Commercial finance in Europe, 1700-1815

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HANDBOOK OF KEY GLOBAL FINANCIAL MARKETS, INSTITUTIONS AND INFRASTRUCTURE

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INTRODUCTION

Commercial finance in the eighteenth century was essentially international, yet limited to a restricted set of ports and cities specialized in international trade. In a classical contribution, the economic historian Braudel (1979) has argued that the development of early modern capitalism occurred inside a 'bell jar', insulated from the rest of the economy. The contours of the 'bell jar' coincided with the boundaries of international trade and the development of capitalism were confined to global commerce. It was only the nineteenth century that saw the evolution of integrated national financial and money markets (Bloch, 1954; Braudel, 1979; Cohen, 1998; Helleiner, 2002).

The basic founding block of international commerce was the bill of exchange. International trade supported the emergence of a liquid international market for trade bills of exchange, which as a result tended to be organized along lines defined by trading relations and provided the infrastructure of financial development for merchants fortunate to participate in it, regardless of their nationality. Eighteenth-century Europe's money markets were integrated and Europe's monetary geography was seamless owing to the existence of bills of exchange, which were traded widely (Flandreau et al., 2009a).

The market for commercial bills, in turn, was the benchmark money market of the eighteenth century, which had grown outside the reach of legislators and through regulatory arrangements in which merchants were able to prevail (Beawes, 1773; De Roover, 1953).

The commercial interest rate was the benchmark interest rate. As merchants could transfer funds as a counterpart to their shipping of commodities, capital was bound to be available at a cost that did not diverge much, on average, across markets that traded with one

* The chapter draws extensively on joint work with Marc Flandreau and Christophe Galimard. Responsibility for errors remains ours.
another (Flandreau et al., 2009b). This in turn facilitated the extension of the trading system, especially in places and for commodities that caused minimum disruption in the rest of the economy, as this minimized the regulatory backlash by temporal and religious authorities.

THE INSTRUMENT: BILLS OF EXCHANGE

What Is a Bill of Exchange?

The international money market in the eighteenth century was built on the four-party bill of exchange. A bill of exchange was a letter by which one merchant ordered his correspondent in some other city to make a payment on his behalf to another merchant in that distant city (De Roover, 1953; Einzig, 1970). Bills of exchange were thus used to transfer money abroad while local currency was used for local payments.

Figure 10.1 explains the functioning of bills of exchange (Beawes, 1773; Neal, 1990; Nogues-Marco, 2011a). There are ordinarily four persons required in making an exchange: two at the center where the money is taken up, and two where it is payable. They are, first the Drawee (deliverer, giver, remitter, or negotiator), being the person who wishes to deliver the money abroad; second, the Drawer (taker), who receives or takes up the money by exchange; third, the party who is to pay the money by virtue of the bill drawn on him, commonly termed the Payer (accepter); and fourth, the person to whom the bill is made payable, and is to receive it, called the Payee (possessor or holder).

Suppose that an English agent needs to settle a debt in Amsterdam and he does not have his own correspondent there. The English agent (Drawee) will buy a bill of exchange from a merchant in London with Dutch correspondents (Drawer), paying in local currency, sterling pounds (£). The bill is drawn in the foreign currency, schelling bank (€), to be paid out in Amsterdam. The Drawee will remit by post the bill to the Payee in Amsterdam to settle his debt. The Payee will show the bill to the Payer for acceptance and the Payer will pay the bill to the Payee at maturity. In the process, the Drawer has incurred a debt toward the Payer. Typically, the Payer and the Drawer would keep accounts with each other and could offset the payment of the bill of exchange with claims from other transactions so that only small net amounts would have to be settled occasionally. If the bill was not accepted or if the accepted bill was not paid, the Payee would protest the bill and the Drawer would be obliged for the payment of the bill plus the charges of protest, postage, commissions, and brokerage.

The exchange rate is the ratio between the quantity of sterling pounds paid for the purchase of the bill in London and the quantity of schelling bank paid in Amsterdam for the payment of the bill. The operation of exchange covers indeed two operations: the transfer of money from London to Amsterdam, and the lending involved over the time period between the purchase of the bills in London and its payment in Amsterdam. The exchange rate for the bill (a future delivery) includes two components: a shadow spot exchange rate for the transfer and a shadow interest rate for the loan. This interest rate is determined by the interest rate in the destination center according to the origin center. In Figure 10.1, it is the interest rate in Amsterdam. To understand why, think about the following arbitrage operation: a time bill in London on Amsterdam is equivalent to a spot transfer of funds from London to Amsterdam at the current exchange rate, and a subsequent deposit of the schelling thus obtained at the Amsterdam interest rate (Flandreau et al., 2009b). Therefore, the price of a time bill in London combines the spot exchange rate on Amsterdam with the Amsterdam interest rate.

Usury Regulation and ‘True’ Interest Rates

In addition to transferring funds abroad, bills of exchange provided a useful tool to escape regulation of interest rates. Legislation in the eighteenth century prevented interest rates from rising above a certain ceiling, which would constitute ‘usury.’ Unlike other financial instruments, which had a local circulation and were thus subject to regulation on interest rates, bills of

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1 Editor's note: The four-party bill of exchange of the eighteenth century was replaced by three-party bills for inland trade in the early nineteenth century in Britain, which led to the rise of accommodation bills to finance international trade in the later nineteenth century and up to the present. With accommodation bills, the interest rate embodied in forward exchange was determined in the place of origin of the bill, whereas with the earlier four-party bills, the interest rate in forward exchange was determined at the place of destination of the bill. In both cases, the interest was determined where the exporter was paid.
exchange escaped usury ceiling because they incorporated a convenient spatial dimension. The price charged on bills of exchange was motivated, according to bankers, by the risks and efforts associated with overcoming the obstacles of foreign settlement. In practice, the price on bills was motivated by geographical distance, and also by time, so it was easy to increase the interest rate by lowering the price of the bill. For legislators, it was not possible to argue that bill prices were low because local interest rates were high. Usury regulations were on interest rates but not on exchange rates (De Roover, 1967; Malynes, 1601).

Through creative use, bills of exchange could also be used to circumvent regulation on domestic interest rates. One way for doing so was called ‘Dry exchange’ (Beawes, 1773; De Roover, 1944; Hayes, 1777; Neal, 1990) and worked as follows: agent A goes to banker to borrow money; the banker wants to charge a usurious interest rate, so he gives the money to A in exchange for a bill drawn by agent A to an imaginary person on Amsterdam at double or triple ‘usance’ (x number of months), according to the maturity of the loan. When the time runs out, there comes from Amsterdam the bill protested for nonpayment, which agent A must repay to the banker in London for the money he borrowed. An alternative way to lend locally at usurious interest rates was ‘fictitious exchange’ (also called exchange and re-exchange): a banker in city A agrees to buy a first foreign bill payable in city B (exchange) and use the proceeds to purchase at the maturity of that bill a second ‘return’ bill payable in city A (re-exchange). The operation is covered because bankers have agreed in advance on the price of the return bill (fictitious exchange), so the operation is bound by arbitrage to yield the same return as a local loan. Many creative ways to circumvent usury regulations can be imagined.

As a consequence of usury regulation, local interest rates, if they can be found, are only a biased measure for the opportunity cost of capital. The section ‘The Cost of Commercial Finance: Searching for Interest Rate’ shows how more accurate shadow interest rates can be extracted from the prices of high-quality bills.

**Bullion Versus Bills**

Bills of exchange were not the only means to settle international payments. Another alternative was the shipping of precious metal, bullion. Suppose that an English agent needed to settle a debt in Amsterdam. Gold and silver, along with bills of exchange, may have been used to settle international payments. The best way to settle the debt normally was to buy a bill of exchange in London on Amsterdam, provided enough such bills were available. But if bills were scarce, their price would rise. If the bill price increased above the level at which it became preferable to send metal rather than bills as payment, two transactions were possible. The English debtor could buy gold or silver on the London market and ship it to Amsterdam. Symmetrically, a Dutch debtor who needed to remit to London had three choices. He could buy a bill of exchange in Amsterdam on London, or he could buy gold or silver in the Amsterdam market to ship to London if the exchange rate of bills was too unfavorable. To avoid metal shipments, the exchange rate must lie within the specie band, which represents the ratio of the bullion price in two centers plus/minus the cost of shipping bullion between the two cities (Flandreau, 2004).

Bills of exchange were used for international payments when bullion markets were integrated. Shipping bullion instead of using bills would be preferable only if the exchange rate departed from the ratio of the bullion prices in the two cities more than costs involved in shipping bullion. But in this case, bullion would flow from the cheaper center to the more expensive center and arbitrage process would tend to equalize prices introducing again exchange rate into the bimetallic specie band. When bullion movements were free and bullion markets were integrated, shipping bullion was profitable only on very few occasions, and bills of exchange were usually used for international payments. This is the case of London and Amsterdam in the eighteenth century (Nogues-Marco, 2011b). Bullion market integration between London and Amsterdam in the eighteenth century is coherent with our knowledge of London–Amsterdam financial market integration in the eighteenth century (Neal, 1990). Only in those cases that bullion movements were restricted, and thus bullion markets were not integrated, exchange rates and ratio of the bullion price in two centers could differ, so bills of exchange and bullion were not an alternative means for international payments, as in the case of Cadiz in the eighteenth century, where bullion exports were forbidden and smuggling silver to London was cheaper than issuing bills of exchange in Cadiz to London (Nogues-Marco, 2011c).

**City-Currencies**

A final point on bills of exchange concerns their geographical reach. Individual centers had idiosyncratic habits regarding how bills would be cashed, paid, or protested. For example, the maturity of bills (not measured in months but in ‘usances,’ a usance being a certain period of time determined by merchant custom) differed between centers according to custom. Differences existed also with respect to the days of grace, the period between the day the bill was presented and the day it had to be paid. Centers had also different risk characteristics. Cities
specialized in different businesses, so collateral differed and this could matter in periods of crises. Finally, there were differences in the way local courts handled bankruptcy. Contemporary cambists’ books explained habits and regulations of bills of exchange for each center (Giraud, 1756; Hayes, 1719–1777; Marius, 1655; Phoens, 1715; Savary, 1675).

Even though the bills of exchange were an international instrument and legal practice converged over time, habits and regulation continued to vary between cities, both within and between sovereign states. As a result, there was no substantive difference between international (or domestic) and international (or foreign) exchange rates. The same logic on bullion and bills of exchange markets therefore applies also within the same kingdom or republic. The only difference concerned the way exchange rates were typically quoted. As cities would use the same currency, bills were typically traded at a discount or premium depending on supply and demand – where the premium or discount was itself limited by the shipping costs of specie. The European monetary system in the eighteenth century was not international, but an intercity system.

**SOURCES**

Where can information on foreign exchange markets be found? The eighteenth century sees the emergence of a financial and commercial press that reports financial market prices (McCusker and Gravesteijn, 1991; Neal, 1988, 1990). A famous example is the London Course of Exchange. Other examples are the Petites Affiches for Paris or the Haaremse Courant for Amsterdam. However, financial markets are older than the financial press, and in earlier times, information on foreign exchange passed mainly through private channels. As part of bankers’ correspondence, most recent local quotes were added at the bottom of their letters. Sometimes a separate sheet of paper was appended to business letters, summarizing prices of foreign currencies in a tabular form.

This way of diffusing foreign exchange information was labor-intensive. Perhaps as an answer to this problem, semi-printed forms emerged. The printed part recorded the instruments that were traded in the market (in the instance, bills payable in a given city), and the clerks had only to scribble the quotes of the day. A transition product toward full-fledged journalism was completely printed forms that certain brokers circulated, such as the Cours van coopmanschappen tot Amsterdam. These forms were usually produced by brokers who signed the document. Bankers could then append this material to their correspondence. Information on foreign exchange quotations could thus survive as part of the business correspondence kept in private bank archives. Some of these correspondences have survived to this day. Famous examples are the banking house Datini (De Rooover, 1948) and the merchant house Roux (Rebuffat, 1965). One famous repository of foreign exchange bulletins is the Nederlandsch Economisch-Historisch Archief (NEHA), Amsterdam. NEHA’s collection contains the largest repository of archival evidence on foreign exchange bulletins, consisting of originals bulletins, photos, and facsimiles (see Boorsma and van Genabek, 1991). Schneider et al. (1992) and Denzel (2010) have extracted from this collection several exchange rate series. Further bulletins can be found in several European archives (see McCusker and Gravesteijn, 1991).

Besides private correspondence and reports in the financial press, a third type of source is merchants’ handbooks. These handbooks strove to provide systematic information on local currencies, weight, measures, and trading techniques useful for merchants dealing abroad (Hoock and Jeannin, 1986). Successful handbooks were repeatedly updated. While handbooks cannot be used to construct a time series of exchange or interest rates, the authors typically tried to come up with an informed description of what was going on ‘in general’ in a given center, for example, whether some currency was regularly traded in a given center or not.

**MAPPING COMMERCIAL FINANCE**

**Quotes as Evidence for Liquidity in the Underlying Market**

A crucial characteristic of foreign exchange bulletins, be they handwritten or published in a journal, is that certain centers are listed but not others. Flandreau et al. (2009a) argue that the existence or not of a price quotation gives a reasonably good indication for the liquidity of the underlying market (Flandreau and Jobst (2005) make a similar argument for the late nineteenth century). While modern studies of liquidity rely on the bid–ask spread, such measures are not available for earlier centuries, except for a few instances. But the existence or not of price quotations provides a proxy for liquidity; it reveals the existence of a sufficiently large demand and supply to warrant the posting of prices.

**Determinants of Liquidity**

To understand why bills on certain cities could be more easily traded than bills on other cities, the straightest route is to begin with the way bankers conducted their business. Bankers had extensive business relationships covering a wide array of cities, and one or several correspondents in each city. These business relations
were put to work when bankers sought to buy, sell, finance commodity transactions, or secure credit. Correspondents and correspondence were also kept when there were no other motives but the sheer need to remain posted, to know about the market outlook or get information on third parties. This meant having many connections and writing lots of letters. The *liste des correspondants* kept by the House of Roux in Marseilles, for example, displays about 1900 correspondents covering the period 1728–1843, of which 1250 were in France.

Thus, any banker in any city could find secure credit from, or extend it to, a vast list of bankers located in other centers. In practice, however, when deciding where they should secure credit from, bankers had to take into account cost, in which interest rates, informational asymmetries, and most probably the quality of local institutions as well as economic factors such as expected future exchange rates and liquidity, the latter mattering a lot if we are to believe the insights from economics and the traces that correspondences have left.

Consider cost. De Roover (1968) reported fifteenth-century anecdotal evidence according to which when interest rates were high in Barcelona, bankers recommended not to borrow from Barcelona but to try to lend there (De Roover, 1968, pp. 48–49). Flandreau and Jobst (2009) found the same logic still at work in the late nineteenth century, with bankers considerably less likely to draw on centers with permanently high real interest rates. Now consider liquidity. Think of a banker in Marseilles seeking to finance a given operation. A given center (say Amsterdam) will be an attractive source of funding if Marseilles has extensive financial and commercial relations with that center, for our banker is likely to find someone willing to buy the bill. In case the banker suddenly faces a need for cash, selling the Amsterdam bill may work better than selling a bill on, say, Saint Petersburg, which had limited merchant relations with Marseilles. The probability to find a ready buyer knowledgeable in Saint Petersburg is low. As a result, other things being equal, bills on Amsterdam in Marseilles might develop a market while bills on Saint Petersburg might not, so we would expect to find evidence in Marseilles of a market for Amsterdam’s bills, but not for Saint Petersburg’s. That does not mean that bankers in Marseilles could not draw on Saint Petersburg, but that they would rather not.

In the end, we are likely to observe the development of liquid, well-organized foreign exchange markets where not only is commercial and financial intercourse intense but also other bankers have already established connections, as occurs in agglomeration economies. One important element to keep in mind, however, is that there is no one-for-one correspondence between underlying trade flows and the exchange rate links that we identify. A given market is used because it provides benefits to the merchants. These benefits may arise because drawing on that center is the simplest way to pay a local exporter, but more often, other elements will be factored in, as in principle any center could be used provided that its instruments are understood and held by many other agents.

**Networks of Financial Financing**

The existence or not of quotations gives a strong indication of liquid markets in international financial claims and the existence of financial linkages between financial centers. Collecting lists of foreign centers quoted therefore allows sketching the geography of commercial finance. Graphically, the information can be depicted in a map, where a line between two cities indicates the existence of a liquid market for mutual claims. These linkages are directed, that is, they might go from center A to center B (A quotes B), from center B to center A (B quotes A), or both ways (A quotes B and B quotes A). The sum of all links gives a network. More formally, the information on the network can be condensed in a square matrix where each row and column correspond to a financial center and the elements of the matrix are coded as zeros or ones depending on whether in a center a market for claims on another center is active. Such a matrix lends itself easily to mathematical operations that allow one to analyze and characterize the network (on techniques to analyze networks, see, e.g., Wasserman and Faust, 1994). Flandreau et al. (2009a) present such an exercise for mid-eighteenth-century Europe, whose main results are summarized below.

**The Geographical Reach of European Finance**

In order to describe a network, ideally information on all nodes is required. Using bankers’ correspondences complemented by cambist handbooks, Flandreau et al. (2009a) identified a population of 78 centers. For 64 of these, foreign exchange trading can be documented, while 14 are mentioned in the sources without any details on market activity being available.

Figure 10.2 shows the location of the 78 cities. The coverage is broad and as far as Europe is concerned, probably more or less exhaustive. The undocumented cities tend to be the more obscure ones. Cities are either part of bigger political constructs and subjected to the power of a ruler, such as Paris, or essentially sovereign entities, such as Hamburg or Genoa. A high proportion of the cities (close to one half) are ports. There are typically several markets per country, except for the case of England that stands out as the one large political entity with only one exchange center in London.

Financial centers are concentrated in Europe. Locations are evenly scattered all over Europe with outreaches on
the fringes of the Orient. A strikingly white area in the map east of the line Vienna—Breslau—Riga—Petersburg should be noted. There are no American, Asian, or African cities, while there are only two cities in the Ottoman Empire. This European bias is not the product of arbitrary sampling but a structural characteristic of the foreign exchange network: European sources do not direct to non-European centers while non-European sources direct back to Europe. The global financial system of that period has a distinct European focus.

Hierarchies, Distance, and Groups

Network analysis provides a number of statistics that help characterize a network. The simplest way to look at hierarchy in a network with directed links (A quotes B) is to rank cities according to the number of quotes they receive. In the map shown in Figure 10.3, the number of quotes received is depicted as a shaded circle. As can be seen, Amsterdam was quoted almost everywhere (54 out of 64 possible markets, or 84%), implying that multilateral settlement using Amsterdam as a clearing center was definitely feasible by the mid-eighteenth century. Another feature is the dominance of North Western European financial centers [Amsterdam, London, Paris, and Hamburg] along with the continued relevance of cities in the Southern/Mediterranean area. Leghorn and Genoa are indisputably the two leading financial centers of this latter zone. The data thus both confirm and qualify traditional accounts of a seventeenth-century shift in European economic geography from a Mediterranean-centered system to a North Western area revolving around Amsterdam. Genoa and Leghorn's relative decline is perceptible in the eighteenth century, but they had hardly retreated into complete obscurity.

As can be seen, the European system was a dense web with a number of identifiable hubs. There is a triangle of intense financial linkages that goes from Amsterdam—London—Paris to Hamburg and shrinks as it heads toward Italy. Other more isolated centers are Vienna in the East and Madrid and Cadiz in the South-West.

While the network appears dense, only a small share of between 11% and 13% of the total number of possible

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links is active. In fact, the eighteenth-century system exhibited a high degree of concentration, comparable to what Flandreau and Jobst (2005) obtained for the later, country-based, network of the late nineteenth century. This result again underlines the critical importance of (multilateral) finance as opposed to (bilateral) trade in shaping foreign exchange transactions.

A final statistic to assess the degree of multilateralism in foreign exchange relations is the distance between any two centers, that is, the average number of nondirectional links one has to travel to reach any city from any other one. About 20% of links between cities were direct, 75% had to pass through an intermediary center, while only 7–8% needed two intermediaries. This reinforces the notion of an encompassing multilateral settlement system with Amsterdam, London, Paris, Hamburg, Genoa, and a number of secondary centers as connecting hubs.

While ranking allows a hierarchical ordering of financial centers, it does not capture finer positional characteristics. For example, a given number of quotes might come from cities all over Europe or from some region only. In this case, while the ranking would be the same, the implications for the role of the financial center might be quite different. A relatively sophisticated tool to approach the issue of grouping and monetary architecture is to adjust a ‘block model’ to the data (Flandreau et al., 2009a; for the statistical techniques, see Nowicki and Snijders, 2001; Wang and Wong, 1987). Block models provide a summary picture of a given network based on the way individuals (in this case, cities) relate to one another. A group, in this logic, is a set of individuals
who interact in similar ways with other groups and among themselves. Applying this methodology, two main breakdowns can be established. The first identifies two groups. One comprises senior centers that tend to quote their likes but do not quote members of the other group. The other comprises junior centers. They generally quote the seniors but not quote each other. This architecture is similar to the core-periphery pattern that Flandreau and Jobst (2005) obtained for the late nineteenth century. A finer characterization of the mid-eighteenth-century system can be obtained by enlarging the number of groups to seven (for details on the optimal number of groups, see the appendix in Flandreau et al., 2009a). First, the ‘capitals of capital’ (Amsterdam, London, and Paris) were already tightly integrated with one another by the mid-eighteenth century and enjoyed a high degree of liquidity (Flandreau et al., 2009b; Neal, 1990). Second, Hamburg, hub for northern European trade and finance, is in a category of its own, relating closely to the ‘Old continental’ centers, which it quotes much more often than do Amsterdam, London, and Paris. Third are the Italian financial capitals (Genoa and Leghorn). In contrast to Amsterdam, London, and Paris, the two Italian ports enjoy a central position for what Flandreau et al. label the Mediterranean periphery. They are also tightly coupled with the Franco-Spanish group, both on the sender and receiver side. Fourth is the Franco-Spanish connection, which played an important role during the eighteenth century for channeling the American Treasure out of Spain (Cadiz, Madrid, Lyon, and Marseille). An interesting fifth group is the cohesive, continental network of traditional financial centers (‘Old continental’) located at the heart of the Holy Roman Empire trade routes and consisting of Augsburg, Frankfurt/Main, Leipzig, Nuremberg, Milan, Rome, Venice, and Vienna. An important feature is that these cities have balanced links with both Hamburg and Genoa–Leghorn and can thus be seen as a glue connecting Northern Europe with the Mediterranean. Beyond that, peripheries split in two subgroups that reflect the opposition between the traditional Mediterranean network centered around Genoa–Leghorn and the modern Atlantic one oriented toward Amsterdam–London–Paris that became dominant in the late seventeenth century.

Some Tentative Hypotheses

The evidence presented by Flandreau et al. (2009a) can be related to a number of ongoing debates in financial and monetary history. First, it underlines the degree of multilateralism, that is, international integration, which prevailed in international settlements in the eighteenth century. Half a century ago, these questions gave rise to a controversy between Wilson (1949, 1951) and Heckscher (1950). Wilson argued that imbalances in bilateral trade created cash constraints that forced merchants to hoard gold and silver as these would be the only instruments available for final settlement of accounts, vindicating the mercantilist prejudice in favor of holding bullion. Heckscher (1950) vehemently countered that multilateralism was already a fact of life around 1650 and even more so over time with bills of exchange on Amsterdam serving as a settlement medium, a claim reiterated by Kindleberger (1993) and Lesger (2005). Sperling (1962) argued that looking at exchange quotations is a natural way to actually measure the degree of multilateralism that prevailed in the international monetary system of the time. The world imagined by Wilson is one where exchange relations are mostly bilateral with pairs of cities quoting one another. That of Heckscher and Kindleberger assumes the existence of readily available international instruments of settlement traded in all markets, such as bills on Amsterdam, along with more parochial ones. The evidence given by Flandreau et al. (2009a) extends Sperling’s analysis by reconstructing the entire network of foreign exchange relations between European cities.

The evidence on exchange markets can also shed some light on the construction of national money. Earlier economic historians (Bloch, 1954; Braudel, 1979) as well as some political scientists (Cohen, 1998; Helleiner, 2002) have emphasized that the making of national money is a recent phenomenon that only followed the Industrial Revolution. In fact, national groups do not appear in the block modeling. The monetary geography is still dominated by cities. A serious qualification concerns Britain, however, whose monetary integration was already so substantial by 1750 that correspondent balances kept in London have replaced ‘market’ relations through foreign exchange. Thus, Britain stands as a prominent exception to the notion that nationalization of money was a nineteenth-century transformation.

As argued earlier, liquidity in a given market is self-reinforcing: liquid markets attract new business, making the markets even more liquid, giving a significant advantage to established currencies and potentially leading to lock-ins (for a classical statement of path dependency in the choice of international currencies, see Krugman, 1980; for an empirical test for the late nineteenth century, see Flandreau and Jobst, 2009). The evidence for 1750 supports the view of powerful positive externalities. It is remarkable that, while as far as trade is concerned, Britain had most probably surpassed Holland by 1750, bills on Amsterdam were still available in a number of places where bills on London had yet to take a foothold, and their liquidity was also dominating. The implication from this would be that, while trade provides the basis for the development of an active market for bills on a given center, liquidity tends to take a momentum of its own, and with the help of strategic externalities support a measure of persistence and deepening of earlier
leadership. On this account, the financial centers of 1750 do not represent the new industrial cities but rather the older places that may have found in financial intermediation a specialization and a way to survive.

Finally, on the view that credible institutions are a requisite for financial development (North and Weingast, 1989), it is well worth noting the crucial importance of Paris as an international center. This is at odds with the traditional emphasis on the inadequacy of the constitutional underpinnings of France’s political regime. Understanding the underlying mechanisms, and the reason why Paris-based commercial paper could prosper despite the financial difficulties of the French crown, would go a long way toward getting a clearer view of the degree to which economic centralization and the economies of scale it entails can substitute for ‘sound’ institutional infrastructure.

THE COST OF COMMERCIAL FINANCE: SEARCHING FOR INTEREST RATE

The Absence of Direct Evidence on Interest Rates

Direct evidence on commercial interest rates in the eighteenth century is exceedingly difficult to come by. Whichever financial center we are looking at, there are no recorded series of ‘money market’ rates for the period before the French Revolution. It is consistent with the fact that we are dealing with an over-the-counter market. In order for ‘one’ price to be recorded and quoted, a formal centralized market must be organized. This requirement was not met by the credit markets of the time, as interest rates resulted from bilateral drawing arrangements that were in turn put to work as a lever for operating on the foreign exchange market. Formalization and centralization prevailed in the foreign exchange market, not in the money market. As a result, a precise notion of the ‘general interest rate,’ meaning probably the typical conditions that the best houses in a center would extend to their correspondent in another center, must have existed as a kind of ‘mental average’ in the minds of contemporary practitioners but was nowhere to be quoted. But the ‘local’ interest rate that a banker would extend to its correspondent could not really be made public, as when it was too high it was not supposed to exist at all. Thus, although observers had a precise notion of what interest rates were and meant in time and space, those rates are quite elusive when one tries to catch them.

Shadow Interest Rates Based on Bills with Different Maturities

Interest rate collectors have tended to be eclectic in their choice of sources, using mainly bankers’ archives — although not exclusively — as illustrated by Homer and Sylla (2005). An indirect way in line with direct evidence to know the commercial interest rate for the eighteenth century is to estimate the shadow interest rate comprised in the bills of exchange (Flandreau et al., 2009b). Suppose that we know the price for a foreign bill bought in a given market $A$ and drawn on another market $B$ where it matures at a certain future date ($a_{AB}$). Suppose next that we also know the price for a ‘similar’ bill, bought in market $A$ and payable in market $B$ and involving the same risks and returns, but maturing today — a spot bill ($x_{AB}$). It is obvious that there is a relation between the price of the first and the second bill that involves the interest rate for the maturity period for a commercial loan in center $B$ according to center $A$ between today and the maturity period ($r_B^*$) (Officer, 1996):

$$x_{AB} = a_{AB} \times (1 + r_B^*)$$

(currency $A$/currency $B$) \hspace{1cm} (10.1)

Scholars have used this simple formula to calculate shadow interest rates (see Boyer-Xambeu et al., 2001; Perkins, 1978; Schubert, 1989).

According to Flandreau et al. (2009b), it is possible to calculate the shadow interest rate for the main centers in the eighteenth century (Amsterdam, London, and Paris) because these centers quoted bills of exchange at two maturities, sight and 2 months. For example, to calculate the shadow interest rate in Amsterdam according to London, the long maturity exchange rate ($a_{LA}[n_l days]$) and the short maturity exchange rate ($a_{LA}[n_s days]$) can be rewritten according to Eq. (10.1) as

$$a_{LA}[n_l] = x_{LA}/\left(1 + r_A^l \times \frac{n_l}{365}\right)$$

(sterling pound/schelling bank) \hspace{1cm} (10.2)

$$a_{LA}[n_s] = x_{LA}/\left(1 + r_A^s \times \frac{n_s}{365}\right)$$

(sterling pound/schelling bank) \hspace{1cm} (10.3)

Substituting for $x_{LA}$ in Eqs. (10.2) and (10.3) gives the arbitrage condition that derives shadow interest rates:

$$r_A^s = \left(\frac{a_{LA}[n_s] - a_{LA}[n_l]}{a_{LA}[n_s] \times n_l - a_{LA}[n_l] \times n_s}\right) \times 365$$

(10.4)

Time-Series Evidence: Cycles, Seasonality, and Long Trends

Figure 10.4 shows the long-term behavior of the three commercial interest rate series computed for Amsterdam, London, and Paris (Flandreau et al., 2009b). Differentials between the series remain small throughout, especially for the Amsterdam–London pair. Paris interest rates were slightly higher — say, between 4% and 5% when London and Amsterdam were between
3% and 4.5% – but the salient fact is that differences across countries are not large and actually disappear toward the end of the century.

Interest rate series exhibit cyclical patterns. Paris interest rate was relatively stable while London was less so and Amsterdam displayed much variation. Monthly average spreads suggest a connection of interest rates with the state of the economy. London and Paris displayed a highly seasonal pattern of fluctuations until 1770. Amsterdam, by contrast, appears to have been less influenced by seasonality. After 1770, however, there was no seasonality for either Paris or London, with Amsterdam becoming by contrast more cyclical.

CONCLUSION

Early modern financial development was closely related to making a reinforcement of a global community of merchants that was transnational, multicultural, and diffuse. The monetary geography in the eighteenth century was composed of a two-part system. One was the older Mediterranean system, revolving around Genoa and Leghorn. The other was the newer ‘Northern Atlantic’ system with Amsterdam, London, and Paris on top. Another hub of the Northern Atlantic system was Hamburg. Contact between these two systems was guaranteed by the pivotal role of Amsterdam, London, and Paris. Interest rates did not differ much between the three main markets – Amsterdam, London, and Paris – although there were persistent differences in average rates due to different degrees of liquidity.

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References


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