

BILLS OF EXCHANGE AND THE MONEY MARKET TO 1600*

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ABSTRACT: This paper describes the evolution of the bill of exchange in medieval and early modern Europe both as a means of remittance and as an instrument of credit. It examines the evolution of the instrument, its use in remittance, its effect on international bullion flows, and its use as an instrument of credit. The paper also describes the international network of exchange markets on which the use of the bill of exchange relied. The paper concludes with a discussion of the emergence of negotiability in Antwerp in response to problems in the system of settlement. An Appendix describes the determination of exchange rates in this period.

JEL Categories: F3, G15, N23

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PREFACE

There are two classes of question one might ask about financial systems. The first and broader class relates to their role in the economy: What is their contribution to economic development and growth? What is their impact on the way business is organized? On the organization and behavior of government? The second and narrower class of question relates to financial systems themselves: What is their economic function? How do they evolve? What are the causes and consequences of financial innovation?

History is perhaps the most promising source of answers to both classes of question. This paper is a draft chapter in a planned work that draws on the economic and financial history of the period to 1600. The section of the work to which this chapter belongs focuses on the narrower class of question about the financial system itself during this period. Other sections will take up the broader class of question. Draft chapters of this section are available as the following working papers¹:

1. Finance before the Industrial Revolution: An introduction
2. Medieval and early modern coinage and its problems
3. Early deposit banking
4. Bills of exchange and the money market to 1600
5. Merchant banking in the medieval and early modern economy
6. The capital market before 1600
7. Risk instruments in the medieval and early modern economy

The financial system is part of the institutional structure that facilitates economic transactions. Specifically, the financial system facilitates lending, payments, and trade in risk. While lending often steals the limelight, the role of the financial system in facilitating payments and trade in risk is no less essential. Before 1600, because of the poor quality and inadequate quantity of coin, the payments function was particularly important (Paper 2 discusses the problems of the coinage in this period). As commerce expanded, the pressing need for adequate means of payment prompted a great deal of financial innovation—in particular, the emergence of the deposit bank and the bill of exchange. The deposit bank (Paper 3) provided a means of payment—the transfer of deposits—that minimized the need to use actual cash. The bill of exchange, the subject of the current paper, provided a means of remittance—of transferring funds from one place to

¹Copies may be downloaded from: <http://www.dartmouth.edu/~mkohn>

another—without having to ship specie or bullion. The bill of exchange was also an instrument of credit, the basis on which merchant banks built an efficient international system of commercial credit (Paper 5). While the bill of exchange satisfied the need for short-term finance, the growing need for long-term finance was met by a developing capital market (Paper 6). Trade in risk was still in its infancy, but the period saw the development of marine insurance and the beginnings of futures and options (Paper 7). Paper 1 provides some general background on saving and investment during the period, on the effects of the prohibition of usury, and on the extensive system of ‘informal finance’, out of which specialized financial institutions and markets evolved.

INTRODUCTION

The deficiencies of medieval money stimulated the development of a sophisticated system of payments that minimized the use of actual coin in commercial transactions. This system had two pillars: one was the deposit bank, the other was the bill of exchange. The deposit bank provided a way of making payments locally without using coin; the bill of exchange provided a way of making payments over long distances—remittance—without using coin. While it developed initially as an instrument of remittance, the bill of exchange was from the beginning also an instrument of credit. Credit was at first incidental to remittance, but over time it became increasingly important in its own right. The market for bills of exchange, together with the market for inter-fair deposits, evolved into an international money market that became a vital source of finance both for commerce and for government.

THE INSTRUMENT

The practice of remittance using paper instruments probably began in the late twelfth century, although the earliest surviving record dates from 1220.² The practice first developed in the trade between the inland cities of northern Italy and the Fairs of Champagne. The first instrument of remittance was the *instrumentum ex causa cambii* or the *cambium* contract.³ This was a promise to pay, typically a promissory note, drawn up formally by a notary. One merchant acknowledged the receipt from another of payment in local currency and promised to repay him at a specified future time and distant place in the currency of that place. The parties to the transaction, or their agents, were both required to appear at the place of payment to complete the transaction. As business practices developed, the *cambium* contract was succeeded by two different instruments—the bill of exchange and the letter obligatory.

The emergence of the bill of exchange was a result of a change in the organization of long-distance trade. By the late thirteenth century, the itinerant merchant was increasingly giving way to the large trading company with permanent branches in the main commercial centers. Rather than traveling themselves, such ‘sedentary merchants’ managed their affairs from their home offices, sending goods and instructions to their agents abroad. Organized in this way, it was easy for them to offer remittance services. They could accept payment at one office in local coin and send instructions to another office to repay in the coin current there. The instrument they used for this transaction was

²Ashtor (1983). The practice has earlier origins outside Europe.

³Blomquist (1990)

first called a *lettera di pagamento* or ‘letter merchant’ and later a *lettera di cambio* or bill of exchange.

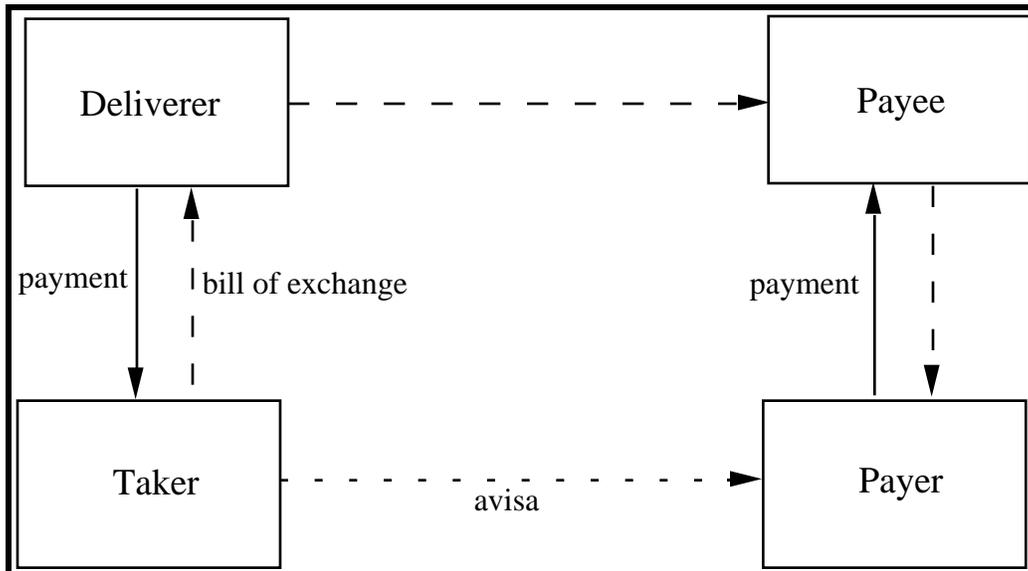


FIGURE 1. THE USE OF A BILL OF EXCHANGE

The bill of exchange differed from the *cambium* contract in a number of ways. First, it was an order to pay rather than a promise to pay. The structure of the transaction is illustrated in Figure 1. The party wishing to remit funds, the ‘deliverer’, gave money to the ‘taker’ and received from him in return a bill of exchange. This was an order from the taker to a ‘payer’ at a distant location to pay a specified amount there to a designated ‘payee’. The payer was an agent or correspondent of the taker, and the payee was an agent or correspondent of the deliverer.⁴ While the deliverer gave the taker local currency, payment of the bill was usually denominated in the territorial money of account of the place of payment or in an international money of account such as the florin or *écu de marc*. The deliverer would send the bill of exchange to the payee, who would present it to the payer for payment. Simultaneously, the taker would send notification to the payer (an *avisa*) instructing him to honor the bill when it was presented. For security, the parties generally sent two or even three copies of each document by separate means.

⁴In later periods, it was common for the payer to be someone who had purchased goods from the taker and so owed him money. During our period, however, transportation and communication were not yet of a speed and reliability to support the sending of goods on order to distant customers. The practice was to send goods on consignment to an agent or correspondent for him to sell in the local market. The proceeds of the sale would provide him with the means to pay bills drawn on him.

Unlike the *cambium* contract, which was payable at the settlement period of the next fair, the bill of exchange generally came due at a fixed length of time from the date of issue. This length of time, known as ‘usance’, was set by custom for each destination.⁵ For example, in Venice around 1400, usance to Florence was 20 days from date, to Bruges two months, and to London three months.⁶ The change from maturity at a set time to maturity at ‘t + usance’ corresponded to the change in the organization of trade. Itinerant trade relied on periodic markets—the fairs—and *cambium* contracts were settled at the corresponding periodic settlement dates. The sedentary trade of the trading companies relied on markets that operated continuously and bills of exchange were therefore settled continuously rather than periodically.⁷

Usance between two places was generally longer than the average postal time: for example, from Venice, the average postal times were 6 days to Florence, 26 days to Bruges, and 33 days to London. So a bill would normally be presented well before its due date. When it was presented, the payer would acknowledge the debt—‘accept’ the bill—by writing the word *acettata* across its face. However, if he had received no instructions from the taker or if he lacked the funds to honor the bill, he would ‘refuse’ it. If the payer refused the bill, the payee had to draw up a formal ‘protest’ before a notary, who would confirm non-acceptance. The protest document was then sent back to the deliverer who could sue the taker for default. Unless the payer accepted the bill, the payee had no direct recourse against him. Only the deliverer, who had given consideration for the bill in the form of merchandise or cash (‘value received’), had the right of action. However, once the payer accepted the bill, the payee could sue him directly if he did not pay when the bill came due.⁸

The bill of exchange, unlike the *cambium* contract, was not a notarial deed but an informal letter. This had the advantage of lowering the cost of the transaction and of increasing its speed. However, it meant that the bill of exchange was not enforceable in a civil court, but had instead to rely on special merchant courts for enforcement.⁹ Its legal

⁵Some bills were payable at half or double usance. For some destinations, usance was a certain number of days after the bill was presented (‘sight’) rather than after the bill was issued (‘date’).

⁶Mueller (1997) Table 8.1, p. 295.

⁷Later, as bills of exchange came increasingly to be used as instruments of credit, centered on the great financial fairs of Lyons and Bisanzone, there was a return to periodic settlement.

⁸de Roover (1970)

standing was established by being written entirely in the hand of the taker—a signature was not sufficient. Only the branch manager or assistant manager were authorized to make out bills of exchange, and specimens of their handwriting would be sent to all correspondents.

The taker on a bill of exchange was usually an international trading company—often Italian—that had branches or correspondents in several cities on which it could draw. The use of bills of exchange depended, therefore, on the presence of such ‘merchant banks’. In the areas of commerce where they were active—between Italy and other markets and within Italy—the bill of exchange had replaced the *cambium* contract as the principal instrument of remittance by the end of the fourteenth century.

However, many areas of commerce remained exclusively in the hands of small merchants, often itinerant: this was true of long-distance trade with the Baltic and of internal trade in most countries outside Italy. In the absence of large international trading companies that could act as intermediaries, the bill of exchange was slow to penetrate these areas. The preferred instrument of credit and remittance was a different instrument known variously as a *cedule obligatoire*, ‘bill obligatory’, or ‘letter obligatory’.¹⁰

The letter obligatory, like the *cambium* contract, was a promise to pay rather than an order to pay. However, like the bill of exchange, it was an informal merchant document, written in the hand of the taker, rather than a legal document drawn up by a notary. Generally, both delivery and payment occurred within the same monetary area, so that there was no permutation of currency. By the fourteenth century, the letter obligatory was a common instrument of remittance and credit in France, the Low Countries, and England, and in the fifteenth century its use spread to Spain and to the Hansa. Its use continued well into the sixteenth century, playing an important role in the great market of

⁹As added assurance, it was usual to begin the text of the bill with “*Al nome di Dio*”, making default blasphemous.

¹⁰“If exchange were taken up by a merchant without an organization abroad or without funds to his credit in foreign towns, he would draw not a bill of exchange, but what the Germans call an ‘Eigenwechsel’, an ordinary bond payable by the drawer himself, who expected to be present in the place stipulated in the bond at the date of payment. It was not the business of exchange that was responsible for the rise of the letter of payment, but the fact that the payment was to be made not by the drawer himself but by his partners, agents or debtors abroad, and it could be employed in all such payments, whether connected with exchange or not. In other words the rise of the letter of exchange was due to the rise and development of that type of commercial organisation of which the Italian banking houses were a specimen: we mean the appearance of firms with permanent connections abroad.” (Postan (1973 [1930]) pp 62-3)

Antwerp.¹¹ It even became an instrument of consumer credit in the Netherlands in the early sixteenth century when retailers used it to extend credit to their customers.¹²

HOW BILLS OF EXCHANGE WERE USED

The bill of exchange served both as an instrument of remittance and as an instrument of finance. As an illustration, let us consider its use in the trade between England the Low Countries in the fifteenth century.¹³ This trade involved three groups of English merchants. The first group, the Staplers, exported wool, selling it in Calais to Flemish drapers against payment later at the Brabant fairs or at Bruges. The second group, the Merchant Adventurers, exported cloth, selling it in Antwerp.¹⁴ Both groups received payment in the Low Countries and therefore had funds there that they needed to remit back to England. The third group of merchants, the Mercers, purchased silks and other luxury fabrics in the Low Countries, which they imported to England. The Mercers needed funds in the Low Countries to pay for their purchases.

The use of bills of exchange enabled each of the groups to satisfy its needs. The Staplers and Merchant Adventurers delivered the funds they had in the Low Countries to the Mercers in exchange for bills of exchange payable in London. In this way, the Staplers and Merchant Adventurers transferred funds from the Low Countries to England, while the Mercers, in effect, transferred funds from England to the Low Countries. However, for the Mercers the bills of exchange were not only a means of remittance but also a means of finance. The bill of exchange involved ‘float’—a delay, equal to usance, between the time funds were delivered and the time the bill had to be paid. This float effectively constituted a loan from the deliverer to the taker. In our case, the Staplers and Merchant Adventurers were lending to the Mercers. The Mercers used this lending to finance their imports into England. They purchased goods for import with the money they borrowed by being takers on bills of exchange, and then paid the bills later out of the proceeds of selling the goods back in England.¹⁵

¹¹Boyer-Xambeu, et al. (1994)

¹²Van der Wee (1993)

¹³Munro (1979)

¹⁴The Staplers sold their wool in exchange for a third in cash and the rest in letters obligatory payable six months or a year later at the Brabant fairs. The Merchant Adventurers sold their cloth mainly in Antwerp on similar terms against letters obligatory payable at the fairs or in Bruges.

¹⁵It was common, too, for Staplers to use bills of exchange to finance their trade. They sold to the Mercers in England bills of exchange payable in the Low Countries. The Staplers used the proceeds to

Initially, the primary function of bills of exchange was remittance, with the credit function secondary. However, over time, the credit aspect became increasingly important. Merchant bankers, who began as providers of remittance services—as takers of bills—soon became financiers as well— as deliverers of funds to other merchants. For example, Lucchese merchants importing raw silk from Genoa to Lucca financed their purchases by selling bills on Champagne to merchant bankers in Genoa; they later repaid by purchasing bills on Champagne in Lucca from the office of the same or other merchant bankers. Their agents in Champagne would pay the bills they had sold in Genoa out of the proceeds of the bills they purchased in Lucca.¹⁶

While bills of exchange were used initially in connection with trade, they came increasingly to be used for purely financial purposes. Merchants borrowed where the cost of funds was lowest and used bills of exchange to transfer the funds to where they needed them. For example, in 1260 the Vincenti of Siena needed to borrow to finance their export business.¹⁷ Rather than raising funds locally, where interest rates were high, they decided to borrow at a more favorable rate in the great financial market at the Fairs of Champagne. They did this by selling bills in Siena drawn on Champagne and by instructing their agent in Champagne to borrow there the funds he needed to pay the bills when they came due.¹⁸ The Vincenti used the funds they obtained in Siena to finance their business, and they eventually shipped goods to Champagne for their agent to sell in order to repay the loans he had taken there. Lenders, too, used bills of exchange to move funds to where the return was most favorable. For example, the Bruges correspondent of Francesco Datini of Prato wrote to him on April 26, 1399: “It appears that there is an abundance of specie in Genoa; so do not send our money to Genoa, or only if you can get

make down-payments on their purchases of wool from the growers. In this case, it was the Mercers who were financing the Staplers. However, in both cases, the remittance function was the same—allowing the Mercers to move funds from England to the Low Countries and the Staplers to move funds in the opposite direction.

¹⁶Blomquist (1990). The instrument they used was actually the earlier *cambium* contract, rather than a bill of exchange. Unlike bills of exchange, *cambium* contracts were due at a fixed date—the settlement period of the next fair. Consequently, the exchange rate, and so the implicit rate of interest, reflected a greater discount the longer the time to payment. The Lucchese importers of the example would therefore have had to deliver a larger sum in Lucca than they took in Genoa, the difference constituting the interest on the loan.

¹⁷Spufford (1986)

¹⁸The borrowing presumably took the form of an inter-fair *deposito*—see below and Kohn (1999a) .

a very good price for it; put it rather in Venice or Florence, or here in Bruges or in Paris or Montpellier; or wherever seems best to you.”¹⁹ Going a step further, merchants, and especially merchant bankers, used bills of exchange to arbitrage differences in interest rates. For example, English merchants borrowed in Antwerp at 5% to relend in London at 10%.²⁰

Bills of exchange were also used as a pure instrument of credit, entirely divorced from remittance—a practice known as ‘dry exchange’ (*cambium siccum*).²¹ The earliest technique of dry exchange was ‘exchange and rechange’ (*cambium et recambium*). A borrower in Venice became the taker on a bill drawn on Bruges; when the bill was presented for payment in Bruges, the payer (the taker’s agent there) settled the bill by selling a second bill, drawn on the taker of the first bill in Venice. Using these two bills back to back, the taker of the original bill created a local loan in Venice to be repaid in Venice when the second bill returned for payment.

Instead of using a second bill, the parties could agree in advance that when the first bill was presented for payment in Bruges it would be refused. The bill would then be formally protested and returned to Venice, where the deliverer would present it to the taker for repayment. The amount repaid would depend on the rate of exchange in Bruges when the bill was protested—the rate of ‘rechange’—so the result was the same as it would have been had a second bill actually been used. Although this device saved the transactions cost of a second bill, it incurred the legal cost of registering the protest.

In the fourteenth century, a third practice developed—‘ricorsa exchange’ (*cambio con la ricorsa*)—that improved on earlier methods and soon replaced them. Here the deliverer (usually a merchant bank) and the taker agreed to name a third party to be both payer and payee. This third party, often the agent of the deliverer (a foreign branch of the merchant bank), on receiving the bill, would draw up and send back ‘without other formality’ a second bill naming the original taker as payer and the original deliverer as payee. This *pro forma* bill avoided both the transactions cost of finding a genuine second bill and the legal cost of a formal protest. However, if the bill was only *pro forma*, why bother to send it at all? By the beginning of the fifteenth century, various forms of ‘fictitious exchange’ became popular. The bills would be made out, often in fictitious names, and stay with the deliverer; repayment would be based on the exchange rate at the fictitious destination, as reported by the deliverer’s agent there.

¹⁹Braudel (1984)

²⁰Wilson (1925 [1572])

²¹For a thorough discussion of dry exchange, see de Roover (1974) Ch 4 and Mueller (1997) Ch 8

However it was done, dry exchange was fundamentally different from a genuine exchange transaction or ‘real exchange’. Real exchange involved the remittance of funds from one place to another, usually with a permutation of currencies, in addition to the provision of a loan. Dry exchange, by combining two exchange transactions, one the inverse of the other, eliminated both the remittance and the permutation of currencies leaving only the loan.²²

The maturity of the loan could be tailored to need by choosing the appropriate destination: the maturity was simply twice the usance. For example, in the fifteenth century, the demand of Venetian merchants for credit longer than the common 40-day *cambium ad Venetias* via Florence turned London into an important center of Venetian exchange: the round trip to London created a six-month loan.²³ If necessary, the maturity of the loan could be further extended by rolling it over for one or more additional ‘returns’. At the end of the sixteenth century, it was common in Genoa to place funds for a full year, involving four rounds of *ricorsa* bills to and from the Bisanzone fairs. In one case, a similar loan in Venice was rolled over for six years.²⁴

The interest rate on the loan depended on the difference between the exchange rate on the outgoing bill (the *andato*) and the exchange rate on the returning bill (the *ritorno*).²⁵ While the former rate was known at the time the loan was made, the latter rate was not: it depended on market conditions at the destination at the time the returning bill was drawn. As a result, the interest rate was uncertain at the time the loan was made. However, far from being a disadvantage, the uncertainty of the interest rate was a major attraction of this form of lending. It was generally understood that any risk-free gain on a loan constituted usury and was therefore prohibited. Dry exchange was a way around this prohibition.²⁶ To some extent, even ‘real exchange’ was a way of evading the ban on

²²Since the letter obligatory, unlike the bill of exchange, was generally created in exchange for goods rather than in exchange for money, its adaptation to use as a pure instrument of credit was not as rapid. However, as we shall see, it did play an important role in one particular kind of lending—the inter-fair deposit.

²³Mueller (1997) Ch 8

²⁴Boyer-Xambeu, et al. (1994) Ch 4

²⁵Usance exchange rates were a compound of ‘spot’ exchange rates and interest rates. For an explanation, see the Appendix.

²⁶In some cases of fictitious exchange, uncertainty was eliminated by setting the exchange rate on the notional returning bill in advance. The Church did not smile on this practice.

usury. While the interest rate was not uncertain in this case, it was at least concealed in the permutation of currencies.

Although evading the prohibition of usury was an important advantage of the bill of exchange, it was certainly not the only, or even the principal, motivation for its use. First, there were plenty of other ways to get around the prohibition of usury. Second, the use of bills of exchange did not always involve a permutation of currencies. For example, in the fourteenth century, exchange of one Italian city on another was often quoted in florins in both places.²⁷ Finally, as usury restrictions were weakened or eliminated in the sixteenth century, the popularity of the bill of exchange continued undiminished.²⁸ The bill of exchange evolved in long-distance commerce and was therefore the chosen instrument of merchant bankers. As merchant bankers became the principal lenders of the period, it was only natural that they should adapt this familiar instrument to their needs. It is always easier and less costly to adapt an existing instrument or institution than to develop something completely new.²⁹

The use of bills of exchange for all of these various financial purposes generated an enormous volume of transactions. Indeed, as early as the fourteenth century, most bills of exchange arose out of financial transactions rather than trade. For example, between 1336 and 1340, the Covoni company of Florence registered 443 exchange transactions: of these, only 70 were trade-related, while the remaining 373 were financial. Of the financial bills, 335 were 'speculative', to exploit interest-rate differentials (159 were from Florence to Venice and 176 were from Venice to Florence). The remaining 38 involved dry exchange.³⁰ Because of the increasing predominance of financial bills, the volume of bills soon exceeded the volume of trade by a large margin.

²⁷Day (1987) p 143; Van der Wee (1993) Ch. 8. The use of a single currency was extended to the Geneva fairs and, later, to Lyons (which used the gold mark) and Piacenza (which used the *scudi di marchio*). The authorities upheld such contracts against accusations of usury on the grounds that they were essential for trade.

²⁸The outright ban on usury was often replaced by interest-rate ceilings. Dry exchange provided a way of circumventing these restrictions (de Roover (1949) Ch. 3). While there was a softening in northern Europe, usury continued to be an issue in the Catholic south until much later.

²⁹De Roover, in many writings, emphasized the importance of the ban on usury for the popularity of the bill of exchange. Many other writers, including Postan (1973) and Day (1987), have downplayed its importance relative to other factors.

³⁰Mueller (1997) Ch 8.

The bill of exchange was a merchant instrument, and it was used predominantly by merchants. However, non-merchants also took advantage of it to remit funds. The Church was one source of business. The pope, the cardinals, and other members of the curia all needed to transfer revenue from wherever it was raised to the papal court. For example, England was a major source of papal taxes. Until the thirteenth century, the money collected there was carried under armed escort to a monastery in France; from there, papal envoys carried the money to the papal court. However, as soon as Italian merchant banks established themselves in England in the thirteenth century, papal agents began to rely on them to remit funds to Rome by bill of exchange: the merchant banks used the funds they received in England to purchase wool for shipment to Italy.³¹ Apart from the Church itself, crusaders, pilgrims, and students all needed to remit funds, and they relied on bills of exchange and similar instruments to do so. The crusaders often combined remittance with finance: they borrowing from merchant banks in Genoa and Venice against repayment by their agents at the Fairs of Champagne.

Governments too used bills of exchange to remit funds—to pay their armies in the field, to provide their allies with subsidies, and to pay feudal tributes, ransoms, and dowries. For example, England relied extensively on the Italian merchant bankers in London and on the English Merchant Adventurers to remit funds to the Continent. The value of this service is illustrated by one occasion when mismanagement by Henry VIII's treasury forced him to remit £20,000 to his Swiss mercenaries in specie: doing so added some £2,000 to the cost of the transaction.³² However, sometimes the sums governments wished to remit exceeded the capacity of the exchange market. They then had no choice but to ship specie despite the cost. When, in 1328, Pope John XXII had to send 60,000 florins to his army in Lombardy, he was obliged to send it in coin. Despite a cavalry escort of 150 men, the shipment was ambushed and half of it lost.³³ Apart from international remittance, governments increasingly used bills of exchange to remit funds domestically: for example, in sixteenth-century England, provincial tax collectors purchased bills on London rather than shipping coin.³⁴

³¹Hunt (1994) Apparently, the first such experiment in 1218 was not a success: the Bolognese merchants in question disappeared with the funds. Happily, later experience was more favorable. The Bardi and Peruzzi transferred some 25,000 florins a year from London to Avignon during the 1330s. While this was a substantial sum, it represented only a small part of their business.

³²Tawney (1925) p 70

³³Spufford (1988)

³⁴Miskimin (1979)

The most sophisticated example of government remittance by bills of exchange was the ‘Genoese system’ of the late sixteenth century. The Genoese advanced credit to the Spanish crown in the form of bills of exchange drawn on Antwerp. The bills were payable there in gold, and the agent of the Spanish crown used the funds to pay the Spanish army in the Netherlands. The Spanish crown repaid the Genoese in Spain in silver when the *flota* arrived from the Americas. The Genoese sold this silver to the Portuguese and Venetians, who needed it for their trade with the East. The Portuguese and Venetians purchased the silver with bills drawn on Antwerp, where they each had a positive balance of trade. In this way, the Genoese system simultaneously provided the Spanish crown with credit, allowed it to remit funds from Spain to the Netherlands, and converted those funds from silver into gold.³⁵ Between 1567 and 1632, this system enabled Madrid to send over 500 million florins to its armies in the Low Countries.³⁶

BILLS OF EXCHANGE, BULLION FLOWS, AND THE ORGANIZATION OF COMMERCE

The bill of exchange provided a means of remittance of significantly lower cost than the shipment of bullion. This had two principal economic effects. First, it ‘competed away’ some of the remittance business that had been done by shipping bullion, so altering the pattern of bullion flows. Second, by lowering the cost of remittance, it changed the way that commerce was organised. To understand these effects, we need to begin with the individual merchant. In the absence of bills of exchange, a merchant importing goods from a distant place could pay for his purchases there either by shipping bullion or by exporting goods from home. Conversely, a merchant exporting goods to a distant place could repatriate the proceeds either by shipping bullion home or by purchasing goods there and importing them. Naturally, merchants chose whichever alternative was the more profitable. Shipping bullion could be the more profitable alternative for one of two reasons.

Bullion varied in abundance, and so in value, from place to place, depending on the distance from the sources of production and on local monetary policy.³⁷ A profit could therefore be made by shipping bullion from where it was less valuable to where it was more valuable. For example, “[b]ecause of much higher value placed on silver in North Africa [the local] goods seemed relatively cheap to European merchants who brought their silver across the Mediterranean to buy them.”³⁸ In this respect, bullion was no

³⁵Ball (1977)

³⁶Van Houtte (1977)

different from any other commodity. The ‘commodity motive’ was the major reason merchants chose to ship bullion. The introduction of the bill of exchange had no effect on the profitability of the commodity trade in bullion and therefore had no impact on the flow of bullion that it motivated.

Even if bullion did not differ in value between two places, there was another reason why a merchant might nonetheless choose to ship bullion. He might ship it purely as a means of remittance. Relying on some means of remittance, rather than shipping goods in both directions, enabled a merchant to specialize in a particular trade. Such specialization increased his productivity: for example, a merchant who specialized in importing raw silk could learn much more about product quality, about the reliability of suppliers, and about the varying needs of customers than could a general merchant trading in many different goods. The specialist could therefore offer better service and make a larger profit. However, against the potential gain from specialization, a merchant had to weigh the offsetting cost of using the means of remittance. If this cost was high, it might outweigh the potential gain from specialization. Shipping bullion was indeed costly—especially over long distances. Consequently, little of the flow of bullion over long distances was motivated solely by its use as a means of remittance, and there was little specialization in long-distance trade.³⁹ Over shorter distances, however, the cost of moving bullion was lower, and so bullion, or rather specie, did play a greater role as a means of remittance in domestic trade, and specialization was correspondingly greater.

The introduction of the bill of exchange made available a means of remittance of significantly lower cost. For long-distance trade, this had little impact on the flow of bullion, since little of it was motivated by remittance in any case. However, lowering the cost of remittance did have a significant impact on the degree of specialization, making it much easier for individual merchants to specialize in importing or exporting particular goods. The organization of the trade between England and the Low Countries, with its Staplers, Merchant Adventurers, and Mercers, provides a good illustration.⁴⁰ For domestic trade, the bill of exchange had more of an impact on the flow of bullion and specie. By the sixteenth century, the bill of exchange saw increasing use in domestic

³⁷See Kohn (1999b)

³⁸Spufford (1988) p 171

³⁹As we have seen, there were, however, occasionally large non-mercantile remittances of bullion for which considerations of profitability did not arise.

⁴⁰Some authors consider the development of the bill of exchange a key factor in the Commercial Revolution and in the replacement of itinerant with sedentary trade. See, for example, Usher (1943) .

trade (the bill on London in England and the bill on Lyons in France). This must have reduced the internal movement of specie as well as further increased specialization in trade.⁴¹

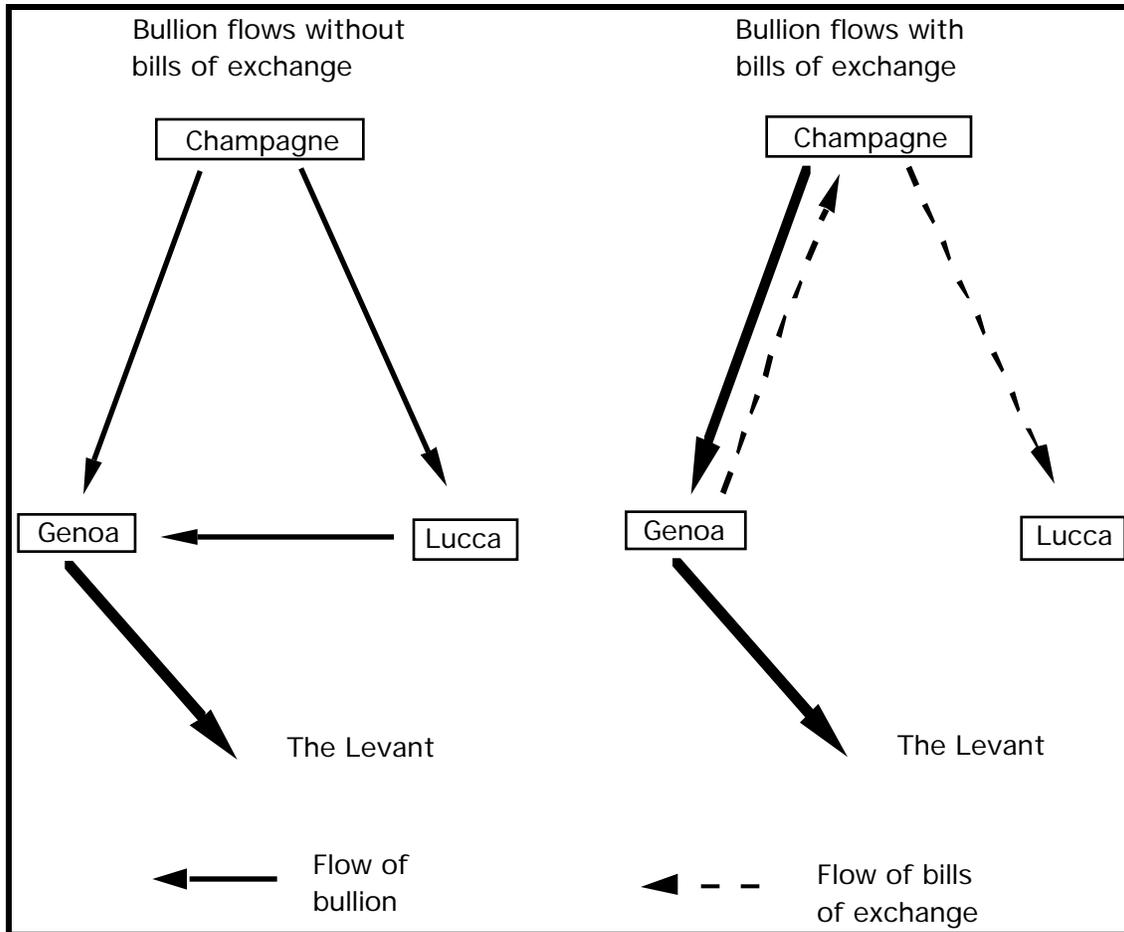


FIGURE 2: BULLION FLOWS WITH AND WITHOUT BILLS OF EXCHANGE

The introduction of the bill of exchange also had a significant impact on *patterns* of bullion flow. As an example, let us consider how it would have affected trade among Champagne, Lucca and Genoa in the thirteenth century. Lucca was a major manufacturer of silk cloth, which it exported to Champagne. It imported the raw silk it required through Genoa. Figure 2 shows how flows of bullion might have looked before and after the introduction of bills of exchange. In both cases, since bullion was more abundant in Champagne than it was in Italy and more abundant in Italy than it was in the Levant, the overall flow of bullion was from Champagne to Italy to the Levant. However, the precise

⁴¹Miskimin (1979)

route the bullion took on its journey southwards was altered by the introduction of bills of exchange.

In the absence of bills of exchange, Lucca balanced its exports to Champagne by shipping bullion home and balanced its imports from Genoa by shipping bullion there. The shipment of bullion from Champagne to Lucca was driven by the commodity motive: bullion was more valuable in Lucca than in Champagne. However, since there was no significant difference in the value of bullion between Lucca and Genoa, the shipment of bullion between the two places served purely as a means of remittance. The use of bills of exchange allowed matters to be arranged more efficiently. As we saw earlier, Lucchese merchants financed their purchases of raw silk in Genoa by selling bills of exchange drawn on Champagne. After they sold the raw silk back in Lucca, they used the proceeds to purchase bills there on Champagne from the exporters of silk cloth, who had funds in Champagne. Their agents in Champagne used the bills purchased in Lucca to settle the bills sold earlier in Genoa.⁴²

While the use of bills of exchange did not alter the overall flow of bullion southwards, which was driven by the commodity motive, it did eliminate the ‘eddy’ through Lucca. Lucchese exporters of silk cloth to Champagne now remitted the proceeds home by bill of exchange and had no reason to ship bullion from Champagne to Lucca. Similarly, importers of raw silk had no reason to ship bullion from Lucca to Genoa. Moreover, the sale of bills in Genoa led to an increase in the flow of bullion from Champagne to Genoa.⁴³ As a result, the bullion that previously had made its way from Champagne to Genoa indirectly via Lucca now flowed directly to Genoa at lower overall cost. This saving in the cost of shipping bullion was the real gain from using bills of exchange in this case.

Indeed, it may be no coincidence that the bill of exchange originally evolved here, in the multilateral trade among the cities of northern Italy and the Fairs of Champagne. The potential gains to be had from rationalizing the flow of bullion southwards may have provided the impetus needed for the development of the new instrument.

⁴²Blomquist (1990) The instrument used was actually a *cambium* contract rather than a bill of exchange.

⁴³Since Genoa has a trade surplus with Champagne, the exchange rate with Champagne was already at the bullion import point. The additional supply of bills therefore has no effect on the exchange rate and merely increases the import of bullion. For a discussion of exchange rates and bullion points, see the Appendix.

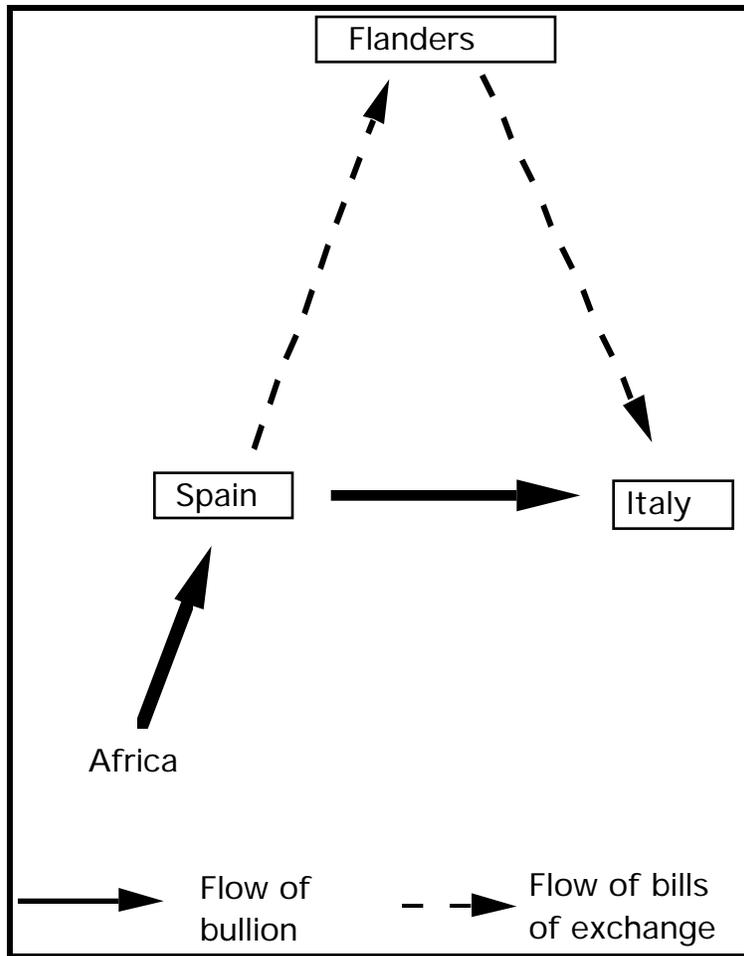


FIGURE 3: MULTILATERAL PAYMENTS SPAIN-FLANDERS-ITALY

Consequently, it was generally in multilateral trade that the use of bills of exchange was the most extensive. Another example is the heavy traffic in bills of exchange linking Flanders, Spain, and Italy in the fourteenth and fifteenth centuries. The pattern is illustrated in Figure 3:

African gold flowed from Spain to Italy not only because of Spain's trade deficit with Italy, but also because of its deficit with Flanders. Bills of exchange were used for purchases from Spain to Flanders and further bills from Flanders to Italy, which meant that eventually Spanish merchants found themselves owing Italians for Flemish goods and had to send gold.⁴⁴

⁴⁴de Roover (1968)

A similar pattern was to be repeated under the ‘Genoese system’ of the sixteenth century, again involving Spain, Italy, and the Low Countries, but this time with American silver instead of African gold.

The traffic in bills of exchange across the Mediterranean and in the Hanseatic trade between northwest Europe and the Baltic was very much lighter. In these two cases, trade was largely bilateral, along a single axis. It therefore lacked the opportunities for remittance by bills of exchange inherent in a multilateral pattern of trade. Moreover, there were no financial flows in these areas. As we have seen, most bills of exchange arose out of financial transactions rather than out of trade. In general, it was multilateral patterns of trade and financial transactions that generated the greatest traffic in bills of exchange.⁴⁵

THE ORGANIZATION OF EXCHANGE MARKETS

The extensive use of bills of exchange both required and encouraged the development of organized exchange markets. Cities that boasted organized exchange markets were known as ‘banking places’. These banking places constituted a network. Initially, this network included only the cities of northern Italy and the Fairs of Champagne. However, it soon extended south and east to southern Italy and the Levant, and west to Provence, and Spain. In the north, as Champagne declined, it expanded to include Paris, Bruges, and London, and later Antwerp. In the sixteenth century, south Germany joined the network, but north Germany, the Baltic, and eastern Europe remained outside it. Outside the network, remittance by bills of exchange was unavailable.⁴⁶ For example, in the fourteenth century, papal tax collectors in Poland had no choice but to carry bullion to Bruges or to Venice in order to remit to the papal court.⁴⁷

⁴⁵Spufford (1988) offers a different explanation. He suggests that a chronic imbalance of trade, and a persistent flow of bullion, was an obstacle to the use of bills of exchange in these areas. This seems unpersuasive, given the persistent bullion flows that often coexisted with the extensive use of bills of exchange—for example, between Champagne and northern Italy. Other historians have cited the “financial backwardness” of the Hanseatic merchants as the reason. However, English merchants, presumably no less financially backward, were using bills of exchange extensively in the fifteenth century, driven by the specialization of the Staplers, Merchant Adventurers, and Mercers (Postan (1973 [1930])). Economic need seems to have been the primary factor in determining where bills of exchange were utilized.

⁴⁶de Roover (1954) , Mueller (1997) , Spufford (1988)

⁴⁷Spufford (1988) p255. The Hanseatic cities were slow to connect to the exchange network. There was only the branch of a single Italian merchant bank in the area, in Lübeck, in the first half of the fifteenth century, and several South German merchant banks, including the Fugger, opened branches later in the

In a banking place, the exchange market was easy to find. In the cities of southern Europe, the center of commerce was the *piazza*, and this would always have a special area set aside for financial transactions. Such transactions sometimes included the underwriting of marine insurance or the trading of government debt, but the main business was always exchange. To facilitate settlement, and since the early *cambium* contracts required registration with a notary, the area for financial transactions—the ‘exchange’—was usually located close to the place of the moneychanger-bankers and notaries. Outside of southern Europe, because exchange was predominantly an Italian business, financial markets were generally found in the area of the Italian colonies. In Bruges, it was in the Place de la Bourse (named after the inn of the van der Beurse family), where the consular houses of the Italians were located.

Not all banking places were of equal importance. At any time, the exchange network had a definite center and perhaps one or two sub-centers. The first great center, from the late twelfth century, was Champagne, with Genoa as its sub-center. By 1320, Venice had replaced Champagne to become the hub of the exchange network, with Bruges the sub-center for northwest Europe. In the fifteenth century, the center moved to Geneva and then to Lyons. In the sixteenth, Antwerp grew to rival Lyons, with Medina del Campo a sub-center that complemented the Antwerp-Lyons axis.⁴⁸ Antwerp and Lyons, weakened as financial centers by the state bankruptcies of Spain and France, were succeeded towards the end of the sixteenth century by the ‘Bisanzone’ fairs, located first at Besançon and later at Piacenza.⁴⁹ The Bisanzone fairs remained the center of exchange well into the seventeenth century.⁵⁰

What made a particular banking place a center? Usually, it was the great commercial centers that became centers of the exchange network. It is notable, for example, that Florence never became a center of the exchange network, even though Florentine merchant banks dominated the business of exchange for centuries. Florence did not

century. It was not until the late sixteenth century that Hamburg became an important financial center, as a result of Flemish and Sephardic immigration from Antwerp. (North (1990))

⁴⁸The relative importance of Antwerp and Lyons is unclear. Antwerp certainly dominated in trade. However, Boyer-Xambeu, et al. (1994) argue that Lyons was more important as a center of exchange.

⁴⁹Antwerp and Lyons were also weakened by the physical insecurity caused by the religious wars and by monetary instability.

⁵⁰The Bisanzone fairs were the keystone of the ‘Genoese system’ of finance and remittance that connected Seville, Genoa, and Antwerp (see above and Kohn (1999c)).

become a center of exchange, because—unlike Genoa or Venice—it was more a manufacturing center than a center of commerce.

Commercial centers, as such, were naturally the focus of a large volume of remittance. This large volume helped create a liquid and competitive market, and the liquid and competitive market lowered costs and attracted more business. For example, an Italian merchant in London in the fourteenth century who wished to remit funds to Florence faced the following alternatives:

- (1) he could purchase a bill on Florence;
- (2) he could purchase a bill on Bruges naming his firm's office there as the payee and instruct the Bruges office to use the funds to purchase a bill on Florence;
- (3) he could instruct the firm's office in Florence to sell a bill drawn on him in London;
- (4) he could instruct the firm's office in Florence to sell a bill drawn on the Bruges office and instruct the Bruges office to cover this by selling a bill drawn on him in London.

Which alternative he chose depended on the urgency of remittance and on the cost. Selling bills in Florence was quicker than purchasing them in London. Indirect remittance via a financial center like Bruges was generally less expensive than direct remittance. While direct exchange between ordinary banking places was possible, most exchange in fact was indirect via the center.⁵¹

Another reason why commercial centers became centers of exchange was that they were also important financial markets. Commercial centers required systems of settlement to facilitate trade. Financial markets emerged initially as adjuncts to these systems of settlement and then took on a life of their own. For example, at Champagne, merchants relied on 'fair banks' to mediate exchange during the fair.⁵² However, at the close of the fair, merchants had to settle their remaining debts. Rather than settling in cash, those in a net debit position commonly covered it by borrowing from those in a net credit position against repayment at the next fair. These loans, known as an inter-fair deposits (*dépôts de foire en foire* or *deposito* loans), were undisguised loans at interest. This was permitted, because the fairs enjoyed a sort of extra-territorial exemption—the 'freedom of the fairs'—from many normal laws and restrictions including the prohibition

⁵¹Boyer-Xambeu, et al. (1994) p 74

⁵²See Kohn (1999a) for details.

of usury. During the thirteenth century, the market for inter-fair deposits developed into a general market for short term loans—a money market. Those seeking short-term credit or having funds they wished to lend short-term came to the fairs to borrow or lend. Moreover, the convenient settlement arrangements and the ease of reinvesting funds or refinancing loans, made the fairs an ideal place to settle debts contracted elsewhere—from London to Genoa.

The same pattern of financial development repeated itself in other commercial centers. In most cases—Genoa, Venice, Bruges, Geneva, Lyons, and Medina del Campo—the financial market developed initially out of the commercial settlement system as it did in Champagne. Antwerp and Bisanzone were exceptions, although in quite different ways. Antwerp, despite its being an important commercial center, actually had a very poor settlement system and it developed as a financial center despite this (we shall have more to say about this presently). In contrast, the Bisanzone fairs consisted of little but a settlement system: they were set up deliberately by the Genoese as a settlement center for their exchange business, and they really had no other function.

Organized exchange markets in general, and those in the great exchange centers in particular, provided two important services—price discovery and settlement. The price for any particular exchange transaction—the exchange rate—was generally set by negotiation between the parties. However, negotiation was constrained by the general state of the market. Usually, potential takers and deliverers both relied on specialized brokers—called *sensales cambiorum* in Venice—to find the best available rates.⁵³ Shopping around by these brokers created a degree of uniformity in exchange rates within a given market.⁵⁴

So long as most exchange was related to trade, rates remained relatively stable. However, once financial and speculative flows came to predominate, rates fluctuated more widely, and there were frequent attempts to corner markets and manipulate rates. In response to this increasing instability, the practice was introduced in the sixteenth century of a public fixing of ‘official’ exchange rates by consensus of all the merchant bankers. This practice—known as the *conto*—first appeared at the fairs of Lyons.⁵⁵ There, the members of each of the important nations—Florence, Lucca, and Genoa—got together and

⁵³The use of brokers to mediate all kinds of trade was universal in the Middle Ages. Brokers were often licensed, and some cities—for example, Bruges and Venice—required the use of a local broker. In south Germany, the *Unterkäufer* were licensed by the local authorities and engaged in moneychanging as well as brokerage. (Hildebrandt (1990))

⁵⁴The determination of exchange rates is discussed in the Appendix.

⁵⁵Boyer-Xambeu, et al. (1994) Ch 4

voted on rates. Initially, each nation quoted its own official rates based on these votes, but later a single set of official rates was obtained by averaging the three. With the official rates posted, the two-day period of actual trading began. The official rates were indicative rather than obligatory, and transactions were often concluded *al prezzo corrente* rather than at the *conto* rate. However, the *conto* rates fixed at Lyons were sent out to correspondents everywhere and provided a benchmark for rates in other markets.⁵⁶ The *conto* method was also adopted in Florence and later at the Bisanzone fairs.⁵⁷ However, rates at Antwerp continued to be set freely in the marketplace, and manipulation there continued to be a problem.

The setting of prices required information, and the great exchange centers were also centers of information. Merchants, because of their travels, and because of their constant correspondence with their far-flung connections, were the best sources of news, and the places where they congregated were the best places to gather it. Consequently, the fairs and bourses were the principal centers of intelligence—political as well as commercial. In the sixteenth century, Antwerp and Lyons crawled with spies and political agents: Queen Elizabeth valued her agent in Antwerp, Sir Thomas Gresham, as much for his political intelligence as for his financial services. The great fairs and bourses were also centers of credit information. At the early fairs, the ‘test of solvency’ was a merchant’s ability to settle: a merchant who failed to settle was declared bankrupt, was unable to obtain credit, and was banished from future fairs. At the later bourses, the constant interaction among the participants and the incessant activity of the brokers aided the diffusion of information, allowing the credit of market participants to be determined by ‘bourse opinion’. In Antwerp, a merchant bank that enjoyed impeccable credit was known as a *Ditta di Borsa*. The obligations of such firms circulated freely and were regarded as largely interchangeable.⁵⁸

The second important service provided by an organized exchange market was a settlement system—a way to settle large volumes of transactions with minimal use of cash. There were two types of settlement system, based alternatively on payment in bank and on the netting and assignment of debts.⁵⁹ ‘Public’ markets, where merchant banks

⁵⁶“no new decision concerning new exchange rates were made in Florence or Medina before they had news about the current Lyons fair.” (Boyer-Xambeu, et al. (1994) p79)

⁵⁷Medina del Campo had a *cuento*, but this was just a list of average transactions rates, published ex post. (Boyer-Xambeu, et al. (1994) Ch 4)

⁵⁸Ehrenberg (1928), Sutherland (1933)

⁵⁹The former is really a special case of the latter: see Kohn (1999a) .

offered their services to the general merchant public, normally relied on payment in bank. Such public markets included the great centers of Champagne, Genoa, Venice, Bruges, and Medina del Campo, as well as many ordinary banking places, such as Sienna, Palma, and Alexandria. In a public market, where most trade took place among strangers, deposit banks provided a means of settlement that everyone could trust.⁶⁰ Such a system could be incredibly efficient: for example, between 1456 and 1459, one bank in Genoa received 160,000 lire in payments from abroad in bills of exchange, and only 7.5% of this amount was settled in cash: the remaining 92.5% was settled in bank.⁶¹ In places that relied upon deposit banks for settlement, they were indispensable: in Venice, “the Florentines explained to their correspondents that when the local banks were closed, because of snow or a local feast day, they could not conclude foreign exchange operations.”⁶²

Some markets—such as Lyons and, especially, Bisanzone—were not public markets but rather ‘inside markets’. In these markets, merchant bankers traded principally with one another, doing little or no business with the general merchant public. In such inside markets, because participants were few and of known reputation, there was no advantage in netting and assigning the debt of a deposit bank (its deposits) in settlement. Participants could just as easily net and assign each others’ debt. The procedure was highly structured.⁶³ At Lyons, at the beginning of each fair—on a date set at the previous fair—the merchant bankers convened at the lodge of the Florentines. Each had prepared in advance a ‘market book’ listing his receivables (outstanding bills on which he was the payee) and his payables (outstanding bills on which he was the payer). During the meeting, the bankers compared their books. If the payer accepted a bill, he would make his mark next to the relevant entry on the book of the payee; if not, the payee would mark the entry ‘SP’ for ‘*sous protest*’. A few days after this first meeting, the bankers met again to trade in new bills, with each new bill being registered in the market books of deliverer and of taker. A few days later, the period of settlement began. Equipped with their market books, pairs of merchants would net payments due to one another bilaterally. Any remaining imbalance would be covered either by assignment of debts due from third parties, which might be netted later in the process, or by drawing new bills payable at the next fair or at other banking places. By the end of this process, very little remained to be

⁶⁰“...there seems to be ground for believing that the increase in banking activity during the fourteenth and fifteenth centuries is largely due to the new business in foreign exchange.” (Usher (1934) p7)

⁶¹Spufford (1986)

⁶²Mueller (1997) p 570

settled in cash: “De Rubys thus reports that a million *livres tournois* were paid in the course of one morning without a single *sol* being disbursed.”⁶⁴ The procedure at the Bisanzone fairs was similar: about a third of the bills due were settled by netting on the books of the bankers, and almost all the rest by drawing new bills (a practice known there as *pagamento in balancio*). At the end of the sixteenth century, at each Bisanzone fair, a small group of bankers would settle in this way bills of an average value of ten to twelve million *écus de marc*.⁶⁵

A major problem for any settlement system is ‘liquidity risk’—the risk that a participant will be unable to settle because of delays in payments due to him. The availability of credit can greatly reduce liquidity risk by allowing participants to borrow to meet their immediate obligations and to repay later, when funds became available. Different exchange markets relied on different types of credit. In some markets, deposit banks played a role by providing overdraft credit; at Lyons and Bisanzone, participants provided each other with ‘overdraft’ on their market books. Many markets relied on the inter-fair deposit (*deposito* or *lettre de foire*) to enable participant to carry over deficits, and surpluses, from one settlement to the next.⁶⁶ The instrument of these loans at Champagne, Lyons, and Antwerp was the letter obligatory, while at Piacenza it was the *ricorsa* bill of exchange. While the maturity of an inter-fair deposit was typically three months—from one fair to the next—it was easy to roll it over (usually at the new market rate).

Whichever method of settlement was used, some residual amount eventually remained to be settled in cash. This was frequently a problem, because coin was often scarce. For example, around 1400 in Bruges, gold was undervalued at the mint, and there was a serious shortage of gold coin. The authorities compounded the problem by prohibiting the settlement of bills of exchange by netting and assignment, requiring instead that each be settled in cash. To make matters even worse they insisted on the use of gold coin.⁶⁷ In general, the kind of coin used in settlement was not necessarily determined by the denomination of the bill of exchange. For example, a bill written in Seville and drawn on Lyons might specify delivery of *maravedis* and payment in *écus*.

⁶³Boyer-Xambeu, et al. (1994) Ch 4

⁶⁴Boyer-Xambeu, et al. (1994) p93

⁶⁵Ball (1977)

⁶⁶See Kohn (1999a) for details.

However, the actual coins delivered in Seville might have been ducats and payment in Lyons might have been in any of a variety of coins; there were often quarrels over which, since the Italians preferred gold and the French silver.⁶⁸ Often, the quality of coin was also an issue. For example, in Florence, cash settlement had to be made at the assay office of the *Arte del Cambio* (the guild of the moneychangers) to facilitate the counting and checking of coins.⁶⁹

ANTWERP AND THE ‘MONETIZATION’ OF BILLS OF EXCHANGE

Although Antwerp was a center of exchange, it had some serious problems with its system of settlement. Antwerp was very much a ‘public’ market. Indeed, it was unprecedented in the free access it allowed to merchants from all countries and in the freedom with which it allowed them to trade. As a public market, we would have expected Antwerp, like Venice and Bruges, to rely on deposit banks for its system of settlement. However, its Burgundian rulers had, for a variety of reasons, banned deposit banks in the 1480s.⁷⁰ Consequently, Antwerp had no choice but to rely on the alternative method of settlement—on the assignment of debt. In the inside markets of Lyons and Bisanzone, among small numbers of well-acquainted merchant bankers, this method worked well. In Antwerp, the most public of public markets, among hordes of strangers trading with one another, it initially worked quite poorly.

Among Italian trading companies and merchant banks, the assignment of debt meant assignment on the books of the parties concerned. However, most of the merchants trading in Antwerp in the early sixteenth century were not Italians and they did not usually keep regular books. Among these merchants, the normal way to record a debt was with a letter obligatory. This was the common instrument of commercial credit, not only among the merchants of Brabant and Flanders, but also among the English, Hanseatic, Rhenish, Spanish, and Dutch merchants who traded in Antwerp. So it was letters obligatory that were assigned in settlement. Initially, only paper that had reached maturity was assigned on the Exchange, but increasingly paper was assigned before maturity. To facilitate assignment, letters obligatory were usually made ‘payable to bearer’ rather than payable to a named party.

⁶⁷Van der Wee (1963) Presumably the purpose of these ordinance was to increase the demand for gold coin and so to force merchants to bring gold bullion to the mint (see Kohn (1999b)).

⁶⁸Boyer-Xambeu, et al. (1994) Ch 4

⁶⁹Mueller (1997) Ch 8

While this procedure seemed an appealing solution to the settlement problem, it faced a serious impediment: its uncertain legal status. In law, there is an important distinction between ‘assignability’ and ‘transferability’.⁷¹ For example, suppose A owes money to B, and writes him a letter obligatory to acknowledge the debt. The instrument is *assignable* if B can, before maturity, assign the right to collect the debt to a third party, C, without giving notice to A. The instrument is *transferable* if, in addition, C obtains the full rights (or better) of B. That is, C himself can sue A for non-payment, and, if he received the instrument from B in good faith, his own rights are not prejudiced by defects in the rights of B (for example, if B obtained the instrument fraudulently). Unlike an instrument expressing a debt to a specific person, a transferable instrument is impersonal: it is evidence of a debt on the part of the issuer to anyone who acquires the instrument. In this way, it is like currency.⁷² The merchant courts of Bruges and, subsequently, of Antwerp recognized the full transferability of the letter obligatory to bearer.⁷³ However, debtors often refused payment, taking refuge in the civil courts, which did not recognize transferability: “In the budding new trading centers [in the North]... prosecutions were legion; the merchants’ circle was not as closed or intimate as in the traditional centers of the South; unknown, unreliable newcomers kept on turning up.”⁷⁴ This legal obstacle to the circulation of letters obligatory was removed in 1507, when the Antwerp civil courts recognized their transferability.⁷⁵

Unfortunately, while the civil courts’ recognition of transferability solved one problem it created another. The court regarded the assignment of a transferable instrument as completely discharging the debt of the assignor, B, to the assignee, C: if the original issuer, A, did not pay up, C could sue A, but he had no recourse against B. While transferability provided C with better *legal* protection, it provided him with worse

⁷⁰See Kohn (1999a) .

⁷¹Different authors use different terminology for this distinction and vary in the meaning they attach to ‘assignability’ and ‘transferability’.

⁷²Powell (1966 [1915])

⁷³Munro (1990) suggests that the origins may have been in the English Law Merchant, citing the case of *Burton v. Davy* in the London Mayor’s court in 1436 as establishing the legal standing of the bearer (assignee). Given the importance of English trade with the Low Countries, this certainly seems plausible.

⁷⁴Van der Wee (1977) p325.

financial protection.⁷⁶ Clearly, under these conditions, no-one would accept in settlement the paper of someone of unknown or inferior credit. This limited the circulation of letters obligatory, especially as the Antwerp market continued to grow and to attract ever larger numbers of newcomers.

The solution was found in applying to letters obligatory the principle of *negotiability*. According to this, the debt of B to C is discharged only when C receives final payment (or satisfactory equivalent). That is, if A defaults, C has recourse not only against A, but also against B (or if there has been a chain of assignment, against each assignor in turn). Consequently, each assignment strengthens the credit of a negotiable instrument. The negotiability of letters obligatory to bearer was established by edict of Charles V for Antwerp in 1536 and for the whole of the Low Countries in 1541. The principle was soon adopted, too, in the Hanseatic towns and in England.⁷⁷

While negotiability addressed the credit issue, it created a technical problem—how to identify the assigning debtors in the sometimes lengthy chain of assignment. With book credit, it was relatively easy to trace the chain back through the books of the parties concerned. However, with a paper instrument it was necessary to create a record of the chain of assignment, either with a notary or by attaching to the instrument each time it changed hands an additional formal document (an assignment note). Both alternatives were cumbersome and costly. The eventual solution was found in the practice of *endorsement*. Each assignor signed the back of the instrument, and his signature legally bound him to indemnify the assignee if the issuer and the previous endorsers failed to pay up: that is, his signature indicated that he retained ultimate responsibility for his own debt. The first examples of endorsement date from the 1570s and by the turn of the century the practice was widespread.⁷⁸

To begin with, only letters obligatory circulated. The letter obligatory was a medium- to long-term instrument—maturities were commonly six months or a year—and the

⁷⁵Usher (1914) suggests that the key court decision was in Bruges in 1527, but Van der Wee (1963) gives priority to Antwerp.

⁷⁶Van der Wee (1977)

⁷⁷This extended to the assignment of letters obligatory what was already the rule for the assignment of book credit in Antwerp ('assignment out of bank'). It is interesting that in contemporary Florence the negotiability of book credit had been dropped as unnecessary. Florence was an 'inside market', like Lyons and Bisanzone, where the participants were well known to one another.

relatively long term promoted circulation before maturity. In contrast, bills of exchange were of much shorter term and merchants tended to hold them to maturity. Moreover, as we have seen, it was the letter obligatory that was the instrument favored by the northern merchants who originally dominated Antwerp. However, with the increasing presence of South Germans and Italians, whose preferred instrument was the bill of exchange, it became necessary to bring bills of exchange into the settlement system. This was done initially by the acceptor of the bill issuing a corresponding letter obligatory, which could then be transferred; this procedure worked poorly and gave rise to many lawsuits.⁷⁹ By the 1530s, it became the practice instead to make bills of exchange payable to bearer and to assign them directly just like letters obligatory.⁸⁰ Moreover, during the sixteenth century, northern merchants gradually switched over from using letters obligatory to using bills of exchange for remittance and credit, and by 1600 it had become the predominant instrument.⁸¹

As they evolved into negotiable instruments, letters obligatory and bills of exchange became a kind of convertible money, similar in many ways to the deposits of deposit banks. Merchants in Antwerp used negotiable instruments as a means of payment: instead of transferring the debt of a deposit bank (a deposit) on the books of the bank, they transferred the debt of non-banks in the form of negotiable instruments.⁸² Paper commonly changed hands ten or twenty times before maturity, and a hundred times was not unusual. Obviously, the paper with the best 'name' circulated the most freely, and the paper of the Fugger merchant bank, the *Fuggerbriefe*, passed from hand to hand almost like modern banknotes.⁸³ In many cases, circulating paper found its way back to the original issuer, so extinguishing the debt, and eliminating the need for settlement⁸⁴; such

⁷⁸Usher (1914) believes the practice originated in Italy, probably in Naples, where it was customary to transfer by endorsement *fedi di credito* (bank certificates of deposit).

⁷⁹Ehrenberg (1928)

⁸⁰Van der Wee (1993) Ch. 10

⁸¹Van der Wee (1977)

⁸²However, because negotiable instruments were made out for a specific amount, they were less flexible than bank deposits: if the amount of the instrument did not match exactly the amount to be paid, the balance had to be paid in cash.

⁸³Van der Wee (1977)

netting was facilitated by the practice of the Antwerp Exchange of concentrating payments at certain set times of day. Paper still outstanding at maturity had to be settled in cash (this obligation was what made the paper ‘convertible’—like a deposit bank’s promise to redeem its deposits in specie). Letters obligatory and bills on Antwerp were usually written to mature at one of the ‘quarter days’ associated with the fairs (the tenth of February, May, August and November). As trading in Antwerp became continuous, the fairs faded away, but the quarter days retained their importance as dates of settlement. On the quarter days, there was a netting procedure—the *scontro* or *rescontre*—that minimized the need for settlement in cash. Similar systems were established in the exchange markets of Rouen, Lisbon, and London.

The usefulness of letters obligatory and of bills of exchange as instruments of credit was further enhanced by the practice of discounting. Although assignment of commercial paper was acceptable as a means of settlement, in times of tight money (*strettezza*), creditors would offer a discount for settlement in cash. Financiers with cash available could exploit this situation by offering to buy commercial paper for cash at a discount. These financiers—known as ‘money dealers’—were usually brokers or *kassiers*.⁸⁵ Discounting a debt was not a new idea. Since the middle ages, it had been common for a creditor in need of cash to request early payment by the debtor in exchange for a rebate. Even the discounting of financial instruments was not in itself new: Florence had an active market in the fifteenth century in future interest payments on government debt (*paghi*) that traded at a discount, like today’s government strips. What was new in Antwerp was the discounting of short-term commercial paper. Initially, because of the uncertain legal status of assignment, money dealers discounted only mature paper. However, once negotiability was established by imperial edict in 1541, they began to discount paper before it matured. They started with letters obligatory, but as bills of exchange became increasingly popular in Antwerp, they discounted these too. By the 1550s the practice was quite common (it was authorized officially in 1540, so long as the interest rate did not exceed 12%).⁸⁶ For example, in March 1560, bills arriving in Antwerp from Lyons and Besançon for settlement at the next fair in May were

⁸⁴“...one gets the impression that a given commercial debt was transferred so often that finally somebody was found who happened to be a debtor of the original debtor, which enabled a full or partial clearing of debts.” Van der Wee (1963)

⁸⁵Although deposit banking was officially banned in Antwerp from the late fifteenth century, the unofficial moneychangers or *kassiers* provided deposit banking services. (Van der Wee (1963)).

immediately snapped up by the money dealers. The practice of discounting greatly improved the market for commercial paper by increasing its liquidity. It also provided a way for letters obligatory to be used as an instrument of pure credit: a merchant wishing to raise cash could write a letter obligatory and discount it with a money dealer.

Driven by the lack of deposit banks, and despite its unpromising beginnings, Antwerp eventually created a highly efficient system of settlement by assignment of debt. Over time, instruments and practices evolved that were suited to a market of anonymous trade among strangers. Moreover, the product of this evolutionary process—the discounting of negotiable bills of exchange—was a financial invention of enormous economic importance. Indeed, in the seventeenth and eighteenth centuries it was to become the foundation of modern commercial banking.⁸⁷

APPENDIX. THE DETERMINATION OF EXCHANGE RATES⁸⁸

The first step in understanding the determination of medieval exchange rates is to understand how they differed from exchange rates today. Today, there are two types of exchange rate—the spot rate and the forward rate. The spot rate is the price of one currency in terms of another for immediate settlement. For example, if the spot rate between the dollar and the pound sterling is XR_S , then in return for a payment of XR_S dollars today in New York, you will receive one pound sterling today in London (both payments settled in bank deposits of the respective currencies). In contrast, the forward rate is the price of one currency in terms of another for settlement at a future date. For example, if the one-month forward rate is XR_F dollars per pound sterling, you can enter into a contract today to receive one pound sterling in London in one month's time in exchange for delivery of XR_F dollars in New York at that time. Both for spot and for forward transactions, today's instantaneous communications allow the delivery of one currency and the payment of the other to take place more or less simultaneously.

In the Middle Ages, however, communications were far from instantaneous and simultaneous delivery of the two currencies was impossible. As a result, spot and forward transactions like today's were not feasible. Consequently, the exchange rates quoted in the medieval exchange market were not spot or forward rates but *usance* rates. A *usance*

⁸⁶Van der Wee (1963)

⁸⁷Van der Wee (1963) . London, which also lacked deposit banks, faced a problem similar to that of Antwerp, and practices there developed along similar lines, partly in imitation and partly independently—see Munro (1979) .

⁸⁸The following relies heavily on de Roover (1949) Ch. 3, Boyer-Xambeu, et al. (1994) Ch 4, and Mueller (1997) Ch 8.

rate is the amount in one currency to be delivered in one place today in exchange for payment of another currency in another place at a *later* date (at usance). For example, suppose the usance rate between Antwerp and London is XR_A groats per pound sterling and usance is one month. Then XR_A groats are to be delivered in Antwerp today in exchange for payment of one pound sterling in London a month from today.

Unlike spot and forward transactions, usance transactions are not symmetric. Usance exchange from London to Antwerp is not the same as usance exchange from Antwerp to London. Rates are distinct too. The usance rate from London to Antwerp is not the same thing as the usance rate from Antwerp to London. If the rate from London to Antwerp is XR_L groats per pound sterling, then, one pound sterling is to be delivered in London today in exchange for XR_L in Antwerp in a month's time.

Note, however, that the two different usance rates are both quoted in groats per pound sterling. In medieval terminology, London is the 'head of the exchange' or London 'gives the exchange' to Antwerp, or London quotes 'certain' and Antwerp 'uncertain'. In this case, the pound is described as the *res*, the object of the transaction, and the groat as the *pretium*, the price. For a place that was the head of the exchange, the exchange rate was 'favorable' when it was high, 'unfavorable' when it was low.⁸⁹

Because of the delay between payment of one currency and receipt of another, usance transactions are not pure exchange transactions: they combine exchange and lending. Consequently, usance rates reflect both interest rates and exchange rates. To unravel the connection, it is useful to consider usance rates in a hypothetical world in which communications are instantaneous and in which there do exist spot exchange rates. In this imaginary world, someone in Antwerp can obtain £1 in London in a month's time in two different ways. One way is to deliver XR_A groats in Antwerp on a usance bill on London. The other is to purchase sterling spot and to lend it in London to be repaid in one month's time. To receive £1 then, one must lend $£1/(1 + i_L)$ now, where i_L is the one-month interest rate in London. To obtain this amount of sterling on the spot market in Antwerp, one has to pay $XR_S [1/(1 + i_L)]$. Because these two alternative ways of obtaining £1 in London in one month's time are equivalent, arbitrage will ensure that their cost is the same: that is,

$$XR_A = XR_S [1/(1 + i_L)]. \quad (1)$$

⁸⁹It was generally the case that the center of the exchange network gave the exchange to other places. This was true of Champagne, Venice, Bruges, and Lyons. However, when monetary conditions at the center were unstable, causing instability of the exchange rate, as in Antwerp, the center would take the exchange from more stable places (such as London).

Symmetrically, someone in London can obtain groats in Antwerp in a month's time either by purchasing a usance bill on Antwerp or by purchasing groats spot and lending them for one month. Again, arbitrage will ensure that the amount in groats received per pound sterling is the same whichever method is chosen. Therefore, if i_A is the one-month interest rate in Antwerp,

$$XR_L = XR_S (1 + i_A). \quad (2)$$

From (2) and (1), we see that the usance rate in London, which 'gives the exchange', is higher than the spot rate, while the usance rate in Antwerp, which 'takes the exchange', is less than the spot rate. It follows, of course, that the usance rate in London is higher than the usance rate in Antwerp.⁹⁰ We can obtain the exact relationship between the two usance rates by taking the ratio of (2) and (1):

$$XR_L / XR_A = (1 + i_A) (1 + i_L), \quad (3)$$

or

$$XR_L = XR_A (1 + i_A) (1 + i_L). \quad (4)$$

Of course, in reality, there was no spot rate, so we must invoke a different sort of arbitrage to underpin the relationship described by equation (4). Consider an arbitrageur in London. He can borrow £1 and deliver it against a bill on Antwerp. A month later, he will receive XR_L groats there and have to repay $(1 + i_L)$ in London. To cover repayment in London, the arbitrageur can instruct his agent in Antwerp to borrow groats there and deliver them against a bill on London that will pay the required amount. The cost in groats of a bill that will pay the needed $(1 + i_L)$ pounds is $XR_A (1 + i_L)$, and this is therefore the amount in groats the agent in Antwerp must borrow there. In a month's time, the agent in Antwerp will have to repay there

$$XR_A (1 + i_L) (1 + i_A).$$

To cover this, he will have the proceeds of the bill on Antwerp that the arbitrageur purchased in London— XR_L . If relationship (4) holds, he will exactly break even. If it does not hold, then either this arbitrage is profitable or the reverse arbitrage is. So even in the absence of instantaneous communications and a spot market, we would expect arbitrage to tend to establish relationship (4). However, it will do so only gradually. A disturbance in one place will cause rates to diverge from the equilibrium relationship. The divergence will stimulate arbitrage, and the arbitrage will tend to restore the equilibrium relationship.

Usance exchange rates are therefore a compound of the (notional) spot exchange rate and of the interest rates in the two places. We can divide up the factors that affect usance

⁹⁰This confirms De Roover's assertion that the exchange rate has to be higher in the place that gives the exchange.

rates accordingly. The spot exchange rate depends on supply and demand of one currency in terms of the other. Supply and demand in turn depends on trade flows between the two places, on unilateral transfers (mainly political and religious), and on capital flows. The effect of trade flows was clear to the English Commission on Exchanges of 1564.⁹¹ It argued that if sales of English cloth in the Low Countries were particularly good, there would be a strong demand in Antwerp for bills on London on the part of Merchant Adventurers wishing to remit funds home. This would drive up the exchange rate—the amount in groats needed to purchase a pound sterling in London. Since the Merchant Adventurers could also remit funds to London by having their agents in London sell bills on Antwerp, the increase in the supply of such bills in London would also drive up the exchange rate there (the amount of groats received in Antwerp in exchange for one pound sterling in London). While good sales of English cloth would raise the exchange rate in both places, poor sales would lower them: weak demand for bills in Antwerp and weak supply in London would cause the two usance rates to fall. Thus, changes in the balance of trade would tend to move exchange rates in Antwerp and London in parallel, with no necessary effect on their ratio (as we know from equation (3), their ratio depends only on the interest rates in the two places). That is, changes in the balance of trade would tend to raise or lower the (notional) spot exchange rate. Unilateral transfers would have a similar effect.

The effect of capital flows is a little more complicated. Suppose, for example, that interest rates are lower in Antwerp than they are in London, so that English merchants (or the English crown) prefer to borrow there and to remit the proceeds home. This capital flow from Antwerp to London will tend to raise the spot exchange rate in the same way as an increase in the sales of English cloth. Conversely, a capital flow from London to Antwerp will tend to lower the spot exchange rate. But such capital flows will also affect the interest rates in both places: a flow of capital from Antwerp to London will tend to raise interest rates in Antwerp (where the funds are borrowed) and to lower them in London (where there is now less borrowing). From (1) and (2) we see that a rise in XR_S , combined with a rise in i_A and a fall in i_L will raise the usance exchange rates both in Antwerp and in London (XR_A and XR_L , respectively). From (3) we see that the effect on the ratio of the two usance rates is uncertain, depending on the relative impact on the interest rates in the two places.

Since dry exchange did not involve either remittance from one place to another or a flow of capital, it had no direct effect on exchange rates. In its more sophisticated

⁹¹de Roover (1949) p184

versions, it had no impact at all on the exchange market at the distant location. For example, at the Bisanzone fairs, *ricorsa* bills were dealt with separately from ‘real’ bills: they played no role in the fixing of exchange rates. Ricorsa bills simply took the *conto* rate determined for real bills. But even in the most primitive form of dry exchange—exchange and recharge—when the return bill was actually purchased in the open market, dry exchange had an equal impact on the supply and demand for remittance, and therefore had no effect on the exchange rate. Dry exchange was an instrument of local credit, and it could therefore affect the local interest rate: for example, an increased desire to borrow through dry exchange, other things equal, would tend to raise the local interest rate. Only in this indirect way could dry exchange have any impact on the usance exchange rate.⁹²

The extent to which the exchange rate could rise or fall was limited, because there was always an alternative to remitting by bill of exchange—shipping specie or bullion. For example, if the exchange rate in London (in groats per pound sterling) falls far enough (becomes sufficiently unfavorable), it becomes less expensive actually to ship sterling coins to Antwerp and to have them reminted into groats. Conversely, if the exchange rate in Antwerp (also in groats per pound sterling) rises far enough, it becomes less expensive to ship groat coins to London and have them reminted into sterling. The two points at which it becomes cheaper to ship specie, in one direction or in the other, are called the ‘specie points’. Clearly, exchange rates could fluctuate only within the bounds set by the specie points.⁹³

How far apart the specie points were depended on the cost of shipping specie and on the cost of reminting it. The cost of shipping included not only transportation costs, but also the risk of loss. This risk was significant: the hazards included not only the chance of shipwreck, piracy, and brigandage, but also the chance of confiscation by government officials. The cost of reminting included the loss of the premium on the old coin, since it had to be sold to the foreign mint as bullion, as well as the usual seigniorage on the new coin. In most cases, the total costs were high and the specie points quite far apart, so that

⁹²“Dry exchange could influence the exchange rates only through the rate of interest and not in any other way.” (de Roover (1949) p163)

⁹³The cost of remitting by bill of exchange was actually greater than the cost implicit in the exchange rate: it also included an explicit transactions costs. Merchant bankers charged a commission that, like usance, was generally customary—for example, 1/3 of 1% in Venice or Milan or 2/3 of 1% in Lyons. If there was a broker or commission agent involved in the transaction, as was often the case, he too would receive 1/5 of 1% to 1/4 of 1%. (Boyer-Xambeu, et al. (1994) p32)

exchange rates could fluctuate quite widely.⁹⁴ However, when cities were geographically close, the cost of shipping specie was relatively low and the specie points could be quite close; as a result, the exchange rates between two such cities would be practically fixed.⁹⁵

If it was possible to ship bullion rather than current coin this lowered the cost, because it avoided the loss of the coin premium. As a result, 'bullion points' were closer together than specie points. Consequently, if it was possible to ship bullion, the exchange rate tended to fluctuate in a narrower band. In many places, however, the export of unminted bullion was prohibited. While this did not, of course, prevent the shipment of bullion, it did make it riskier, raising the cost and widening the bullion points. In contrast, the great commercial centers frequently did allow the free shipment of bullion, because they were often important bullion markets. Moreover, the existence of a large and liquid bullion market in these places made shipping bullion relatively inexpensive and kept the bullion points close together. This tended to keep exchange rates in a relatively narrow band and was another important reason why the great commercial centers often became centers of exchange.

Debasement widened the distance between the specie points by sharply increasing the premium on the new, debased coins. The debasements of the French coinage in the early fourteenth century led to wide fluctuations in the exchange rate on Champagne and this contributed to its decline as a center of the exchange network.⁹⁶ At the same time that a debasement raised the premium on new coins, it eliminated the premium on old, pre-debasement, coins by effectively demonetizing them. This, of course, encouraged their export as bullion. For example, during Henry VIII's debasement of 1543, merchants smuggled specie (presumably pre-debasement coin) to the Low Countries despite the export ban, because it was so much more profitable than remitting by bill of exchange.⁹⁷ In this way, by increasing exchange-rate volatility and by encouraging the costly

⁹⁴“There can be no doubt that the adjustment of international balances was accomplished more frequently by sharp fluctuations of the exchange rates than by corrective specie flow.” (de Roover (1949) p140) For example, in the fifteenth century, exchange rates between Venice and London fluctuated in a range of about 20%.

⁹⁵This was true of Venice and Bologna, Florence and Pisa, Avignon and Montpellier, Barcelona and Valencia, Bruges and Paris. News of a sharp rise in the exchange rate on one of such a pair of cities quickly led to shipment of specie from the other, so that exchange rates on the two cities moved closely in parallel. (Mueller (1997) p588)

⁹⁶Boyer-Xambeu, et al. (1994) Ch 4

⁹⁷de Roover (1949) Ch. 3.

shipment of bullion, debasement damaged the efficiency of international payments just as it did the efficiency of domestic payments.

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