

**HOW AND WHY ECONOMIES DEVELOP AND GROW: LESSONS
FROM PREINDUSTRIAL EUROPE AND CHINA**

CHAPTER 8

THE PAYMENTS SYSTEM

Meir Kohn*

Department of Economics
Dartmouth College
Hanover, NH 03755
email: mkohn@dartmouth.edu

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ABSTRACT: The coinage of preindustrial Europe was quite inadequate for the needs of a commercializing economy. As a result, various types of IOU came to be used as money instead—bank deposits as means of payment and bills of exchange as means of remittance.

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Economic activity requires the commitment of resources. Since the internal resources of an enterprise are often limited, the ability to draw on external resources—on external financing—is essential. The core function of a financial system is to facilitate external financing. A financial system also performs two other, closely related, functions—payments and trade in risk. The development of a financial system was an essential part of the commercialization of preindustrial Europe. In the current chapter, we will look at payments: it was, as we will see, a particular problem. In Chapter 9, we take up financing and trade in risk.

Commercialization—the expansion and deepening of the market—required adequate means of payment and remittance. A means of payment is a way of transferring value from person to person in exchange for the delivery of goods and services. A means of remittance is a way of transferring value from place to place. In both cases, the value can take the form either of currency or of an IOU.

Currency in preindustrial Europe consisted of silver and gold coin, and it came in a bewildering profusion of forms: each jurisdiction issued its own coinage, and they varied widely in weight and fineness. Even within a single jurisdiction, the coins in circulation varied. Because of the crude technology of minting, new coins differed in weight and were easy to clip and counterfeit. The quality of a given issue deteriorated over time as a result of wear and of the culling of heavier coins. To keep up with this deterioration, successive issues tended to be of progressively lower weight and fineness. Not only was the coinage of poor quality, but there was not enough of it. Throughout the period there was a chronic shortage of circulating medium, punctuated by occasional acute shortages.

In addition, the currency was poorly tailored to the needs of payment. Silver was initially so scarce that the value of the smallest coin was too great for small payments. For example, the smallest coin in twelfth-century England, the penny, paid the daily wage of a domestic servant: there was with nothing smaller to be used as change. The problem eased as silver grew more abundant and the silver content of coins declined, making coins less valuable. However, this only exacerbated a second problem: the value of silver coins was too low for large payments. The counting, sorting, weighing, and testing of thousands or even millions of coins could take weeks. Merchants therefore used bar

silver instead or, once they became available, gold coins. Even so, payment in specie or bullion remained difficult and expensive.

. We begin with the early development of these methods during the Commercial Revolution. We then look at how the resulting improvement in the payments system contributed to the general expansion. The payments system that emerged from the Commercial Revolution was not however without some serious problems. The search for solutions to those problems led to further development of the payments system—our final topic for this chapter.

MEANS OF PAYMENT IN THE COMMERCIAL REVOLUTION

The acceptance of IOUs in payment requires trust: there must be some confidence that the IOU will ultimately be honored. Consequently, the use of IOUs in payment developed initially only among people who knew one another.

Payment by IOU

We have seen that a large part of exchange was conducted on the basis of sales credit: that was how one villager sold to another; how a shopkeeper, craftsman, or innkeeper sold to his regular customers; how one merchant sold to another he knew and trusted. The extension of sales credit meant, essentially, the acceptance of an IOU in payment: in exchange for the delivery of goods or services, the seller accepted from the buyer a personal promise to pay.

Exchange based on sales credit requires periodic settlement. The extender of credit may wish to liquidate a debt in order to support his own purchases, although, if he too can buy on credit this may not be essential. A more important reason for periodic settlement is the need to limit exposure to default by the debtor. Periodic settlement represents a ‘test of solvency’. Of course, if sales credit must ultimately be settled in currency, the need for currency is not eliminated but merely deferred. The need for currency can be reduced, however, by setting off one debt against another—by *netting*. With netting, only a fraction of the original debt will remain to be settled, and the more successful the netting the smaller the fraction.¹

¹Often, in preindustrial Europe, what remained was settled in kind rather than in cash.

When sales credit is reciprocal, as it often was in local trade, there is considerable opportunity for bilateral netting. A baker who sold bread to a shoemaker on credit would eventually need a new pair of shoes. The extended periods for which debts were often carried made it easier to net debts bilaterally. In larger communities, however, and with more complicated patterns of trade, there were fewer opportunities for bilateral netting. Some form of multilateral netting was therefore necessary.

The simplest form of multilateral netting is the assignment of third-party debt. For example, a merchant who owes 100 florins to a supplier and is in turn owed 80 florins by a customer can assign the customer's debt to the supplier in partial settlement. Repeated assignment of debts creates opportunities for bilateral netting—for example, if the merchant's supplier happens to be in debt to the merchant's customer.

The assignment of third-party debt was common both among merchants and within local communities. Merchants in the Mediterranean zone generally assigned debts via the books of the parties involved. Merchants in the northern zone did not keep books, recording debts instead by means of promissory note ('letter obligatory'); so it was these they assigned in settlement. Quite complex chains of assignment were common, even in the country.

The principal threat to a payments system based on sales credit is *liquidity risk*—the risk that a participant will fail to settle on time. This poses a danger to the system as a whole, because each participant relies on timely settlement by others to be able to settle his own debts. One failure to settle can therefore lead to another in a cascade that eventually brings the system to a halt. The problem can largely be eliminated, however, through flexibility—through creditors being willing to give debtors extra time to settle when necessary, and appropriate.

A system of payment based on sales credit consequently worked only among people who knew one another. Each knew the other's credit, and reputation gave each an incentive to honor his debts. Debts could be carried for extended periods, because no one was going to flee to escape their obligations. If trust between the parties broke down, there was a common formal order to call upon (of village, association, or city). Multilateral netting through the assignment of third-party debt was possible, because credit was common knowledge: a creditor would know whether or not to accept the

debt of a particular third party in settlement. Similarly, liquidity risk could be addressed through flexibility, because a creditor would know whether a debtor was illiquid or insolvent: patience was appropriate in the former case, but not in the latter.

None of this applied when it came to trading among strangers. Credit was unknown, the incentive of a continuing relationship were usually absent, and social constraints on behavior were weak. The obvious alternative in these circumstances was payment in cash. Indeed, despite the problems of the coinage, cash was the chosen means of payment for the myriad, relatively small, transactions in town markets. For the much larger transactions of long-distance commerce, however, cash was not a practical solution. Instead, there evolved in the major commercial centers a system of payment based on the use of *mediated* IOUs.

Deposit banks

The problems of the coinage created a market niche for a moneychanger—a professional who could exchange one type of coin for another and check the quality of coin tendered. Rather than checking coin repeatedly for each payment, it made sense for the moneychanger to check coin only once and then place it in storage. Payment could then be made by transferring not the coin itself, but the ownership of the coin. In this way, moneychanger-bankers created a sort of book-entry money by ‘immobilizing’ the actual coin and allowing the transfer of title to it on their books.² Rather than physically handing over coin, a payer could transfer a credit on the books of his bank to the benefit of a payee. This was known as ‘payment in bank’.

While deposit banking can be seen as a way of improving the efficiency of payment in coin, it is more illuminating to see it as a way of extending settlement by the assignment of third-party debt to transactions among strangers. The assignment of a debt

²There is an obvious analogy with the recent practice of immobilizing stocks. Today, stock certificates are locked away in the vaults of a depository that records on its books the ownership of the stocks it holds. The delivery of a stock can now be effected simply by changing a ‘book entry’—in reality, a computer record—rather than by physical delivery of the stock certificate. Immobilization of stocks has greatly increased the efficiency, and reduced the cost, of settling stock trades.

is acceptable only if the third party in question is known to the creditor and considered a good credit. In major commercial centers where trade with strangers predominated, deposit banks played the role of third parties with a public reputation, universally known and trusted.³

Trust in deposit banks was reinforced by public regulation and public guarantees. Municipal authorities licensed banks, requiring an oath and sureties from potential bankers. They also restricted bank assets and activities. In 1309, when a series of bank failures infuriated foreign merchants, Bruges even went so far as to supplement private sureties with a form of deposit insurance.⁴

Settlement by assignment of bank deposits had additional advantages. Because the debt of the *same* third party was assigned in many payments, there was greater opportunity for netting.⁵ As a result, bank deposits could be used to mediate a large volume of transactions with very little need for final settlement in cash. Moreover, because bank deposits were so useful as a means of settlement, depositors were happy to hold on to them rather than converting them immediately into cash.

This willingness of people to hold on to bank deposits made it possible for banks to become lenders. They could do so by creating a deposit for a borrower, which the latter could use to make payments. Such a ‘fictitious’ deposit would not be backed by coin held by the banker. As a result of this practice, the amount of deposits outstanding came to exceed the amount of coin held against them—fractional reserve banking.

The ability of banks to lend enabled them to offer a solution to the problem of liquidity risk. If a depositor temporarily lacked a sufficient balance in his account to settle a debt, the banker would allow him to ‘overdraw’ his account. That is, the banker would

³Deposit banks were not the only ones to play the role of trusted third party. Many merchants held balances with innkeepers and brokers and they settled with one another by transferring balances on the books of these intermediaries. Nicholas (1992); Nicholas (1979). Also, merchants often held working deposits with merchant banks (about which we will learn presently) and used these too for payments purposes. de Roover (1944).

⁴de Roover (1974)Ch 15.

⁵Usher (1934)

make him a loan that allowed him to settle.⁶ The banker was in a position to provide this credit, because he knew his customers and because his customers had an incentive to repay in order to preserve the banking relationship. Such overdraft lending was a natural adjunct to the banks' function as payments intermediaries.

The purest example of deposit banking as assignment of debt was to be found at the great medieval fairs. As we saw in Chapter 6, trading at Champagne was divided into periods. The first period were devoted mainly to the sale of cloth. The sellers were predominantly from Flanders, the buyers from Italy. A subsequent period was devoted to the sale of oriental spices and drugs: now the Italians were the sellers and the Flemings, the buyers.⁷ The fair banks provided the payments system that made this trading structure possible. In the first period, the Italians paid for their purchases of cloth by transferring to the Flemish sellers credits on the books of the fair banks.⁸ In the later period, the Flemish merchants used the credits they had accumulated in the first period to pay for their own purchases of spices and drugs.

The credits used in payment were not really deposits. Although evidence is scarce, it seems the Italians did not deposit coin with the bankers before trading began. Rather, the bankers created the credits on their books by allowing Italian merchants to overdraw their accounts during the first period of trading; these overdrafts were then largely extinguished by payments the Italians received during the later period of trading.⁹ Consistent with this interpretation, 'deposits' at the fair banks were not payable on demand, but only during the settlement period that followed the two periods of trading.

In the settlement period, merchants with negative balances had to cover them. Although they could settle in cash, it was more common to roll over the unpaid balance to the following fair. This was usually done by borrowing from other merchants who had

⁶Note that this lending was at the discretion of the banker. Because transactions were conducted orally, overdraft was impossible without the banker's consent. Usher (1934)p18

⁷This is a considerable simplification of the actual procedure.

⁸Payment was final in that the banks guaranteed settlement.

⁹de Roover (1954)p204. The bankers at Champagne were themselves from northern Italy, predominantly from Asti and Piacenza Abulafia (1997), and so in a position to extend credit to their fellow Italians.

completed their trading with positive balances with the bankers. Similarly, merchants with positive balances could, if they wished, receive payment in cash, but many preferred instead to lend them. To facilitate the borrowing and lending of bank balances, there soon developed an active market in inter-fair loans or ‘inter-fair deposits’.

Inter-fair deposits were a convenience for both borrowers and lenders, since it enabled them to balance their purchases and sales over time without having to ship bullion back and forth between their home cities and the fairs. For example, a merchant who bought more than he sold at one fair could balance this by selling more than he bought at another: he did not have to settle his ‘deficit’ in the first fair in cash.¹⁰ The market for inter-fair loans enabled netting to be extended *across* fairs.¹¹

Deposit banking probably originated in Genoa some time in the twelfth century. By the fourteenth, payment in bank predominated in all the major centers of commerce, both cities and fairs.¹² Every merchant resident in such a center, whether native or foreign, would hold deposits at one or more deposit bank. Visiting merchants would open temporary accounts.

MEANS OF REMITTANCE IN THE COMMERCIAL REVOLUTION

Without a way of remitting funds to or from a distant market, a merchant would have had to balance the value of goods he sold and purchased there. To purchase goods he would have had to bring or send goods of equal value to cover the purchase; in order to sell goods he would have had to purchase other goods with the proceeds and bring or send them home. Remittance by shipping coin or bullion loosened this constraint, but only at considerable cost. Because each place had its own coinage, the coins or bullion sent or brought had to be melted down and reminted. And, because coin and bullion were especially vulnerable to theft and robbery en route, extra security was required.

¹⁰See Grafe (2001), for example, on the practice at the Castilian fairs or Farmer (1991) on the English fairs.

¹¹Nicholas (1992) p 171

¹²In cities, even large ones, that were not then primarily centers of commerce, deposit banking either did not develop at all (for example, in Paris and London), or it did not develop to the same extent (for example, in Florence).

Remittance by IOU

Remittance by IOU offered a less expensive alternative. A merchant could deliver funds to someone in his home city in exchange for a promise of funds in the distant market; he could then use the funds there to cover any excess of purchases over sales. Similarly, a merchant with an excess of sales over purchase in a distant market could repatriate the excess funds by delivering them to someone there in exchange for the promise of repayment at home.

Remittance by IOU seems to have originated in the late twelfth century in the inland cities of northern Italy as part of their system of trading with the Fairs of Champagne.¹³ The earliest instrument of remittance was the *cambium* contract—a promissory note, drawn up formally by a notary.¹⁴ One merchant acknowledged receipt from another of payment in local currency and promised to repay at a future date and at a different place, in the currency of that place. The two parties to the transaction, or their agents, had to be present at the time and place of repayment to complete the transaction.

A similar instrument, the letter obligatory, appeared a little later in the northern zone. Like the *cambium* contract, this was a promise by one merchant to pay another in some other place. However, in this case, payment was often in the same currency. Moreover, the letter obligatory was an informal document, written in the hand of the debtor, rather than a formal document drawn up by a notary.

Like sales credit, the *cambium* contract and the letter obligatory were unmediated: they were direct obligations of one party to another. Consequently, like sales credit, they required trust, and their use was therefore limited to merchants who knew one another and who had recourse, if necessary, to a common system of formal order. Expansion of the system of remittance by IOU had to await the emergence of a mediated instrument of remittance.

By the late thirteenth century, as we saw in Chapter 6, there existed a number of large trading companies, each with branches in many of the principal commercial centers. These companies found it easy to offer the service of remittance: they could accept

¹³Ashtor (1983)

¹⁴Blomquist (1990)

payment at one branch in local coin and send instructions to another branch to repay in the coin current there.¹⁵ The instrument they used for this transaction was called a *lettera di cambio* or bill of exchange. Remittance by bill of exchange involved four parties. The ‘deliverer’ delivered funds to the ‘taker’ and received from him a bill of exchange. The deliverer sent the bill to his own agent at the distant location—the ‘payee’. The payee presented the bill to the agent of the taker there—the ‘payer’. In the meantime, the taker would have sent notification (an *avisa*) to the payer instructing him to honor the bill when it was presented.

The bill of exchange was an informal letter, not a notarial deed. This lowered the cost and increased the speed of the transaction but also made it unenforceable initially in a civil court. Merchant courts, however, did recognize such informal documents.¹⁶ Moreover, since the taker was typically a large trading company in the business of providing remittance services—a merchant bank—it had an interest in preserving its reputation for honesty and reliability.¹⁷

Remittance by bill of exchange depended, therefore, on the existence of large international trading companies with multiple foreign branches.¹⁸ Such companies were predominantly Italian—initially Lucchese, then mostly Florentine. However, non-Italians did play a minor role: Catalan merchant banks, for example, were active in Bruges and Palermo.

While bills of exchange predominantly served commerce, non-merchants made use of them too. Church officials, for example, used them to transfer revenue to the papal court. Revenue collected in England, for example, was paid into the branches of Italian companies there, which used the funds to purchase English wool for export to Italy.¹⁹

¹⁵The Knights Templar, a military order, had monastic houses around Europe and in the Holy Land; they used these ‘branches’ in much the same way to provide remittance services. Barber (1994).

¹⁶See Chapter 6 for a discussion of merchant courts.

¹⁷For additional security, it was usual to begin the text of the bill with “*Al nome di Dio*”, making default blasphemous.

¹⁸We shall look at these companies, and at how they operated, in greater detail in Chapter 9.

¹⁹Hunt (1994)

Princes and lords also remitted funds by bills of exchange—to pay their armies in the field, to provide subsidies to their allies, and to pay feudal tribute, ransoms, and dowries. Sometimes, however, the sums involved were too large for merchant banks to handle, and specie had to be shipped instead. For example, in 1328, the pope had to send 60,000 florins in coin to his army in Lombardy. Despite a cavalry escort of 150 men, the shipment was ambushed and half of it lost.²⁰

The exchange network

Cities served by merchant banks were known as ‘banking places’. Most cities in northern Italy, the center of medieval commerce, were banking places, as were many cities in the Mediterranean zone. There were fewer banking places in the northern zone—the fairs of Champagne, and when Champagne declined, Paris, Bruges, and London. The banking places constituted a network, and only within this network was it possible to remit funds by bill of exchange.²¹

Banking places were not all of equal importance. At any time, the exchange network had a center and perhaps one or two sub-centers. The first great center, from the late twelfth century, was Champagne, with Genoa as a sub-center; Lucchese houses dominated both. By 1320, Venice had replaced Champagne as the heart of the exchange network, now dominated by the Florentines. Bruges was the sub-center for northwest Europe, exchange there largely in the hands of fewer than a dozen Florentine houses and a few Lucchese.

As a rule, it was the great commercial centers that became centers of the exchange network.²² They were naturally the source and destination of a large volume of remittance. The large volume created a liquid and competitive market, and the liquid and competitive market lowered costs and attracted more business. Consequently, while it was possible to remit directly from one ordinary banking place to another, most

²⁰Spufford (1988)

²¹de Roover (1954), Mueller (1997), Spufford (1988)

²²It is notable, for example, that Florence never became a center of the exchange network, even though Florentines dominated the business of exchange for centuries. However, unlike Genoa or Venice, Florence was more a center of manufacturing than a center of commerce.

remittance was indirect, routed through one of the centers.²³ For example, a fourteenth-century Italian merchant remitting funds from London to northern Italy would usually find it cheaper to do so by remitting to an agent in Bruges and having him remit from there to the final destination.

In most banking places, and certainly in the centers of the network, there would be an organized market for exchange. In Bruges, for example, the exchange market was held in the square opposite the inn of Van der Beurse, called the Beursplein or Place de la Bourse; trading took place each day during fixed hours, opened and closed by the ringing of a bell.²⁴ An organized market provided a mechanism for setting prices—in this case, rates of exchange. For any particular transaction, the rate was negotiated between the parties, but negotiation was constrained by the general state of the market. Potential takers and deliverers generally relied on specialized brokers to find the best available deal, and the activity of these brokers created a degree of uniformity in rates.²⁵

Organized exchange markets relied on deposit banks for settlement. Indeed, settlement of bills of exchange soon provided deposit banks with most of their business.²⁶ Settlement in bank minimized the need for settlement in cash, thereby lowering the cost of transactions and speeding them up. Indeed, deposit banks were indispensable to the smooth functioning of the exchange market: for example, when deposit banks were closed in Venice, due to snow or a local feast day, the exchange market shut down too.²⁷

The overdraft facilities of deposit banks and markets for inter-fair loans provided protection against liquidity risk, but the exchange market itself provided an alternative. Someone lacking the funds to honor a bill presented for payment could—if this credit was good—become the taker on another bill, thereby acquiring the funds necessary to meet his obligation.

²³Boyer-Xambeu, et al. (1994) p 74

²⁴Blockmans (1992)

²⁵On brokers, see Chapter 6.

²⁶Usher (1934) p7

²⁷Mueller (1997) p 570

THE BENEFITS OF A PAYMENTS SYSTEM BASED ON IOUs

By the end of the period of the Commercial Revolution, European commerce was served by a well-developed payments system. The standard means of payment for commercial transactions in all important commercial centers was payment in bank. Bills of exchange provided a convenient means of remittance from one commercial center to another, with the letter obligatory performing the same function in the northern zone.

The increasing use of IOUs as means of payment and remittance in place of currency contributed to the economic expansion. By lowering trading costs, it facilitated the expansion of exchange. It lowered the transactions cost component of trading costs, and it lowered financing costs through its contribution to financial development. By reducing the amount of bullion needed for payments, it reduced the resource cost of the payments system, which freed resources for other uses.

Lowering transactions costs

The use of IOUs rather than currency lowered transactions costs. As we have seen, payment in bank greatly reduced the need to count, weigh, examine, and sort coin. Payment in bank was not itself, however, free of cost. The order to pay generally had to be given orally, and both payer and payee had to be present.²⁸ The banker had to register the credit and the debit in his books by hand: a dozen such transactions constituted a busy day for him. But, unlike the cost of using currency, the cost of payment in bank was independent of the amount paid. So it was much less expensive for large transactions, while currency retained the advantage for small ones.

Remittance by IOU reduced the need for costly shipment of coin or bullion from place to place. For example, Lucca was an important manufacturer of silk cloth, which it exported to Champagne; it imported the raw silk it needed through Genoa. Lucchese merchants buying raw silk in Genoa could cover their purchases there with IOUs payable in Champagne. When they sold the raw silk in Lucca, they could remit the proceeds to Champagne by purchasing IOUs payable in Champagne from the exporters of silk cloth (who had funds in Champagne from the sale of the cloth). In Champagne, the

²⁸Later in the period, when payment in bank was recognized as legal tender, the payee did not have to be present. And there was some use of written orders of payment.

representatives of the silk importers could use the IOUs purchased in Lucca to settle those sold in Genoa.²⁹ In the absence of remittance by IOU, Lucca would have had to bring home the proceeds of its exports to Champagne by importing bullion and to pay for its imports from Genoa by exporting bullion. Remittance by IOU eliminated the need for these bullion shipments.

Remittance by IOU did not, however, mean eliminate all shipments of bullion. The production of bullion in Europe, mainly silver, was concentrated in a few regions, predominantly in Central Europe. In those regions, bullion was more abundant and so less valuable than elsewhere. The difference in values was the basis of a highly profitable trade outwards from the regions of production. Silver flowed from Central Europe to Champagne, the Low Countries and Venice, and from these places onward to the rest of Europe.³⁰ These flows of bullion, however, represented *trade*, not remittance; the size of these flows was not affected by remittance by IOU.

As our example shows, remittance by IOU facilitated multilateral trade. In its absence, trade between two cities or regions had either to be balanced in goods or through the shipment of bullion. One city or region could buy more or sell more in another only if bullion were shipped to cover the difference. Remittance by IOU made it possible to offset an excess of imports from one place (for example, Lucchese imports from Genoa) with an excess of exports to another (Lucchese exports to Champagne). This reduced payments costs through a form of netting.

The same principle operated at the level of individual merchants. In the absence of remittance by IOU, the individual merchant trading with a distant place had either to export goods of equal value to those he imported or cover the difference by shipping bullion. The use of IOUs allowed netting across merchants. For example, one merchant could import goods without exporting anything while another exported without importing. This enabled merchants to specialize, both in particular sorts of goods and in

²⁹Blomquist (1990) The IOU in question was a *cambium* contract.

³⁰From Europe, silver flowed to North Africa and the Levant and from there to the Indian Ocean and China. There was also a direct flow of silver from central Europe eastwards, to eastern Europe and from there to Asia.

particular trading destinations. For example, some Lucchese merchants became experts in buying raw silk and knew the market in Genoa. Others became experts in selling silk cloth and knew the market at Champagne. By facilitating specialization in commerce, the use of bills of exchange increased merchant productivity, lowering transactions costs.

If we think of means of payment and remittance as ‘money’, then the use of IOUs reduced the cost of providing Europe with money. Had all payments and remittance needed to be executed in coin or bullion, it would have required a large amount of bullion. This would have increased the demand for bullion in Europe and so raised its value there. The use of IOUs as money instead prevented this from happening. As a result, bullion remained cheaper in Europe than in Asia. It was therefore profitable for Europe to export large quantities of bullion in exchange for Asian goods. So, instead of having bullion tied up in the payments system, Europe traded it for a significant amount of Asian goods. More important, the profitability of exporting bullion stimulated inter-zone trade with Asia, with all the growth-enhancing benefits of market expansion that this implied.³¹

The limited role of currency

Despite the use of IOUs, currency retained a role in payment and remittance. It continued to be the means of payment for small transactions in market towns and in the retail markets of cities. It increasingly became the means of payment for predation: the payment of tribute in kind—in goods and in labor—was gradually commuted to payment of money rents and taxes. And currency was, of course, a means of settlement for the residual debts that remained after IOUs were netted. We have seen that when the amount to be remitted was too large for the exchange network, it were remitted instead in coin or bullion.

Currency and bullion remained important stores of value. With little in the way of liquid financial assets available, a large part of saving went into hoards.³² Even wealthy merchants in financially advanced northern Italy kept a large fraction of their assets in

³¹This effect was strengthened in the sixteenth century, of course, when Europe began to mediate the export of even cheaper American silver to Asia.

³²Cipolla (1994) pp33-37

specie. In areas where the financial system was less developed, there was an even greater preference for the holding of currency and bullion. Gold and silver, in whatever form, were seen primarily as liquid assets. Currency was liquid, of course, but even plate and jewelry could readily be melted down and minted into coin, or, less destructively, pawned.³³ The amount of bullion held as an asset was probably much larger than the amount in circulation in the form of coin.

Currency was important too as a standard of value or unit of account. Debts, including the IOUs used as means of payment and remittance, were denominated in units of currency.³⁴ Small debts were denominated in the local silver currency. Once gold entered circulation in the thirteenth century, large debts—particular commercial ones—were generally denominated in gold coin. Contractual payments other than debts—such as taxes, rents, and wages—were also denominated in currency units. This did not mean, however, that payment had to be made in the currency of denomination. As we have seen, debts were often netted or assigned in payment. And when they were actually settled, it was frequently in currency other than that in which they were denominated (at the going conversion rate). Moreover, settlement in kind was quite common, with whatever goods were available to the debtor and acceptable to the creditor.

The contribution to financing

The IOUs that served as means of payment and remittance were nonetheless IOUs. As such, they played an important role in the financing of commerce.

Deposit banks were, by their nature, financial intermediaries: they borrowed in their own name (their deposits) and re-lent to others. Financial intermediation grew naturally out of their payments function, which, as we have seen, included the extension of overdraft credit. Deposit banks soon expanded their lending by extending overdraft for longer periods to create commercial loans. They also participated in commercial ventures

³³See Chapter 9.

³⁴Sometimes, however, the units were ‘imaginary’—for example, ‘pounds’ of 240 pennies when no such coin existed. Sometimes the unit of account was a coin that no longer existed.

as silent or investing partners in venture partnerships. And they made non-commercial loans to princes, nobles, municipalities, craftsmen, petty traders, and even peasants.³⁵

While the primary motivation for the bill of exchange was initially remittance, financing was from the beginning inherent in its structure. Funds were delivered in one place to be repaid somewhere else later: the delay made the transaction a loan. For example, elaborating on our earlier example, Lucchese merchants financed their purchase of raw silk in Genoa by borrowing against IOUs payable at Champagne. In cases such as this, finance retained a connection with remittance: the funds were borrowed in one place and repaid in another. However, the bill of exchange soon came to be used as a pure instrument of credit entirely divorced from remittance—a practice known as ‘dry exchange’.³⁶

Dry exchange combined two bills of exchange, back to back, to create a loan in the same place. For example, a merchant in Venice would borrow there against a bill payable in London. When the bill was presented for payment to the merchant’s representative in London, the representative would raise the necessary funds by borrowing against a bill to be paid by the merchant himself in Venice. The roundtrip to London created for the merchant a six-month loan.³⁷ If this was not long enough, he could extend it further by rolling it over for one or more additional ‘returns’.

The bill of exchange was a means of remittance that became an instrument of credit. In contrast, the letter obligatory was an instrument of credit that came to be used as a means of remittance. Merchants in the northern zone, unlike those in the south, did not keep books and the letter obligatory was their main instrument of sales credit. It could be transformed into a means of remittance simply by making it payable in a different place. Unlike the bill of exchange, it was generally created in exchange for goods rather than in

³⁵Non-commercial loans were generally secured. The most common security was a pawn—in the case of princes and nobles usually of jewelry or plate. The king of England once borrowed from bankers in Bruges by pawning his crown jewels.

³⁶For a thorough discussion of dry exchange, see de Roover (1974) Ch 4 and Mueller (1997) Ch 8

³⁷It was the purely the great distance from Venice to London that made the latter an important center of Venetian exchange. Mueller (1997) Ch 8

exchange for money, so it was less readily transformed into a general instrument of lending.

The letter obligatory did, however, play an important role in one particular kind of lending—the interfair deposit. As we saw earlier, at the close of a fair, after all possible netting of obligations had taken place, merchants had to settle the debts that remained. Rather than settling in cash, those in a net debit position often covered by borrowing from those in a net credit position for repayment at the next fair. The maturity of such an interfair deposit was typically three months—from one fair to the next. However, it was easy to roll it over (usually at the new market rate). While the market for interfair deposits started out as an adjunct to the settlement process of the fair, it soon attracted other business. Indeed, before long most interfair loans were unrelated to settlement. Moreover, because of the liquidity of this market, many debts contracted elsewhere were made payable at a particular fair.

In this way, the markets for inter-fair loans and bills of exchange at the fairs expanded beyond mere liquidity facilities and markets for remittance to become full-blown financial markets. So growing out of their function as market centers, and in addition to it, the fairs of Champagne became the leading financial center.

As financial markets developed, bills of exchange were used increasingly to remit funds for financial as well as for commercial reasons. Merchant bankers used them to transfer funds to where they could earn the highest return. 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 a very good price for it; put it rather in Venice or Florence, or here in Bruges or in Paris or Montpellier.”³⁸

A merchant banker could go a step further than this. Rather than merely directing funds to where rates were highest, he could borrow funds where rates were low (by being a taker on bills) and lend them where rates were high (by being a deliverer).³⁹ Such arbitrage helped to integrate financial markets across Europe and thereby to equalize

³⁸Braudel (1984)

³⁹de Roover (1948) Ch 4.

interest rates.⁴⁰ It also generated an enormous volume of transactions in bills of exchange. Indeed, as early as the fourteenth century, most bills of exchange were related to finance rather than to 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.⁴¹ Because of the increasing predominance of financial bills, the volume of exchange soon exceeded the volume of trade by a large margin.

THE FURTHER DEVELOPMENT OF THE PAYMENTS SYSTEM

In the centuries that followed the Commercial Revolution, the payments system continued to develop. The driving force for that development was the need to address the principal problem of the medieval payments system—the instability of deposit banks. Throughout the period, recurrent bank failures disrupted markets, paralyzing trade and finance. There eventually emerged two solutions to this problem—a payments systems that did without deposit banks and a new kind of deposit bank less susceptible to failure. Before we examine these solutions in detail, we first need to understand the nature of the problem—why deposit banks were so prone to failure.

The instability of deposit banks

We have seen that deposit banks soon expanded their lending beyond the provision of short-term overdraft to depositors, thereby expanding their deposits beyond the amount of coin they held against them. This exposed them to potential problems of liquidity and solvency. They had to be able to convert deposits into coin on demand. And they had to ensure that potential losses on their loans did not compromise their ability to meet their liabilities. Ensuring liquidity and solvency was much more difficult than it is for banks today.

⁴⁰Of course, this was not a true arbitrage: an adverse movement of the exchange rate could turn a potentially profitable ‘arbitrage’ into a loss-making speculation. So merchant bankers integrated financial markets only to the extent that they were willing to bear this risk.

⁴¹Mueller (1997) Ch 8. 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’.

Banks were very small. The size of banks in fourteenth century Bruges was typical.⁴² A bank's staff might consist of the banker himself, an assistant, a bookkeeper, perhaps a cashier, and one or two messengers. No bank in Bruges had more than 100 depositors or more than £5,000 in total deposits—less than \$1 million in today's money.⁴³ Because failures were frequent, depositors were nervous about the safety of their deposits and the slightest rumor could set off a run. Since a dozen of the largest depositors might hold two thirds of the bank's deposits, withdrawals by only a few of them could cause the bank to fail.

Banks could not invest in safe and liquid assets, because no such assets yet existed. Much of a bank's assets took the form of equity investments in trading ventures. These were risky, illiquid, and of relatively long maturity (a trading voyage could take two years). Overdraft, the other principal form of commercial lending, was not much better: its maturity was indefinite, and it could not be liquidated in times of stringency. Whatever the form of commercial lending, it was generally poorly diversified: a few large investments or loans made up the bulk of a bank's assets.

Deposit banks operated in a highly unstable environment. War, or even the threat of war, could interrupt trade for extended periods, and the needs of war finance could empty a territory of coin. Commodity prices were highly volatile, and a price collapse could be disastrous for banks that had invested directly in commodities or that had extended loans or guarantees to speculators. The monetary environment, too, was highly unstable. A general shortage of coin would increase withdrawals, depleting bank reserves. A strengthening of the coinage (deflation) would raise the value of the bank's liabilities, lower the value of reserves, and, at best, leave other assets unchanged. The result could be catastrophic.⁴⁴

⁴²de Roover (1948)

⁴³Venice's banks were probably the largest: in 1500 its ten banks had between them some 4,000 deposits totaling about one million ducats—roughly \$60 million in today's money. Lane (1937)

⁴⁴Since the effects of debasement (inflation) were just the reverse, banks actually benefited from debasement.

All of these problems came to a head in the second half of the fifteenth century.⁴⁵ The ‘bullion famine’, which peaked at this time, was devastating to banks. The scarcity of coin strained their liquidity and the general deflation and slump threatened their solvency. Bank failures increased the demand for coin and further exacerbated the shortage. There was also contagion, as the market for bills of exchange transmitted tight liquidity from place to place.⁴⁶ Waves of bank failures—most notably in Venice, Florence, and Bruges—continued on and off into the sixteenth century.

Payments systems without banks

One solution for the unreliability of deposit banks was simply to do without them. This became possible when the IOUs that served as means of remittance were adapted to use as means of payment. This adaptation was the result of changes in the exchange network.

In the early fourteenth century, Venice replaced Champagne as the primary center. In the fifteenth, Venice was succeeded by Geneva and then Lyons. In the sixteenth, Antwerp emerged as a secondary center to Lyons. The Genoese established their own center, first at Besançon, and then later at Piacenza—where it continued to be known as the ‘Bisanzone’. The Bisanzone fairs were unique in that they were created solely for the purpose of clearing bills of exchange and served no other function. With the decline of Lyons and Antwerp late in the sixteenth century, Bisanzone came to dominate the exchange network and continued to do so well into the seventeenth century.⁴⁷

Lyons and Bisanzone—unlike Champagne—did not rely on deposit banks for settlement. While Champagne had been a public market, they were ‘inside markets’ in which merchant bankers dealt only with one another. Settlement proceeded roughly as follows. Participating merchant bankers compared ‘market books’, in which each had listed his bills payable and receivable. Pairs of bankers netted bilaterally payments due to one another. Any remaining imbalance was covered either by assigning debts due from

⁴⁵de Roover (1954, Van der Wee (1977)

⁴⁶Mueller (1997) Ch. 4

⁴⁷The Bisanzone fairs were the keystone of the ‘Genoese system’ of finance and remittance that connected Seville, Genoa, and Antwerp. We shall have more to say about this in Chapter 9.

third parties, which might be netted later in the process, or by drawing new bills. These bills might be payable at the next fair or at another banking place. Instead of relying on deposit bank overdraft for liquidity, participants accommodated one another through ‘overdraft’ on their own market books. Instead of relying on inter-fair deposits to balance credits and debits over time, participants drew new bills of exchange.⁴⁸

Because the participants were few and of known reputation, they did not need to assign the debt of a trusted third party (a deposit bank). They could just as easily assign each other’s debt. This is the same principle we saw at work with commission agents in Chapter 7: rather than trading with one another directly, a large number of strangers traded with one another through a small group of merchant bank intermediaries. Within such a small group, a viable informal order was possible. By the end of the sixteenth century, a group of some sixty merchant bankers was meeting regularly four times a year at the Bisanzone fairs, “to settle the debits and credits of half of Europe”.⁴⁹

This system of settlement worked for the exchange markets of Lyons and Bisanzone because the number of participants was small. At Antwerp, however, the exchange market had numerous participants from many different countries. In such a public market, one would have expected settlement to rely on payment in bank. However, Antwerp had no deposit banks: following a series of banking crises in the fifteenth century the authorities had banned them.⁵⁰ This left the exchange market at Antwerp with no choice but to rely on the assignment of *private* third-party debt—primarily letters obligatory.⁵¹

Not surprisingly, this initially worked poorly.⁵² Performance improved significantly, however, once the inherent problems had been addressed by a series of legal innovations.

⁴⁸“De Rubys thus reports that a million *livres tournois* were paid in the course of one morning without a single *sol* being disbursed.” Boyer-Xambeu, et al. (1994) p93

⁴⁹Van der Wee (1977)

⁵⁰The rulers of the Low Countries first banned banks in 1489. de Roover (1974)

⁵¹Netting and settlement took place on each of the four ‘quarter days’ that had originally marked the Brabant fairs. Letters obligatory and bills on Antwerp were usually written to mature on these days.

⁵²Van der Wee (1977)

To understand the nature of these innovations, suppose A paid B by assigning to him a debt C owed A. The first problem was that if C defaulted, only A had the right to sue him: B had no direct recourse. This problem was solved when the Antwerp civil courts recognized the transferability of letters obligatory in 1507: C's debt to A is transferable if, on assignment of it to B, C now owes payment to B, rather than to A, the original creditor.

The solution of one problem, however, created another. If C did not pay up, B could now sue C, but he no longer had any recourse against A: A's original debt to B was considered settled. Clearly, under these conditions, no-one was willing to accept in settlement the paper of someone of unknown or inferior credit. This second problem was solved by applying the principle of negotiability. The assignment to B of C's debt is negotiable when A's original debt to B is discharged only when C actually pays B. That is, if C defaults, B has recourse not only against C, but also against A. And, if C's debt has been assigned more than once, then B has recourse against each assigner in turn. Consequently, with negotiability, each additional assignment actually strengthens the credit of the instrument. The negotiability of letters obligatory was established by edict for Antwerp in 1536 and for the whole of the Low Countries in 1541.

To keep track of the chain of assignment it became customary for each assigner to sign the back of the instrument—to endorse it (another legal innovation). Endorsement legally bound the assigner (A) to indemnify the assignee (B) if the issuer (C) and the previous endorsers failed to pay up. The first examples of endorsement date from the 1570s and by the turn of the century the practice was widespread.

Initially, only letters obligatory circulated in Antwerp. However, with the increasing presence there 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. Consequently, by the 1530s, it had become the practice to assign bills of exchange in the same manner as letters obligatory.⁵³ Over the course of the sixteenth century, northern merchants gradually switched from the letter obligatory to the bill of exchange.⁵⁴

⁵³Van der Wee (1993) Ch. 10

⁵⁴Van der Wee (1977)

As commercial paper (letters obligatory and bills of exchange) evolved into a negotiable instrument, it became a kind of convertible money, similar in many respects to the deposits of deposit banks. Merchants in Antwerp used commercial paper as a means of payment: instead of transferring the debt of a deposit bank on the books of the bank, they transferred the debt of non-banks hand to hand. Commercial paper commonly changed hands ten or twenty times before maturity, and a hundred times was not unusual.⁵⁵ 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.⁵⁶

The usefulness of commercial paper as a means of settlement was further enhanced by the practice of discounting. Although assignment of commercial paper was acceptable in settlement, when money was tight, creditors were willing to pay a premium for settlement in cash. Those who had cash could exploit this situation by offering to buy commercial paper for cash at a discount.⁵⁷ Those most active in discounting were the cashiers or money dealers, unofficial pseudo-banks that had sprung up after official deposit banks were suppressed (they described themselves not as banks, but as ‘cash-managers’). Discounting commercial paper was authorized officially in 1540 and by the 1550s it was common.⁵⁸ By providing liquidity in this way, discounting improved the quality of the market and increased the acceptability of commercial paper in settlement. 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 cashier.

⁵⁵In many cases, circulating paper found its way back to the original issuer, so extinguishing the debt, and eliminating the need for settlement. Van der Wee (1963)

⁵⁶Van der Wee (1977)

⁵⁷Discounting itself was not new: there were earlier examples of the discounting of other types of receivable.

⁵⁸Van der Wee (1963)

Payments systems based on public banks

While fairs learned to do without deposit banks (Antwerp had been one of the fairs of Brabant), several commercial cities found a different solution in a new kind of bank—the public bank. The public bank was more stable than private deposit banks, because it could be limited to a payments function and prohibited from lending. Sacrificing lending to protect a bank’s payments function made perfect sense in terms of the general good: the payments function was crucial; the contribution of deposit banks to financing, quite minor.

Venice was not the first city to create a public bank, but it was the most influential in establishing the practice. Bank failures had been a continuing problem in Venice, repeatedly interrupting commerce and tying up depositors funds in lengthy and litigious liquidations.⁵⁹ A severe banking crisis in 1584 was the final straw, prompting the Senate to establish a public bank. The *Banco di Rialto* opened for business in 1587.⁶⁰

The *Banco di Rialto* accepted deposits and allowed deposit transfers and cash withdrawals, but it paid no interest on its deposits and allowed no overdraft or other credit. This was clearly not a profit-making enterprise, and the bank’s expenses had to be covered by public funds. The management of the bank was licensed to a private individual (the normal practice for public offices), but the bank was guaranteed by the Senate. Although Venice did not prohibit private banks, none were established for several years.

The *Banco di Rialto* was a great success. Its deposits were so useful as a means of payment, that there were few cash withdrawals, and payment *in banco* was soon at a premium over payment in coin.⁶¹ The prohibition of overdraft seems to have been ignored, which no doubt improved the efficiency of the payments system. Furthermore, since there was only a single bank, there was no need for inter-bank clearing, and this too

⁵⁹In a speech in 1584, a Venetian senator noted that of the 103 private banks founded during the life of the Republic, 96 had failed. Mueller (1997) p 122

⁶⁰The idea was not new: there had been proposals in Venice for a public bank for at least a century. Mueller (1997)

⁶¹Van der Wee (1977)

increased efficiency. The success of the *Banco di Rialto* inspired imitation and many Italian cities set up similar public banks—for example, Milan in 1593 and Rome in 1605. In Genoa, an established public financial institution, the *Casa di San Giorgio*, began accepting deposits in 1586.⁶²

The idea of the public bank spread to northern Europe with the establishment of the Bank of Amsterdam (*Amsterdamsche Wisselbank*) in 1609.⁶³ The motivation was somewhat different in this case. The city authorities were suspicious of the new-fangled practices that spread to Amsterdam from Antwerp—settlement by assignment and discounting by cashier-bankers. They preferred the settlement of commercial paper in hard cash. However, when they tried to shut the cashiers down, they met with strong resistance from the city's merchants, who deemed their services indispensable. So the city set up a public 'cashier' as a substitute.

The Bank of Amsterdam offered transferable deposits convertible into good coin.⁶⁴ There was no overdraft or other lending, so that deposits were fully backed by coin, and all services were free. To encourage merchants to use the Bank, commercial paper over 600 guilders was required to be payable in deposits of the Bank. The Bank was spectacularly successful, and similar public banks were soon established in other northern cities. By the end of the seventeenth century, there were some 25 public banks across Europe.⁶⁵

Despite the success of public banks, private deposit banks did not disappear. In many places, including Amsterdam, they competed successfully with the public banks by offering better services—particularly by being more willing to extend overdraft.⁶⁶ Although public banks were more stable than private banks, they were not entirely

⁶²Parker (1977)

⁶³Van der Wee (1977), de Roover (1948)

⁶⁴The Bank traded extensively in precious metals to provide the mints with the bullion needed to produce this coin, and it later came to play a central role in the market for bullion. van Dillen (1934)

⁶⁵Parker (1977)

⁶⁶Amsterdam gave up its attempts to prohibit private cashiers in 1621 and chose instead to regulate them. van der Borcht (1896)

immune to the temptations of lending—particularly to the city governments that had established them. In fact, some public banks were created specifically to provide their parent cities with inexpensive financing. The lending of public banks, like that of private banks, often ended badly.⁶⁷

CONCLUSION

Antwerp and Venice found two very different solutions to the problem of banking instability—negotiable bills of exchange and discounting on the one hand; the public bank on the other. The two were later combined in Amsterdam and in London to provide a foundation for a more stable system of private banking.⁶⁸ The negotiable bill of exchange was a relatively safe and liquid asset. The discounting of bills therefore provided a form of lending well suited to small banks—precisely what had been lacking earlier. Moreover, the public bank lent additional stability to the system by providing liquidity to private banks in times of crisis. Modern commercial banking, which combined these two elements, was to play an essential role in financing the expansion of English trade in the eighteenth century and the Industrial Revolution to which it gave rise.⁶⁹

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⁶⁷The first public bank, the *Taula de Canvi*, was established in Barcelona in 1401 and failed in the 1460s as a result of excessive lending to the city.

⁶⁸Van der Wee (1963). By 1600, goldsmiths and scribes (scribes) in England were starting to take on the banking functions performed by cashiers in Antwerp and Amsterdam. The Bank of England was founded in 1694.

⁶⁹See, for example, Pressnell (1956).

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