The rise of financial capitalism

International capital markets in the Age of Reason

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Published by the Press Syndicate of the University of Cambridge
The Pitt Building, Trumpington Street, Cambridge CB2 1RP
40 West 20th Street, New York, NY 10011-4211, USA
10 Stamford Road, Oakleigh, Melbourne 3166, Australia

© Cambridge University Press 1990

First published 1990
First paperback edition 1993

Library of Congress Cataloging-in-Publication Data available.

A catalogue record for this book is available from the British Library.

ISBN 0-521-38205-X hardback
ISBN 0-521-45738-6 paperback

Transferred to digital printing 2002

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1. Historical background for the rise of financial capitalism: commercial revolution, rise of nation-states, and capital markets

The decade of the 1980s saw the emergence of international capital movement as a dominant feature of the economic relations among nation-states. The resulting pressures on exchange rates, balances of payments, and trade patterns have disconcerted all participants – those who make national economic policy, as well as international financiers and ordinary citizens. Perhaps the most striking episode was the collapse of the world's stock markets during the week of 19 October 1987, the suddenness, sharpness, and inclusiveness of which took all observers by surprise. Some, trying to determine if computer-driven sales in New York or in Tokyo had led to the collapse of international stock markets in 1987, were disoriented on finding that Tokyo prices for 20 October preceded, rather than followed, New York quotes for 19 October. They were forced by this circumstance to confront once again the mystery of the international date line, a phenomenon first detected by the chronicler of Magellan's voyage to circle the earth.

Antonio Pigafetta recorded his amazement that, according to the Portuguese inhabitants of the Cape Verde Islands, it was Thursday, 10 July 1522, when his ship returned to the European settlement there, not Wednesday, 9 July, as indicated in his diary.[1] He finally reasoned correctly what had happened,[2] but nearly two centuries later the English buccaneer and explorer William Dampier remarked on the discrepancy of dates in East Asia. The Portuguese, Dutch, and English who settled in the Pacific islands by going east from Asia were a day ahead of the Spanish settlers who arrived by going west from the Americas. The accidents of European

[1] Derek Howse, *Greenwich Time and the Discovery of the Longitude* (Oxford University Press, 1980), pp. 160–1.

[2] ". . . as we had always sailed towards the west, following the course of the sun, and had returned to the same place, we must have gained twenty-four hours, as is clear to any one who reflects upon it." Antonio Pigafetta, "Diary," quoted by Lord Stanley of Alderley, ed., *The First Voyage round the World* (London: Hakluyt Society, 1874), p. 161, and Howse, *Greenwich Times*, p. 161.

settlement, whether from west or east, in the Pacific Basin during the Age of Exploration have determined to this day the zigzags of the international date line, which is not embodied in a formal agreement but is merely a way to show the differences in dates that exist among the islands of the Pacific.[3]

Perhaps each age has to discover certain fundamental truths such as the international date line in its own way, but historical precedents for such discoveries are reassuring evidence that the patterns revealed are indeed fundamental truths. Moreover, they usually are more easily discerned in a historical context rather than a contemporary context. In the case of financial markets, for example, in the eighteenth century there were many fewer well-organized marketplaces and fewer groups of active traders than now. Moreover, government regulations and taxes were much less onerous and diverse. The financial trauma of 19 October 1987 reaffirmed that we live in a new era of closely integrated international bond, equity, and money markets. The financial innovations, as well as the technological innovations, that have led to this new era are still being put into place. It is already clear that they will not be adopted and perfected smoothly. The remainder of this book argues that eighteenth-century Europe provides a historical precedent that can be examined to give us some useful perspective, a sense of the potential dangers as well as the possible advantages of our new financial system.

In the course of investigating the origins of international capital markets in Europe in the late seventeenth century and their operation throughout the eighteenth century, I have become increasingly impressed with the modernity of their operations. Whereas the capital flows and price movements of that era have no direct bearing on today's events (although they can be used to test and refine modern economic and financial theories), the background conditions that led to the development of the international capital markets of the eighteenth century do have some striking similarities to our modern adventures. There were wars, revolutions, religious persecutions, political upheavals, and displacements of wealthy elites at the end of the seventeenth century as there are at the end of the twentieth. There were also investments (and disinvestments) on a large scale by foreigners in the government debts of the leading nations, changes in trade patterns that yielded immense profit opportunities for the most knowledgeable international entrepreneurs, and insider trading, takeover attempts, and financial

[3] Howse, *Greenwich Times*, p. 163.

disturbances that destroyed and created private fortunes in apparent chaos. Because the eventual outcomes in these early markets were largely beneficial for the participating countries and their private citizens, it is encouraging to review their history. Encouragement is always welcome in times of rapid change and uncertainty, and history may give its students a sense of confidence and even direction when they turn to coping with the demands of the present.

The history of financial capitalism begins, it now appears, with the "price revolution" of sixteenth century in Europe, which could more aptly be termed the "first financial revolution." Traditionally, the price revolution has been associated with the influx into Europe first of gold from the Portuguese trade with Africa and then silver from the Spanish mines in Peru and Mexico. Price levels throughout Europe more than doubled and remained at the higher levels through the next century of economic crisis.[4] The classic work of Earl Hamilton offered powerful evidence that the increase in silver imports into Spain and from there to the rest of Europe led to the increase in prices.[5] He further argued that in countries where profit inflation occurred because money wages lagged behind the rise in final prices, there was a powerful impetus for the rise of capitalism.[6] Later historians have disputed almost every aspect of Hamilton's famous thesis, but two points are particularly pertinent to the case for a financial revolution. First, prices rose more rapidly than did the supply of specie, implying that it was used ever more efficiently. Moreover, nominal rates of interest appear to have fallen in the most active commercial centers, whereas persistent inflation alone would have tended to raise them. Second, the major units of account throughout Europe tended to depreciate in terms of silver over the sixteenth century, whereas the influx of silver alone should have led them to appreciate. This indicates that governments' supplies of bullion, rising more rapidly than ever before, still did not keep pace with governments' demands. Their demands depended on the rise in prices, as well as more grandiose military goals, whereas their supplies depended on

[4] The standard treatment of the price revolution is Fernand Braudel and Frank Spooner, "Prices in Europe from 1450 to 1750," in E. E. Rich and Charles Wilson, eds., *The Cambridge Economic History of Europe*, Vol. 4 (Cambridge University Press, 1967), pp. 374–486.

[5] Earl J. Hamilton, *American Treasure and the Price Revolution in Spain, 1501–1650* (Cambridge, MA: Harvard University Press, 1934).

[6] Earl J. Hamilton, "American Treasure and the Rise of Capitalism (1500–1700)," *Economica*, 9(November 1928), pp. 338–57.

their taxing power, as well as the greater numbers of tax sources becoming available.

What were the main elements of the financial revolution that was responsible for these anomalies of sixteenth-century inflation? The Portuguese and Spanish discoveries in the East and West Indies at the end of the fifteenth century required merchants throughout northwestern Europe to develop new financial techniques in order to exploit the opportunities of long-distance trade. The new profit opportunities were realized only after protracted waiting periods, and the longer delays before receiving returns on overseas investments required new forms of finance. The greater variety of trade goods available for Eastern merchants and the increased dispersion of their markets required financial intermediaries capable of mobilizing larger sums, waiting for longer periods, and dealing with greater numbers of clients spread over greater distances than ever before. The increased demand for financial intermediation arising from the possibilities of profit was met in large part by the projection of power by the emerging nation-states of Europe. Especially influential was the Habsburg Empire of Charles V and Philip II. These two Habsburg monarchs, in their imperial endeavors, stimulated the rise of financial intermediaries throughout Europe – individuals and firms who could operate across market boundaries, whether defined by geography, language, religion, or political authority.

Corresponding to the stocks of fixed capital embodied in the thousands of oceangoing vessels constructed during the sixteenth century and to the stocks of inventory capital carried in their cargo holds, then, were transferable and negotiable claims on these physical stocks – financial capital. As markets developed for the exchange of these financial claims independent of the markets for the exchange of goods, the possibilities for shifts in ownership, use, size, location, and composition of physical capital were enlarged enormously. This phenomenon of financial markets directing the outcome of goods and factor-of-production markets has been termed financial capitalism. The origins of the term appeared at the end of the nineteenth century, when it was clear that the capital markets of the industrial world were directing the course of the second industrial revolution associated with automobiles, chemicals, and electricity.[7] But it is clear that capital markets with many of the characteristics of those of the late nineteenth century arose much earlier in western Europe. And it may well be,

[7] Rudolf Hilferding, *Finance Capital: A Study of the Latest Phase of Capitalist Development*, translated by Morris Watnick and Sam Gordon, edited by Tom Bottomore (London: Routledge & Kegan Paul, 1981).

as argued at the end of this book, that they directed the course of the first industrial revolution as well.

The origins of financial innovations

The first financial revolution in early modern Europe, according to James Tracy, arose from the wartime demands that Charles V levied on the provinces of the Habsburg Netherlands in 1542.[8] The imposition of provincewide excise and property taxes pledged to service annuities, both life annuities (for the duration of one or two lives, nominated by the purchaser) and heritable annuities (perpetual, but redeemable by the States-General), led to the creation of a large and growing market for these long-term securities. They were heritable, transferable, and therefore suitable for resale, although the resale market seems to have been limited.[9] It is noteworthy in light of subsequent developments that a large part of the annuities sold by the County of Holland went to "foreigners," primarily residents of the surrounding provinces in the north.

Herman van der Wee believes that a financial revolution arose in late-sixteenth-century Antwerp.[10] The key innovation was the perfection of the negotiability of the foreign bill of exchange in this multinational, multilingual marketplace of the emerging world economy. Domestic bills were less flexible, because they had a more limited number of potential clients and because they were typically repaid in installments, so that the backs of domestic promissory notes were devoted to recording the repayments. Foreign bills of exchange were paid in full at the time stated, and so the back of the bill was available for a series of endorsements to third parties.

The foreign bill of exchange took advantage of offsetting balances that merchants accumulated with each other in different ports, so that local currency could be used only for local payments, whereas bills drawn against balances held abroad would be used for foreign payments. The

[8] James D. Tracy, *A Financial Revolution in the Habsburg Netherlands: Renten and Renteniers in the County of Holland, 1515–1565* (Berkeley: University of California Press, 1985).

[9] Tracy mentions notes in the inscription lists concerning annuities that had been transferred, but not to transfer books. Tracy, *A Financial Revolution*, p. 90, fn. 50.

[10] Herman van der Wee, *The Growth of the Antwerp Market*, 3 vols. (The Hague: Nijhoff, 1963), and "Monetary, Credit and Banking Systems," in E. E. Rich and Charles Wilson, eds., *The Cambridge Economic History of Europe. Vol. 5: The Economic Organization of Early Modern Europe* (Cambridge University Press, 1977), pp. 290–392.

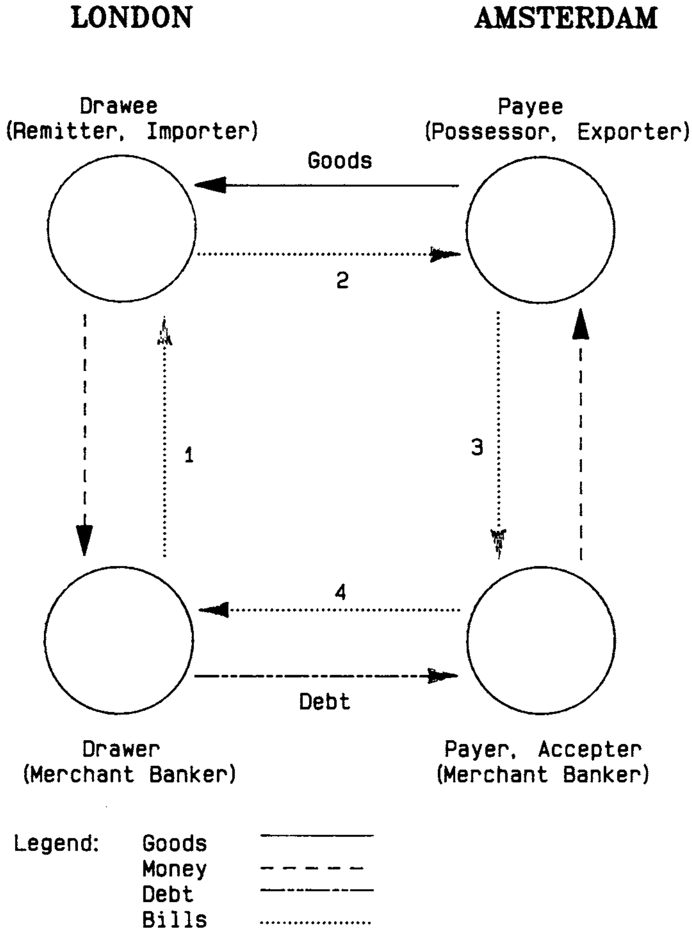

Figure 1.1. The foreign bill of exchange and the international flows of money, goods, and capital.

buyer of a bill (drawee, or remitter) purchased it from the drawer, a merchant with foreign correspondents, paying in local currency (Figure 1.1, London side). He could then remit it to pay for imports he had received from abroad. So the bill was drawn in foreign currency to be paid out by the acceptor of the bill in the foreign city to the final possessor of the bill (the payer and payee on the Amsterdam side, Figure 1.1), who either was the foreign exporter or had been assigned it. The ability of the London importer to pay the Amsterdam exporter in a bill of exchange depended, of

course, on the willingness of the Amsterdam merchant banker who had to accept the bill to extend credit to the London merchant banker. In place of a shipment of bullion in payment for the goods imported, the existence of the bill of exchange allowed payment to occur by an export of short-term capital from Amsterdam to London. So there were typically four parties to the bill, shown in Figure 1.1 as the drawer and drawee on the London side and the payer and payee on the Amsterdam side, although the eighteenth-century usage was to refer to the drawee as the remitter of the bill, the payee as the possessor of the bill, and the payer as the accepter.[11] The payee could assign the bill to another party, but in so doing assumed responsibility for its eventual payment along with the drawer and accepter. Multiple assignments or endorsements therefore increased the security of this negotiable instrument and its liquidity.

This revolution in means of payment originated in Antwerp, where the negotiability of the long-established foreign bill of exchange was created by introducing serial endorsements. This innovation was transferred to Amsterdam with the Portuguese Jews and various Protestants expelled from Antwerp in 1585 and was perfected with the establishment of the Amsterdam Wisselbank in 1609. Using the Wisselbank, merchant bankers could transfer payments denominated in bank money (called *banco*) rapidly and securely among themselves without the delays and uncertainties caused when a bill was extinguished by sending it back to the original drawee. For example, the flow of new debt from the London merchant banker to the Amsterdam merchant banker shown at the bottom of Figure 1.1 could occur by transfers from one account to another within the Wisselbank, as could the subsequent extinguishment of the bill. This actually improved the negotiability of the bill, because the time delay in protesting bills refused by the designated accepter was then reduced, as was the risk to the accepter of default by the drawer. Moreover, it allowed so-called dry bills, or short-term lending by merchant bankers to local merchants, to become more efficient, reducing the rate of interest on short-term credit. Under this variant, the flows shown in Figure 1.1 were reversed: The merchant banker bought a foreign bill from the local merchant as the basis for lending him money (Figure 1.2, London side) and sent the bill to his correspondent, who had it accepted by a colleague by promising immediate "rechange" – purchase of a bill drawn on London with the

[11] Malachy Postlethwayt, *The Universal Dictionary of Trade and Commerce*, 2 vols. (London: 1774; reprinted New York: Augustus M. Kelley, 1971), s.v. "Acceptances," "Accepter," "Bills of exchange," and "Drawer."

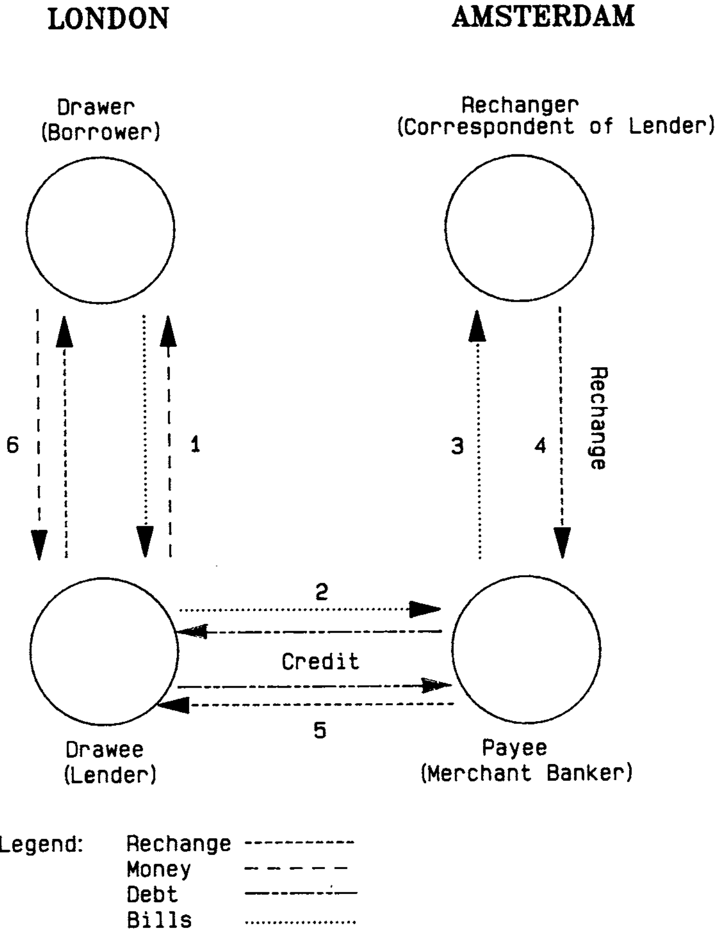

Figure 1.2. The foreign bill of exchange as a means of credit.

proceeds of the bill drawn on Amsterdam (Figure 1.2, Amsterdam side). This bill then would be sent to the merchant banker in London and accepted by the local merchant there, who in paying it off two months later would also have repaid his original loan from the merchant banker, including an undisclosed amount of interest.

The key features of these early financial innovations – safe and rapid international movement of funds in the bill of exchange, and safe and liquid long-term investment in the perpetual annuity – were successfully blended by 1609 in the shares of the Dutch East India Company (VOC hereafter, from the initials for Vereenigte Oost-Indische Compagnie). At

that time, the directors of the company (known as the Heeren XVII) converted the initial investments that had been made into the first three voyages into a permanent capital fund. Investors could not recover their capital from the company, but were entitled only to whatever dividends might be declared each year, as well as the right to transfer their shares to another investor. The dividends were made high and stable, however, and so the resale market was made attractive. Operating control of the Heeren XVII was independent of shareholders, because it derived from the political compromise among the six cities written into the original charter. This allowed, indeed encouraged, foreign investors, because their participation would increase the working capital available to the Dutch without infringing on their power to control the far-flung enterprise.[12] The combination of a permanent capital and the separation of operating control from ordinary stockholders made these shares ideal for active trading in the secondary market that arose on the Amsterdam Beurs. That they were inscribed in the ledger books at each city chamber made them secure, and transfers could be made very quickly and cheaply in special transfer books.[13]

These features of the Dutch company were only gradually adopted by the English East India Company (EIC). The EIC made its capital permanent in 1650 and allowed foreign ownership at the time of renewal of the charter in 1698. Throughout the eighteenth century the management of the EIC was liable to stockholder revolt and pressure, even though foreigners were excluded from positions as directors. Whereas trade in Dutch shares was active at dividend time as shrewd investors moved in to strip the dividends,[14] trade in English shares was especially active during the election of new directors.[15]

Diffusion of financial innovations

The origins of these assorted financial innovations in western Europe derive fundamentally from the overseas discoveries and the emergence of

[12] J. R. Bruijn, F. S. Gaastra, and I. Schöffer, *Dutch-Asiatic Shipping in the 17th and 18th Centuries*, Vol. 1, *Introductory Volume*, Grote Serie of *Rijks Geschiedkundige Publicatien*, Vol. 165 (The Hague: Nijhoff, 1987).

[13] This is described in detail by M. F. J. Smith, *Tijd-Affaires in Effecten aan de Amsterdamsche Beurs* (The Hague: Nijhoff, 1919), pp. 30–7.

[14] Ibid., p. 27. This is Smith's interpretation of the observed increase in activity, but the point deserves further research, because a cosmopolitan pool of share owners and the requirement to be present locally to receive dividends could create the same phenomenon.

[15] Lucy S. Sutherland, *The East India Company in Eighteenth-Century Politics* (Oxford: Clarendon Press, 1952), pp. 144–6.

long-distance trade. Not only were the mental horizons of Europeans broadened by the discoveries, but also their time horizons were lengthened by the duration of the voyages. Moreover, the pursuit of the conflicting goals of power by the monarchs and profit by the merchants forced innovations by each. But equally important to our story was the process of diffusion. The innovations described earlier were adopted only fitfully by other European states over the course of the seventeenth century. In the case of Holland and England, the innovations were implemented in improved, more efficient form, because the process of transplantation eliminated the legal restrictions and encumbrances that had been imposed in the country of origin. This was especially true for the bill of exchange when brought to Amsterdam from Antwerp at the end of the sixteenth century and perfected in the first decade of the seventeenth. It was true also of the transferable share when brought from Amsterdam to London at the end of the seventeenth century and perfected, in the decade after the South Sea Bubble, with the transferable annuity obligation of the state.

The initial impetus for the spread of these particular innovations derived from the wars and the underlying religious conflicts that led to mass migrations and countermigrations of religious minorities. The forced displacement of merchant elites began with the expulsion of the Sephardic Jews from Granada in 1492 by Ferdinand and Isabella. It continued in the sixteenth century with the persecution of Ashkenazic Jews in central Europe, as well as the emerging Protestant groups, and culminated in the seventeenth century. In that century, the flight of refugee elites began with the Spanish expulsion of the Moors from Valencia,[16] spread through central Europe with the Thirty Years' War,[17] and climaxed in the 1680s with the expulsion of the Huguenots from France,[18] the importation of Dutch Jewish communities and other religious dissidents into England with William III,[19] and the "flight of the wild geese" from Ireland (which included Richard Cantillon).[20] All these groups took with them their tal-

[16] Earl J. Hamilton, "The Decline of Spain," *Economic History Review*, 8(1937–8), pp. 168–79.

[17] Geoffrey Parker, *The Thirty Years' War* (London: Routledge & Kegan Paul, 1984).

[18] Warren Scoville, *The Persecution of the Huguenots and French Economic Development, 1680–1720* (Berkeley: University of California Press, 1960).

[19] William Cunningham, *Alien Immigrants in England*, 2nd ed. (London: Cass, 1969), and Harold Pollins, *Economic History of the Jews in England* (London: Associated University Presses, 1982).

[20] Antoin E. Murphy, *Richard Cantillon: Entrepreneur and Economist* (Oxford: Clarendon Press, 1986).

ents and skills and as much of their treasure as they could; they left behind them contacts that could be called on again and again.

From the time of Henry VIII (1509–47), England benefited from receiving numbers of the most skilled and adept of these religious minorities who had been persecuted in their homelands, although England was never the dominant destination of any group, and it constrained those who arrived to live in well-defined settlements and limited them to trades and skills that were noncompetitive with those pursued by the native English.[21] Edward VI (1547–53) continued his father's policy of protecting these dissident communities, but Mary (1553–8) expelled all of them. Many went to Frankfurt, where they mingled with Huguenot refugees from Wallonia. German Anabaptists and Arians who had been established at Austin Friars in the City of London by Edward VI were also dispersed by Mary. All these groups were encouraged to return by Elizabeth (1558–1603), and their numbers were augmented by an influx of Spanish Netherlanders. Cromwell (1648–58) was responsible for allowing the reentry of Jews into England, for a price, of course. The encouragement of these refugees to alight in England with their flight capital was continued in the Restoration (1660–88). Lucy Sutherland reported that "in 1681 those managing the affairs of the French Protestant refugees petitioned the Company to help those who had fled bringing their fortunes with them by 'accepting such monies as they should pay into the Company's Cashier at moderate interest . . . until they could find out other ways of improving their estates.' The Company agreed to accept any money so offered at 4 per cent. for three months and then at 3 per cent. until the owners wished to withdraw it, when they undertook to pay capital and interest without waiting for the bonds to mature."[22]

But it was William III (1689–1702) who first raised foreigners to high status. Daniel Defoe is credited with authoring a piece of doggerel that lamented the dominating role of Dutch advice in guiding William's affairs:

> We blame the King that he relies too much
> On Strangers, Germans, Huguenots, and Dutch
> And seldom does his just affairs of State
> To English Councillors communicate.[23]

[21] Cunningham, *Alien Immigrants*, pp. 140–1.

[22] Sutherland, *The East India Company*, p. 11. She cites as her source the company's Court Book (32, p. 179, 16 December 1681).

[23] Quoted in David Ormrod, *The Dutch in London* (London: HMSO, 1973), p. 17.

These forced movements of tightly knit communities repeatedly along well-established routes of trade can be seen as movements of flight capital as well as of skilled labor. Such movements also resulted in the establishment of a network of correspondents who repeatedly conveyed information about political conditions and, more important to them and to economic history, economic and commercial circumstances. That laid the groundwork for the future transfers of technology, labor, and capital that would benefit England and Holland enormously.

The dispersions of religious and political communities because of repeated persecutions also provided the basis for the continued flow of financial capital in response to investment opportunities. In the first instance, this was a matter of necessity for the immigrant groups. They had to liquidate their capital stocks at their places of origin into portable form to be carried with them to their eventual destinations. Once there, they had to invest quickly to establish themselves anew in their trades. But these stringencies placed on flight capital were quickly relieved by opportunities for war profiteering that arose in the wake of the persecutions. Starting with the Thirty Years' War (1618–48), the wars of the seventeenth and eighteenth centuries were increasingly international in their scope, even worldwide, because armed conflicts could occur anywhere that citizens of the warring nations came into contact. Within Europe, men and arms on a large scale had to be moved quickly to distant battle sites, and military success usually depended on the success of merchant bankers in moving funds to purchase and sustain mercenaries near the enemy's strongpoints. These wartime needs, climaxing with the War of the League of Augsburg (1688–97) and the War of the Spanish Succession (1702–13), gave emigré bankers opportunities for large profits. The introduction of the Dutch system of finance to Britain by Gilbert Burnet, bishop of Salisbury, made British public securities at last favorable objects of investment by emigrés throughout Europe,[24] and the volume of these securities outstanding was enlarged enormously during the war years from 1689 through 1713. The Protestant refugees ensconced in Geneva as early as 1730 probably held 30 million livres tournois in the public funds of France, chiefly in the form of rentes, and another 30 million livres tournois (£1.35 million) in the "stock" of England, primarily the transferable shares of the Bank of En-

[24] Jonathan Swift, *Works*, Vol. 8, edited by H. Davis (Oxford: Clarendon Press, 1951), p. 68, gives credit to Burnet, but ascribes to him far baser motives; cf. P. G. M. Dickson, *The Financial Revolution in England: a Study in the Development of Public Credit, 1688–1756* (London: Macmillan, 1967), p. 17.

gland, the EIC, and the South Sea Company. These all enjoyed a high reputation, were easily negotiable, and were always quoted above par.[25]

The large scale of these turn-of-the-century wars encumbered both France and England with their first major national debts,[26] mostly in the form of annuities at high rates of interest ranging from 8% to 10%. The rate of interest implicit in these annuities, issued during the wars and especially at their conclusion, was much higher than the rates of 5% to 6% that prevailed in the peaceful years of recovery that followed. Because of the awkwardness of transferring title on these securities from one owner to another, however, annuity holders could not easily realize their implied capital gains. Both governments, in making the annuities irredeemable at the time of issue and thereby guaranteeing potential investors that their annual payments would continue undisturbed for up to 99 years, gave up the possibility of reducing their debt service after the wars by issuing replacement debt at lower, peace time interest rates. The Mississippi Bubble and South Sea Bubble arose precisely from the competing efforts by France and England to convert fixed-interest irredeemable debt into variable-yield securities that could be more easily traded and retired. The premium paid by investors for the improved liquidity of these alternative financial assets translated into lower debt service for the government. Both the English and French governments seized on the weakened position of the once mighty Spanish Empire after the War of the Spanish Succession to convert their annuity debts into equity in large monopoly trading companies that would exploit the riches of the Spanish Empire. In this endeavor they took inspiration from the success of the VOC and the EIC in their successful exploitation of the riches of the Portuguese Empire in the Far East.

Placing the shares of these huge new companies on the relatively small stock markets of the time led to the famous bubbles of 1719 and 1720. In these episodes, the promises of financial gains from implementing proven innovations on a truly grand scale led to speculative excesses in which the prices of all shares rose quickly to unsustainable heights, collapsed, and left the markets in a disarray that invited political intervention and recriminations.[27] Whereas those bubbles traditionally have been seen as

[25] Herbert Luethy, *La Haute Banque Protestante en France de la Révocation de l'Edit de Nantes à la Révolution. Vol. 2: De la Banque aux Finances* (Paris: SEVPEN, 1961), p. 57.

[26] Earl J. Hamilton, "Origin and Growth of the National Debt in Western Europe," *American Economic Review*, 37(May 1947), pp. 118–30.

[27] These are analyzed in Chapters 4 and 5.

disasters that effectively forestalled the rise of financial capitalism for over a century,[28] they had an important effect in internationalizing the European investment community of the eighteenth century to an unprecedented and irreversible extent.[29] Instead of equity in perpetual joint-stock companies or debt in the form of annuities, however, the new financial instrument became the perpetual and redeemable annuity: the "Three Per Cent Bank Annuity" of 1726, the precursor of the "Three Per Cent Consol," created in 1751. Financial investment activity thereafter focused on this nearly ideal security, which essentially gave the holder an equity position in the financial fortunes of the state. But its attractiveness to the investing public depended on the relative ease by which it could be acquired and disposed of, the clear terms of the interest payments, and the readily available information about its current price and the military and political events likely to affect its price.

The financial revolution in England

This achievement in financial innovation in English government securities took over 30 years from the first issue of government-backed annuities in 1693 and 1694. These turned out to be not as popular as prior experience with them in the Netherlands and France had led William III's advisors to expect. Indeed, rather than annuities, the most successful financial innovations proved to be the state lotteries, beginning with the Million Lottery of 1694. This built on the triumphs of private lotteries, in which prodigious numbers of tickets at relatively low prices had been made available from reasonably large numbers of outlets. For example, Thomas Neale's lottery of 1693 had £25,000 of 10*s*. tickets available at 11 different goldsmiths, with 250 prizes at stake.[30] The success of the Million Lottery must be traced in large part to the low denominations in which the lottery tickets could be purchased, their ease of transfer, and the clear-cut (if uncertain and unfavorable) terms on which their returns were gained. They were sold in large numbers by ticket offices set up at major pubs.

All this stood in contrast to the restrictive conditions for purchasing, trading, and receiving the income of the annuities. The transfer of annuities

[28] William R. Scott, *The Constitution and Finance of English, Scottish and Irish Joint-Stock Companies to 1720*, Vol. 1 (Cambridge University Press, 1910), pp. 436–8.

[29] Dickson makes this point for England (*The Financial Revolution*, pp. 311–12), and it is made as well for Holland by F. P. Groeneveld, *Economische Crisis van het jaar 1720*, (Gröningen: Noordhof, 1940).

[30] Dickson, *The Financial Revolution*, p. 45.

was entrusted to the Exchequer and remained very cumbersome until the process was taken over increasingly by the Bank of England through issuance of its own annuities after the South Sea Bubble. The subscriber to an annuity made his payment to the Exchequer and named the nominee whose life was being insured. In return, he received a tally of receipt and a paper "Standing Order," which was assignable, for the future payment of the annuity.[31] At each semiannual payment of the interest, the annuitant, his agent, or his assignee had to present proof that the nominee was still living. This usually was an affidavit signed by the parish rector of the nominee, or, after 1694, simply a declaration by the annuitant notarized by a justice of the peace. But because the Standing Orders were liable to every imaginable vicissitude over the course of the term of the annuity, transfers were made very elaborate. Titles to annuities had to be examined as carefully as titles to land. As a consequence, transfers were much less frequent than were transfers of shares in the joint-stock companies.[32]

Transfers of these shares, though still cumbersome by modern standards, were effected much more quickly and inexpensively. The companies used a double-entry system with two sets of books: the transfer books equivalent to the journal or flow accounts of merchants of the time, and the ledger books equivalent to the ledger or balance sheets in mercantile accounting. Each proprietor's initial holding was recorded in the ledger book on the left-hand side under the "Per" heading. Proprietors were arranged alphabetically and under each letter by size of holding. Additional shares purchased would be entered on successive lines under the initial entry. New proprietors would have entries created for them in rough alphabetical order at the end of the folios devoted to the original proprietors. Sales of stock by any proprietor would be entered under a "Contra" heading on the right-hand side. At the time of semiannual dividend payments, the Per entries would be totaled, and the Contra entries subtracted, and the balance would be the basis for payment of the dividend. Each entry in the ledger book, Per and Contra, was initiated by a transfer-book entry. Here printed forms, three to a page, were filled out in sequence and numbered so that each ledger entry, Per for the buyer and Contra for the seller, could be identified by a uniquely numbered transfer. On the transfer forms were entered the folio numbers for the ledger accounts of the seller (top) and of the buyer (bottom) to complete the cross-referencing. The transfer form itself was filled in by a clerk, who also witnessed the transfer and gave, in order, the

31 Ibid., p. 76.
32 Ibid., pp. 458–9.