Money and its use*, pp. xxx–xxxi, 98, 262; de Roover, *Medici bank*, pp. 108–41; idem, 'Commercial revolution', pp. 34–9; Lopez, *Commercial revolution*, pp. vii–viii; Denzel, 'European bill of exchange'; de Roover, '"*Cambium ad Venetias*"'; idem, 'Scholastics, usury, and foreign exchange'; Mandich, 'Per una ricostruzione'; Mueller, *Venetian money market*, pp. 293–307.

[3] See, for example, Bigwood, *Les livres de comptes de Gallerani*; de Roover, *Medici bank*; Sapori, ed., *Libro giallo della compagnia dei Covoni*; Goldthwaite, Settesoldi, and Spallanzani, eds., *Due libri mastri degli Alberti*; de Roover, *Money, banking and credit*; Lane and Mueller, *Money, banking and credit*; Mueller, *Venetian money market*.

[4] Bell, Brooks, and Moore, '*Cambium*'.

[5] Matringe, 'Fair deposit', pp. 275–315 (quotation p. 276).

southern Europe at times brought trade to a standstill. Writing about the sixteenth century, Puttevils has followed up van der Wee's arguments, showing how private promissory notes or bills of obligation became transferable and negotiable financial instruments at Antwerp to the extent that they could be considered as part of the money supply.[6] Moreover, Gelderblom and Jonker have given late medievalists much to consider in their discussion of the growth of cashless payments in the Low Countries between 1500 and 1800. The payments were made by transfers of 'money of account' between the current accounts of the parties involved, without any coin changing hands.[7] This made payments quicker and simpler, and no longer reliant on the availability of coins or bullion. Early modern banking, with its flexible cash payments and fair deposit schemes, may seem a world away from its more constrained and constricted fifteenth-century counterpart. Our purpose here is to challenge these assumptions by examining the functions of the bill of exchange to show its flexibility as a financial instrument. We do so by using the data now available from the final ledgers of the Borromei banks in Bruges and London in 1438, following Goldthwaite's dictum that the best way of seeing how merchant bankers manipulated the bill of exchange is by examining their accounts.[8]

Our arguments are divided into three main sections. In section I we discuss the nature of the bill of exchange and stress the fact that the use of exchange and re-change only played a small part in the overall business of the Borromei, whose vast network of clients and correspondents was nurtured by the use of bills of exchange. As shown in section II, these bills, together with letters of advice, allowed them to shift money and adjust international balances without moving bullion, through both direct transfer and tripartite exchanges, that were easily monitored through the use of *nostri* and *vostri* accounts. Section III is mainly devoted to the flexibility of the bills of exchange, concerning both one of the parameters of the bill itself (exchange rate or maturity), as well as its uses (including that of guarantee for future payments). As we show in the conclusion (section IV), it became 'friendly' not so much because it allowed immediate gain (hard to calculate, both for contemporaries and for modern scholars, given the fact that the theoretical maturity for payments was not always respected), but because the terms of its use could be adjusted according to needs, making for greater business efficiency and strengthening relations with business partners.

I

The Borromei were among the leading Italian merchant bankers of the fifteenth century. Our research has concentrated on the commercial network of their Milanese bank but other members of the family were also active in Venice and Florence. In the 1430s the Milanese bank was controlled by Vitaliano I Borromeo, whose fortunes were inextricably entwined with those of the last Visconti duke, Filippo Maria (1392–1447).[9] The Borromei of Milan conducted their business in northern Europe through agents in the 1420s until, in 1435, Vitaliano decided

[6] Puttevils, 'Tweaking financial instruments'; van der Wee, 'Antwerp'.
[7] Gelderblom and Jonker, 'Enter the ghost'.
[8] Goldthwaite, 'Banca', p. cix.
[9] Bolton and Guidi-Bruscoli, 'Antwerp', pp. 365–6; Mainoni, 'Economy of Renaissance Milan', pp. 127–8.

first to establish a bank in Bruges and then, in 1436, a branch of the Bruges bank in London, both in the name of his young son Filippo. Fortunately, two ledgers for these banks have survived, one for Filippo Borromei & Partners of Bruges for the calendar year 1438, the other for Filippo Borromei & Partners of London for the years 1436–9.[10] All the secondary material from which they were compiled is now, alas, lost. We have created an electronic database version of the ledgers containing some 23,000 separate transactions from the accounts of *c.* 750 individuals who were clients of the bank, ranging from great merchants such as the Bardi of Florence and the Contarini of Venice, London mercers, grocers, drapers, and tailors who dealt regularly with the Borromei, to 'the barber, our neighbour' in London and 'Arnoldo, our cooper' in Bruges. A set of analytical tools has also been developed that allows us to group transactions by type, from simple journal payments to protested bills of exchange and letters of advice, and to track movements within accounts and fluctuations in exchange rates. By comparing the two ledgers for the year 1438, we can also reconstruct exchange transactions between the Low Countries and London in detail, with some surprising results. Such a comprehensive approach to the daily practices of Italian exchange banking in northern Europe has not been attempted before. What it shows us is not banking in theory but the day-to-day practices of an Italian company in Bruges, the financial centre of north-western Europe, and London, a major market for imported luxury consumer goods and raw materials and the main port for shipping exports of both wool and cloth from England. Most strikingly, the banks' day-to-day exchange operations differ from the 'ideal' models described in contemporary merchant and book-keeping manuals and in many modern works on late medieval Italian banking. There was, in practice, considerable flexibility in the use of the bill of exchange for purposes other than the profits to be made from exploiting the differences in exchange rates between southern and northern Europe, a flexibility also to be found in the Bardi ledgers almost 60 years later.[11] It is our purpose here to argue that over-concentration on exchange and re-change has led to a distorted picture of the commercial importance of the bill of exchange.

By the 1430s the bill was a well-developed instrument. The taker, in town 1, took up a sum of money from the deliverer in the same town and wrote a bill of exchange drawn on his correspondent in town 2 (the payor), to be paid to a nominated payee there after a specified time difference, or usance, which could be as little as a few days if between Florence and Venice or up to three months if between Venice and London. The essential elements were generally agreed periods and good working knowledge of exchange rates at home and abroad, provided by frequent correspondence between centres, as demonstrated in the Datini letters.[12] The original function of such bills was the transfer of capital from one region to another. In addition to this primary function, however, they could also be used to

[10] These ledgers are kept in the Borromeo-Arese family archive on Isola Bella, Lake Maggiore, Piedmont, Italy, Libro mastro 7 (London) (hereafter BLon), and Libro mastro 8 (Bruges) (hereafter BBr). References to specific accounts are given by folio number and the place of the account on the folio. So BLon, fo. 43.2*a* is on folio 43, the second account by descending order on the *avere* (right-hand) side, whereas *d* indicates the *dare* (left-hand) side. See also Guidi-Bruscoli and Bolton, 'Borromei Bank'.

[11] Guidi-Bruscoli, 'London and its merchants', pp. 124–6.

[12] de Roover, *Medici bank*, pp. 110–25; Spufford, *Money and its use*, pp. 254–6, 258; Denzel, *Handbook of world exchange rates*, pp. xxii–xxxvi; Bell et al., '*Cambium*', pp. 373–8.

extend credit locally; what turned them into loans taken up and repaid in town 1 was the process of re-change. There were two ways in which this could be achieved. A new bill could simply be written and returned, with the taker of the first bill in town 1 now becoming the payor, and the original deliverer now being the payee, a practice known as exchange and re-change. This could also be done 'fictitiously', through account entries, without a bill actually being sent.[13] Alternatively, the nominated payor in town 2 could protest or refuse to pay the bill. This was done formally, through an appointed notary who would record the protest and the exchange rate for the given currency on that day in the town. The bill would then be re-drafted and sent back at a different exchange rate, and would include protest fees. This entry from the Bruges ledger shows how it was done.

On 22 July 1438 Giovanni Salvadore, in Venice, wrote a bill on Bruges for the 500 Venetian ducats he had received from Cecco di Tommaso and brothers of Venice, at an exchange rate of $51^3/_4$ groschen per ducat. Filippo Borromei & Partners were to act as both payors and payees in Bruges but when the bill matured two months later, on 22 September, they protested the bill which was worth £107 16s. 3d. flemish in Flanders and returned it to Venice at an exchange rate of 47 groschen per ducat. The settlement in Venice was two months later when Salvadore would have to repay Cecco di Tommaso and brothers 552 ducats, which included 2s. flemish for the cost of writing the formal protest in Bruges. Salvadore had borrowed 500 ducats in Venice for four months, the time the bill took to reach Bruges and then be returned to Venice, and had repaid Cecco di Tommaso and brothers 552 ducats at a monthly interest rate of 2.6 per cent. The Borromei earned 4s. in commission from this transaction while Cecco di Tommaso and brothers secured a healthy return on their short-term loan from the difference between the exchange rates for the ducat against the groschen in southern and northern Europe.[14]

Obviously protests could also be genuine, if for whatever reason the payor was unable to pay. Sometimes there were further complications: on 5 August 1438 the Borromei of Bruges received the protest of a bill of exchange they had delivered to Geneva. Three weeks later, however, because the original taker—Matteo Vandericche, a carter on the Bruges–Geneva route—was not in Bruges to repay them, they sent the protested bill back to Geneva instructing the payee, Giovanni Panigarola, to be paid, by a different payor, at the following fair.[15] On another occasion, part of the bill was paid; the other part came back with a protest and the reissue involved only the remainder.[16]

As with all Italian banks, the Borromei's exchange operations relied on three closely related developments. The first, as we have seen, was the bill or letter of exchange itself, a simple document for the international transfer of funds; the second, double-entry book-keeping which allowed payments to be made across accounts so that no physical money changed hands or had to be transferred from one country to another; and, third, the careful nurturing, efficient organization, and exploitation of a rich and trusted network of international commercial

[13] de Roover, 'What is dry exchange?'; Mueller, *Venetian money market*, pp. 323–6.
[14] BBr, fos. 206.1*d–a*, 321.1*a*, 328.1*d–a*.
[15] BBr, fo. 97.2*d–a*.
[16] BBr, fo. 101.3*d–a*.

correspondents, with the emphasis being on personal trust.[17] Successful exchange banking rested on the proper working of all three, so that treating each separately is an artificial construct necessary only for the sake of clarity. The letter or bill of exchange was used for making international payments yet consisted of no more than a few lines of instructions, copies of which were sent to the various parties involved. No original bills survive in the Borromei archive to go with the ledgers, but a typical example involving the Borromei family can be drawn from Rawdon Brown's transcripts preparatory to the publication of *Calendar of State Papers Venetian*. It involved another branch of the family, with its headquarters in Venice and branches in Bruges and London, just like their Milanese relatives:

> [In the name of] Jesus on the 7th of March 1447, in Venice. Pay by this first letter at usance to ser Alessandro Borromeo, son of messer Antonio, 400 ducats at the rate of exchange of $43\frac{1}{2}$ sterlings per ducat and this sum was received [in Venice by Michele Zon] from ser Giovanni Borromei & Partners. [Addressed to] Jacopo Salviati & Partners in London.[18]

Here Giovanni Borromei & Partners in Venice delivered 400 Venetian ducats to Michele Zon, who then drew a bill on Jacopo Salviati & Partners in London, who were to pay the sum at usance, that is, 90 days after the day of writing, to Alessandro Borromei. When the letter arrived in London it would have been entered in the Salviati ledger on the *dare* (debit) side of Michele Zon's account and on the *avere* (credit) side of Alessandro Borromei's. It is likely that no physical money in the sense of coins or bars of gold or silver changed hands in this transaction. Everything could have been done by payments across accounts in Venice and London facilitated by the use of double-entry book-keeping. Technically speaking double entry is not strictly necessary for keeping track of exchange operations: English merchants are not known for using it, although they both took up and delivered bills. However, the sheer scale of the Borromei operations, with thousands of yearly transactions and turnovers running into hundreds of thousands of pounds, flemish and sterling, would have made it difficult to use single entry. The principles of double entry have been fully explained by many others and need no repetition here. Transfers across accounts (*giri di partita*) were standard practice, at least among Italians, from the fourteenth century onwards. Cash was always at hand, be it in Bruges (and at the fairs of Antwerp and Bergen-op-Zoom and at Middleburg) or in London; but cash payments amounted to a very limited share of all transactions, even at a local level, with credits and debits transferred from one account holder to the other or to and from the bank. Evidence from the Bruges ledger shows that the value of cash operations (both in Bruges and at the Brabantine fairs) was in the region of 10 per cent of the total turnover.[19] Bills of exchange were occasionally bought locally for cash but that was the exception rather than the rule. Payments were almost exclusively made through the use of the *nostro* and *vostro* (the

[17] Leone, 'Some preliminary remarks', p. 620; Melis, 'La grande conquista', pp. 314–15. Karens, 'Pre-modern credit networks', pp. 2450–55, argues that reputation and trust were less important at the local level, where everyone was simultaneously in a credit/debit relation with multiple people, each of whom took many small decisions about extending the duration of the credit, or forgiving portions of debts.

[18] The transcripts, TNA PRO 31/14/191, have not been foliated; this bill was not included in *Calendar of State Papers Venetian*.

[19] Bolton and Guidi-Bruscoli, 'Antwerp', p. 371.

latter also defined as *suo*, or *loro*) accounts. A *nostro conto* was and still is held by the bank in both the foreign and the local currency as it represents money held abroad for the bank by its correspondent in, say, Venice, Florence or Genoa; while a *vostro* or *loro* account is kept in the local currency of the bank that keeps the ledger.[20]

How this worked can be seen in a bill involving John Young, the factor in the Low Countries of Thomas Cannings, a prominent London grocer. Acting for his master, Young took up a bill of exchange from Filippo Borromei & Partners of Bruges. It was for £121 flemish which, at an exchange rate of 84 groschen per English noble (6s. 8d.), would yield £115 4s. 9d. sterling and was drawn on Cannings in London. The latter was to pay that amount to Filippo Borromei & Partners of London three months after the writing of the letter and not at the normal usance of 30 days. The whole transaction was recorded in four short entries in the Bruges and London ledgers.[21] As we shall see in section III, the *avere* side of Cannings' account shows that the debt was carried over to 1439 and repaid in instalments in January without any additional sum (interest) charged for such delay: this flexibility in payment is a point to which we shall return.[22]

If the development of the bill of exchange and the use of double-entry book-keeping were the first two essentials for smooth functioning of Italian international banking, then the third, reliance on a network of correspondents across Europe, north and south, was equally vital. For the Borromei of Milan the cornerstones were their banks in that city and in Bruges, London, and Barcelona. Access to the Venetian money market and to the papal curia for the transfer of ecclesiastical funds was essential for any international bank and here the Milanese and Venetian branches of the family, which also had banks in London and Bruges, worked closely together. The Borromei of Venice had established a company at the papal court in 1435 when Galeazzo Borromei entered a partnership with Tommaso Spinelli of Florence. On Galeazzo's death in 1436 he was replaced by Antonio Borromei (in the name of his son Borromeo) in a company that was to last until 1447, operating mainly at Basel and Ferrara where the Great Council of the Western Church was being held.[23]

These family connections formed one of the main pathways for trade and exchange between northern and southern Europe and Iberia. The other was provided by a network of clients and correspondents in both Bruges and London as well as in southern France, Spain, Florence, Genoa, Geneva, and Basel. In the north Ubertino de' Bardi & Partners, a Florentine bank, had started life in London, at least, in the 1420s as Totto Machiavelli and Ubertino de' Bardi & Partners. By 1438 it had become simply Ubertino de' Bardi & Partners both in Bruges and London, although Totto was still alive and suing a case in the Court of Common Pleas at Westminster in that year. The Bardi delivered and took up bills of exchange to Venice, Milan, Barcelona, and Basel, and acted as payors and payees in other bills,

[20] For a more detailed discussion of these accounts, see de Roover, *Medici bank*, pp. 130–2; Borromei Bank Research Project, 'The Borromei family and its banks in the fourteenth and fifteenth centuries', http://www.queenmaryhistoricalresearch.org/roundhouse/default.html, 'The ledger' (accessed on 26 July 2020); fig. 5 reproduces Cecco di Tommaso and brothers of Venice's *nostro conto* at fo. 329, which was kept by the Borromei of Bruges in two currencies.

[21] BBr, fos. 117.2*a*, 323.3*d*; BLon, fos. 156.4*d*, 258.7*a*.

[22] BLon, fo. 272.4*a*.

[23] Caferro, 'Silk business', pp. 419–20; idem, 'Soul of a banker', pp. 305–6; Jacks and Caferro, *Spinelli of Florence*, pp. 39–45.

all by cashless transfers across accounts. Many Italian companies in the northern cities, such as Simon Francesco Maggiolini and Lorenzo Damiani & Partners of Pisa in Bruges and Bertuccio Contarini of Venice in London, acted in the same way, making payments across accounts and taking and paying bills of exchange.[24]

In southern Europe and Iberia the Borromei maintained close links with correspondents and clients who acted for them in their own territories while they in turn represented them in northern markets. It was a very tight-knit group of companies, found in both ledgers. In Venice their main correspondent was the company of the Sienese Cecco di Tommaso and brothers which had another bank in Valencia. Both the Borromei of Bruges and of London did more exchange business with Cecco di Tommaso and brothers than with their own family company of Antonio Borromei and Lazzaro di Giovanni and the same can be said of their transactions with the Panigarola of Venice. This family was originally from Milan but Arrighino Panigarola, either individually or in partnership with his brothers, acted for the Borromei in Venice while Giovanni Panigarola and brothers looked after their interests in Geneva and Milan itself. The Borromei relied on the Florentine company of Bernardo da Uzzano and Diego degli Alberti in Basel and on the Ventura, also Florentines, in Florence and Avignon, where they also dealt with Bernardo and Matteo Ricci & Partners, again from Florence. The Fornari of Genoa were the main correspondents in the Ligurian city, the Ventura and the Uzzano in Barcelona, the Ventura again and Giannozzo Bucelli in the important French city of Montpellier, Cecco di Tommaso and brothers in Valencia and Jacopo da Riveruolo in Seville. In Barcelona and Catalonia, the Borromei had both their own company and important commercial and exchange relationships with major Catalan merchants, like Gabriel Carmau, Joan Font, Berenguer Fortuny, and Joan Riba.[25]

II

Exchange operations formed the largest single distinct item of business for the Borromei in both Bruges and London. In 1438 the 1,233 bills of exchange to and from Bruges were worth £95,718 flemish or 35 per cent of the total turnover of £274,000 flemish. To this should be added a further £22,425 flemish for the value of letters of advice, discussed further below, bringing the total value of exchange transactions to £118,143, or 43 per cent of total turnover. The 39 protested bills of exchange were worth only £3,348 flemish and if this sum is added to the previous total, then exchange operations were worth £121,491 flemish or 44 per cent of total turnover. At London, the 481 bills of exchange recorded in 1438 amounted in value to £29,872 sterling or 28 per cent of turnover. There were 59 letters of advice worth £5,055 sterling and 19 protested bills of exchange worth £1,003 sterling. Together, the total value of the three main exchange operations came to £35,930 or 35 per cent of the total turnover of £102,000 sterling in 1438, lower in value

[24] Holmes, ‘Florentine merchants in England’, p. 205, n. 9; *Calendar of Plea and Memoranda Rolls*, pp. 145, 177–8, 208. For accounts held by these companies, see BBr, fos. 23.1*d–a*, 25.2*d–a*; BLon, fos. 188.4*d–a*, 219.3*d–a*; and Guidi-Bruscoli, ‘Mercanti-banchieri fiorentini’, pp. 31–2.

[25] Carmau: BBr, fo. 203.1, BLon, fo. 255.1; Font: BLon, fo. 215.1; Fortuny: BBr, fos. 19.1, 92.5, 123.1, 123.2, BLon, fo. 189.3; Riba: BBr, fos. 14.2, 51.1, 71.1, 118.2, 146.1, 312.2.

and percentage terms than the comparable figures for Bruges. That is only to be expected since Bruges was the end point of the Italian exchange banking system in north-western Europe, while London was where the Italians sold their luxury cloth, spices, and raw materials and bought wool and cloth for export.

Following de Roover's arguments on the primacy of exchange and re-change operations, many historians have subsequently focused their attention mainly on the use of bills of exchange as a means to extend credit locally, with precise usances for payment, first abroad to the payee and then, on its return, to the original deliverer.[26] The majority of bills in the Borromei ledgers, however, show that this was simply not the case. The striking point in both Bruges and London was the low value of exchange and re-change and of protested bills of exchange in both monetary and percentage terms.

Most of these bills of exchange flowed along the familiar axes of Venice–Bruges, Bruges–Venice, Barcelona–Bruges, Bruges–Barcelona, or Bruges–London, London–Bruges, but this was not always the case. Triangular exchange between three parties was also possible by instructing a correspondent to deliver or take up a bill on another correspondent in a third centre.[27] At times this simply involved the transfer of money from Venice or Barcelona to Bruges or London or vice versa. So on 9 January 1438 the Borromei of Bruges were able to send 400 Venetian ducats, the equivalent of £311 13s. 4d. of Barcelona at an exchange rate of 15s. 7d. of Barcelona per ducat and an estimated exchange rate of 50 groschen per ducat in Bruges from Barcelona to Venice, by using the *nostro* accounts of Giovanni Ventura & Partners of Barcelona (who were acting as deliverers and takers on behalf of Filippo Borromei & Partners of Bruges) and of Arrighino Panigarola in Venice (acting as a payor).[28] It is not easy to establish how the estimated exchange rate was determined. On the same day, direct remittances from Bruges to Venice were quoted at 48 groschen per ducat, that is, substantially lower than the 50 groschen above. Other examples, however, show that in general the estimated rate reflected the rate on that day: that was the case, for example, of a remittance from Milan to Venice on behalf of Bruges, quoted at an estimated 48 groschen per ducat.[29]

Money was also sent from Venice to London on behalf of someone based in Bruges. At the beginning of 1438 Cecco di Tommaso and brothers of Venice, on behalf of the Borromei of Bruges, drew a bill of exchange for 150 ducats on London, the payors being the Borromei of London (exchange rates: $46\frac{1}{2}$ sterlings per ducat and an estimated 51 groschen per ducat). The deliverer in Venice was Benedetto Dandolo and the payee in London was Battista Spinola. The bill was recorded in the Bruges ledger on 14 January 1438 with a value of £31 17s. 6d. flemish. The second part of the transaction was recorded in the Borromei of London's ledger in the *nostro conto* of Filippo Borromei & Partners of Bruges on 5 March 1438. Battista Spinola received the sum of £29 1s. 3d. sterling at the agreed exchange rate of $46\frac{1}{2}$ sterlings per ducat.[30]

[26] Not all historians would agree, however: see section IV for Leone's dissenting opinion, and Goldthwaite, *Economy of Renaissance Florence*, pp. 217–19, and esp. p. 219 where he recognizes the continuing use of the bill for the simple international transfer and exchange of funds.
[27] On tripartite exchange, see de Roover, *Money, banking and credit*, p. 65; Mueller, *Venetian money market*, p. 296.
[28] BBr, fos. 272.2*d*, 285.1*a*.
[29] BBr, fos. 283.1*d*, 291.1*a*.
[30] BLon, fos. 174.2*d*, 184.2*a*; BBr, fos. 280.1*d*, 288.1*a*.

Similarly, on 1 March 1438 the Borromei of Bruges recorded a bill sent on their behalf from Venice to the Borromei of London with a settlement date of 18 April. As before, two exchange rates were given for the 600 ducats, $46\frac{1}{2}$ sterlings per ducat in London and an estimated 52 groschen per ducat in Bruges. The day after the settlement date, 19 April, the Borromei of London recorded the end of the operation there, where the bill yielded £117 10s. 0d. sterling which was debited to the Borromei of Bruges's *loro conto*. In Bruges this was equivalent to £130 0s. 0d. flemish.[31] This was done on other occasions, as on 31 December 1438 when 500 ducats were sent by bill of exchange to London at $44\frac{3}{4}$ sterlings per ducat (and an estimated 49 groschen per ducat in Bruges). The settlement date was given as 3 March 1439 and duly, on 5 March 1439, the bill was entered in the *loro conto* of Filippo Borromei & Partners of Bruges in the London ledger, yielding £93 4s. 7d. sterling.[32]

Using the accounts of their family partners or clients to transfer money from Barcelona to Venice or Venice to London on behalf of someone based in Bruges was part of the day-to-day business of both Borromei banks, as it was for their Italian colleagues. At times the bank also used balances held abroad in a *nostro* account with a client in one centre to pay its creditors in another, with the money passing through neither Bruges nor London, as in December 1438, when the Borromei of Bruges used money or credit held for them in their *nostro* account with Giovanni Panigarola in Geneva to transfer the equivalent of £273 0s. 4d. flemish to Cecco di Tommaso and brothers of Venice who would be credited with 1347 ducats and $9\frac{1}{2}$ *grossi*.[33] Tripartite exchanges such as this were comparatively rare, however. One hundred and fifty-five, for a total value of *c.* £16,140 flemish, are to be found in the Borromei ledger for Bruges, and just nine for a total value of £834 sterling are in the Borromei ledger for London: they played only a small part in the Borromei's main banking activities, the direct transfer of funds back and forth across western Europe from where they were held to where they were needed to pay bills and to trade on their own behalf and for their clients, with only a limited involvement in the exchange/re-change market.

One further financial instrument allowed the settlement of international accounts by book transfers. It was similar to the bill of exchange and was called the letter of advice (*lettera d'avixo*) in the Bruges ledger, the term adopted here.[34] This first example is of a simply written instruction from London ordering the bank in Bruges to make a transfer across accounts. On 21 April 1438 the following entry appears in the London ledger, in the *nostro conto* of Filippo Borromei & Partners of Bruges, with the cross-entry in their *loro conto* (that is, money or credit that the Borromei of London kept in London for them): 'On 21 April we [the Borromei of London] wrote to them [the Borromei of Bruges] instructing them to make us creditors there and debtors here for 3,000 *écus* at 20⅔ sterling*s* per *écu* [= £258 6s 8d sterling]'.[35]

The letter was entered in the Bruges ledger on 8 May, in almost identical fashion, in the Borromei of London's *nostro conto nuovo* with the cross-entry in their *loro*

[31] BLon, fos. 189.5*a*, 203.2*d*; BBr, fos. 277.1*d*, 293.1*a*.
[32] BBr, fos. 332.1*d*, 393.1*a*; BLon, fos. 298.1*d*, 312.7*a*.
[33] BBr, fos. 331.1*d*, 349.1*a*.
[34] BBr, fo. 164.1*a*; Biscaro, 'Il banco Filippo Borromei', p. 291. De Roover, *Money, banking and credit*, p. 51, states that 'it seems likely that the bill of exchange developed out of the letter of advice'.
[35] BLon, fo. 155.2*d*. The cross-entry is at fo. 203.2*a*.

conto. The time difference for payment between London and Bruges was 17 days rather than the normal 30.[36] A speedy adjustment had been made between accounts in London and Bruges and, once again, without coin changing hands. This transaction was a straightforward arrangement between the two banks themselves, the one, London, being the branch of the other, Bruges. On other occasions, one or the other of them acted on behalf of the banks at Milan and Barcelona through one of their correspondents. So, on 17 March 1438 the Borromei of London sent instructions to their main correspondent in Venice, Cecco di Tommaso and brothers, on behalf of the Borromei of Milan and the Borromei of Bruges. The London ledger shows the following transaction in the Borromei of Milan's *loro conto* (with cross-entry on the Borromei of Bruges' *loro conto*): 'On 17 March we [the Borromei of London] wrote to Venice to Cecco di Tommaso and brothers instructing them to make them [the Borromei of Milan] creditors and the Borromei of Bruges debtors on 17 June next for 1880 ducats at $42^3/_4$ sterlings per ducat'.[37]

The transaction was recorded six days later in the Bruges ledger in the *nostro conto* of the Borromei of London with the cross-entry in Cecco di Tommaso and brothers' *nostro conto*. The exchange rate was now quoted at an estimated 49 groschen per Venetian ducat, the same as that quoted in bills to Venice on the same day, producing £383 16s. 8d. flemish. The time difference was 92 days or roughly usance between London and Venice and here the transfer was to be made between two accounts held by Cecco di Tommaso and brothers in Venice on instructions from London.[38]

Both these examples involve settlements between the various branches of the Borromei bank, using their *nostro* and *vostro* or *loro* accounts but transfers could also be made for and on behalf of other clients. The Borromei of London kept accounts for both Bernardo da Uzzano and Diego degli Alberti & Partners of Basel and Lorenzo di Niccolò di Zanobi & Partners of Bruges. On 28 May 1438 they were respectively debited and credited for £178 2s. 6d. sterling as a consequence of a letter received from Venice. In Uzzano and Alberti's account it reads:

> On the same day [28 May 1438] £178.2.6 sterling for a letter from Venice from Arrighino Panigarola instructing us to make Bernardo da Uzzano and Diego degli Alberti & Partners creditors here [in London] and Lorenzo di Niccolò di Zanobi & Partners debtors for 950 Venetian ducats at 45 sterlings [pence] per ducat, provided Lorenzo di Niccolò is happy with it and accepts the written agreement we have drawn; otherwise this transaction is not valid. At Lorenzo di Niccolò.[39]

The £178 2s. 6d. sterling was not taken from Lorenzo di Niccolò's account in London and transferred to Uzzano and Alberti's until 2 October 1438, however, 127 days after the letter was first recorded in the London ledger.[40] Their respective accounts in the Bruges and London ledgers show that Lorenzo di Niccolò, Uzzano and Alberti of Basel, the Uzzano of Barcelona, and Arrighino Panigarola of Venice

[36] BBr, fos. 190.2*a*, 307.1*d*.
[37] BLon, fo. 181.1*d*. The cross-entry is at fo. 194.4*a*.
[38] BBr, fos. 293.1*d*, 299.1*a*.
[39] BLon, fo. 209.2*a*. The cross-entry is at fo. 210.5*d*.
[40] BLon, fos. 209.2*d*, 210.5*a*.

dealt regularly with each other, suggesting that this letter of advice was part of the regular movement of funds between four major European banking centres.[41]

III

The ability to move money across western Europe with relative ease gave Italian merchant-bankers and the clients who used their services considerable flexibility in their credit and trading operations. The Borromei of London, for example, could draw on the Venetian money market to finance purchases of wool and cloth for export and the Borromei of Bruges used credits built up in Geneva to pay debts in Venice. All bills had some form of inbuilt credit function, of course, created by the time difference between taking up a bill in one town and paying it in another. As Mueller rightly stressed, the element of time was crucial for credit.[42] The argument has always been, at least when calculating interest rates on exchange loans, that usance was fixed, at 90 days between London and Venice, 60 days between Venice and Bruges, 30 days between London and Bruges, and so on. Internal evidence from the Borromei ledgers suggests strongly that this may not always have been the case, or at least that repayment was taking place on more flexible terms. Ninety-one bills of exchange were sent directly from Bruges to Venice in 1438. Two-thirds of them were recorded as being payable at usance, that is, 60 days, but 31 were not. Of these one was at 15 days less than usance; one at 10 days; one at 3 days; and one at 2 days. There were then one at 1 day over usance; one at 3 days; four at 5 days; one at 6 days; three at 7 days; one at 9 days; three at 10 days; two at 13 days; one at 14 days; one at 16 days; two at 21 days; one at 23 days; one at 3 months; one, quite exceptionally, at 121 days; two at sight; and one 10 days after sight.[43] The exchange rate could be adjusted to take into account longer or shorter maturity periods, but this was not always the case. On 11–12 February, for example, bills were delivered at 49 groschen per ducat irrespective of whether the time of payment was usance or three months; and on 15 June the exchange rate was $49\frac{1}{2}$ groschen irrespective of the settlement date being 16 or 27 August.[44]

Even more significant, when discussing flexibility, was the actual time of payment, which often differed from the settlement date, whether or not it was usance. Unfortunately, in the exchange transactions with Venice, it is not possible to calculate actual dates of payment, because we do not have records from the Venetian side. Nor can we calculate the repayments on bills coming the other way, from Venice to Bruges, since they are simply recorded in the ledger by date of entry. However, the unique survival of both the Bruges and the London ledger of the Borromei for the year 1438 allows us to check the actual payment date for bills along the Bruges–London axis (Bruges here including bills drawn on or sent to Middleburg, Arnemuiden, and the fairs at Antwerp and Bergen-op-Zoom). We have been able to match 49 bills leaving London and arriving in Bruges and recorded in both ledgers.

[41] BBr, fos. 9.2, 89.1; BLon, fos. 209.2, 210.5.
[42] Mueller, *Venetian money market*, p. 293.
[43] BBr, *passim*.
[44] BBr, fos. 22.1*d*, 44.2*d*, 87.1*d*, 165.2*a*, 181.1*d*, 181.2*a*, 295.1*a*, 303.1*a*.

When the parties involved in the London–Bruges or Bruges–London bills were Italians or Catalans, payment was usually effected by book transfers. When English merchants were involved, the situation was different since their factors or attorneys in the Low Countries often took up bills from the Borromei in Bruges and then their employer repaid them in cash in London. One such was Ralph March, later a distinguished member of the Mercers' Company, the factor of John Broddesworth; William Gron acted for John Notebroun, Thomas Et for Geoffrey Boleyn, and so on. Taking up a loan in the Low Countries and repaying it in London made sense for both the English mercers and the Italians: the former needed funds in the Low Countries for their commercial operations and could repay in London from the proceeds of the sale of the goods they imported; the latter, in the same way, could transfer money from the Low Countries to London, where they needed it to buy wool and cloth.[45]

To see how repayment, mainly in cash, was arranged, we look again at Thomas Cannings's account for 1438. Cannings was a member of the Cannings-Young family of Bristol and London, a rising star in the Grocers' Company, and a future mayor of the city in 1456–7, a man who would be regarded as a trustworthy client by the bank. His factor in the Low Countries was another member of the family, John Young. On 24 September Young took up a bill of exchange for £42 15s. 4d. sterling, which was recorded in Young's account in Bruges on 24 September 1438 and in Cannings's account in London on 26 November 1438 (the settlement date was two months), but paid it in full in cash only on 2 December 1438. In Bruges it had been recorded as £45 19s. 6d. flemish; although an exchange rate was not explicitly indicated, it can be calculated as 86 groschen per noble (22⅓ sterlings per *écu*), equivalent to the rate charged on other bills of exchange drawn on that date with the standard usance. Another bill, for £115 14s. 9d. sterling, was sent from Bruges, on 24 September 1438, this time with an agreed settlement date of three months, and it was duly recorded in Cannings's London account on 24 December 1438. Again, it was not paid off immediately, but carried over to his account in the ledger for 1439 and then settled by cash in two instalments on 10 and 27 January 1439.[46] The effective settlement date for this bill was therefore four months, not the standard one, nor the agreed three. In this case, the implicit exchange rate was 86 groschen per noble (equivalent to 22.86 sterlings per *écu*), possibly to account for the longer settlement date.[47] From these two examples we can see that the granting of a longer settlement date could affect the exchange rate (second instance) but did not necessarily do so (first instance). Moreover, it is likely that the Borromei did not know *ex ante* that Cannings would not pay on time and therefore such delay could not be incorporated into the exchange rate; however, the delayed payment was allowed without extra charges (that is, there was not even an *ex post* penalty for the longer maturity). Undoubtedly this flexible approach, which did not necessarily generate immediate profits in monetary terms, certainly enabled the maintenance of good relations with an important client.

[45] Guidi-Bruscoli, 'London and its merchants', pp. 123–4; Bolton, 'London merchants', pp. 61–5.
[46] See section I.
[47] BLon, fos. 156.4*d*, 248.5*a*, 272.4*a*; BBr, fos. 117.2*a*, 323.3*d*, 327.2*d*. It is important to emphasize that the case of the Borromei is not unique, as similar examples can be found in the Bardi ledgers for the 1490s: Guidi-Bruscoli, 'London and its merchants', pp. 123–5.

There is a regular pattern in the London ledger of deferred payments by English merchants. Consequently, calculating interest rates by knowing the date of issue and by using fixed periods for usance may not be a valid way of approaching the problem. This caveat also applies to exchange rates. The Datini letters do provide evidence of what the general exchange rates for various currencies were at the time of writing in the place from which the correspondent was writing.[48] The ledger of the Borromei of Bruges, however, shows clearly that rates varied not only from week to week and day to day but also within the day itself. Our evidence here comes once again from the main exchange axis from Bruges to Venice, where Cecco di Tommaso and brothers, Arrighino Panigarola, and Antonio Borromei and Lazzaro di Giovanni were the Borromei's main correspondents. On 20 February 1438 the Borromei of Bruges, as takers, drew six bills of exchange on Venice with different parties at four different exchange rates, between $48\frac{1}{2}$ and $49^2/_3$ groschen per Venetian ducat, the highest rate being 2.4 per cent higher than the first, although they all had the same settlement date (usance).[49] In two of the bills three of the four participants were the same, but exchange rates were $48^2/_3$ and $49^2/_3$. On 31 July 1438, 30 bills of exchange were recorded, seven of them from Bruges to Venice, with exchange rates varying between 46 and 47 groschen per ducat (a 2.17 per cent difference).[50] On the same day 10 bills were recorded in the opposite direction (Venice to Bruges), eight of them with an exchange rate of $51\frac{1}{2}$ groschen per ducat, the remaining two of $51\frac{3}{4}$ and $51^3/_5$.[51] Conversely, between the end of January and the beginning of February 1438, all bills sent from Bruges to Venice were quoted at 48 groschen per ducat regardless of whether they were payable at usance, at three or even at six months.[52] This pattern occurs again and again through both ledgers, as these few examples—among several—from London show: on 29 August 1437 three bills were sent from London to Venice at—respectively—$42^1/_6$, $42^1/_3$, and $42\frac{1}{2}$ sterlings per Venetian ducat;[53] on 21 April 1438 four bills were sent from London to Venice at four different exchange rates: 42, $42^1/_{12}$, $42^1/_8$, and $42^1/_3$ sterlings per ducat.[54]

These variations resulted not just from the demand for the ducat on the international market but also from the known creditworthiness of the parties involved and their ability to deliver, take, or pay the bill; the settlement date, where it was less or greater than usance; and special or particular circumstances, often unclear to the modern researcher. One example of the third of these factors will suffice. On 17 December 1438 a bill for 300 Venetian ducats was sent from Bruges to Venice. The deliverers were the Borromei of Bruges, the taker in Bruges was Benedetto Bon, the payors in Venice were Vittor Capello and brothers, and the payees Cecco di Tommaso and brothers. The exchange rate was $44^1/_8$ groschen per ducat, which was exceptionally low, compared with the very variable rate of

[48] Bell et al., '*Cambium*', pp. 379–82.

[49] BBr, fos. 10.2*d*, 15.2*d*, 45.5*d*, 171.1*a*, 175.2*a*, 295.1*d*–*a*. One bill had an exchange rate of $48\frac{1}{2}$, three $48^2/_3$, one $48\frac{3}{4}$, and one $49^2/_3$.

[50] BBr, fos. 22.1*d*–*a*, 25.2*d*, 156.2*a*, 197.1*a*, 311.1*d*–*a*.

[51] BBr, fos. 8.3*a*, 15.2*d*, 22.1*a*, 52.1*d*–*a*, 53.1*d*, 68.2*a*, 86.3*d*, 94.1*d*, 154.1*d*, 156.2*d*, 181.1*a*, 191.1*a*, 199.1*d*, 302.3*d*, 303.1*d*.

[52] BBr, fos. 13.1*d*, 28.3*a*, 169.3*a*, 276.1*a*, 283.1*d*.

[53] BLon, fos. 55.3*d*, 61.5*a*, 115.4*a*, 120.1*d*, 121.4*a*.

[54] BLon, fos. 178.1*a*, 192.2*d*, 200.3*d*, 200.5*d*, 203.1*a*, 203.2*a*.

between 46⅔ and $48\frac{1}{4}$ groschen per ducat in other bills drawn on Venice in the preceding week. This meant that the cost of 300 ducats in Bruges was only £55 3s. 1d. flemish, whereas it would have been more than £60 flemish at the highest rate. Was this because the settlement date is indicated as '*per tempo de' noli delle ghalee veniziane*' ('at the time of the preparation of the Venetian galleys'[?])?[55] Unfortunately it is difficult to be more precise than that. In the early fifteenth century, ships were sailing to Syria around mid-February and this implied that money was dear in Venice in the preceding month. The Flanders fleet did not sail before the spring, but the effect on interest rates was lower given the lesser amount of goods loaded on the ships.[56] The lender in Bruges might have had more favourable terms given the demand for money in Venice upon maturity, when the fleet was being prepared. The date of the arrival of the galley was more uncertain than the departure, but even in the latter case there was often a considerable delay of days or even weeks between the expected and the effective date; this uncertainty could well have affected exchange rates.[57] Even more interesting is another case on 8 September 1438. On that day the Borromei of Bruges asked Jacopo da Riveruolo in Seville to deliver for them 60 *doblas* '*a rischio de la nave*' ('for insurance on the ship'[?]): Giovanni Tanzo, the owner of the ship, in his capacity as a taker, drew a bill of exchange on Bruges, on the Borromei of Bruges, at 38 groschen per *dobla*. On the same day it was Jacopo Grillo's turn to deliver for the Borromei 450 *doblas*, again '*al rischio de la nave*': Tanzo's bill was drawn at 40 groschen per *dobla*, with a rate that was 5.26 per cent higher than previously. The third bill drawn by Tanzo on Bruges on the same day (for 335 *doblas*, with Borromei of Bruges as payors and Antonio Taverna as payee), without any apparent reference to insurance, had a much lower exchange rate of 33 groschen per *dobla*.[58]

This hard evidence must raise the question of whether it is possible to make meaningful *ex post* calculations about 'interest' based on the analysis of 'current' exchange rates, when many specific circumstances (shorter or longer maturities, creditworthiness of the parties involved or privileged relations with them, and so on) could affect them; moreover, the effective payment could be delayed without penalty and this—in practice—extended the duration of the loan. As these circumstances were not necessarily exceptional, historians should be cautious when using individual transactions to assess possible interest rates. Perhaps in 1465 a Venetian agent in London was right, when he underlined that *cambi* (exchanges) '*se chiameno canbii, perché da uno zorno a l'altra cambiano prexio*' ('they are called [ex]changes because they change their value from one day to another').[59]

The long debate about 'licit' and 'illicit' interest in terms of the Church's teaching on usury is not our prime concern here. The Borromei bank in Bruges did in fact pay interest on the so-called *depositi a discrezione*, that is, time deposits it held for Vitaliano Borromeo and the heirs of Giovanni Del Barza of Milan at 5.3 per cent and 4.9 per cent annual simple interest respectively.[60] Moreover sometimes it charged interest (again defined as '*dischrezione*' in the ledger) on money advanced to

55 BBr, fos. 143.3*a*, 349.1*d*.
56 Lane, 'Rhythm and rapidity', pp. 109–10.
57 Doumerc, 'La crise structurelle', pp. 608–11.
58 BBr, fo. 205*d*.
59 Mueller, *Venetian money market*, p. 337, n. 78.
60 BBr, fos. 39.1*d*, 155.1*a*, 219.1*a*.

clients before the agreed date.[61] Loans were also made by way of exchange on pre-arranged terms and this practice has already been discussed elsewhere in respect of Pieter le Chuer of Bruges and Geoffrey Chittok, draper, of London.[62]

Finally, and simply to add further examples of their flexibility, bills of exchange could be used as guarantees for future payments. On 28 June 1438 the bank in Bruges gave John Young, the factor and attorney of Thomas Cannings, £121 flemish and in return Young drew a bill of exchange on London for £110 sterling. The bill, however, was never sent and was eventually cancelled on 23 September: in fact it had only been kept as a guarantee for repayment of the money at the August fair at Antwerp. In this case, the exchange rate of 21.81 sterlings per *écu* (calculated from the 88 groschen per noble given in the document) was higher than the 21 sterlings ($91^{2}/_{5}$ groschen per noble) which was normally charged on bills going from Bruges to London at that time. If the bill had been sent, the Borromei would have received £110 sterling instead of the £105 17s. 6d. that they would have obtained at the standard rate, which may imply some sort of penalty in case of missed repayment. Young actually did not repay in cash, but wrote another bill to London at an exchange rate which was even more favourable for the Borromei. Four days later, on 27 September, the bank paid £130 flemish in cash to Young who wrote another bill on London. Once again, the bill was not sent, because Young agreed to repay the money at the following fair at Bergen-op-Zoom. If he did not do so, then the Borromei would send the bill to London and this they duly did on 19 November, because this time the money had not been repaid.[63] As in the previous case, the exchange rate was more favourable for the Borromei than the rate charged on another bill drawn on that day, although in both cases this could be due to the longer maturity in addition to the willingness to charge a 'penalty'.

IV

In 1972 a consortium of three of the four major British banks issued their personal account holders with a new credit card called Access. It was advertised as 'Your flexible friend' to extol the benefits of easy access to credit. We might also apply this slogan to the bill of exchange in the fifteenth century. The Borromei ledgers show its many uses and confirm what Leone wrote in his 1983 article:

> To concentrate research too exclusively on the ways in which profits were derived from individual types of foreign currency transactions may in the long-run prove unrewarding and even misleading, since the real problem still lies in reconstructing the nature and objectives of the medieval banking system … The principal aim of foreign exchange transactions lay not in the eventual difference between two chronologically separate quotations … which might be hoped to generate a profit but rather … in making payments over distances possible … Otherwise we run the risk of missing the complexity of the real inter-relationships revealed by the documents and replacing them with a series of purely bilateral relationships which are removed from reality and derive from models based on

[61] This occurred mainly in Bruges and involved local Flemish and German merchants; BBr, fos. 13.3*d*, 39.1*a*, 59.1*d*, 60.6*d*, 83.3*d*, 121.1*d*.
[62] Bolton, 'London merchants', p. 66; idem, 'How it really worked', pp. 97–8.
[63] BBr, fos. 80.6*d*–*a*, 117.2*d*, 121.1*a*, 312.3*d*–*a*, 348.2*d*.

the exchange that in practice it is quite impossible to identify and evaluate the different components of this profit.[64]

It is quite clear that the bill's main purpose for the Borromei, as for other international merchant bankers, was the movement of capital, making payments possible across western Europe without the need for cash. Funds could be transferred from Venice to Barcelona on instructions sent from Bruges while international adjustments to credit and debit balances could be made between accounts by use of the letter of advice, a simple variant of the bill of exchange. Flexibility over time has also been shown. Usance was less rigorously applied than might have been expected, with staggered repayments extending the length of the loan to several months rather than 30, 60, or 90 days. Exchange rates could fluctuate within the day, making it difficult for the modern scholar to calculate interest rates on loans by way of exchange with any degree of accuracy.

This flexibility meant that the bill of exchange served many purposes, from loans to speculation, from the transfer of funds to guarantees for future payment. Moreover, it was flexible because its apparently rigid features (usance, exchange rates, and forms of payment) were easily adjusted according to contingent needs. If the bill was flexible, was it also friendly? By friendliness we do not mean that every transaction was strategically adjusted for the sake of a short-term profit on the transaction itself. Friendliness, on the contrary, meant that the bank and its favoured clients manipulated bills to facilitate all the different types of operations described above. In difficult or special circumstances their terms of use could be adjusted to meet current needs to carry on business more smoothly and effectively, and this was advantageous in the long term.[65]

There are also wider implications arising from the ability to move funds from place to place with relative ease. Gelderblom and Jonker have recently argued that 'new' administrative practices such as double-entry book-keeping, bilateral current accounts, and 'bank money' gave merchants the means to create money in the form of book debts which must have made M1 far more elastic than hitherto supposed.[66] Werner would go further. In his wide-ranging article on banking and the money supply, he argues that individual banks create credit and money newly when granting loans. This is the basis for his revival of the old theory of the credit creation of banking and, while this has stirred up considerable debate among economists, Ravn has pointed out that the theory best fits the historical period 1200–1500 when bankers operated in a cash-strapped environment and allowed their clients to trade with each other by debiting and crediting their respective accounts in their ledgers.[67] If this is true of *giri di partita*, payments across accounts to settle debts without the use of coin, might it also be true of bills of exchange in terms of creating international book debts that could also be added to M1? Gelderblom and Jonker and others write about the Low Countries in the sixteenth

[64] Leone, 'Some preliminary remarks', pp. 620, 626–7.

[65] See also Kadens, 'Pre-modern credit networks', p. 2455, on the importance of keeping business rolling notwithstanding uncertainties on the reliability of debtors.

[66] Gelderblom and Jonker, 'Enter the ghost'. M1 is the most limited definition of the money supply and in the middle ages includes only coin in circulation, time deposits (if any), and assets easily convertible into cash. Cipolla, *Money, prices, and civilisation*, pp. 38–51, was the first to use the term 'ghost money.'

[67] Werner, 'Lost century in economics', pp. 361–2, 366–9; Ravn, 'Werner's typology of banking theories', p. 10.

and seventeenth centuries but more or less all their findings can be replicated in the Borromei ledgers in the 1430s and in those of other Italian banks before and after them.[68] Credit and cash did function seamlessly together as different ways of making payments rather than distinct and differently priced economic categories. The availability of coin was only one part of the story, given the ready access to other forms of money. The most important of these, in terms of international commerce, was certainly the highly flexible bill of exchange. The Venetian money market could provide the capital for large purchases of English wool and cloth, much to the benefit of the local economy. When needed, Barcelona could send money to Bruges and vice versa. International debits and credits could be adjusted through bills of exchange and letters of advice; credit the Borromei banks of Bruges and London had available in Geneva could be transferred to Venice or Barcelona. The bill of exchange was much more than a way of profiting from differential exchange rates between northern and southern Europe. Through its flexibility it helped make late medieval international trade work.

DOI: 10.1111/ehr.13070

References

Bell, A. R., Brooks, C., and Moore, T. K., '*Cambium non est mutuum*: exchange and interest rates in medieval Europe', *Economic History Review*, 70 (2017), pp. 373–96.

Bigwood, G., *Les livres des comptes des Gallerani*, A. Grunzweig, ed., 2 vols. (Brussels, 1961–2).

Biscaro, G., 'Il banco Filippo Borromei e compagni di Londra (1436–1439)', *Archivio Storico Lombardo*, ser. iv, 40 (1913), pp. 37–126, 283–386.

Bolton, J. L., 'London merchants and the Borromei bank in the 1430s: the role of local credit networks', in H. Kleineke, ed., *The fifteenth century, 10: Parliament, personalities and power: papers presented to Linda S. Clark* (Woodbridge, 2011), pp. 53–74.

Bolton, J. L., 'How it really worked: Italian banking in northern Europe in the fifteenth century as seen through the Borromei ledgers', in M. Allen and N. J. Mayhew, eds., *Money and its use in medieval Europe three decades on: essays in honour of Professor Peter Spufford* (2017), pp. 85–100.

Bolton, J. L. and Guidi-Bruscoli, F., 'When did Antwerp replace Bruges as the commercial and financial centre of north-western Europe? The evidence of the Borromei ledger for 1438', *Economic History Review*, 61 (2008), pp. 360–79.

Caferro, W., 'The silk business of Tommaso Spinelli, fifteenth-century Florentine merchant and papal banker', *Renaissance Studies*, 10 (1996), pp. 417–39.

Caferro, W., 'Tommaso Spinelli: the soul of a banker', *Journal of the Historical Society*, 8 (2008), pp. 302–22.

Cipolla, C. M., *Money, prices, and civilization in the Mediterranean world, fifth to seventeenth centuries* (New York, 1967).

Cotrugli, B., *Libro de l'arte de la mercatura*, V. Ribaudo, ed. (Venice, 2016).

de Roover, R., 'What is dry exchange? A contribution to the study of English mercantilism', *Journal of Political Economy*, 52 (1944), pp. 250–66.

de Roover, R., *Money, banking and credit in medieval Bruges* (Cambridge, Mass., 1948).

de Roover, R., 'The commercial revolution of the thirteenth century', in F. C. Lane and J. C. Riemersma, eds., *Enterprise and secular change: readings in economic history* (1953), pp. 80–5.

de Roover, R., '"*Cambium ad Venetias*": a contribution to the history of foreign exchange', in *Studi in onore di Armando Sapori*, vol. I (Milan, 1957), pp. 631–58.

de Roover, R., *The rise and decline of the Medici bank*, 1397–1494 (New York, 1966).

de Roover, R., 'The scholastics, usury and foreign exchange', *Business History Review*, 41 (1967), pp. 257–71.

Denzel, M. A., 'The European bill of exchange: its development from the middle ages to 1914', in S. Chaudhuri and M. A. Denzel, eds., *Cashless payments and transactions from the antiquity to 1914* (Stuttgart, 2008), pp. 153–94.

Denzel, M. A., *Handbook of world exchange rates*, 1590–1914 (Farnham, 2010).

Doumerc, B., 'La crise structurelle de la marine vénitienne au XVe siècle: le problème du retard des *mude*', *Annales. Economies, Sociétés, Civilisation*, 40 (1985), pp. 605–23.

[68] Gelderblom and Jonker, 'Enter the ghost'; Matringe, 'Fair deposit'.

Gelderblom, O. and Jonker, J., 'Enter the ghost: cashless payments in the early modern Low Countries, 1500–1800', in R. J. van der Spek and B. van Leeuwen, eds., *Money, currency and crisis: in search of trust, 2000 BC to AD 2000* (2018), pp. 224–47.
Goldthwaite, R. A., 'Banca', in R. A. Goldthwaite, E. Settesoldi, and M. Spallanzani, eds., *Due libri mastri degli Alberti. Una grande compagnia di Calimala, 1348–1358*, vol. 1 (Florence, 1995), pp. ciii–cxiv.
Goldthwaite, R. A., *The economy of Renaissance Florence* (Baltimore, Md, 2009).
Goldthwaite, R. A., Settesoldi, E., and Spallanzani, M., eds., *Due libri mastri degli Alberti. Una grande compagnia di Calimala, 1348–1358*, 2 vols. (Florence, 1995).
Guidi-Bruscoli, F., 'Mercanti-banchieri fiorentini tra Londra e Bruges nel XV secolo', in L. Tanzini and S. Tognetti, eds., *Mercatura è arte: uomini d'affari toscani in Europa e nel Mediterraneo tardomedievale* (Rome, 2012), pp. 11–44.
Guidi-Bruscoli, F., 'London and its merchants in the Italian archives, 1380–1530', in M. Allen and M. Davies, eds., *Medieval merchants and money: essays in honour of James L. Bolton* (2016), pp. 113–26.
Guidi-Bruscoli, F. and Bolton, J. L., 'The Borromei Bank Research Project', in L. Armstrong, I. Elbl, and M. A. Elbl, eds., *Money, markets and trade in late medieval Europe: essays in honour of John H. A. Munro* (Leiden, 2006), pp. 460–90.
Holmes, G. A., 'Florentine merchants in England, 1346–1436', *Economic History Review*, 2nd ser., XIII (1960), pp. 193–208.
Jacks, P. and Caferro, W., *The Spinelli of Florence: fortunes of a Renaissance merchant family* (University Park, Pa, 2001).
Kadens, E., 'Pre-modern credit networks and the limits of reputation', *Iowa Law Review*, 100 (2015), pp. 2429–55.
Lane, F. C., 'Rhythm and rapidity of turnover in Venetian trade of the fifteenth century', in *Venice and history: the collected papers of Frederic C. Lane* (Baltimore, Md, 1966), pp. 109–27.
Lane, F. C. and Mueller, R. C., *Money, banking and credit in medieval and Renaissance Venice: coins and money of account* (Baltimore, Md, 1985).
Leone, A., 'Some preliminary remarks on the study of foreign currency exchange in the medieval period', *Journal of European Economic History*, 12 (1983), pp. 619–29.
Lopez, R. S., *The commercial revolution of the middle ages, 950–1350* (Englewood Cliffs, NJ, 1971).
Mainoni, P., 'The economy of Renaissance Milan', in A. Gamberini, ed., *A companion to late medieval and early modern Milan: the distinctive features of an Italian state* (Leiden and Boston, Mass., 2015), pp. 118–41.
Mandich, G., 'Per una ricostruzione delle operazioni mercantili e bancarie della compagnia dei Covoni', in A. Sapori, ed., *Libro giallo della compagnia dei Covoni* (Milan, 1970), pp. xcix–ccxxiii.
Matringe, N., 'The fair deposit: credit reallocation and trade finance in the early modern period', *Annales. Histoire, Sciences Sociales*, 72 (2017), pp. 275–315.
Melis, F., 'La grande conquista trecentesca del "credito di esercizio" e la tipologia dei suoi strumenti fino al XVI secolo', in F. Melis, *La banca pisana e le origini della banca moderna*, M. Spallanzani, ed. (Florence, 1987), pp. 307–24.
Mueller, R. C., *The Venetian money market: banks, panics, and the public debt, 1200–1500* (Baltimore, Md, 1997).
Munro, J. H. A., 'Wechsel', in M. North, ed., *Von Aktie bis Zoll. Ein historische Lexicon des Geldes* (Munich, 1995), pp. 413–18.
Puttevils, J., 'Tweaking financial instruments: bills obligatory in sixteenth-century Antwerp', *Financial History Review*, 22 (2015), pp. 337–61.
Ravn, I., 'Werner's typology of banking theories', *Forum for Social Economics* (2019), https://doi.org/10.1080/07360932.2019.1668286.
Sapori, A., ed., *Libro giallo della compagnia dei Covoni* (Milan, 1970).
Spufford, P., *Money and its use in medieval Europe* (Cambridge, 1988).
van der Wee, H., 'Antwerp and the new financial methods of the 16th and 17th centuries', in H. Van der Wee, ed., *The Low Countries in the early modern world* (Aldershot, 1993), pp. 145–66.
Werner, R., 'A lost century in economics: three theories of banking and the conclusive evidence', *International Review of Financial Analysis*, 46 (2016), pp. 361–79.

Official publications

Calendar of Plea and Memoranda Rolls of the City of London, 1413–37, A. H. Thomas, ed. (Cambridge, 1943).
Calendar of State Papers Venetian, 1: *1202–1509,* R. Brown, ed. (1864).