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The Formation of Financial Centers: A Study in Comparative Economic History

Charles P. Kindleberger

INTERNATIONAL FINANCE SECTION
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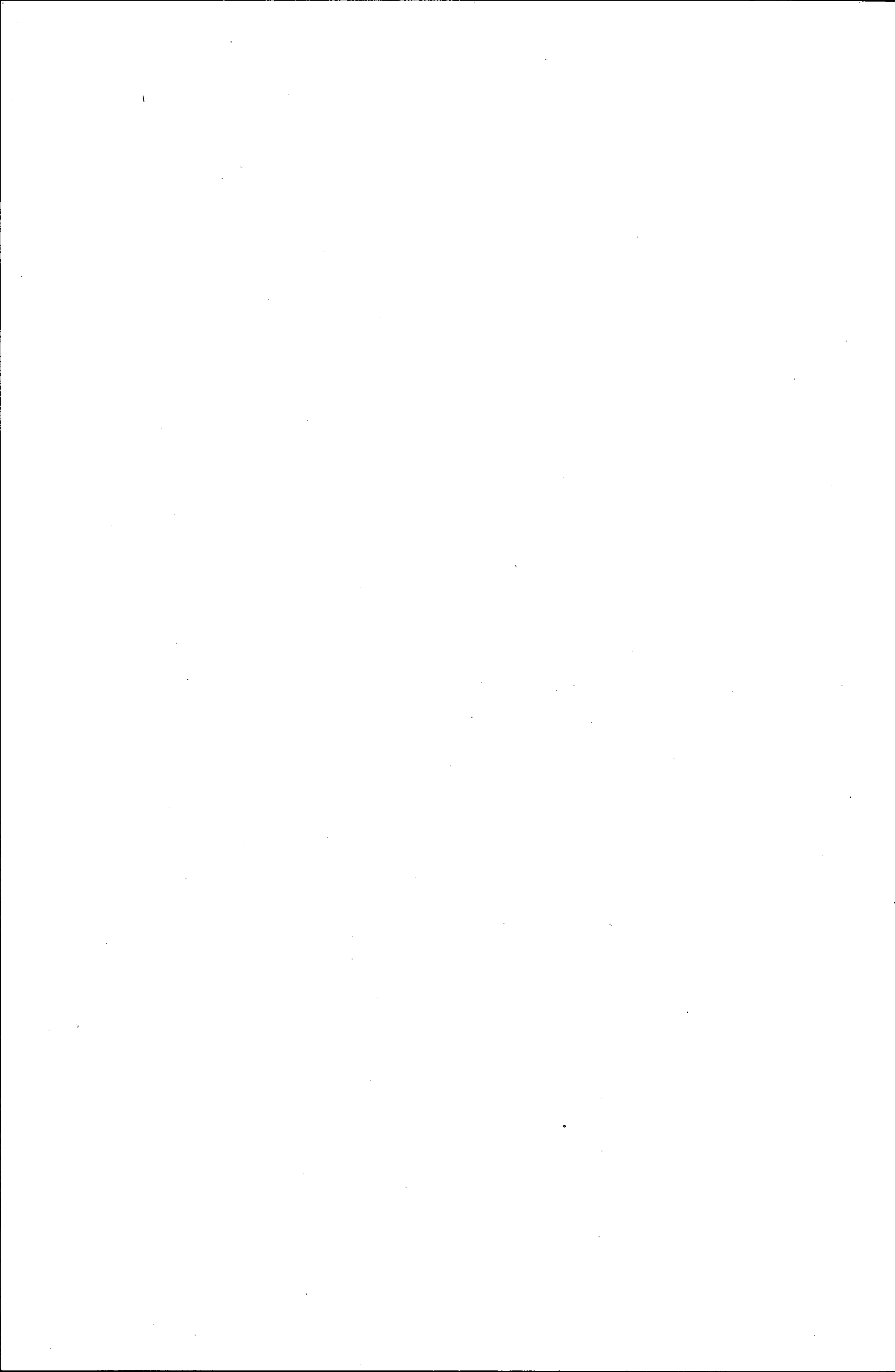

I. INTRODUCTION

It is a curious fact that the formation of financial centers is no longer studied in economics, perhaps because it falls between two stools. Urban and regional economics, which concern themselves with cities, discuss the location of commerce, industry, and housing but rarely that of finance. [An exception should perhaps be made for Canada (Kerr, 1965, 1967) and for France (Labasse, 1955).] Pred's (1966) study of urban growth in the United States deals exclusively with commerce and industry, making no mention of banking or financial markets. A recent U.S. survey of urban economics mentioned finance only once in the text and referred to no work on the subject in a bibliography of 438 items (Goldstein and Moses, 1973). Only the study of the New York metropolitan area led by Vernon (1960) devotes attention to it. At the same time, a vigorous new literature on money and capital markets and their role in economic development takes no interest in geographical location or the relationships among financial centers (Goldsmith, 1969; McKinnon, 1973; Sametz, 1972; Shaw, 1973). Apart from a sentence or two, one would think that the money and capital market was spread evenly throughout a given country.

The "geography of finance," to borrow Kerr's phrase, is relevant to contemporary issues as well as being of considerable historical interest. Contemporary relevance is provided partly by the tasks of building money and capital markets in developing countries, which McKinnon (1973) and Shaw (1973) regard as vital to economic development, more important, indeed, than foreign aid or export expansion. Among developed countries, there is the issue of which center, if any, will emerge as the leading money and capital market of the European Economic Community if it achieves monetary integration. Economic analysis may not be equal to the task of predicting the answer to this question, or of recommending the policy measures a government or intergovernmental body should follow if it wishes to affect the outcome of the market process.[1]

Historically, an explanation is needed as to why money and capital markets were centered at the capital in Great Britain, France, and

[1] An up-to-date report on the subject is Interbank Research Organisation (1973). There are, moreover, indications that the U.S. government is interested in contemplating the steps that would be required to restore the supremacy of New York as the leading world financial center.

Germany but not in Italy, Switzerland, Canada, the United States, or Australia. One can formulate an aspect of the issue as a riddle: What do the Midlands Bank, the *Crédit Lyonnais*, the *Dresdner Bank*, the *Banca Tiberina*, the Bank of Nova Scotia, and the First Boston Corporation have in common? The answer: Their executive offices are located in a different place from that implied by their name—the Midlands Bank in London, the *Crédit Lyonnais* in Paris, the *Dresdner Bank* in Berlin (from 1892 to 1945), the *Banca Tiberina* (after 1879) in Turin, not along the Tiber, the Bank of Nova Scotia in Toronto, and the First Boston Corporation in New York. The two historical curiosities can be combined. A year after the Midlands Bank transferred its headquarters from Birmingham to London in 1891, there was a simultaneous movement of the *Schaffhausen'schen Bankverein* from Cologne to Berlin (i.e., from a provincial city to the capital) and of the *Eidgenössische Bank* from Bern, the capital, to Zurich. The affinity of finance and locations is underlined by the fact that so many banks have places rather than functions (Merchants, Farmers, etc.) in their names. (Private banks, where confidence is all-important, are named for people.)

An historical approach is also called for because, if modern analysts have little interest in spatial finance, the same cannot be said of their grandfathers. Two generations ago, before and after World War I, economics displayed an interest in the functions of and relations among financial centers that is rare in current research. Fanno (1913, Chap. III) had a chapter on the centralization process in banking and money markets, including geographic centralization. In his *Evolution of the Money Market*, Powell (1915) presented a detailed account of the processes by which congeries of isolated banks were formed into a financial structure centered on London, with many physiological analogies, including "natural selection" and "survival of the fittest." The most highly developed analysis, however, was provided by Gras (1922, Chaps. V, VI), the economic historian, who described the stages of development from village and town to metropolitan economy, specifying the development of specialized financial institutions as a metropolitan function.

In the pages that follow, a comparative analysis is presented in literary rather than statistical or econometric form. It is perhaps unnecessary to defend the comparative method after having shown that the administrative capital sometimes serves as the financial center and sometimes does not. I go further, however, and suggest that the study

of single cases, valuable as it is, frequently tempts the economic historian to rely too heavily on single analytical models and that the comparative method, for limited problems at least, is of value in showing what is general and what special in historic process. The qualification that the comparative method is most effective with limited problems—as a rule, of a partial-equilibrium sort—reflects concern that, as the analyst moves from one to another country, society, polity, or economy, general-equilibrium issues like business cycles, stages of growth, and backwardness embody too many degrees of freedom to enable him to generalize with confidence.

That the comparative historical account is qualitative rather than quantitative derives from the limitations of the writer, the great size of the task of rendering comparable data from a wide number of countries, and an interest more in process than in the detailed outcome. Even such an impressive study as Goldsmith's *Financial Structure and Development* (1969), which shows conclusively that financial machinery becomes more elaborate as a country grows in productive process, does not examine the detailed processes, particularly the spatial ones. Extending this study to measure the process described would make it unduly long.

Chapter II briefly reviews the literature on the location of cities and their functions, the roles of money and capital markets in the development process, and the evolution of banks and banking. Its main purpose is to identify the economies inherent in a central organization of financial markets and banking machinery, and to show why financial centers tend to be organized spatially in a hierarchy, with a single center as the keystone of the arch. The description is largely limited to banks and banking, with little explicit attention to other elements of money and capital markets. Some reference is made to clearinghouses, stock exchanges, government and private security markets, mortgages, foreign bonds, and insurance, though none to factoring, consumer finance, or pension funds. As economic growth proceeds, the importance of banks as financial intermediaries diminishes relative to other institutions, but it is always strategic.

Chapter II, which concentrates on the why of a single financial center, is followed by seven case studies designed to show the processes by which a given locality is chosen. Chapters III, IV, and V deal with England, France, and Germany, where the political capital became the financial center as well. The contrast between the English and French centers, on the one hand, and the German, on the other, is provided by their respective political histories, especially the late

unification of Germany in 1870, which furnishes a sort of "instant replay" of the process. Chapters VI and VII deal with the Italian and Swiss examples, each with late unification, in 1860 and 1848 respectively, but different from the German example because the financial center turns out to be a different city from the political capital. Canada and the United States, in Chapters VIII and IX, furnish cases of financial centers emerging in countries developed from the wilderness; here, again, the political and financial leadership chose different sites. The Canadian experience is of particular interest. The country felt obliged to free itself successively from money- and capital-market reliance on London and New York, experienced two shifts of the financial center, from Halifax to Montreal, then—long-drawn out and still incomplete—from Montreal to Toronto. Lately, moreover, a relatively independent market has begun to develop in Vancouver.

Chapter X deals in summary fashion with the question of a world financial center, arching over and connecting indirectly national money and capital markets. London held the position during most of the nineteenth century, though with challenges from France and Germany. In the twentieth century, a shift to New York occurred, and a second shift is now in progress from New York to the Eurodollar market. That market is spread all over the world but its heart, to use a well-worn image, beats in the American and British banks in London. A concluding Chapter XI seeks to use the lessons derived from the historical studies to throw light on the question of whether a financial center for the European Economic Community will emerge, and if so where.

II. BANKING DEVELOPMENT AND THE METROPOLIS

A recent spate of books has focused anew on the role of banking in economic development. Two of the earliest writers in the field were Hoselitz (1956) and Gerschenkron (1952), who emphasized especially the role of the *Crédit Mobilier,* founded in 1852, in stimulating rapid industrial expansion in France. German banking was said to be as powerful as the steam engine (Gerschenkron, 1962, p. 137). These leads were followed up and developed by Cameron (1961, 1967, 1972), in his own book on France and in the case studies he edited. Some of these cases, particularly Austria, Italy, and Spain, suggested that banking may or may not make a positive contribution to economic development, depending not on the personal qualities of the bankers but on the "structural characteristics of the system, and the laws, regulations and customs" (Cameron, 1972, p. 8). The contribution of the *Crédit Mobilier* to the industrial development of France has also been downgraded (Fohlen, 1972, p. 37); its interests, and those of many of its imitators, lay in speculation, not in industrial growth.

Much of this historical literature, however, focused on banking as an agent of growth through stimulation of demand. By contrast, the analytical contributions of Goldsmith, McKinnon, and Shaw emphasize the role of banking in mobilizing and allocating liquid resources. Goldsmith (1969, p. 400) points out that the development of financial intermediaries "accelerates economic growth and improves economic performance to the extent that it facilitates the migration of funds to the best user, i.e. to the place in the economic system where the funds will find the highest social return." Shaw equates "deep" with liberalized finance, which opens the way to superior allocations of savings by widening and diversifying the financial markets in which investment opportunities compete for the savings flow. In his only reference to space, he goes on: "The market for savings is extended. . . . Local capital markets can be integrated into a common market, and new opportunities for pooling savings and specializing in investment are created" (Shaw, 1973, p. 10). McKinnon's (1973) emphasis is on raising the rate of interest on financial capital to equality with the rate of interest on real capital. This makes it worthwhile for entrepreneurs to save in money form for later investment and increases the availability of external finance, enabling entrepreneurs, who would otherwise be limited to their own savings, to start businesses sooner and on a larger

scale. Financing trade and production at a rate of interest equal to the return on real assets is a shot in the arm to development. Integration of capital markets eliminates local and sectoral monopoly and monopsony, but especially stimulates the formation of savings and its pooling (Shaw, 1973). Here is an echo of Powell's (1915, p. 274) reference to banking as a "magnet which pulls out hoards."

As noted, these discussions of banking innovation and financial intermediation or deepening lack a spatial dimension. Financial centers are needed not only to balance through time the savings and investments of individual entrepreneurs and to transfer financial capital from savers to investors, but also to effect payments and to transfer savings between places. Banking and financial centers perform a medium-of-exchange function and an interspatial store-of-value function. Single payments between separate points in a country are made most efficiently through a center, and both seasonal and long-run surpluses and deficits of financial savings are best matched in a center. Furthermore, the specialized functions of international payments and foreign lending or borrowing are typically best performed at one central place that is also the specialized center for domestic interregional payments. (This is not always the case. For twenty years after Berlin became the undisputed center for German domestic finance, Hamburg continued its role as the leading city for foreign-trade finance.)

To limit ourselves again to domestic interregional payments, the efficiency of a single center is akin to the contribution to utility of a single numeraire. Each locality deals not with each other locality in making and receiving payments, but with a single center; $n-1$ conduits are needed instead of $n(n-1)/2$. Small localities are typically clustered about a provincial financial center but are linked to others through the central financial market. When country clearing was established in London in 1858, the National Provincial Bank thought it "preposterous" for a bank at Manchester to collect a check on Newcastle-on-Tyne through London (Taylor, 1964, p. 229). At that time, the National Provincial Bank had offices in Manchester and Newcastle, whereas its banking office in London was opened only in 1866. Later, however, the National Provincial Bank must have cleared among its branches through a central point such as London. French centralization of distribution through Paris has been much criticized; the efficiency of central clearing for such purposes as moving artichokes from Dijon to Bordeaux obviously declines as costs of transport rise. But for money payments there can be no doubt of the efficiency of a central financial market as the apex of a national system, and of a single international

market as the apex of national financial centers. An African student once complained to me that Latin-American payments to a country such as Kenya were made in dollar checks on New York; he was persuaded that the system was devised to enable imperialist extortionists to exploit the periphery. He found incredible the truth that the centralization of payments and use of a vehicle currency are efficient.

As an efficient system of payment develops, utilizing the medium-of-exchange function of banking, firms find themselves able to economize on working balances by centralizing them at the metropolitan pivot. Companies above a certain size tend to establish financial offices in the metropolis to deal in financial markets as well as to finance a larger flow of payments with smaller working balances. Increasingly competitive security markets provide larger and cheaper security issues for those who need capital, as well as more liquid investments for lenders. Economies of scale are found not only in the medium-of-exchange and store-of-value functions of money, but also in the standard-of-deferred-payment function insofar as it relates to loans, discounts, and bond issues.[1]

The origins of banking are diverse. Elementary textbooks imply that they can be traced mainly to the storage function of goldsmiths, but this is oversimplification. The goldsmiths in England, congregated in London, were an important source of private banking but by no means as important as merchant houses. Other bankers originated as scriveners or notaries, tax receivers or tax farmers who lent out funds being held for remittance to the Treasury, court bankers who provided advances and personal services to profligate princes, and industrial companies that paid wages in tokens, moving a stage beyond the truck system (payments in commodities), and found that the tokens remained in circulation. Some manufacturers lent out business profits rather than plowing them back in industrial expansion. But the bulk of bankers started as merchants, gradually becoming specialized in the financial side of commerce. Ten of fourteen private bankers in Liverpool—a commercial city, to be sure—sprang from wholesale houses (Pressnell, 1956, p. 49). Often a merchant devised a system for making or collecting payments at a distance and was asked to perform such services for others. The Bank of England was started during the Nine Years' War by wine merchants who found themselves with liquid capital as they sold their stocks and had no opportunity to replace them.

[1] I can scarcely refrain from pointing out that these economies tend to be lost in the international system when there are fluctuating exchange rates, no international money, and a disintegrated international capital market.

Beer also involved capital accumulation that in a number of instances led the brewer into banking.

Both banking and commerce involve the overcoming of distance, and the geographical pattern of banking was linked to commerce. Cities are typically located at a break in transport, and such a break must lie across a trade route (Duncan *et al.*, 1960, p. 39). London, Paris, Cologne, Rome, and Montreal lie on major rivers at the first ford or shallow part up from the sea. Berlin lies at the point of transshipment for bulk cargoes moving from the Oder to the Elbe (Henning, 1971). Lyons and Frankfurt were historic fair towns on international caravan trails, and the *furt* in Frankfurt stands for ford—the ford of the Franks on the river Main. As we shall see, the coming of the railroad, a major innovation in transport in the nineteenth century, changed the character of banking and the location of some financial centers, and only timely action by communities to influence the shape of the railroad network prevented other changes adverse to them.

Not all commodities are identical in their impact on transport or the location of financial activity. It is possible to construct a "staple theory" of finance, at least for the early stages of banking development, to explain the particular impact of different commodities on the size and pattern of financial flows. Seasonality of financial requirements is one aspect; unique production processes, a need for bought inputs, and time needed to consume outputs are others. Ports are dominated by particular commodities financed in certain ways, and this affects their financial development: Liverpool by cotton and wheat, Glasgow by sugar and tobacco, Cherbourg by cotton, Bremen by cotton and coffee (financed in London), etc.

The mechanism by which the location of a city, the transport network, and the economic characteristics of the goods and services in which an area specialized determined the financial pattern was partly Darwinian and partly the result of deliberate action by government or private individuals. The Darwinian evolution of the banking pattern is illustrated by depressions that wiped out both badly located banks and bankers and those who were well-located but incautious. State policy is reflected by the centralizing policies of the Bank of France and French government, which in 1848 wiped out the provincial banks established during the 1830s, and by the decentralizing pressures in Canada and the United States. The strength of regional banking in France in the period before World War I was in spite of, not owing to, state action, which typically operated at that time to discourage regional autonomy. At the private level, local action fostered means of

transport and opposed rival financial centers. Of great interest, banks, bankers, corporation head offices, and the like deliberately changed locations, often saving face by professing loyalty to their birthplace. Goldstein and Moses (1973, p. 485, note 40) describe Webber's game-theoretic model of location decisions under uncertainty with the assumption that "once the firm is located, it is impossible to relocate." For banks, as will be evident later, such an assumption lacks historical validity.

Some allowance must also be made for pure accident. I am informed by Juan Linz that Bilbao flourishes in Spain as the second financial center outside of Madrid because Prieto, the Socialist Finance Minister in the 1930s, came from that region and saved its banks while allowing those of Barcelona to fail. The history of European and North American banking is filled with accounts of bankers' quarrels based on personal, social, political, and religious differences, which may or may not be superficial rationalizations of deep-seated economic forces.

On a staple-theory showing, banking starts out to serve the needs of sovereigns and nobles; develops in connection with commerce; then less personally with governmental finance; next with transport, including shipping, canals, turnpikes, and railroads; then with industry; and finally with intermediation in insurance, mortgages, consumer finance, factoring, pension funds, and the like. In a highly developed setting like New York or London, the money market in a broad sense includes (1) a money market with many specialized segments for commercial paper, acceptances, collateral loans, Treasury bills, federal funds (in New York), certificates of indebtedness, etc., and (2) a capital market, both private and governmental, dealing in new issues and secondary distribution, together with (3) trading in commodities, foreign exchange, bullion (in London, Paris, and Zurich), and, to a lesser degree, ships and ship charters, and insurance (Madden and Nadler, 1935, p. 110). The borrowing and lending pattern starts locally and extends to a national center, with perhaps intermediate regional stops, finally becoming international. Specialization grows in instruments and functions and by hierarchical market. Inflations, depressions, wars, and the like distort or intensify the pattern.

The hierarchical character of financial specialization was originally discussed by an economic historian, N. S. B. Gras (1922), who developed a theory of stages of metropolitan development in which finance was the apex. There is a national credit market in a country, but it is spatially concentrated in a hierarchical pattern. As summarized by Duncan (1960, p. 84), Gras traces through four phases the growth of

the metropolis to serve a hinterland: (1) commerce, (2) industry, (3) transport, (4) finance. Finance is more concentrated than commerce, industry, or residence. In 1929, 4 counties had one-quarter of the savings deposits in the United States—a poor measure of financial concentration—whereas 11 counties shared one-quarter of retail sales, and 27 counties shared one-fourth of the population (McKenzie, 1933, p. 62). In 1955, New York had $4.4 billion of nonlocal loans, compared with $1.2 billion for Chicago and $490 million for San Francisco—another measure of metropolitan character (Duncan *et al.*, 1960, p. 117). Similar data for Canada in the 1960s are given in Chapter VIII.

Cities, according to Vernon (1960, pp. 70, 73), attract industries or services in which there is great uncertainty and need for face-to-face contact, those in which speed of interaction is a requisite. Unstandardized outputs lead to agglomeration as a convenience for the shopper. The port of New York attracted the wholesalers, who pulled in the financial institutions, which attracted the central offices of national corporations (Vernon, 1960, p. 80). A detailed study of New York's financial functions (Robbins and Terleckyj, 1960, p. 38) supports this view and discusses the external economies arising from specialization, joint facilities, and the services of other industries such as printing. Shopping convenience is mentioned, but perhaps too little is made of the fact that the broader the financial market, the greater the liquidity of security issues, with the result that lenders and borrowers from other regions will transfer to that market their gross demands and supplies, not just net excess demand or supply. The borrower pays a lower rate of interest and/or is able to issue a larger loan. The lender acquires a qualitatively different investment because it is traded on a broader secondary market, which is why he is willing and often eager to accept a lower interest rate (Kindleberger, 1963, pp. 191–192). Insurance companies are less centralized than most other segments of the money and capital market because of a pronounced preference by consumers in the United States for locally issued insurance policies (Robbins and Terleckyj, 1960, Chap. VI).

In addition to economies, there are diseconomies which work against centralization and favor regional markets. The foremost is cost of information, which gives local credit markets an advantage in dealing with small firms in an area. Unfamiliarity with local personalities and character may discourage central money and capital markets from lending locally. The difference in time is another diseconomy of centralization that has supported the growth of North American markets as against European, the Eurocurrency market as against New York,

and the West Coast of North America as against Toronto-Montreal and New York. Direct communication by telephone or telex must be simultaneous; when it spans many time zones, it involves a dislocation of the working day for at least one party. This is another specific illustration of the cost of dealing in finance at a distance; the foremost is the loss of information obtainable only with face-to-face contact. Still a third diseconomy of centralization is crowding, which made for the building of hundreds of offices in midtown Manhattan after World War II and induced one bank, the First National City Bank, to move its head office from downtown to midtown Manhattan. The same phenomenon had been evident in London, with a banking community in the West End of London, separate from the City, for the convenience of rich clients in Mayfair. The London and Westminster Bank, formed in 1836, communicated through its name that it was one of the few banks which operated in both the City and the West End.

Not a diseconomy so much as a discrimination is the tendency of governments and private persons to favor their compatriots over foreigners, even at the expense of higher cost or lower profit—an implicit or explicit mercantilist attitude.

Up to a certain high degree of concentration, positive externalities and economies of scale appear to outweigh diseconomies, favoring centralization. The continuous reduction in the costs and difficulties of transport and communication over the last two hundred years has favored the formation of a single world financial market.

III. LONDON AS THE FINANCIAL CENTER OF ENGLAND

Prior to about 1750, there was little country banking in England. Substantial incorporated banks existed in Scotland, and the Bank of England was established in London in 1694; there were also many private bankers there. The Bank of England had a monopoly of joint-stock banking in England; private banks were allowed to issue notes, but their size was limited by the fact that they could have no more than six partners.

Beginning about 1750, there was an upsurge of banks in the country. The dozen or so existing in 1750 doubled by 1772 and reached 400 by 1800 (Bisschop, 1896, pp. 150, 163). Bankers with large families or trusted relatives tended to establish a separate firm in the City in addition to one in the country. The father of the four Baring brothers had come to Exeter from Germany as a wool and serge merchant and had gone into banking in 1717; fifty years later the brothers divided up—two in London and two in Exeter (Wechsberg, 1966, p. 102). And Abel Smith II, the son of the tax receiver Thomas Smith who remitted funds to London through his connections as a mercer with goldsmith bankers, started a Nottinghamshire bank in 1757, a London bank in 1758, a Lincoln bank in 1775, and a bank at Hull for the Russian trade in 1784 (Leighton-Boyce, 1958, p. 20). Much of the activity of these banks was remittance. Landlords living in London received their rent twice a year in May and November, so that the banks were called upon at these times for London bills (Bisschop, 1896, p. 156). The West End banks, which served the landed interests, were particularly involved in government securities (Anderson, 1972, p. 251). In addition, in prosperous times country banks accumulated deposits which they remitted to London for investment. Testifying before the Bullion Committee in 1810, Mr. Richardson, a bill broker, said:

> In some parts of the country there is little circulation of bills drawn on London, as in Norfolk, Essex, Sussex, etc. . . . . I receive bills to a considerable extent from Lancashire in particular, and remit them to Norfolk &c where the bankers have large lodgments and much money to advance on bills of discount (Bagehot, 1873, p. 138).

Bagehot added in 1873 (p. 140) that the distribution of the bill brokers' customers remained much the same after sixty years, and his text speaks of funds from agricultural counties such as Somersetshire and

Hampshire, with good land but no manufactures or trade, being invested in the discount of bills from Yorkshire and Lancashire (p. 6).

The numerous country banks, hard hit by the deflation following the Napoleonic War, generated a campaign, largely led by Thomas Joplin, a timber merchant from Newcastle, for adoption of the Scottish system of joint-stock (incorporated) banking with branches. The panic of 1825, in which many small country banks disappeared, brought the adoption of joint-stock banking in 1826, but within a radius of 65 miles from London the privilege of issuing notes was reserved to the Bank of England. (The Bank sought to provide an element of stability for the country banks by opening branches outside the 65-mile area.) With the renewal of the Bank's charter in 1833, further legislation was required. This was interpreted, against the wishes of the Bank of England, as permitting joint-stock banks of deposit, if not joint-stock banks of note issue, within 65 miles of London. The result was the establishment outside the radius of many banks with the right of note issue. Inside the area, only a few banks were started, as the issuing of notes was deemed the principal source of profit. The outstanding one, which survives today, is the London and Westminster.

The other four of the five great joint-stock banks of 1967 (reduced to four by the merger of the National Provincial with the London and Westminster in 1968) were originally provincial. Lloyds was started as a private bank in 1765 in Birmingham by a successful Quaker metal trader. Members of the family set up a London firm in 1770; the last partner of both the London and Birmingham houses died in 1807. The Birmingham bank remained private until 1865, when it began a series of mergers and amalgamations which converted it from a provincial to a City and national institution. Mergers of 1884 with two private banks (Messrs Barnett, Hoares, Hambury and Lloyd, and Bosanquet, Salt and Co.) brought the bank effectively to London. The head office remained in Birmingham, but the center of gravity rapidly shifted to London (Sayers, 1957, p. 35).[1] The need to acquire branches and to establish the bank in London came from difficulties in balancing the demand and supply for investments. In 1866, a shareholder was opposed to branching, but the chairman pointed to the need to attract funds (p. 237). Then, as the branch movement grew and banks were acquired

[1] The general manager from 1871 to 1902, Howard Lloyd, went to London from Birmingham once a week; his successor made it his business to concentrate all the head office in London (Sayers, 1957, p. 50). From 1899 the Board met alternately in Birmingham and London, and by 1910, the Board met only in London (p. 272).

in areas of surplus funds, the opposite necessity to find an outlet for funds in London became imperative—a process of unbalanced growth. According to Sayers (1957, p. 269), "A main attraction for joining Lombard Street was the prospect for fuller and more remunerative employment of surplus cash." Integration of the national capital market can be seen in the tension caused by the original practice of paying 2½ per cent on deposits in Birmingham, while in Lombard Street the rate varied with the bank rate. When the bank rate rose above 4 per cent, some depositors were tempted to move cash to London. This tendency existed before amalgamation with the London banks but became accentuated thereafter. Only much later, in 1920, when a 7 per cent bank rate had made the London rate apply far out into the country, was the problem resolved by establishing a single deposit rate for the entire bank (pp. 165, 270).[2]

The history of Midlands Bank is similar to that of Lloyds. It started early as a joint-stock bank, in 1836, but moved slowly, acquiring only six branches in the next fifty years, all near Birmingham. By 1889, it had absorbed eight provincial banks, including substantial ones in Lancashire and Wales. At this point, the Birmingham Banking Company, another smaller rival of Lloyds, followed Lloyds's example in acquiring a London connection (Crick and Wadsworth, 1936, p. 311). Like modern multinational corporations, which invest defensively, following the leader to prevent it from stealing a march, the Midlands Bank merged with the Central Bank of London in the same year. So as not to offend Birmingham, it was stated that the London bank had imposed among its conditions "a sine qua non that the head office must be in London, and half-yearly meetings of stockholders in January in Birmingham and July in London." The Baring crisis of 1890 sped the process of amalgamation when Lord Goschen, the Chancellor of the Exchequer, shocked the banks by calling their reserves inadequate. By October 1898, the business of the Midlands was judged ill-balanced: "Our country business is out of all proportion to our Metropolitan business," and the head office was too small. This was corrected by merging with the City Bank of London (Crick and Wadsworth, 1936, pp. 312, 316). The bank's biographers regard the process as the outcome of an irresistible trend in English banking; Surrey and Kent and the suburbs of London—not the agricultural counties this time—were

[2] References to the ability and willingness of depositors to move funds between the provinces and London are found elsewhere in Sayers's (1957, p. 110) account of Lloyds for Birmingham, and Leighton-Boyce's (1958, p. 36) account of Nottingham.

lending surplus funds to the industrial areas of the Midlands and the West Riding (Yorkshire). The head office was the channel through which resources flowed far more efficiently than under the old agency and bill system (pp. 329, 342). There was danger for local banks which became too heavily involved in separate industries: Bradford in wool, Oldham in cotton, Sheffield in steel (p. 345).

On occasion, however, there was safety in being off by oneself. Prior to its merger with the Midlands, the Bank of Wales had little trouble in the crises of 1857 and 1866, largely because its business was predominantly Welsh (Crick and Wadsworth, 1936, p. 188). On the other hand, the Northumberland and Durham Bank failed in 1857, whether, as one story has it (Gregory, 1936, p. 184), because the bank had loaned almost £1 million of its £2.5 million assets to a single company, Derwent & Co., which was working mineral rights owned by the bank's Jonathan Ricardson, or because £250,000 of small bills on Newcastle shopkeepers, probably good in themselves, were not discountable outside of Newcastle (Powell, 1915, p. 286). Integration is good in good times; in bad times, it is good if you have the trouble and the rest of the world helps, bad if the trouble originates outside and is communicated inward.

The National Provincial Bank and Barclays developed differently. The National Provincial was organized as a joint-stock company in 1833, with £1 million of capital, a board in London, but banking operations in a series of branches outside the 65-mile limit. Some existing banks were taken over; many new ones were created. The geographical spread was wide: Gloucester, Stockton, Darlington, Kingsbridge, Manchester, Ramsgate, Newcastle, Emlyn, etc. As Withers (1933, pp. 61, 62) notes, "In those days of slow communication and transport, it must have required no ordinary courage . . . in an era of political and industrial unrest and wild speculative fever, to open for business, and to establish liabilities in places as remote as Darlington in the north and Exeter in the west." The provincial banks were given a certain amount of local autonomy but were under the general management of London. In 1866, when the bank had 122 offices, it opened for business in London. This involved giving up the right to issue notes.

The calculations which led to this decision—to exchange the right of note issue amounting to nearly £450,000 for banking operations in London—have not been made explicit. The rise of railroad communication, development of London clearing and, after the Bank Act of 1844, spread of payment by check rather than by notes, plus the development

of limited liability for bank as well as other shareholders in 1857 and 1862, may all have played a role. In 1858, the National Provincial was opposed to clearing in London and the substitution of checks for country banker drafts and notes (Taylor, 1964, p. 229). By 1865 it found the trends irresistible. If the testimony of other banking histories is applicable, the London agency banks were probably earning profits on a surplus of funds generated in the branch network; the branch banks could appropriate the profit by investing the funds themselves. It would be interesting to know whether the decision was influenced by the possibility of improving intrabank settlements in London.

The last of the giant joint-stock banks, Barclays, was created in 1896 from an amalgamation of twenty private banks then doing business in various parts of England, with histories stretching back many generations. The three largest were Barclay, Bevan, Tritton, Ransom, Bouverie & Co. of London, itself a merger of a City and a West End bank; Gurney and Co. of Norwich; and Jonathan Backhouse of Darlington. Seven of the twenty original banks were firms in which there were Gurney interests. The merger combined a valuable London business with strong connections in the Eastern counties, the Southwest, and the Northwest (Matthews and Tuke, 1926, pp. 1–9). Amalgamation reflected the view that the day of the private general banker was ending and that national networks both made for efficiency in payments and protected the banker from undue dependence on other banks for funds or outlets. In particular, country banks with considerable surpluses of funds to invest required assured outlets, partly in the industrial counties but partly abroad. The necessary division of surplus funds could be made only in a central capital market, with the net excess of each branch-banking network made available for lending abroad through the discount market and the stock exchange.

In concluding the discussion of England, it is hardly necessary to explain how London became the metropolitan apex of the financial network. Whether with the correspondent system, the Bank of England branches in the provinces, or the nationally spread joint-stock banks with their head offices also in the provinces, the system had no choice but to center in London. London had an ancient banking tradition and it was a major port, the capital seat, and the hub of the railroad network; all forces were brought to bear on this locality, which was itself somewhat divided between the City and the West End. The different banking systems in Ireland and Scotland reached across their boundaries and linked up with London.

After the railroad was built in 1830, London was accessible from all

parts of the country. Howard Lloyd went to London from Birmingham one day a week from 1884 to 1902, and, after his retirement in that year, attended a weekly board meeting from his country place until his death in 1920 (Sayers, 1957, p. 50). In 1899, one partner of Smiths spent three days a week at Nottingham and one each at London, Newark, and Mansfield (Leighton-Boyce, 1958, p. 279).

London was not the only port; much foreign banking business had been conducted through Liverpool, the cotton and grain port, and through Glasgow and Dundee, which specialized respectively in tobacco and jute. The centralization process occurred through failure, merger, or a change of headquarters. Three American banks, the so-called "W-banks"—Wiggins, Wildes, and Wilson—failed in the crisis of 1837 (Hidy, 1939, p. 84), and the Bank of Liverpool did not survive the crisis of 1857; the Royal Bank of Liverpool failed in 1847 and stopped payment a second time in 1867. W. & J. Brown & Co., which remained afloat in 1837, added British capital and opened a London branch during the Civil War, when cotton was scarce; it closed down the Liverpool operation in 1889. Other Liverpool banks were absorbed at the end of the century, like the Liverpool Union Bank, which was taken over by Lloyds in 1900. The takeover required courage, Sayers (1957, p. 261) states, as Liverpool valued its independence. When Lloyds tried to absorb the Manchester and Liverpool District Bank in 1903, there was an outcry. The *Manchester Guardian* protested that the "strongest, best conducted and most prosperous of the so-called country banks should not lose its identity" (Sayers, 1957, p. 263). Financing was separated from the handling of commodities and concentrated away from the port of entry. Henry Bell, who became general manager of Lloyds in 1913, had started his banking career in a private bank in Liverpool. He worked for a time with the Liverpool Union Bank, where he gained experience in the financing of cotton, corn, timber, and provisions. When the Liverpool Union was taken over by Lloyds, he was soon transferred to the Head Office in Birmingham, and in 1903 was transferred again to manage the City Office in Lombard Street. There he turned his Liverpool experience in commodity finance to such good account that he ended up as General Manager of the entire Lloyds Bank (Sayers, 1957, pp. 79–80). Successful men, management, and techniques all converge upon the center.

Two of the smaller national joint-stock banks survived into the 1960s, with head offices in Lancashire but large London branches. The Manchester and Liverpool District Bank kept its identity until 1962, despite amalgamations, but it changed its name to District Bank in 1924 when

it achieved national status. By the same token, the Bank of Liverpool grew through merger to national scope, permitting its acquisitions to retain their original London agents, until in 1918 it was dealing with five private bankers. It then merged with Martin's Limited, with a head office in Liverpool but a separate board in London. In due course, after a death, the parochial name was altered to Martin's Bank (Chandler, 1964, Vol. I, pp. 420 ff.).

As they became national, banks experimented with various degrees of uniformity of practice and decentralization (Sayers, 1957, pp. 58, 232; Leighton-Boyce, 1958, p. 279). In the end, "the principal characteristic of the British money market is the decentralization of granting credit, while at the same time the various banking institutions are closely connected by the placing of their actual reserve in the hands of one note-issuing bank" (Bisschop, 1896, p. 217).

That coiner of physical images, Powell (1915, pp. 370, 372), quoted the 1858 Select Committee on the tendency of deposits to gravitate to London, the center of commercial activity, adding, "The expression 'gravitates' is singularly felicitous, though it is possible that the Committee did not realize how rapidly the mechanism of the Money Market was being modelled on the lines of the Solar system."

IV. PARIS IN FRANCE

The development of banking in France differed sharply from that in England. Centralization had been a feature of French life since the time of Louis XIV, but the French Revolution scattered banking back to its origins in Geneva or Germany, or overseas. With peace, these merchant banks returned to Paris; they began to slough off speculation in merchandise and to open subsidiaries in ports such as Le Havre to finance imports of cotton (Lévy-Leboyer, 1964, pp. 436–437). Apart from the ports, however, the development of credit markets was slow and they were poorly integrated. Emile Pereire wrote in 1834 that there were no banks outside of Paris, in contrast with England, which had five or six hundred (Bigo, 1947, p. 21). The disconnected character of money and capital markets is illustrated by the fact that Dijon paid 9 or 10 per cent for discounts, while Paris paid 4 per cent and Lyons as little as 3 per cent (Gille, 1970, pp. 57, 77). Lyons, however, found money tight each spring when it paid for silk from Italy. The seasonal tightness applied to all of rural France, which shipped funds to Paris in the first half of the year and got them back with the harvest after August (Bigo, 1947, p. 101).

Napoleon, who established the Bank of France at the turn of the century, sought to unify the national credit system by establishing subsidiaries of the Bank in the provinces to improve the circulation of specie and drafts. With the Restoration, the Bank of France abandoned this policy on two grounds, the difficulty of finding the local buyers for Bank of France stock needed to qualify as regents of the provincial *comptoirs,* and the scarcity of three-name paper, which was all the Bank would rediscount. The alternative was to establish regional banks to mobilize local savings more effectively. Such banks got off to a good start in Rouen, Nantes, and Bordeaux—all ports—and others were begun in the 1830s in Le Havre, Lille, Lyons, Marseilles, and Dijon, but under restrictions. The Bank of France decided that it needed a monopoly of the note issue and limited the regional banks as to the paper they could discount, the size of the notes they could issue, and the ability to redeem notes in Paris (Gille, 1970, pp. 1–101). In the financial crisis of 1848, the Bank of France allowed the regional banks to fail, so as to take over the note issue, and returned to a program of *comptoirs.*

One of the fundamental reasons for developing local institutions was

the fear that the Bank of France would order the provinces to restrict credit in a crisis without regard for local conditions (Gille, 1970, p. 24). As we have seen in the case of England, however, integration and separation can each be a help or a hindrance in periods of stress, depending upon where the liquidity squeeze strikes.

With a fractured national market, some localities experienced unique conditions owing to specialized foreign relations. While Paris served as an intermediary between sources of capital such as Vienna, Frankfurt, Strasbourg, and Basel and outlets such as Rouen, Saint-Quentin, and Ghent, Lyons had its special connection with Geneva, and Mulhouse with Basel (Lévy-Leboyer, 1964, p. 429). Marseilles was continuously bled for specie by Spain, Corsica, Algiers, and the Black Sea (Gille, 1970, pp. 67–68).

In contrast with these cities, which were linked into two or more banking networks, the countryside went its own way. Bankers were often landed proprietors rather than merchants, with an interest in lending to agriculture and in equipping large estates, but they were dominated by security, prudence, tradition, and routine. The banking leadership was in Paris, and the small country banks chose not to follow it (Thuillier, 1955, p. 512).

With the foundation of the *Crédit Mobilier* and the large credit banks—the *Crédit Lyonnais, Société Générale, Comptoir d'Escompte,* etc.—in the 1850s and 1860s, the money and capital market of France became better interconnected but no less centralized with the passage of time. The *Crédit Mobilier* and the *Société Générale* started in Paris and undertook large-scale lending for railroads, ports, and other public works, but did not finance local industrial activity. Established in the silk capital at the entrepôt for foreign trade to Switzerland and Italy, the *Crédit Lyonnais* spread out a network of branches—first in the Languedoc and then throughout the country—to draw funds not to Lyons but to Paris. The history of the bank is discussed in detail in two books, an account of the years from 1863 to 1882 by Bouvier (1961), and one of the few studies of credit networks by a geographer, Labasse (1955).

Bouvier follows with great precision the move of the bank from Lyons to Paris. Started by Henri Germain, son of a silk manufacturer, who received a substantial dowry from his wife, daughter of another silk family, its early investments were industrial and regional. Most were in difficulty by 1870. In some cases, such as the widely discussed firm, *La Fuchsine,* manufacturers of a synthetic dye, the difficulties of the firm were intensified by the greed of the bank in seeking quick

profit rather than careful development. Mme. Germain died in 1867, and M. Germain was remarried in 1869 to a Parisian. He was elected to the Chamber of Deputies, and this required his presence in Paris. Bit by bit, he spent a greater proportion of his time in Paris. He did not visit the head office in Lyons even once during 1881, and the head office was actually shifted to Paris in 1882. Even in 1879, the head of the subagency at Béziers asked whether he could not deal directly with Paris rather than going through Lyons.

In 1871, the bank made very large profits in the Thiers rente. From then on, its task was to collect savings from all France, but especially from the Lyons hinterland, to funnel to Paris for investment in foreign bonds. "Drainage" (with a French pronunciation) was the function of the branch network, the accumulation of deposits. Towns like Grenoble, Annecy, and Creusot, which had thriving industry and building and needed loans, were to be avoided. Loans were provided to commerce, the fruitgrower, the cattle feeder, and the abbatoir, but not to industrialists. The Minister of Finance made the same objection in relation to Lille in 1835: "It is rare that banks adapt to and prosper in cities of factories. There is little hope of keeping the notes of the bank in circulation for very long" (Gille, 1970, p. 36).

The change in the personal interests of Henri Germain from Lyons to Paris are of course symptomatic rather than causal. The decline in silk manufacturing in the Lyons area reduced the demand for finance and left Lyons "a gold mine for savings." Germain and the *hauts banquiers* of Paris, Geneva, and Italy who started the bank with him were interested only in lending to large and established industry, as was true of Paris banking generally. Where such loans were not available, foreign loans served instead.

Little change in this process was produced by the rise of the so-called "industrial banks," or *banques d'affaires,* founded in the 1870s. Most disappeared in the Great Depression or in the crash of 1882, which also engulfed the *Union Générale.* Those that survived did so by hoarding their profits on the Thiers rente. With recovery, from 1896 on, moreover, their investments were highly similar to those of the deposit banks, in foreign bonds and established companies.

Under these circumstances, the demand for local credit had to be filled locally in regional credit markets, which sprang up in competition with the national market. In 1910, and again in 1929, small regional banks that had not merged with or been driven under by the large Paris-led firms organized to resist the domination of the center. In 1910, the 400-member *Syndicat Central des Banques de Province* met at

Bordeaux (Brocard, 1912, p. 106). In 1929, the *Crédit Industriel et Commercial,* in cooperation with several other institutions, organized the *Union des Banques Régionales pour le Crédit Industriel* (Madden and Nadler, 1935, p. 327). The movement flourished particularly in the North, in Lorraine, and in Haute Savoie.

In the North, the *Crédit du Nord* emerged as one of the strongest of the regional banks in France. With its head office in Lille in 1848, it established a few branches—Armentières in 1878, Tourcoing in 1884, and Paris in 1889, before expanding more rapidly after 1894 (*Crédit du Nord Centenaire,* 1948). It is of particular interest that it remained a regional bank and did not move its head office to Paris. Other vital regional capital markets in Lorraine and Haute Savoie undertook to finance the expansion of Briey iron ore after 1870 and the development of hydroelectric power generation, aluminum, and other electric metallurgical and electric chemical industry (Buffet, 1917; Charpenay, 1935). The Charpenay bank failed in 1931, receiving no assistance from the Bank of France. A well-known writer on French banking (Dauphin-Meunier, 1936, pp. 165–166) has accused the Bank of France of fostering greater centralization in the twentieth century by actively competing with the regional banks for local paper. The small regional banks were able to compete with the national institutions because their deposits were mostly at term, as opposed to sight, and they were able to maintain much lower reserve ratios, in some cases as low as 3 to 4 per cent, against 12 per cent or so for the larger banks (Fanno, 1913, p. 74).

Beyond the private and deposit banks, centralization of the capital market in France was accentuated by government institutions, not only the Bank of France but also such national institutions as the *Crédit Foncier* (1852), *Crédit Agricole* (1860), and *Caisses d'Epargne* (1881, later merged with the *Caisse de Dépôts et de Consignations*). To this day, savings banks do not invest locally, as is generally the case in the United States, but pour their funds to Paris, where they are administered by a single decision-making unit, most recently as an adjunct to the planning process.

The choice of Paris over other central locations need not be explained. Tradition, administrative centralization, the communication network laid out in a star with Paris as the center, all attest to the pull of the capital. Apart from the regional banks, there was no resistance to the centripetal force. By 1900 the Lyons bourse had been left behind and was characterized as a museum piece, despite some revival during the German occupation of France in 1940–42, when it was in the

unoccupied zone (Labasse, 1955, p. 446). After World War II, the movement continued, with the transfer to Paris in the single year 1950 of the head offices of three major Lyons companies, including the *Comptoir de Textile Artificiel,* whose president continued to live in Lyons but worked in Paris during the week (Labasse, 1955, pp. 493, 500). The movement of international, largely American companies to France in the 1950s and 1960s accentuated the trend and finally elicited a program to move industry and head offices out of Paris to the provinces.

V. BERLIN IN GERMANY

The emergence of a single financial center in Germany has taken place twice, on both occasions in connection with war: first, in the rise to dominance of Berlin over Cologne, Frankfurt, Darmstadt, Dresden, Leipzig, and Hamburg after the victory of Prussia over France in 1871; and, second, in the gradual emergence of Frankfurt as the financial capital of West Germany, following the isolation of Berlin at the end of World War II. In both instances, the process was partly political and partly economic.

Prior to 1870, Germany was made up of at least thirty principalities, republics, and kingdoms, varying in size from cities like Frankfurt and Hamburg to the large state of Prussia, which encompassed a wide area from Frankfurt north to the sea and then east—including East Prussia and Silesia—with its capital at Berlin. Prior to the reduction of internal barriers in 1818, the establishment of the *Zollverein* in 1834, and the construction of the railroad in the 1840s, the constituent elements of Prussia often pursued separate policies because of physical separation. Private banks were local—the Rothschilds in Frankfurt, the Oppenheims in Cologne, Bleichröder and Mendelssohn in Berlin, Heine and Warburg in Hamburg. Beginning with the creation of the *Schaffhausen'schen Bankverein* in 1848 on the ruins of Schaffhausen & Co., which had failed, two waves of bank formation took place, from 1850 to 1857 and from 1866 to 1873, from the victory of Prussia over Austria to the onset of the Great Depression, with hardly any pause for the Franco-Prussian War in 1870 (Helfferich, 1956, p. 30).

In a passing moment of absent-mindedness, the Prussian government in 1848 granted the *Schaffhausen'schen Bankverein* permission to create an incorporated bank. But when the bank sought to grow by adding to its capital and moving to Berlin in 1853, it was refused permission (Riesser, 1911, p. 509). Its by-laws did not specifically provide for branches. Tilly (1966, p. 115) states that Berlin in the 1850s was the ideal place to start a bank, presumably because of its security activity in the finance of railroads, although he fails to say why. To get around the refusal of the Prussian government to permit further incorporated banks, Cologne financiers, led by the Oppenheims and Gustav Mevissen, and with French financial support, started the *Bank für Handel und Industrie*, known as the *Darmstädter Bank*, in Darmstadt, Hesse, a few miles from Frankfurt-am-Main and outside Prussian

jurisdiction, where money was plentiful. The statutes were for the most part copied from those of the *Schaffhausen'schen Bankverein* charter of 1848, but they went beyond these to include provisions patterned after the *Crédit Mobilier* of 1852, permitting loans and participations for own account, underwriting, issuance of bonds, and powers to effect mergers and consolidations of various companies (Riesser, 1911, pp. 56–57; Cameron, 1956). The bank quickly opened an agency in Frankfurt and followed that by agencies in Mainz, Berlin, Heilbronn, Mannheim, Breslau, and Leipzig, and, considerably later, in Hamburg and Stuttgart (Benaerts, 1933, p. 275). The Frankfurt agency was converted into a branch in 1864.

In 1856 another way was found around the Prussian refusal to grant bank charters, by using the form of *Kommanditgesellschaft auf Aktien,* a limited partnership with transferable shares.[1] Scores of banks were created, among them the conversion of the private bank of Hansemann, founded in 1851, into the *Diskontogesellschaft,* the *Berliner Handelsgesellschaft* (both of them in Berlin and both with Cologne money), the *Norddeutsche Bank,* and the *Deutsche Vereinsbank* at Hamburg (Tilly, 1966, p. 115).

The participation of Cologne bankers in operations in Darmstadt and Berlin, and through them throughout the German states, raises the question whether there was a national German or at least a Prussian-Saxon money and capital market as early as the 1850s. Cologne had no security market of its own, finding it easier to use Berlin and Frankfurt, or even Brussels and Paris (Tilly, 1966, p. 118). At this stage, Frankfurt and Berlin specialized in security markets: Frankfurt loaned to princes, towns, and foreign states, but not to industry or for railroads (Böhme, 1968, pp. 151–153; 1966, p. 219).[2] The thesis of Tilly's study of the Rhineland banks is that German industrialization of the period was achieved not through the careful planning of an efficient state bureaucracy but in "thousands of profit-oriented decisions made by capitalist entrepreneurs operating throughout Prussia"—and especially in the Rhineland (Tilly, 1966, p. 138). The implication is that the decisions were decentralized. Karl Marx said of Germany that there was "no Isaac Pereire but hundreds of Mevissens on the top of more *Crédit Mobiliers* than Germany has princes" (quoted by Blumberg,

[1] Compare the British episode of 1833, when joint-stock banks were created in England within 65 miles of London, over the objection of the Bank of England, through the discovery of a loophole in the 1826 law (see Chap. III).

[2] For a discussion of the Frankfurt money and capital market more generally, see Heyn (1969).

1960, p. 171). But Mevissen was himself the president of the *Darmstädter Bank, Luxemburg Bank, Schaffhausen'schen Bankverein, Bank für Suddeutschland, Kölner Privatbank,* and the *Berlin Handelsgesellschaft,* in addition to being president of a railroad, and he sat on the boards of six mines and two industrial companies, typically as chairman of the executive committee (Blumberg, 1960, pp. 199–200). Other Cologne bankers like Hansemann, Camphausen, and Oppenheim moved freely between banking in Berlin and Cologne and business operations in the Ruhr. Eichborn was a banker in Berlin and an industrialist in Silesia. Private bankers such as Bleichröder and Mendelssohn in Berlin worked alongside the joint-stock banks and corporations, especially in the issuance of securities (Landes, 1960, p. 206). For Prussia, at least, and for Germany as a whole, excluding Bavaria, Wurtemburg, Baden in the South, and the Hansa cities in the North, the banking network solidified rapidly in the 1850s.

Hamburg was different. It clung longer to merchant banking and was slower to specialize than other parts of Germany. Its interests lay in foreign trade, in shipping, and in overseas finance rather than in domestic railroads and coal and steel. Regarded by the rest of Germany as the "English city," and itself disdainful of Prussian leadership until the successes of 1870, its banking was more closely tied to London than to Berlin. In 1857 this foreign connection almost led to disaster. The speculative excess in grain produced a crisis which spread from New York to Liverpool to London to Scandinavia to Hamburg, where a number of private houses could not meet their obligations and ship captains were unwilling to discharge their freight for fear of not being paid. Appeals for a silver loan were made to Rothschild, Baring, and Hambro in London; to Fould and Napoleon III in Paris; and to Amsterdam, Copenhagen, Brussels, Dresden, Hanover, and Berlin (Böhme, 1968, p. 254). Fould, who was the father-in-law of Heine, the Hamburg banker, telegraphed back: "Your dispatch is not sufficiently clear." The Berlin ambassador indicated that Brück and the Kaiser would not help. At the last minute, as an anti-Berlin gesture, the Austrian government sent a train with 12 million talers of silver, known as the *Silberzug,* which saved the private banks of Merck, Godeffroy, Donner, John, Berenberg, and Gossler & Co. after the discount rate had reached 10 per cent (Böhme, 1968, pp. 266–270; Rosenberg, 1934, pp. 128ff.). Shortly thereafter, Hamburg moved to specialized banking and the foundation of joint-stock banks, the *Norddeutscher Bank* and the *Commerz- und Diskontobank.*

With Prussian successes in the 1860s, German banking became

increasingly concentrated in Berlin. The defeat of Austria deprived Frankfurt of its counterweight against the power of Prussia; from having been an imperial city and a free city, it became, in Böhme's expression, a Prussian provincial city. The functions of the Frankfurter bourse in dealing with state loans passed to Berlin (Böhme, 1968, p. 236). Among private banks, Bleichröder, Mendelssohn, and Warshauer in Berlin flourished in their security dealings, while Bethmann, Erlanger, and Rothschild in Frankfurt found their clientele shrinking (Böhme, 1966, p. 219). It seems evident that the ascendency of Berlin over Frankfurt was political, but there are other explanations—the nimbleness and skill of the Berlin bankers (Helfferich, 1956, p. 27) and the greater importance of railroad issues over those of state entities (Brockhage, 1910, p. 56). Each has a portion of the truth. But Berlin had not made its start by specializing exclusively in railroad securities. The Prussian State Bank and the affiliated *Seehandlung* had undertaken some industrial development finance well before 1840. Nor had Frankfurt monopolized state issues. After the fire of 1842, Hamburg floated a loan of 34.4 million Mark banco through two Berlin and one Hamburg houses. Issued in Berlin, much of the original amount was bought in Hamburg, and all had been repatriated by 1846 (Brockhage, 1910, pp. 208–209). Berlin was thus a capital market far more than Prussia before 1850.

When the Reich was founded by unifying Prussia and the other German states, the several monies in circulation were consolidated by the adoption of the Mark; the several banks of issue were absorbed into the *Preussische Staatsbank,* which emerged in 1875 as the *Reichsbank.* In the boom that immediately followed victory, however, there was a splurge of bank creation, the most important new banks being the *Deutsche Bank* in Berlin and the *Dresdner Bank* in Dresden, both in 1872. The *Deutsche Bank* was started by a group including Adalbert Delbrück and Ludwig Bamberger, the former a private banker, the latter a member of the *Zollverein* Parliament, an economic expert who had worked in Paris banks during an exile after 1848. The bank's founders wrote to Bismarck in February 1870 indicating their intention to devote the bank to foreign trade. Outside the United States, the finance of world trade was at that time in the hands of the French and British. Georg von Siemens, a cousin of the electrical-equipment manufacturer, was the general manager of the *Deutsche Bank.* He was completely persuaded of the high national purpose of making German trade independent of British credit and filling "the gap in finance of external trade" (Helfferich, 1956, pp. 31, 38, 41). The bank was located

in Berlin, "the importance of which is indicated by the eagerness with which the Frankfurt capital market comes to meet it" (Helfferich, 1956, p. 34). It also enlisted some Hamburg capital (Wiskemann, 1929, p. 206).

In the event, the *Deutsche Bank* had little success in foreign finance and found it impossible to operate in that field from Berlin. Its first step was to open a branch in London, in cooperation with two Frankfurt banks, in March 1871. It then established branches in Bremen and Hamburg in 1871 and 1872, respectively, "because of the difference in foreign exchange in inland and coastal towns, and the rather sharp differences in inner and coastal trading practices" (Helfferich, 1956, p. 43). Von Siemens's biographer insists that the requirements of overseas trade were decisive for the foundation of the *Deutsche Bank* but notes that business was not limited to foreign trade; he justifies expansion on the domestic front by the need to have the bank's acceptance signature widely recognized (p. 58). In the crisis of 1873, a number of banks failed and the *Deutsche Bank* took over several of them. In the beginning, it restricted itself to state loans, communal loans, and railroad securities, holding back from founding industries and issuing securities. Gradually, however, it built a syndicate of banks to move into industrial finance and underwriting. The finance of foreign trade was forgotten or put aside because of the need to build domestic roots (Helfferich, 1956, p. 111); lending to foreign borrowers, but not finance of German foreign trade, was undertaken in the 1890s. Foreign-trade finance remained the province of the Hansa cities, and particularly Hamburg, with its strong ties to London.

Victory in 1871 brought to the capital the *Darmstädter Bank* from Hesse and the *Mitteldeutsche Creditbank* from Frankfurt. The crash of 1873 produced a lull in the movement, and then came the *Dresdner Bank* in 1882, the *Schaffhausen'schen Bankverein* in 1892, the *Commerz- und Diskonto Bank* from Hamburg in 1892. Whale (1930, pp. 27–28) comments that these Berlin offices were at first only branches but soon grew to be coordinate head offices that rather eclipsed the original head offices. The process is set forth in more detail in the centennial volume of the *Commerz Bank* (1956). The *Mitteldeutsche Creditbank*, which had started in Sachische Meiningen in 1856 because it had been refused permission to locate in Frankfurt, opened its Berlin office, as noted, in 1871. From 1889, it began a policy of building local branches both in Frankfurt and in Berlin. By 1905, there were six such offices in Frankfurt, including Hoechst and Offenbach-am-Main, and seventeen in Berlin. These numbers reflect "the gradual shift of weight to

the capital and the squeezing out of Frankfurt from its leading position as bank and stock exchange city" (*Hundert Jahre*, 1956, p. 42). When Anton Gustav Wittekind retired in 1912 after forty years of leadership, two successors were appointed, one in Berlin and one in Frankfurt.

The move of the *Commerz Bank* from Hamburg to Berlin was more complex, as befitted a surrender by the possessor of a proud heritage. Founded in Hamburg in 1870, the *Commerz Bank* saw its early hopes dashed by the crisis of 1873. Deciding to follow the fashion of the times and found a subsidiary in Berlin, it absorbed the private banking house J. Dreyfus and Co. of Frankfurt-am-Main, which had acquired a Berlin subsidiary in 1891. The merger gave rise to some competition in Frankfurt, but the *Commerz Bank*'s chief interest from the first had been in Berlin. In 1899, it embarked on a policy of branch offices in Berlin, followed by more branches in Hamburg. The Frankfurt office of J. Dreyfus was given up in 1897 in favor of a *commandite* with the reconstituted firm. Even this was ended in 1908. In 1905, the *Commerz Bank* merged with the *Berlin Handelsbank,* bringing it a head office for its subsidiary and fourteen deposit branches. By 1914, the bank had eighteen branches in Hamburg and forty-four in Berlin (*Hundert Jahre,* 1956, p. 48).

Riesser (1911, p. 654) attacks a statement that banks in Germany differed from those in Britain in that the British banks moved from the provinces to London, whereas those in Germany moved from the capital to the provinces. The latter process started only after 1897, when the big banks had finished moving to Berlin. Then came the filling out of the national system in directions and areas hitherto neglected, exactly as individual British banks had done.[3]

German experience differed from that of the rest of the Continent and North America in that the metropolitan financial center for the country did not also serve for intermetropolitan dealings. Berlin had borrowed and lent abroad in the first half of the century, when the German capital market was fragmented, just as did Frankfurt, Cologne, Hamburg, and Augsburg (Brockhage, 1910). With the unification of the German capital market after 1871, domestic functions focused on Berlin and finance of foreign trade on Hamburg. The *Diskontogesellschaft* had worked closely with the *Norddeutsche Bank* of Hamburg since the early 1860s. As noted, the *Deutsche Bank* established a Hamburg subsidiary in 1872, but it became effectively interested in overseas opera-

[3] In 1900, for example, the Midlands Bank, finding itself with few branches south of a London–Bath line, created a network in the area (Crick and Wadsworth, 1936, p. 341).

tions only in 1886 (Wiskemann, 1929, p. 237). The *Darmstädter Bank* opened a subsidiary in Hamburg in 1890, the *Dresdner* in 1892, and the *Mitteldeutsche* in 1896. Wiskemann (p. 238) observes that Bismarck's interest in capital exports was not exclusively political. The "imperialistic phase" of German capital lending began after his dismissal. However much it might rival Britain in shipping and in direct rather than entrepôt purchasing, Hamburg did not challenge London in finance, whether from inability or disinclination.

The position of Berlin as a transfer point for transport between the Elbe and the Oder Rivers and its subsequent development as a railroad center have been mentioned. Friedrich List characterized it as an important communications center as early as 1833 (Baar, 1968, p. 531). Two scholars, one an economic historian, the other a social historian, have recently suggested that part of Berlin's importance lay in the fact that it was midway between the Ruhr and Upper Silesia (Borchardt, 1972, p. 152; Böhme, 1966, p. 333). Borchardt's other reasons seem more compelling—the concentration there of the Prussian authorities, the German imperial authorities, and the central bank, and the preference of associations and other organizations for that city, its easy access to Hamburg, and the like. The German geographer, W. Christaller, developed a theory that a central location tends to be chosen as a metropolis, but this view has since been discredited by the abundance of counterexamples, such as New York and London (Duncan, 1960, p. 81). Even to the extent that the central-place theory retains validity, there is no reason why it should be central between heavy industries that are competitive rather than complementary. The break-in-transport theory of metropolitan location requires connections between intercommunicating portions of a common hinterland, not a point on the ridge of equal delivered prices between competitive suppliers.

The Postwar Emergence of Frankfurt

After World War II, with the isolation of Berlin and the formation of zones of occupation, the major banks were broken up. In 1945 the *Deutsche Bank,* for example, was divided into ten branch institutes in the three Western zones of occupation. With the relaxation of Allied control in 1952, these were amalgamated into three regional banks, the *Süddeutsche Bank* in Frankfurt, the *Rheinische-Westfälische Bank* (later *Deutsche Bank West*) in Düsseldorf, and the *Norddeutsche Bank* in Hamburg. When permission was granted in 1957, these three parts were reunited into the *Deutsche Bank AG* with a legal seat at Frank-

furt, but three "central offices" remained in the three cities indicated, each of which had several members on the common management committee. In the mid-1960s the central office in Hamburg was reduced in status. In 1974 Frankfurt dominates Düsseldorf on the Board of Directors, with eight directors to Düsseldorf's five, and weekly board meetings are held mainly in Frankfurt. The General Secretary of the *Deutsche Bank* explains that Frankfurt has become the main focus of the *Deutsche Bank* because the city is the most important financial center of postwar Germany. The *Bundesbank* is there, the Frankfurt bourse has the greatest turnover of all the exchanges in the German Republic, and both of the other so-called *"Grossbanken"* have their head offices in Frankfurt (*Deutsche Bank,* letter of Jan. 25, 1973; Seidenzahl, 1970, pp. 375ff.; Wechsberg, 1966, pp. 260ff.).

In the same fashion, the *Commerz Bank* of Hamburg was divided into ten successors, reassembled into three in 1952, and into one in 1958. Various directories in the 1960s gave the location of its head office as Düsseldorf. In 1974, the head office is in Frankfurt.

It is of some interest that Cologne, which is the city nearest to Bonn, the postwar capital of the German Republic, was never in contention. Düsseldorf, which gave Frankfurt the greatest competition, is the trading and financial city of the Ruhr, with its heavy industry. Hamburg and Frankfurt were chosen by the British and American authorities respectively as the seats of their occupation forces in Germany. After the moratorium on foreign investment in Germany was removed, the head offices of American-owned multinational corporations gravitated to Frankfurt, perhaps partly because of its large and efficient international airport and partly because of the American governmental presence there, although the decisive element in that presence was shortly moved to Bonn.

The fragmentation of German financial (and political) areas and their reunification in West Germany reflect the U.S. political preoccupation with decentralization and the reality of the forces pushing in the direction of a single financial center. In the initial stages, U.S. policy harbored, or at least fostered, the illusion that each of the ten *Länder* might have a central bank and a separate monetary policy. When the occupation forces were withdrawn, *Land* banks were quickly unified in a *Bank Deutsche Länder,* later transformed into the *Bundesbank.* The American effort at decentralization represented an idealistic (ideological?), interesting, but futile experiment.

VI. ITALY—TURIN, FLORENCE, ROME, OR MILAN?

In her account of the rise of the New York money market, Myers (1931, p. 6) states: ". . . there occurred a separation between the political and financial capitals which is peculiar to America. In Europe the two are generally the same: London, Paris, Berlin are the seats both of government and of the money market." Milan, Zurich, and Amsterdam attest to the fact that this is not always the case. As we shall see, moreover, the formation of the Italian financial center was more complex than this statement implies.

Italy, of course, had an ancient tradition in banking. Venice and Florence were banking centers in the Renaissance; Lombard Street in London was named after immigrant bankers from Milan and its surrounding area. In the late eighteenth century, when port cities were banking centers, Genoa, the capital of Liguria, was a flourishing trading town with a developed financial community. There was a smaller financial community down the coast at Leghorn. With its magnificent port, Naples was the commercial and financial center of the Kingdom of Two Sicilies, with the whole south of Italy as its hinterland. Its importance is indicated by the fact that the Rothschilds established a branch of their house there after the Napoleonic War.

As the northern city-states lacked a substantial hinterland (Luzzatto, 1960, p. 160), the small city-states declined, and Italy reached the middle of the nineteenth century without a substantial banking center in the North outside of Genoa. As late as 1844, Genovese were convinced that Turin could not become a banking center (Cavour, in Romani, 1968, p. 591). Attempts to create banks in Milan failed between 1821 and 1847, and Lombardy had to rely on capital imports from France during the period of seasonal financial stringency caused by silk (Greenfield, 1965, p. 142). With the unification of Italy in 1860 under the leadership of Count Cavour of Piedmont, Turin became the capital of Italy, and the banking center as well. Lombardy, which had been liberated by the Kingdom of Sardinia in the course of the unification struggle with Austria, held back from wholehearted support of "Italy" and insisted on local autonomy. Rome and the Papal States were not to be acquired until 1870.

The financial difficulties of the regime led to foreign borrowing and to the selling off of royal and Church land. Rivalry developed in France between the Pereires and the Rothschilds as to which could stake out

a dominant position in Italy. Both were interested in banking and the finance of state and public works, largely railroads. Speculative fever in Paris stimulated the *Crédit Mobilier* to found the *Società Generale di Credito Mobiliare,* and the *Société de Crédit Industriel et Commerical* to start the *Banca di Credito Italiano.* The English ambassador joined the Ricasoli family of Florence to found the *Banca Anglo-Italiana,* again in Turin. In all, thirteen banks of ordinary credit (roughly equivalent to joint-stock banks in Britain or commercial banks in the United States) were founded in Turin from 1860 to 1866, including the notorious *Banco Sconto e Sete* (Bank of Discount and Silk). Elsewhere in the North, there were three leading private banks in Genoa, four in Milan, and one in Leghorn. In 1865, Florence became the capital. In 1866, de Boullay of Paris started a new bank in Florence which sold American mortgages and shares in the tax collections of Lecce. It quickly suspended payments. The *Credito Mobiliare,* which for thirty years was to be the most important bank in Italy after the *Banca Nazionale,* the predecessor of the Bank of Italy, transferred its head office to Florence in 1865 (Luzzatto, 1963, pp. 63ff.).

Gerschenkron (1968, p. 88) has ascribed the development of Italy after 1896 to the industrial investments of the *Banca Commerciale Italiana* and the *Credito Italiano,* which were founded with largely German funds. The question inevitably arises why the *Credito Mobiliare* and the *Banca di Credito Italiano* did not produce the same result thirty years earlier. Cameron (1972, p. 18) indicates that, if a banking system is to be effective, government must assure minimal conditions of both financial and political order and refrain from random ad hoc interference. Cohen (1967), who supports the Gerschenkron thesis for the end of the century, explains the earlier failure by the poor development of financial institutions, their geographic limitation to the North and Central parts of the country, and their general inefficiency (1972, p. 60).

The banks of the 1860s were supported in 1871 and 1872 by a new wave of foreign banks, including the *Banca Italo-Germanica,* which started in Florence, moved to Rome, and developed branches in Naples, Milan, and later Trieste and Leghorn. This bank speculated unwisely and collapsed in 1874. Another with a similar experience was the *Banca Austro-Italiana.* Both names indicate that nationality was not a critical factor at this stage and that German banks could fail as well as French banks. Somewhat longer lived was the *Banca Generale,* founded in Rome in 1871 with Milanese and foreign capital (Clough, 1964, p. 125). Luzzatto (1963, p. 105) comments that these bank failures

were unimportant in an economy which was four-fifths agricultural and not integrated through cheap transport. Losses were mainly suffered by foreign speculators, plus some Italians in Turin and Genoa, and, in minor measure, in Florence, Milan, and Leghorn.

Despite the abortive attempts to shift the financial center to Florence when it became the capital in 1865 and to Rome when the capital was finally established there in 1870, Piedmont and its capital, Turin, remained the financial center of the country from 1860 to 1890. The *Banca Tiberina,* which had close associations with the *Banco Sconto e Sete,* moved north from Rome in 1879 and maintained its legal seat in Turin until 1889 (Clough, 1964, p. 12). Its purpose was to enlarge its capital for speculation in Roman real estate, and it sought capital not only from the *Banco Sconto e Sete* but also from the *Banca Nazionale.* In 1884, the *Banca Napoletana* was transformed with the help of the *Banca Nazionale* and new Genovese, Turin, and Swiss capital into the *Banca di Credito Meridionale* for the purpose of investing in Neapolitan real estate under the regulations of a law of the same year (Luzzatto, 1963, pp. 211–212). The *Credito Mobiliare* seems to have moved back from Florence to Turin to be in the action, although I find no explicit mention of a date, and to have participated alongside the *Banca Generale* in lending to the steel and shipbuilding complex at Terni, to railroads, and for housing, especially in Rome. One of the six banks of issue, the *Banca Romana,* was also deeply involved in the financing of Roman expansion. The note circulation of the *Banca Nazionale* reached its limit in 1866 and the limit was raised (Smith, 1959, p. 163). The *Banca Tiberina* began to fail and it was saved. Two matters caused crisis to erupt—the tariff war with France in 1887, which provoked the withdrawal of French capital, and the revelation that the *Banca Romana* had violated its statutory note-issue limit, leading to a political scandal. The result was the failure of the *Credito Mobiliare* and the *Banca Generale,* the forced amalgamation of the seven banks of note issue (including the *Banca Nazionale* and the *Banca Romana*) into the Bank of Italy, and the collapse of Turin as the financial capital of Italy. The failure of the *Credito Mobiliare* is sometimes ascribed to the death in 1885 of its leader, Balduino. While he was alive, the bank's speculations were happy. In his contemporary annual articles on Italian financial affairs, Pareto (1894, p. 59) blamed the failures on the fact that the banks engaged in affairs patronized by the government and advised the *Banca Commerciale Italiana* and the *Credito Italiano* to refrain from such activity. Under Balduino's successor, Bassi, the *Credito Mobiliare* entered into building speculation

in Rome and Naples (Luzzatto, 1963, p. 266). The *Banca Generale* lost heavily in Terni, in railroads (the *Ferrovie Meridionale*), in Milan, and in foreign investment. Luzzatto (1963, p. 250) notes that its *Crédit-Mobilier*-type operations were pursued from the Rome head office, and that the Milan branch went in for strictly commercial banking.[1]

The wave of liquidation from 1887 to 1893 removed Turin from leadership and put Milan and Genoa ahead. The larger Lombard and Ligurian banks built branches in Piedmont, including its capital, Turin, and Piedmont's depositors shifted their funds to them (Fanno, 1913, p. 92n). In the mid-nineties the *Banca Commerciale Italiana* was established in Milan; the *Credito Italiano* started with its head office in Genoa and ultimately moved it to Milan (Luzzatto, 1960, p. 465). The former was purely German in origin, started by Bleichröder and the *Deutsche Bank*. The latter took over the Milan remnant of the *Banca Generale* and had German, Belgian, and Swiss stockholders. In 1898, a *Società Bancaria Milanese* was started, was transformed into the firm Weill-Schott Brothers and Co., and absorbed another private bank in Milan. It expanded rapidly in boom conditions, acquired the *Banco Sconto e Sete* in 1904, kept on expanding, and in 1907 was dominated by its Genovese group. The Bank of Italy supported it, being interested in developing a third large bank in Lombardy, in Liguria, and above all in Genoa. Bonelli (1971, pp. 29-37) notes that the bank lacked central direction, with its Milan office entirely unaware of the risks taken in Genoa. When the international money market tightened in the crisis of 1907, the *Società Bancaria Italiana,* as it was now known, collapsed, despite the efforts of Stringher of the Bank of Italy to save it. This left Milan as the undisputed financial center *in* Italy. The more interesting question is whether it was the financial center *of* Italy, that is, whether the Italian financial system was still unintegrated or had coalesced into a unified structure.

The critical questions in this abbreviated account of the geography of Italian banking from 1860 to the First World War are: Why was Rome not the financial center? If not Rome, why did Turin lose out to Milan? What role in the choice between Turin and Milan was played by the nationality of the foreign sources of capital and direction?

The reasons for the rejection of Rome seem evident. It became the capital late, it was badly located in relation to the productive parts of Italy, and its transport connections were poor. In no sense could it be called a metropolis with an economic hinterland for which it provided

[1] An earlier failure of the *Banca di Milano* was the result of the failure in 1882 of the *Union Générale* of Paris, which had created it.

service. Rome, in fact, was a parasitical city. The Church sucked income from the rest of Italy and the world, and the services it rendered in return were spiritual, and economically elusive. Savings were limited, the demand for capital for investment in housing very large. It was a sinkhole for capital, not a functioning pivot for allocating capital throughout the country.

The rise of Milan to preeminence over Turin has been attributed to the excesses and scandals of 1887 to 1893, the loss of prestige of France relative to Germany after 1871, the deep cleavage between France and Italy over the tariff agreement of 1887, and the political banking of Germany, with its Lombard connections. In my judgment, more cause should be attributed to the locational aspects. Turin got the jump on Milan with the Fréjus pass and the Mt. Cenis tunnel in 1870, the latter projected under Cavour in 1859 before unification. Cavour's policies concerning railroads, canals, and economic development generally gave the Kingdom of Sardinia (Piedmont and Sardinia) a headstart in economic development, but easy access to France was a vital aspect of it. When the Gotthard tunnel was finished in 1882, the position of Piedmont was weakened and that of Milan strengthened;[2] the completion of the Simplon tunnel in 1906 intensified the central character of Milan and the increasingly peripheral character of Piedmont.

A hypothesis emerging from this review is that Italian financial integration did not take place until 1893 and that it had an important role in the economic ursurge which occurred between then and World War I, much along the lines predicted by Shaw and McKinnon. Prior to that time, the capital market was fragmented, despite a certain amount of branch banking, the active roles of the *Banca Nazionale* and the government, and the close connections of banks in Turin and Rome on a few investments (largely housing and such railroads as were left over by foreign investors). Such a hypothesis would explain why German *Crédit-Mobilier*-type banks succeeded in stimulating the Italian economy when French banks of the same character could not. Turin industry grew rapidly after 1893, but it was financed by the *Banca Commerciale Italiano* and the *Credito Italiano*, except for the automobile industry, which used the Turin bourse (Castronovo, 1969, pp. 200ff., 215ff., 243). From 1860 to 1885, Italy, even Central and Northern Italy, was not an integrated financial market. When it became one, economic development spurted.

[2] There is irony in the fact that the *Banca di Torino* helped finance the Gotthard route (the *Società delle Ferrovie del Gottardo*) (Castronovo, 1969, p. 116).

VII. A SINGLE CENTER IN SWITZERLAND?

Almost forty years ago, Schwarzenbach (1935, pp. 482–483) made the case that Switzerland differed from France, England, and Holland in not having a single financial center but, rather, three: Zurich, Basel, and Geneva:

> In contrast to other financial centers . . . the money market in Switzerland is not concentrated in any one city. This fact is chiefly due to the political organization of Switzerland as a confederation of twenty-five states (cantons) which have wide powers of local government. As an outgrowth of territorial and historical factors, a strong individualism exists which is responsible for the lack of uniformity in the social and economic structure of the various states. Consequently there has developed no single preponderant business or financial center such as Paris in France, London in England, or Amsterdam in Holland.

This statement was hardly true. Of the seven large commercial banks in being forty years ago, five had their largest office, if not the nominal head office, in Zurich and two in Basel (Schwarzenbach, 1935, p. 497); of the seven stock exchanges, only Zurich, Basel, and Geneva were of any importance, and the Zurich turnover was from two to four times greater than that of Basel, with Geneva an also-ran (Schwarzenbach, 1935, p. 519). Switzerland provides a classic case of the formation of a single financial center, since it started with many, of which Zurich was originally not particularly important as compared with Geneva, Basel, Bern, or Winterthur. Zurich emerged as the financial center at the end of the nineteenth century, despite the connections and traditions of Geneva and Basel and the fact that the governmental seat was at Bern after confederation in 1848. Zurich's success can be ascribed to its focal location in the railroad age, especially after the building of the Gotthard tunnel, and to the pushiness of its bankers.

Geneva and Basel were old banking communities with long-established connections. Geneva's lines ran to Lyons, which had a great Swiss colony, the so-called "*Nation Suisse*" (Iklé, 1972, p. 10) and to Paris, where its Protestants mingled freely with the Huguenots and Jews of the *hautes banques* and the Bank of France. Many Parisian bankers had spent the Revolution and especially the Terror in Geneva, although others installed themselves in Zurich, Neuchâtel, Lausanne, or Winterthur (Lévy-Leboyer, 1964, pp. 425, 431). With the return of

peace, fifteen out of twenty-two *hautes banques* in Paris were said to be of Genevese origin (Lévy-Leboyer, 1964, p. 432n). The traditional names of Burchardt, Iselin, and Stahelin were long associated with Basel banking, lending to Switzerland generally, but principally to Baden, as far north as Karlsruhe and Stuttgart, and to eastern France in competition with Paris, especially to Besançon, Mulhouse, Strasbourg, and Nancy (Iklé, 1972, p. 14). Mulhouse was even called the daughter of Basel finance (Gille, 1970, p. 88).

Zurich had some tradition in foreign banking going back to 1750, but it was hardly a significant town one hundred years later. It was less important than Geneva or Basel and about on a par as an economic center with Winterthur, when it started its meteoric rise in 1850. Its population increased elevenfold between 1850 and 1910 (Union Bank, 1962, p. 55). In World War I its position in the interior of the country, away from the belligerents' borders, resulted in the concentration there of international transactions.

Zurich's development can be illustrated by an account of the Union Bank of Switzerland, which was formed from an amalgamation in 1912 of the Bank of Winterthur, established in 1862, and the *Toggenburger Bank,* originally of Lichtensteig and later of St. Gall in eastern Switzerland. The Bank of Winterthur started out bravely as a *banque d'affaires* in the boom of the 1860s, in discounts, industrial-security issuance, and railroad promotion. From the 1850s, Winterthur was connected by railroad with Zurich, Frauenfeld, Schaffhausen, and St. Gall. The town fathers, proposing to make the city a center for storage and transshipment of goods, built a weighing house, a municipal granary, and a storage warehouse at the time they formed the Bank of Winterthur. By 1872, the Bank was a solid affair with a flourishing business throughout German Switzerland.

In 1873, the city embarked on a foolhardy scheme to build a "Swiss National Railway" in order to make Winterthur a link in the network running from Lake Constance to Lake Geneva, bypassing Zurich, Bern, and Lausanne. Part of the inspiration was pique against Zurich, the capital of the canton in which Winterthur was situated, and against Alfred Escher, "the strongest personality in economic and political life at the time" (Iklé, 1972, p. 18), president of the *Schweizerische Kreditanstalt,* which he founded in 1856, president of the Northeastern Railroad, and later promoter of the Gotthard tunnel. The threat of Winterthur to Zurich and Escher was met by prompt and effective action by the Northeastern and Central Railroads. The Swiss National Railway went bankrupt in 1878, and the city had to issue debt to make good

its share of the loss when assets of the company in which 31 million Swiss francs had been invested were sold at auction to the Northeastern Railroad for less than 4 million (Union Bank, 1962, pp. 38–39).

"If you can't lick them, join them." Already in the 1870s, there had been a demand for the Bank of Winterthur to establish a foothold in the business center of Zurich. As Winterthur stagnated and Zurich flourished, the bank moved at the very end of the century to shift its center of gravity. In 1897, it acquired a participation in a Zurich banking and stockbrokerage firm, but this proved to be unsatisfactory and was given up in 1901. The bank then strove to overcome its prejudice against branches and in 1906 acquired the Bank of Baden's Zurich office, which had been established in the 1890s. Part of the stimulus was the rising strength of Escher's creation, the Swiss Credit Bank, growing with the city of Zurich, his success in railroading, and the threat of the Swiss Banking Corporation. This latter, started in midcentury as a syndicate of private bankers calling itself the Bank Corporation, formed into a bank, the *Basler Bankverein,* in 1870. In 1895, it merged with the *Zürcher Bankverein* to form the Swiss Bank Corporation (Iklé, 1972, p. 15). The Swiss Credit Bank and the Swiss Bank Corporation belonged to the "cartel of Swiss banks" formed in 1897 to place the loans of municipalities and cantons. The cartel excluded the Bank of Winterthur, which then formed a rival group. The Bank of Winterthur merged with the *Toggensburger Bank* of eastern Switzerland in 1912, started branching into French Switzerland in 1916, and went into Italian Switzerland in 1920. Its last penetrations into Basel and Bern occurred in 1920 and 1923.

A history of the bank, *Union Bank of Switzerland,* asserts that it was inevitable after the formation of the Zurich office that Zurich should become the heart and center of the institution. The "administrative offices" were kept in Winterthur and St. Gall, and annual meetings of stockholders alternated between them from 1912 to 1945. There was one managing director for Winterthur and Zurich and one for Lichtensteig and St. Gall; they acted alternately as chairman of the annual meeting. "Gradually the Toggensburger chairman for Lichtensteig and St. Gall gave precedence to Winterthur, and after his death in 1921, the two-consul system fell into desuetude" (Union Bank, 1962, p. 74). In World War I, the foreign-exchange business of Zurich grew, and this encouraged the concentration of the Union Bank's commercial business in Zurich. Even before the war, that branch had been making rapid progress in the handling of its stock-market and credit operations. A new building was completed in Zurich in 1917, and a year

later the accounting department was moved there from Winterthur. From then on, the board of directors held all its regular meetings in the Zurich building. In 1912, the management had consisted of two ex-Winterthurers and two ex-Toggensburgers. One retired, and three new managers from Zurich were brought in, including the head manager, Paul Jaberg. Another death left the Zurich preponderance at three of five (*Union Bank*, 1962, pp. 86–88, 132).

Of further interest, the Swiss National Bank (the central bank, created in 1905 after a legislative proposal for its establishment had been rejected by referendum in 1894) has been domiciled in Bern since 1935, but effectively it is divided between Bern and Zurich. The seat of management is Zurich, and two of three departments are located there—discounts, foreign exchange, and secured loans in one, giro and auditing in the other. The third department in Bern deals with note issue, cash reserves, administration, and the fiscal agencies for the federal government and the federal railways (Schwarzenbach, 1935, pp. 484–486). This division of functions brings to Zurich all subjects that involve uncertainty and need for face-to-face communication, except those involving the federal government, leaving routine questions—except possibly cash reserves—for another location.

There is a question today whether telex and the telephone have made Basel, Geneva, and Zurich one financial center, with no real distinction among them. Are the distances between Zurich and Basel and the language barrier, if one adds Geneva, so slight as to be negligible? I think not. Some American corporations, such as Investors Overseas Service, may have chosen Geneva because it has been a more international community than Zurich ever since the location there of the League of Nations in 1919. Moreover, the French-speaking atmosphere may be more attractive to international corporations than *Schweiz'sche Deutsch* or even *schriften Deutsch*. But Zurich clearly dominates. The gnomes are the gnomes of Zurich, not of Switzerland. The location in Basel of the Bank for International Settlements—a 1930 decision dictated by the route of the railroad—and in Geneva of the League and its successors, the Economic Commission for Europe and the European offices of the United Nations, keep those cities alive administratively and as banking centers. But Zurich is the focus.

Even had it not been for its traditional banking relations to France, Geneva would have held on to some (most?) of its role as a distinct financial center because of the cultural differences between French- and German-speaking Switzerland. It is of interest to contemplate whether Geneva would have outstripped Zurich if *Suisse romande* had

been larger and wealthier than the German-speaking parts. Lugano in a small way remains a separate financial community, linked to Italy by ease of communication as well as language and separated from the rest of Switzerland by the Alps, however much tunneled. But Ticino is a very small proportion of total Switzerland. Geneva, the Vaud, Neuchâtel, and the other Francophone portions are substantial both in numbers and economically. It is likely but not certain that cultural differences make for separation of financial functions.

Switzerland, I conclude, is not very different in financial agglomeration from other European cases. Tradition, the federal form of government, the seat of government in Bern, the international roles of Basel and Geneva, and the financial relations of those cities with particular hinterlands abroad, at least historically, were overwhelmed by the central location of Zurich at a crossroads. The crossroads was partly arbitrary and man-made, if we accept the Union Bank's account of the role of Escher, which I have not pursued in depth. Zurich benefited from the accident of World War I, which inhibited development of the two financial markets on the border; Geneva, with its relations with France, and Basel, connected to Germany exclusively after the loss by France of Alsace-Lorraine, may to some extent have neutralized each other. While there can be no doubt that Geneva and Basel are today closely connected with Zurich and with each other, Zurich is the financial capital of Switzerland, and an international money and capital market, though not the political capital, which is in Bern.

A final point: Measured by total assets, Zurich would stand out, but not so much as when measured by the assets of commercial or private banks. This is because of the large role of the cantonal banks, the first of which was established in Bern in 1834. Restricted to particular cantons, they do not move. Their total assets rose ahead of those of "Discount banks" and "Other banks" in the 1870s and by 1910 constituted four-fifths of the banking total (Johr, 1915, p. 457). But the cantonal banks put half their funds into mortgages, where the national market is less perfect than in bills of exchange, commercial loans, or stock-exchange securities. (In the 1960s, it took a difference of almost 2 full percentage points in savings-bank interest rates to move savings-bank funds from the East to the West Coast of the United States, indicating that in this capital market integration proceeds slowly.) The cantonal banks do not constitute so much an exception to these remarks as a different story.

VIII. TORONTO vs. MONTREAL IN CANADA

Initially, I intended to limit this exercise in comparative economic history to Europe, and thus to countries at broadly the same stage of development and with similar factor proportions. The more I considered Canada, however, the more I observed certain interesting and perhaps unique features. I therefore deal here with Canada, and, in the next chapter, as a companion piece, briefly with the United States.

Chartered banking in Canada began after the Napoleonic War. The Bank of Montreal opened its doors in 1817 without a charter. The first chartered bank, according to Neufeld (1972, p. 39) was the Bank of New Brunswick, opened in 1820. The centenary volume of the Bank of Montreal claims 1821 as the date for its charter, but royal assent was not received until 1822, putting it two years behind its New Brunswick neighbor (Bank of Montreal, 1917, p. 14). Then quickly followed the formation of the Quebec Bank, the Bank of Canada (not the central bank started in 1936, but a Montreal bank established by American citizens), and the Bank of Upper Canada.

With a large Scottish population, initial Canadian practice followed the Scottish tradition of branch banking rather than the English, and the Bank of Montreal opened agencies in Quebec, Kingston, and York in the first year, 1817. Kingston and York (now Toronto) were in Upper Canada (now Ontario), so that the tension between Montreal and Toronto, or between the Provinces of Quebec and Ontario, may be said to have started early. In the same year, the Bank of Canada founded an agency in Kingston. The Bank of Montreal opened an agency in New York in 1853, the first such agency, and one of only two as late as 1870 (Neufeld, 1972, p. 123). The Bank of British North America was organized in London in 1836 and within a year opened branches in Toronto, Montreal, Quebec, St. John, Halifax, and St. John, Newfoundland (Ross, 1920, p. 22).

While Montreal handled the export of furs and the import of general merchandise, Nova Scotia throve on shipbuilding from as early as 1761 to 1874, when wooden ships lost out to ironclads. The major banks in Nova Scotia were the Halifax Banking Company, formed in 1825 from Collins, an earlier private bank; the Bank of Nova Scotia, organized in 1832 as a counterweight to the monopoly of the former; and Merchants Bank of Halifax (later the Royal Bank of Canada), proposed during the Civil War, when shipbuilding had its last expansion. The

two largest firms, heavily indebted to the Merchants Bank, passed into receivership in 1885. The Merchants Bank "now realized that if enterprises of national importance were to be financed, the bank must become national in scope, with [sufficient] capital and reserves that its position could not be shaken by local losses" (*Royal Bank of Canada,* 1920, p. 17). The bank resolved in that year to extend its operations to Montreal and, after establishing a branch there, opened agencies in the east and west of the city.[1] In twelve years, the focus of the bank had shifted from Halifax to Montreal. In 1898, Duncan of the Halifax branch ceased to be in sole command of the bank, though he remained for one more year in charge of the head office in Halifax and the branches in the Maritimes and Newfoundland. With the upsurge of business, the Montreal manager, Pease, was made general manager; the name was changed from the Merchants Bank of Halifax to the Royal Bank of Canada; branches were opened as far away as Vancouver; and some 5,000 new shares of $250 par were sold to prominent Americans. At the annual meeting of 1906, it was proposed to change the head office from Halifax to Montreal, "the natural center for expansion." This was accomplished the following year (Jamieson, 1953, pp. 17–24).

The decision of the Bank of Nova Scotia took place more slowly. Again, a personnel change was the occasion.

> One of the first important decisions made by the new general manager —a title which replaced the old Scotch form of "cashier" in 1898—was the removal of the Bank's executive office from Halifax to Toronto in March, 1900. The change was a natural outcome of the westward turn of events which followed closely on the linking of far-flung provinces by the Canadian Pacific and other railway systems and was a necessary step if the Bank were to play a leading role in the new prosperity and economy of the twentieth century. Many of its Maritime customers had already become dominion-wide concerns, and important connections which it had established in Ontario, Quebec and Winnipeg, necessitated banking facilities free from the delay attendant upon correspondence between these points and Halifax. It is a matter of pride to the citizens of Nova Scotia that the Bank still retains its head office in Halifax, and that year by year the shareholders meet on the fourth Wednesday in January in the Maritime home of their institution—now a splendid new building completed last year and fittingly used for the first time by the directors and share-

[1] It is of some interest to observe that, in the same year, poised on the brink of decline, Halifax established the first clearinghouse in Canada, but this example was quickly followed by Montreal (1889), Toronto and Hamilton (1891), and Winnipeg (Jamieson, 1953, p. 25).

holders at the hundredth annual meeting in January, 1932 (*Bank of Nova Scotia*, 1932, pp. 81, 83).

At almost exactly the same time, in 1899, Max Aitken, later Lord Beaverbrook, became secretary to a Halifax firm at the age of twenty. He arranged a merger between the Commercial Bank of Windsor and the Union Bank of Halifax, which presumably transferred the focus of that bank's operations from Nova Scotia to Ontario. Later, he formed an investment concern, Royal Securities, in Halifax, which operated in new ventures, mergers, reorganizations, and the like. This was moved from Halifax to Montreal in 1906 (Neufeld, 1972, pp. 488–489).

Puzzling in the foregoing is the lack of a single magnet: Montreal, Toronto, Windsor, and again Montreal. There is temptation to say that Montreal was the attraction in 1887 when the Merchants Bank of Halifax (Royal Bank of Canada) made its decision, and delay in the case of the Bank of Nova Scotia produced a different choice because of developments between 1887 and 1900. Moreover, the choice of Windsor in 1899 is odd unless the Commercial Bank was Aitken's second or third choice for merger with the Union Bank. But then why Montreal again in 1906? And why, once the Royal Bank had established itself in Montreal and Toronto outstripped it—a supposition we are about to examine—why did not the Royal Bank or the Bank of Montreal move to Toronto? The Bank of Montreal declined relative to the Canadian Imperial Bank of Commerce, located in Toronto (Neufeld, 1972, p. 573), but presumably not enough to warrant the expense and wrench of transferring to the livelier site.

The decline of Halifax as an early financial center needs no further explanation, but the drawn-out resolution of the competition between Toronto and Montreal is perplexing. Toronto started to compete with Montreal in the 1850s, was beaten back in the 1860s when a financial crisis followed the end of the Civil War in the United States, and then began a long rise to rival status. With the Western boom and the wave of British investment in Canada after 1896, Toronto gained further, even though much of the capital from London was handled through Montreal. After World War I, there were still further gains for Toronto but no clear-cut ascendency. Toronto continued to gain and ultimately surpassed Montreal as a financial center, but the latter did not give way, as had Cologne, nineteenth-century Frankfurt, Lyons, Turin, Philadelphia, Baltimore, and Boston. The money market in Canada is said to be centered in "Toronto and Montreal," or reference is made to the interest differential between New York and "Montreal-Toronto"

(Botha, 1972, pp. 138, 143). The Royal Commission on Banking and Finance (1964, pp. 294–315) refers to foreign-exchange brokers of Montreal and Toronto, or to the dealer inventories of the secondary security market as "concentrated in Montreal and Toronto." The Bank of Montreal and the Royal Bank retain their head offices in Montreal, whereas the three smaller but faster-growing (till 1960) chartered banks, the Canadian Imperial Bank of Commerce, the Bank of Nova Scotia, and the Toronto-Dominion Bank are headquartered in Toronto (for size in selected years from 1870 to 1970, see Neufeld, 1972, Table 4.6, p. 98). Since 1960, the Bank of Montreal and the Royal Bank have grown in total assets relative to the Toronto three, but, in regard to security deals, the Royal Commission in 1964 (p. 343) observed:

> The main volume of business has remained concentrated in Montreal and Toronto with the latter tending to grow in relative importance in response to the westward shift of Canadian economic activity and the replacement of overseas countries by the United States as the primary source of external capital.

Yet Montreal is as close to New York as is Toronto, and should not have suffered when New York replaced London as the source of overseas investment in stocks and bonds issued by Canadian entities.

But let us leave aside the question of whether Montreal or Toronto is the more important money and capital market for this or that financial instrument. The more interesting question is whether Toronto is emerging as the single financial center of Canada by a process drawn out at much greater length than in other countries or whether the two centers have been stabilized in an exceptional cooperative relationship. In 1947, Masters (p. 211) wrote, "Rivals, their capital structures became and remained closely linked." This has been the standard view until very recently. It now appears, however, that Toronto has overtaken and surpassed Montreal. So drawn out is the process, however, that Montreal banks seem to be under no pressure to move their head offices or their major money-market or foreign-exchange activities to the Ontario financial capital. The diseconomies of disarticulation are, in some inexplicable way, not very pressing.[2]

[2] As this study was being prepared for publication, Dr. Irving Silver of the Canadian Ministry of State for Urban Affairs kindly called my attention to an article that appeared in the *Montreal Gazette* on May 28, 1974. It reported that a study by Professor André Ryba of the University of Montreal established that stock-market, money-market, bond-market, and banking activities are all gradually shifting to Toronto. In particular, both the Royal Bank of Canada and the Bank of Montreal have shifted their "vital money market 'trading desks' to Toronto."

Gras (1922) distinguishes four stages—commerce, industry, transport, and finance—through which a town must pass en route to becoming a metropolis. For the early period during which Toronto came out from under the shadow of Montreal, we are fortunate in having a history that explicitly uses Gras's model. Masters's (1947) study is focused on the period from 1850 to 1890, when Toronto triumphed over its other Ontario rivals and emerged as the dominant financial center of that province. Along the way, there was a continuous struggle with Montreal, a struggle marked by the desire to avoid financial domination by New York (Glazebrook, 1971, pp. 193–194). The major episodes in that struggle were the construction of the Grand Trunk railroad and early Welland and St. Lawrence canals; the transfer of the government account from the Bank of Upper Canada in Kingston to the Bank of Montreal in 1864; the failure of the former in 1866; the determination of E. H. King, the general manager of the Bank of Montreal, to pattern banking legislation after the National Bank Act in the United States, shifting from branch to unit banking to keep ahead of challenging banks and requiring banks of issue to hold government debt, thus relieving the Bank of Montreal; and the struggle over the Canadian Pacific Railway terminus in the 1870s. The details are too complex perhaps for a non-Canadian readership. The central point is that in the 1860s Ontario was alarmed at the growing strength and dominance of the Bank of Montreal, which it believed to be draining loanable capital from Ontario to Montreal (Masters, 1947, p. 59). Determined to resist this development, Ontario made political efforts to bring transportation routes to and through Toronto, created and fostered banks such as the Bank of Commerce in 1866 and the Dominion Bank in 1870, and influenced banking legislation (Masters, 1947, p. 97). Toronto's population rose from 45,000 in 1861 to 210,000 by 1901, while Montreal's grew from 90,000 to 270,000. Thereafter, as money and migrants poured Westward, Toronto continued to gain on Montreal, but not so much as to crush it as a financial center.

Several factors account for the rise of Toronto as a rival of Montreal in addition to the transport system, the development of the West, and policy initiatives by Torontonians. One is the shift of investment from railroads to mining. St. James Street in Montreal specialized in railroad securities, while Toronto specialized in mining stocks. In manufacturing, moreover, Montreal tends to have older industries: clothing, textiles, food and tobacco products, and railway equipment, as well as machinery and aircraft, whereas the Golden Horseshoe from Niagara to Toronto and around the western end of Lake Erie, the Torontonian

hinterland, specializes in flour milling (old), steel, automobiles, and agricultural implements, and electrochemical and electrometallurgical industries based on Niagara power (Ray, 1967, pp. 40, 41). Casual empiricism suggests that the income elasticity of Ontario's industry outweighs that of Quebec.

Another factor is the change in the source of external capital from Britain to the United States. Britain's gateway to Canada was naturally Montreal. New York had the choice of going up the Hudson all the way or turning west via the Erie Canal. Direct investment, however, strongly favored Toronto. Table 1, showing employment percentages in Canadian-, U.S.- and U.K.-owned firms in Canada indicates sharp differences by province. There is, of course, no assurance that the location of production facilities governs the location of head offices of investing companies, which have an effect on the location of financial facilities. United States corporations could locate production facilities in Ontario but have Canadian corporate headquarters in Montreal, in communication with the U.S. head office in New York, but this pattern is unlikely. With New York virtually equidistant from Montreal and Toronto, it makes sense for companies such as General Motors, whose production facilities are in the Middle West and whose finance is in New York, to choose Toronto over Montreal in the interest of efficient communication between U.S. headquarters and Canadian production. Where a U.S. company has only a single factory in Canada, moreover, head office and plant are probably located together. Toronto may also be favored by U.S. businessmen because of the identity of language and the similarity of culture.

But what must be explained is less the rise of Toronto than the lack of greater decline in Montreal until the 1970s. Part of the explanation may lie in governmental policy, urging the two main banks to keep their

TABLE 1

Manufacturing Employment in Selected Provinces in Canada, by Nationality of Control of Firms, 1961
(in per cent of total)

	Canadian	*United States*	*United Kingdom*
Atlantic provinces	78.67	6.05	15.15
Quebec	75.95	16.84	6.35
Ontario	62.39	30.71	6.10
Canada	70.48	22.54	6.16

Source: Ray (1967, p. 49).

head offices in Montreal. Unlike the central bank's position in England, France, Germany, or Switzerland, but similar to that of the Bank of Italy in Rome, the Bank of Canada remains in the capital, Ottawa, where it was established in 1935. Ottawa is located in Ontario but on the Quebec border. The Porter Commission notes that until recently the Bank's senior personnel "have made only infrequent visits to the financial centers of Toronto and Montreal," and that visits of financial people to Ottawa, while always welcome, are made only for some specific purpose or complaint and do not provide the "frequency of contact needed" (Royal Commission, 1964, pp. 322–323). The remark is addressed to the question of the efficient functioning of Canadian financial machinery, which requires frequent face-to-face contact among governmental and private financial decision-makers. There are recent indications that the diffidence between central and commercial bankers noted by the Porter Commission has diminished or disappeared. It is perhaps going too far to read into the discussion a hint that the Bank of Canada remains in Ottawa because it is unable or unwilling (given the bicultural nature of the Dominion) to choose between Toronto and Montreal.

Canada is one of the few countries where geographers, as well as historians, have studied metropolitan development, using the Gras model. Geographers, along with economists, are surprised that relations between Toronto and Montreal have for so long been complementary rather than competitive, and that the country fails to conform to the model of metropolitan primacy. In population, the ratio of the largest to the next largest city is 1.2 in Canada, as compared with 2.3 in the United States and 7.5 in France (Kerr, 1967, p. 538). Almost 350 miles apart, Toronto and Montreal overwhelm the rest of Canada but not each other, as Table 2 shows. Financial concentration reaches more than 90 per cent in the two cities in stock-market activity, and here Toronto is far ahead. In all else, it has been a draw.

Geographic analysis throws more light on the separate claims of Toronto and Montreal to metropolitan supremacy by comparing the inbound and outbound passenger traffic of the two cities with that of other major Canadian cities. The nul hypothesis is that such traffic will conform to the gravity model, in which predicted traffic between any two cities is some constant times the product of the two populations divided by the square of the distance between them. The model predicts well for most pairs (Kerr, 1967, p. 545), but high residuals—positive and negative—have significance (see Table 3). The residuals suggest that Toronto has particularly close relations with distant cities,

TABLE 2

SELECTED DATA FOR INDICATED METROPOLITAN CENTERS[a] IN CANADA, ABOUT 1961

(in per cent of Canadian total)

	Montreal	*Toronto*	*Vancouver*	*Next Ranking City*
Population (1961)	11.6	10.0	4.3	2.6 (Winnipeg)
Population (1966)	12.2	10.7	4.4	2.5 (Winnipeg)
Service receipts and retail sales	13.4	13.8	5.4	3.1 (Winnipeg)
Value added in manufacturing	17.9	19.8	4.0	5.3 (Hamilton)
Checks cleared at clearinghouses	26.8	37.3	6.0	7.1 (Winnipeg)
Income tax paid	12.7	19.0	6.1	3.6 (Winnipeg)
Assets of leading corporations	38.1	36.7	6.3	5.0 (Calgary)
Value of stock-market transactions	26.3	67.1	6.3	0.2 (Calgary)
Domestic airline passenger traffic[b]	17.6	23.3	10.9	6.6 (Edmonton)

[a] Metropolitan census areas.

[b] Leading airports outbound plus inbound 1965.

SOURCE: Kerr (1965, Tables 16-1–16-6, 16-8).

and that Sudbury, a large mining town, has limited relations with the cities about it, presumably because it is specialized and because it deals with the world through Toronto. It is equally of interest that St. Johns and Halifax have heavy interaction in the provinces, presumably because they are so removed from other centers, whereas London and Windsor, both important manufacturing towns, deal little with each other, presumably because their relations go through Toronto. Airplane traffic is not as useful an index of financial interaction as check clearings would be, but it throws an oblique light on the phenomenon.

The centripetal tendencies in Canada, then, go less far and much more slowly than those observed in Europe.[3] Canada first detached its

[3] Note that in Australia there are two main money markets, an old one, Melbourne, and a new, Sydney, with "Sydney tending to become the more important of the two, partly because the Head Office of the Reserve Bank is there" (Wilson, 1973, p. 49). This case is worth comparing with Canada and may help determine the role in the slow rise of Toronto played by the cultural differences between French Montreal and British Toronto.

TABLE 3

PAIRS OF CITIES WITH HIGH POSITIVE AND NEGATIVE RESIDUALS[a]

High Positive Residuals in Descending Order of Importance	*High Negative Residuals in Descending Order of Importance*
Toronto–Vancouver	London–Windsor
St. Johns–Halifax	Sudbury–Quebec
Toronto–Winnipeg	Sudbury–St. Johns
Toronto–Calgary	Sudbury–Fort William
Toronto–Edmonton	Sudbury–Regina
Toronto–Halifax	Sudbury–Ottawa
Toronto–St. Johns	Sudbury–Montreal
Vancouver–Winnipeg	Sudbury–Edmonton
Vancouver–Montreal	Ottawa–Montreal
Vancouver–Ottawa	Moncton–St. Johns

[a] Calculated by relating airline passenger traffic to the product of their populations divided by the square of the distance between them.

SOURCE: Kerr (1967, Table 16-11, p. 545).

monetary and capital relations from London and turned them toward New York. Montreal balanced between London and New York. Toronto then rose to assert independence from Montreal, with some duality: "One group of finance capitalists were to continue to shuttle back and forth between Toronto and Montreal, while others, including mining men, were to be just as solicitous in cultivating the New York market" (Masters, 1947, p. 212). The Dominion built up "Toronto-Montreal" as a counterweight to New York, fostering a market in Treasury bills in the 1950s and a day-loan market, which enabled the Bank of Canada to control the money supply by internal operations rather than resort to New York funds.

In the same fashion, under the leadership of the Bank of British Columbia, Vancouver has set out to build its own money and capital market; in its foreign-exchange operations, it deals in U.S. dollars directly with banks in Seattle, San Francisco, and Los Angeles, rather than through Toronto-Montreal (Botha, 1972, pp. 138–143; Eaton and Bond, 1970, p. 15). One reason, of course, is the difference in time zone, and distance (i.e., the cost of wire services) may be another. It is paradoxical, except perhaps in terms of differences in rates of growth, that Canadian banks should abandon one coast—Nova Scotia—and cultivate the other.

The arguments for and against regional financial independence are summed up in a sentence from the Porter report *à propos* of stock markets, but applicable in general to money and capital markets:

While a single national exchange would concentrate all trading, cause the markets to be broader and more resilient and might reduce trading costs per unit, it would fail to take account of the country's significant regional variety and of the need of local exchanges to provide a center for the shares of smaller and less nationally-known companies" (Royal Commission, 1964, p. 344).

Contrast this with the remark quoted earlier from the Royal Bank's fiftieth anniversary celebration volume (1920, p. 17) that if "enterprises of national importance were to be financed, the bank must become national in scope, with [sufficient] capital and reserves that its position could not be shaken by local losses."

IX. NEW YORK AS THE FINANCIAL CENTER OF THE UNITED STATES

The rise of New York as the financial center of the United States, winning out initially over Boston, Philadelphia, and Baltimore in the first quarter of the nineteenth century, and beating back, so to speak, later challenges from Chicago and St. Louis, is sufficiently familiar that it need not occupy us for long. It is, moreover, well chronicled in Albion (1939), Gras (1922), and Myers (1931), and has an up-to-date analysis in Robbins and Terleckyj (1960). Of the financial dominance of New York since 1825 there is no doubt. The remarkable feature is that it was maintained despite persistent attempts to defeat it, from the early efforts of rival cities, the Second Bank of the United States in Philadelphia, and the National Bank Act of 1863 to the attempt embodied in the Federal Reserve Act of 1913. Economies of scale in money and finance proved stronger than the institutional enactments against them.

Prior to the end of the Napoleonic War, there was no clear ascendancy of one North Atlantic American port over the others. Each had its hinterland. After 1815, well before the completion of the Erie Canal, New York took steps to pull ahead. British supplies accumulated during the war were dumped there. When commission merchants threatened to hold them back for higher prices, New York enacted an auction law that made all sales final and forbade withdrawing goods once offered for sale. Jobbers, wholesalers, and country merchants flocked to the port. In 1818, a New York merchant started the first liner service, by sailing packet to Liverpool; a ship left promptly on schedule whether it had a full cargo or not. These actions created a demand for sterling. To provide a supply, merchants, shippers, and bankers—at that time indistinguishable from one another—sought the financing of cotton and grain. Planters, always needing to buy more land and slaves, were continuously in debt. New York bankers advanced them funds to ensure that cotton bound for Liverpool from New Orleans, Mobile, Savannah, or Charleston would be shipped coastwise to New York and then across, a diversion of 200 miles which after 1850 proved physically unnecessary. The Erie Canal, projected in 1818, was finished in 1825. That same year, New York bankers advanced a large loan to the state of Ohio to divert the grain trade from the Ohio and Mississippi Rivers to the canal and New York (Albion, 1939, pp. 1–93).

Baltimore was slow in building the Chesapeake and Ohio Canal. It was still under construction when the opportunity came to build the Baltimore and Ohio Railroad. Philadelphia tried to meet the competition with the Main Line Railroad, built between 1827 and 1837. But this route was clumsy and inefficient. It ran by rail from the city to the Susquehanna River and by boat to the Alleghanies, with produce hauled over the mountains by stationary engine. By 1842, Boston had tunneled the Berkshires with the Boston and Albany Railroad but still had to rely on the Erie Canal for western produce. Supplementing the canal by the New York Central on a waterlevel route, New York stayed ahead (Albion, 1939, pp. 378–381). When Andrew Jackson destroyed Philadelphia's Second Bank of the United States in 1836, New York's position was assured.

A good illustration is the experience of Alexander Brown and Sons of Baltimore. The father came to the United States from Ulster in 1800, opened an Irish-linen warehouse in Baltimore in that year, and distributed bulky goods through Maryland and Virginia. He took William, one of his four sons, into partnership in Baltimore in 1805, sought to open a branch in Philadelphia in 1806 and again in 1809, but succeeded through his son John only in 1818. By this time, William was in Liverpool, and Liverpool and Philadelphia had outstripped Baltimore. By 1825, it was clear that New York was the most interesting center, and in that year son James opened Brown Brothers & Co., primarily to promote the interests of the Liverpool house, William and James Brown & Co. While Baltimore remained the head of the family enterprises until Alexander's death in 1834, for the last years of his life the backbone of the commission business was the sale in New York or shipment to Liverpool of the cotton sent by Southern correspondents. The first New York circular of Brown Brothers and Co. in 1825 indicated correspondents in New Orleans, Mobile, Charleston, Savannah, and Huntsville (Kouwenhoven, 1968, pp. 20–31).

Others to desert Baltimore were George W. Peabody, Elisha Riggs, and William W. Corcoran. Peabody, originally from Boston, was teamed up with Riggs, serving as London commission agent. The American end of Peabody and Riggs moved to New York in the late 1830s and subsequently broke up, with Peabody founding in London the firm that later developed into J. P. Morgan & Co. (Hidy, 1939, pp. 15, 95, 136, 237). Riggs then went into the securities business with Corcoran and, at some stage, probably at the time of the Mexican War, both moved to Washington to deal in U.S. securities. Here is the direct pull of the capital. Note, however, that neither made an optimal choice

in terms of maximizing wealth, as the Riggs Bank and the Corcoran securities business, while profitable, remained small compared with New York operations.

New York attracted people as well as goods and money. Most came from Connecticut and Massachusetts (south of the Cape and west of Worcester, beyond which the pull of Boston dominated), with few, apart from the Stevens family, from New Jersey. New Englanders captured the New York port about 1820 and dominated its business until after the Civil War (Albion, 1939, pp. 238–242). The analogue is with the Scots in banking and accounting in London. While I have no definitive explanation for the divergent behavior of New Jersey and Connecticut, the answer is likely to be found in the different character of the soil, flat and relatively rich, on the one hand, hilly and rocky, on the other.

As New York became the financial center of the country, the practice developed of maintaining bankers' balances in the city. A substantial seasonal movement had to be handled. New York funds were built up during the harvest and movement of crops and drawn down during the rest of the year. New York funds bore a premium exchange rate over those in Philadelphia and other centers, which was resented by other parts of the country. Measures were taken by states to prevent the drain of funds to New York; for example, Connecticut required in 1848 a minimum reserve of 10 per cent in vault cash, prohibited in 1854 lending out of state more than one-quarter of a bank's capital and surplus, and required that loans must be made within the state up to the amount of capital and surplus before any could be loaned outside. None of these devices proved effective. Country banks found New York paper and deposits among the safest and most reliable investments. As in England, provision was made in New York State for the redemption of notes issued by country banks either at their seat or in New York, Troy, or Albany, a further incentive to build up New York balances (Myers, 1931, Chap. VI). The city served as an intermediary between Europe and the South and West, and balanced the country movement of cash on a seasonal basis as well.

The National Bank Act of 1863 furnished legal recognition of the New York banks' role as the ultimate banking reserve of the country. The original legislation provided that country banks could keep as little as two-fifths of the mandatory 25 per cent reserve in vault cash and deposit the remainder in a national bank in one of nine cities: Boston, Providence, New York, Philadelphia, Cincinnati, New Orleans, Chicago, and St. Louis. Banks in the nine cities had to hold their entire

reserve in currency. This was hard on the reserve cities outside New York; they normally kept funds in New York but now had to hold only currency reserves. Revision of the law in 1864 provided for eighteen "redemption cities," enlarged from the previous list, and allowed banks in those cities to keep half their 25 per cent reserve in New York. "Country banks" were permitted to maintain two-fifths in deposits in a national bank in any redemption city. In effect, New York was a central reserve city and the other seventeen were reserve cities (Myers, 1931, Chap. XI).

In 1887, the legislation was amended again to permit any city of more than 200,000 inhabitants to become a central reserve city. Chicago and St. Louis accepted, "determined to wrest from New York its prestige and financial preeminence" (Myers, 1931, p. 240). St. Louis complained to little avail that merchants making payments to other cities bought drafts on New York rather than sending checks on St. Louis banks (Gras, 1922, p. 266). Bank balances rose rapidly in the two cities, but those in New York did not slow down. Chicago and St. Louis attracted deposits from their areas, but cities even further West and further South kept correspondent balances in New York.

The Federal Reserve Act of 1913 represented an extension of resistance to the financial domination of New York. Gras, in 1922 (p. 266), said it "struck a heavy but not a death blow." The statement seems exaggerated even for its time. New York remained the leading financial center, unchallenged by the eleven places chosen as regional centers for the other districts. Because branch banking was permitted in California, individual institutions like the Bank of America grew to be among the largest in the country, though the New York State requirement of unit banking failed to prevent New York banks from dominating the country in size and number.

The Federal Reserve Act was based on the theory that regional money and capital markets would develop around the locations of the twelve district banks. The Act implicitly contemplated separate monetary policies for the twelve districts. A structure of rates developed, the lowest rates being charged customers in New York, for example, with higher rates as size of city decreased and as one moved from North and East to South and West (Riefler, 1930, pp. 65, 72; Lösch, 1954, pp. 461ff.). Fluctuations in the rate were wider in New York than in the outlying portions of the market (Riefler, 1930, p. 74). But there was only one money market and only one monetary policy, focused on New York. Discount and open-market policies were unified. New York's facilities were more specialized, more competitive, and more

available to other regions. Half the loans of New York City's banks were for borrowers outside the city, as contrasted with 8.2 per cent for Chicago, 7.8 per cent for Dallas, and 6.3 per cent for San Francisco—the three nearest competitors (Robbins and Terleckyj, 1960, p. 85). New York was also the center for international finance.

Here is a clear example of economies of scale. The financial center was a port, but the connection of finance to ports had diminished. It was neither an administrative capital nor a central location. Its dominance continued in spite of the strong resistance implicit in Populism, in spite of political steps to reduce its role, in spite of New York's own insistence on unit rather than branch banking, and in spite of efforts to create other financial centers by legislation.

The 1959 move of the head office of the First National City Bank from Wall Street to a midtown location on Park Avenue raises a series of new questions. Have the economies of centralization been exaggerated, or is modern communication reducing them? Is propinquity to corporate head offices for bank decision-makers more important than ready access to other banks, law offices, and financial markets for Treasury bills, foreign exchange, commercial paper, stocks, bonds, and the like? The bank left the bulk of its check handling in downtown Manhattan, close to the other banks and the clearinghouse but far from headquarters. It is understood that this creates some problems. In London, City banks acquired West End banks (by merger rather than by building new branches in competition with existing institutions) to serve the convenience of nonfinancial clients. Now, in New York, the same forces threaten to reverse the centralization process.

X. INTERNATIONAL FINANCIAL CENTERS

The same concentration that produces a single dominant financial center within a country (with the possible exception of Canada) tends to result in the emergence of a single worldwide center with the highly specialized functions of lending abroad and serving as a clearinghouse for payments among countries. Banks, brokers, security dealers, and the like establish branches in such centers. The process is similar to that which takes place within a country, although the barriers of exchange risk and higher transactions costs prevent it from being carried as far.

Court, merchant, and security banking spread internationally, as it did within countries, by the process of branching. Originally, these functions were usually performed by large families of male members. The court banking performed by the five Rothschild brothers moved out after the Napoleonic War to Vienna, Frankfurt, Naples, Paris, and London. Alexander Brown used his four sons to extend his merchant banking business from Baltimore to Philadelphia, New York, Boston, and Liverpool. [It has been suggested that one of the reasons for extending Alexander Brown and Sons in space, apart from efficiency, was that Alexander found it difficult to live near his most dynamic son, William (Brown, 1909)]. Early American bankers in France, such as Welles and Greene, who were associated with Welles cousins in Boston, went to Paris and Le Havre in 1817, and Fitch and Co. of New York established a branch with a brother in Marseilles in the 1830s (Redlich, 1951, Part II, p. 60). In the early 1860s, the eight Seligmann brothers went from New York and San Francisco to Frankfurt, Paris, and London (the central financial capitals rather than the ports) and to Amsterdam and New Orleans, largely to sell U.S. securities (Seligmann, 1894, p. 115). The Philadelphia banker, Drexel, who had moved there in 1837 after dealing in foreign exchange in Louisville, Kentucky, had three sons. One of them, Joseph William Drexel, set up an allied firm in Paris in 1867. He teamed up with J. P. Morgan in New York in 1871 to provide a network for selling U.S. securities in Europe in close cooperation with his brothers in Philadelphia (Hopkinson, 1952).

It is not entirely clear that there was a dominant financial center in Europe prior to 1870. It seems doubtful that the economies of scale had extended far enough that one center existed. American banks went to London, Liverpool, Paris, and Marseilles. London bankers established themselves in Paris, and Baring Brothers teamed up with Hope

and Co. of Amsterdam. Prussia placed loans abroad in Hamburg, Frankfurt, Kassel, Leipzig, Amsterdam, and Genoa in the 1790s (Brockhage, 1910, pp. 34–35). By 1820, it was borrowing in Amsterdam on foreign issues, and in Frankfurt on domestic; Amsterdam was the first trading city on the Continent for public loans—Prussian, Austrian, and Russian. Interest rates differed widely among financial centers (Brockhage, 1910, p. 54).

British foreign lending at short term was stimulated by the usury laws of 1571, which limited interest charged to a stipulated rate that successively declined from an original 10 per cent to 8 per cent in 1623, 6 per cent in 1660, and finally 5 per cent in 1713, until their repeal in 1854. Akin to the interest ceilings of Regulation Q in the United States (which did not apply to foreign time deposits, allowed foreign banks to earn high interest rates in New York, and enabled them to bid for dollar deposits, stimulating the movement of funds to the Eurodollar market in the late 1950s), acceptances on foreign bills permitted charging commissions as well as interest, thereby avoiding the usury laws, as some domestic borrowers complained (Leighton-Boyce, 1958, pp. 10, 61, 205). By the time the usury laws were eliminated, this man-made distortion no longer had importance in stimulating the flow of British capital abroad, inasmuch as British savings exceeded domestic demand at going rates of interest and the efficiency of the London market kept transactions costs low.

By the mid-1820s, Britain was a substantial exporter of capital on long-term account. In one view, Britain had a monopoly of capital exports until 1850, when France moved in, largely for *la gloire* (i.e., capital exports in the service of national policies) (Rosenberg, 1934, p. 38). This view is not universally shared. Crick and Wadsworth (1936, p. 307) express an opopsite opinion:

> During the early years of the 19th century, Paris had held pride of place as the principal international banking center, but subsequently London steadily overtook her. . . . After suspension of specie payments by the Bank of France in 1848, London banks became busier in international affairs, with more and more bills domiciled in London.

Both statements seem insufficiently qualified. As Cameron (1961) has shown, French bankers experimented with international lending in the 1830s and 1840s but came into their own in foreign issues in the 1850s and 1860s, led by the *Crédit Mobilier* and the Rothschild Paris house, which transferred their intense domestic rivalry to the international arena. Whether London or Paris was the leader in the second quarter

of the century, the role was contested during the twenty years after 1850, and Paris finally lost out:

> All great communities have at times to pay large sums in cash, and of that cash a great store must be kept somewhere. Formerly there were two great stores in Europe, one was the Bank of France and one was the Bank of England. But since the suspension of specie payments by the Bank of France [in the war of 1870] its use as a reservoir of specie is at an end. . . . Accordingly London has become the sole great settling house of exchange transactions in Europe, instead of being formerly one of two. And this preeminence London will probably retain for it is a natural pre-eminence. The number of mercantile bills incalculably surpasses those drawn on any other city. . . . The pre-eminence of Paris partly rose from a distribution of political power (Bagehot, 1873, p. 16).

Even this statement, written immediately after the events of 1871 and 1872, is put too strongly. London emerged as the undisputed leader in international finance after 1873, especially outside the Continent, but Paris was by no means cast completely in the shadow.

The pivotal role of London was enhanced by the part it played in transferring the Franco-Prussian indemnity. The new German government ended up with substantial claims in sterling, which, along with the Vienna stock-market crash, helped to precipitate the Great Depression (Newbold, 1932, p. 438).

Whether London focused so heavily on foreign lending that it neglected the provision of finance to domestic industry is a familiar issue incapable of clearcut answer. The presumption is that it did not. Numerous industries required large amounts of capital: for a long time, railroads; then shipping, iron and steel, cotton, banking, and finance; and, later, coal, public utilities, and communications. The London Stock Exchange was responsive to the capital needs of these industries (Jeffrys, 1938, pp. 62, 121). In addition, private companies went public in manufacturing and such profitable enterprises as brewing. Investors wanting trustee securities lost their taste for industrial shares and preferred foreign railroad and government bonds (Kindleberger, 1964, pp. 61–64). On the whole, however, domestic and foreign lending are complements, not substitutes, even though, in the British case, they were cyclically opposed.

After 1870, France did not contest British financial leadership. On the contrary, on such occasions as the Baring crisis of 1890, it supported London with a gold loan from the Bank of France to the Bank of England. While the apex of the financial system of the world was

London, foreign balances were also maintained by central banks in Paris and Berlin, like provincial cities in a national system.

Germany's attempt at resistance, led by the *Deutsche Bank,* and its failure were detailed in Chapter V. Hamburg was prepared to challenge London's preeminence in shipping and to support the German program of naval construction (Cecil, 1967) but not to contest the financial position of London. It had a special place in financing German trade and in providing a market for Northern securities (Wiskemann, 1929, p. 273), but it was too provincial vis-à-vis Berlin in domestic matters and vis-à-vis London in international ones. The *Deutsche Bank,* with a few others, opened a branch in London, but it contested British financial hegemony mainly in the narrow arena of the Ottoman Empire, or took on the Italian clients of the weakened French.

New York's challenge to the dominance of London has been traced back to 1900. In his report for 1904, the U.S. Comptroller of the Currency recommended that national banks with more than $1 million of capital be allowed to accept bills of exchange and establish foreign branches. In the panic of 1907, American banks borrowed more than $500 million from Europe to overcome the inelasticity of the money supply. As a result, Abrahams (1967, p. 10) states, it became clear that the American economy had grown too large to be carried by Europe and that an American solution was necessary.

As in 1870, however, it was war which turned positions sharply. J. P. Morgan & Co. provided an early credit to the French government against gold deposited in the vault of the Morgan, Harjes bank in Paris. In 1916, three leading American banks, the Guaranty Trust, the Bankers Trust, and J. P. Morgan, organized a syndicate under which 175 American banks made loans under acceptance credits to 75 French firms. During World War I, a number of commercial-bank branches that had been opened in France and Britain in the early years of the century were expanded and new ones were established, to serve both governmental finance and industry, but especially to handle monies for the U.S. Army.

Further branches were organized after the war in a massive expansion, which subsided after the 1920 boom. H. Parker Willis, in his Introduction to Phelps (1927, p. iii), spoke of the "unfavorable experience gained by some American banks which went hastily into foreign countries during the years 1919 and 1920." Substantial foreign lending by Wall Street began with the success of the Dawes loan in 1924, but it declined after June 1928 when the stock-market rise diverted attention to that outlet and tight money hit the domestic and foreign bond

markets. Foreign, and especially German, borrowing shifted to the short-term market and finance paper, slowed down in 1930, and stopped completely after the Standstill Agreement of July 1931.

From 1914 on, London had difficulty maintaining its role as a center for foreign reserves and a source of short- and long-term credit. The rise of New York produced two reactions—anguish at the loss of leadership and relief at the shifting of responsibility. The head of the London City and Midland Bank (as it was known then) "publicly wept" over the passing of sterling supremacy, while the head of the Hong Kong and Shanghai Bank was enthusiastic about the rise of New York credits, telling Benjamin Strong—"and most English bankers agreed with him"—that New York must carry some of the load for financing the world's commerce (Abrahams, 1967, p. 53).

I have dealt elsewhere (Kindleberger, 1973) with the hiatus created in the interwar period by British inability to serve as a lender of last resort for Europe and U.S. unwillingness, at least until the Tripartite Monetary Agreement of September 26, 1936, to take over the task. In this view, the 1929 Depression was the consequence of an ineffective transition of the financial center from London to New York. No new center rose to challenge the old ones and to wrest financial supremacy or responsibility from them. Instead, in this instance an old center lost the capacity to serve as the center of the world financial system, and the most promising candidate for the position was unwilling or unable to fulfill the responsibilities.

From 1936 on, and especially during World War II, the United States increasingly accepted world financial leadership. The first steps were governmental. The Anglo-American Financial Agreement of 1946 represented a "key currency" approach in which, first, sterling would be restored to health as a means of rebuilding the financial system, so that the sterling area could play an important, and possibly even coequal, role with the dollar. In the first Marshall Plan discussions, however, in July 1947, Clayton and Douglas rejected the suggestion of Bevin and Dalton that the United States undertake a new program of assistance to Britain, after which they would approach Europe in "financial partnership" (State Department, 1972, pp. 269, 272). Gradually, the New York market recovered its interest in lending abroad, at long term and short. New York was the world financial center from the early 1950s until the end of the decade, when the Eurodollar market began to develop.

As the emphasis in this paper is historical, little will be said of the transition from New York as the leading financial center back to

London as the principal location of the Eurodollar market, or of the breakdown of the Eurodollar market with the events of August 1971, the Smithsonian devaluation, and the floating period begun in February 1973. Several points about the process should be made, however. First, U.S. banks and security dealers increased the number and size of their European branches in the 1960s. Early in the decade, the major efforts abroad of New York banks in London were as dealers in dollars seeking to escape first Regulation Q and later capital controls. In the crunch of 1966 and 1969–70, however, a number of banks throughout the United States went to London not to lend but to be in position to borrow dollars to add to their reserve balances in the United States. Second, much of the foreign branching was defensive investment. Banks went abroad not so much to earn profits as to avoid losing clients; as American corporations moved abroad, their bankers went with them. Third, with the forced devaluation of the dollar in August 1971, the Smithsonian Agreement of December 1971, and the period of floating in response to adverse speculation beginning in February 1973, the Eurodollar bond market substantially dried up.

After the second devaluation, trade payments and long-term contracts came to be denominated in currencies other than dollars. While borrowers were willing to go short of dollars, private parties outside the United States were less willing to go long. In Eurocurrency and Eurobond markets, the dollar was less widely used. No single currency took its place, however; the Deutschemark, Swiss franc, Japanese yen, and, to a lesser extent, guilder and Belgian franc severally replaced the dollar as international money. As the dollar declined in world financial use, no other currency or center, for the time being at least, rose to take its place. The international payments mechanism thereby lost the efficiency that comes from centralizing payments.

One possibility is that the European Economic Community may develop as a money and capital market to replace the Eurodollar market in the world financial system.

XI. A FINANCIAL CENTER FOR EUROPE?

Will European economic integration, and especially the formation of the European Economic Community, result, sooner or later, in geographical financial centralization? To pose the question is to review the forces which in the past have led to the formation of financial centers.

A European currency. Is a European currency neecssary to the development of an efficient money and capital market? The answer is almost certainly yes. The Segré report (1967) proposed to achieve an integrated money and capital market—presumably concentrated in space, although the issue was not addressed—by removing national restrictions on lending and harmonizing regulations. The resultant market, however, would still have been divided by currency. The Werner report (1970) recognizes that integration of financial institutions implies development of a single money, although currencies having permanently fixed exchange rates, by the Hicks theorem, are a single money in all but the trouble and expense of exchange transactions. In some views, it is necessary to go further and develop common long-term assets that are included in the portfolios of participating nations.

The London capital market operates in sterling, while New York and the Eurodollar markets operate in dollars. The movement toward world financial integration has been set back by currency realignments and floating. The development of a European capital market serving world as well as European needs probably requires a European currency.

History suggests that this is conveniently accomplished by taking an existing money and converting others into it. In Germany, the Prussian thaler was adopted after conversion from silver to gold, but it was called the "mark" after the currency used in Hamburg. In Italy, the process was more complex, involving reduction of ten separate currencies to four and then to one, the one being the new lira of Piedmont, which had taken the leadership during the political unification. The process took a decade (De Mattia, 1959; Luzzatto, 1963, pp. 60ff.). If a national currency is chosen as the basis for the new currency—say, the Deutschemark but called the "*ecu*" (both an acronym for European Currency Unit and an ancient French coin)—it might confer an advantage on the established financial center associated with the chosen currency, in this case Frankfurt. It is likely that Berlin benefited from the choice of the Prussian thaler and Turin from that of the Piedmont lira.

An attempt to create an entirely new currency would presumably not affect the ultimate choice of a particular financial center, assuming that the currency was successfully established and the agglomeration process envisaged actually took place. Some unexpected side effects would probably occur. There is, of course, a question whether the public would in fact go over to the synthetic currency. The 1958 conversion of the old to the new franc by dividing by 100 affected children and tourists more than it did the French population, which continued for a number of years to use the old franc as a unit of account. On the other hand, the conversion of sterling to the decimal system in 1970 was relatively painless. Money is established not by fiat but by public acceptance, and public acceptance in nine countries of a synthetic new money cannot be guaranteed. Such acceptance is neecssary, however, to the creation of a single financial center.

Central bank. The development of a European money ultimately requires a European central bank, and meanwhile a pooling of foreign-exchange reserves. It is not evident that the latter must have a physical embodiment and staff; the former will. If a single central bank—the Bank of England, the Bank of France, the Bundesbank, or any other—were chosen as the European central bank and other central banks were merged into it, its existing location might well have an effect on the ultimate choice by the market of a physical center. The example of the Bank of Italy in Rome, far from the financial center in Milan, makes this uncertain, however.

In any case, history suggests that the choice of one among a number of competing centers is normally evaded in the process of merging banks. The new European central bank would probably begin as a "federal reserve" system in which the various central banks started as separate units but ultimately became fully articulated subordinate parts. The managing board might be located in a nonfinancial center comparable to Washington, Ottawa, or Bern. With the passage of time, one regional bank would come to dominate the others, as New York dominates Boston, Philadelphia, or Richmond. The board in a place like Strasbourg, for instance, would probably have little attractive force.

Administrative capital. If the administrative machinery of the European Economic Community, including the European central bank, were located in an existing financial center, it would be likely to serve as a magnet to other financial institutions and to attract them into a single primary location. The creation of a new capital would surely not, as Rome, Bern, Washington, Ottawa, Canberra, and a host of

other examples testify. Presumably, other factors would have to be at least neutral—with enough tradition, savings available for investment throughout the Community, and the like. This suggests an interesting question: If France persuaded the EEC to choose Paris over Brussels as its capital, would France's strong postwar tradition against foreign lending stand in the way of financial concentration?

Tradition. Tradition and skill favor London as the financial center, but it is doubtful that these are enough. Savings are also necessary, so that dealers can make a market, lend when the rest of the market is borrowing, and sell out of inventory when the rest of the market is buying. London's success in capturing the lion's share of the Euro-money market arose from the presence there of major branches of U.S. banks, which provided savings. British savings are limited in amount; are concentrated in institutionalized form, such as insurance and pension funds that no longer flow into foreign investment; and are, in any case, held at home by investment controls. It is conceivable but unlikely that skill and tradition are enough to bring the European financial center to London on the basis of brokerage, with the British participants not taking a position. The Inter-Bank Research Organisation (1973, pp. 1–8), studying the future of London as an international financial center, recognizes that Britain is unlikely to be a major exporter of capital but proposes that it operate as an entrepôt, with Europe as its hinterland. The picture is not persuasive.

Economies of scale. Clustering develops when the high risks of an activity can be reduced by continuous interchange of information (Robbins and Terleckyj, 1960, p. 35). It is possible but expensive to communicate by telephone and telex, and many financial functions involving uncertainty are better performed face-to-face. Robbins and Terleckyj (1960, p. 35) note that the central financial district of lower Manhattan minimizes communications costs. In 1960, a financial house with 120 lines to New York houses would pay $420 monthly rental if located in New York, $230,000 if in Chicago, and $640,000 if in Los Angeles. While presumably communications costs have declined in the last fifteen years (costs are not so high as to prevent the head offices of a limited number of banks from being located in Toronto and Montreal in Canada, or Basel and Zurich in Switzerland), they are not likely to be so low as to eliminate all tendency to clustering. A network of banks located in all the financial capitals of Europe—London, Paris, Frankfurt, Amsterdam, Brussels, Milan, and Zurich—would not be cheap.

Note the unimportance of clustering for new security issues. Syndi-

cates in new issues consist of firms located virtually everywhere. But secondary markets must be concentrated so as to eliminate the need to search over wide distances for price information or to maintain continuous interchange. While long-distance arbitrage does take place in some securities, such as kaffirs (gold-mining stocks) between London and Johannesberg and between major European markets and New York, the number of securities handled in this arbitrage is limited; efficiency in handling a large number of issues is sacrificed to efficiency in handling a diffuse market through arbitrage.

Robinson (1964, pp. 19, 202) has said that the secondary market is unimportant for corporate bonds, as most investors keep them until they mature or are otherwise retired. This does not seem to be borne out for the Eurobond market, if one can judge by the number of articles devoted to "the major weakness of the Euro-bond market . . . trading rather than issuing" (Yassukovich, 1971; see also Low, 1972b; Lutz, 1973). In addition, costs of exchanging price information continuously among traders must be covered. The six leading traders—three of them American firms—were located in London, Brussels, Geneva, and Zurich in 1969; today the leaders are in Frankfurt, Paris, Luxemburg, and some centers in Canada and the United States (Low, 1972b, pp. 1157–1158). In addition, there are problems of delays in payment and delivery of bonds. To meet these, the Morgan Guaranty Trust Company organized "Euroclear" in Brussels in 1968, Barclays Bank International founded Eurobond Clearing House in London in 1969, and a group of Luxemburg banks organized a Center of Delivery of Euro-Securities in Luxemburg (CEDEL) in 1971. That such arrangements were unsatisfactory is indicated by these events: (1) Barclays Bank International abandoned the Eurobond Clearing House and substituted a different system of Registered Depository Receipts (McRae, 1972); (2) Euroclear and CEDEL agreed to collaboration after long negotiations sponsored by the Association of International Bond Dealers; and (3) the Morgan Guaranty Trust Company decided to sell Euroclear while making an agreement to render it banking services for five years. This last step represents an improvement by eliminating the control of the clearinghouse by a single bank. At the time, it was stated that the number of participants in Euroclear had risen from 74 in 1968 to 376 in 1972 (Low, 1972a, p. 31).

In 1971, Kohn (1971, p. 70) suggested that there was no need for a single center for the secondary market—"the true marketplace." While "in any particular time one locale is more attractive than another," he said (p. 68), the market really has no center at all—not London or

Luxembourg, Frankfurt or Brussels, Paris or Geneva, etc.; it is a mistake to expect all market makers to buy or sell freely in all circumstances. This verdict seems appropriate only for a period of transition or flux before an efficient centralized system has been developed. Another possibility is that the secondary market for securities could be linked up among widely separate centers by a computer-based system of bid and asked prices, supported by a regional system of security depositories. In the United States, the National Association of Security Dealers started the first of these in 1971, and the Depository Trust Company of New York, with eight regional depositories in six states, provided the second in 1973. Although it is far from clear what volume of security dealings would be necessary to cover the capital expense of establishing such a system in Europe, it seems likely that in time there will be no need for a central location for secondary markets in securities.

Other centripetal forces remain, especially the need for face-to-face communication with bankers, lawyers, security dealers, and borrowers and lenders. Telephone and telex have moderated these centralizing tendencies but have not destroyed them. Nor is the picture telephone likely to provide a substitute for face-to-face communication in the flesh.

The achievement of economies of scale in a concentrated center—an evolutionary and time-consuming process, as the historical record shows—has been disrupted by the 1971–74 currency realignments and floating. When and if a European currency is established or the Eurodollar recovers strength and is reestablished as international money, the need for scale economies is likely to lead ultimately to agglomeration. Present participants in the Eurocurrency and Eurobond markets may be content to remain where they are and deal with one another by telex and telephone (this is more likely for the Eurocurrency market and for new issues than for the secondary market), but new entrants will be drawn to optimal locations, probably a single place. Banks and security dealers located in many centers will cut down on the less efficient locations in periods of recession and expand the efficient ones when recovery comes, in spite of the decline in cost of communication. The experience of Euroclear, CEDEL, and Barclay's suggests that the choice lies between Brussels and London, but the outcome is likely to depend on other factors. Economies of scale predict one center but not which one.

Central location. The Christaller view that the metropolis chosen as the financial center must be centrally located (Duncan, 1960) probably

holds at the extremes: Edinburgh, Copenhagen, Rome need not apply. It cannot count for much in Europe among London, Paris, Frankfurt, Brussels, or Amsterdam (or Geneva or Zurich if Switzerland were to join the European Economic Community). Probably even Hamburg or Munich would not be ruled out for failing to stand at the epicenter.

But need the European financial center be in Europe? Could it again be New York, with London, Paris, Frankfurt, *et al.* linked to each other by means of their connections with Wall Street? Can Europe be integrated financially by an outside center, as it is to some degree integrated in the field of labor by Mediterranean workers who have no roots in any one place, and in industry by American corporations that are more mobile than their European counterparts? The outcome is possible and, as indicated, there is some interest in the United States in developing policies to restore New York to world financial leadership. The immediate outlook is not propitious, given the dim view the world takes of the dollar. Over a longer view, moreover, the time differences round the world make a European center, rather than one in North America or Asia, more efficient in integrating European financial markets.

Transport. While metropolitan centers have grown at breaks in transport, it is usually possible today to adjust transport to function. A few communities, like Wellington, New Zealand, are so hemmed in between mountains and sea that a major airport can be developed only at exorbitant expense. Small cities may have difficulty supporting the lumpy transport facilities necessary for effective communication. Existing facilities are likely to be taken into account to avoid undertaking new ones. On the whole, however, there are few limits among European cities.

Headquarters of multinational corporations. Might banks, perhaps starting with U.S. banks, drift into a single center or build up their offices in such a center, perhaps putting those offices in charge of European branches, if a number of multinational corporations, particularly those of U.S. ownership, were to congregate? The reason for attributing particular behavior to foreign corporations and foreign banks is that, in the context of European integration, they are more mobile than "native" corporations and banks. American corporations in Canada are likely to be located in a more economic pattern than Canadian corporations, since the latter will resist leaving the place in which they started. In Canada, however, the location of the U.S. parent corporation may cast an economic shadow across the border, as Ray (1971) has suggested. The location of U.S. subsidiaries in Europe is likely to reflect

no such influence. French corporations, by contrast, may move their headquarters from Lyons to Paris, but they are unlikely to continue further to London, Brussels, or Frankfurt.

What governs the choice of location for the headquarters of an American firm in Europe? Initially, investment was often made in Britain on the basis of similarity of language and culture; in a particular country from which forebears of the firm's decision-makers had migrated to the United States; or in centers thought to be agreeable, especially Paris. Later, but before the Common Market, it was frequently judged necessary to produce in each country in which the firm wanted to sell: "To sell in France, produce in France." The advent of the Common Market, and the conversion of the Six into the Nine, has changed this less than had been anticipated. With time, however, and as the European Economic Community seems more solid and less ephemeral, other firms may follow the pattern of IBM, which is said to have rationalized its production to take advantage of the elimination of tariffs, or of Ford, whose major facilities exchange parts between Antwerp and Cologne.

What is relevant, however, is not the location of production facilities but of company headquarters. In Germany, companies were attracted after World War II to the American military headquarters in Frankfurt. Today, more and more American companies seem to develop an affinity for the headquarters of the Commission of the European Communities in Brussels.[1] Sales headquarters may be divided culturally between Latin and Germanic countries, in some cases splitting Switzerland between two European headquarters. Financial headquarters of some companies have been located in London. Where companies have one headquarters, and it was not established in the last fifteen years in Brussels, it has typically been where it has its largest production facilities, or in London or Paris. If there is a trend, it is probably to Brussels.

With one exception, major American banks in Europe have not designated any one branch to head up their European network. London, Brussels, Paris, Frankfurt, Zurich, Geneva, and Rome report separately to the head office, and coordination among them is directed from New York. It is not evident that this is efficient. It is likely, rather, that

[1] "In all, some 450 international companies have their main European offices in Brussels, a total rivalled only by Paris" (Interbank Research Organisation, 1973, pp. 2–22). And, following them, two American banks—the Chase Manhattan and the Security Pacific—have put their European headquarters in Brussels rather than London.

the matter will be allowed to continue unresolved, pending the emergence of a particular location as the dominant center.

Culture. For cultural reasons, a single financial center may not emerge. Cultural factors perhaps contributed to the stalemate between Toronto and Montreal and, according to some authors, to the survival of Basel and Geneva as financial centers in spite of the competition from Zurich. French corporations stay in Paris, Belgian in Brussels, Dutch in Amsterdam, and German in Düsseldorf, Hamburg and Frankfurt. International cooperation among such banks as the *Crédit Lyonnais,* the *Banca Commerciale Italiana,* the *Deutsche Bank,* and Morgan Guaranty Trust remains voluntary for separate deals; there is no true merger, with unified decision-making. Historical evidence predicts that the emergence of a true financial center would be preceded by takeovers, mergers, and amalgamations, but in the last fifteen years these have been few.

This is perhaps the crux. If there is no integration beyond tariff removal and collaboration in international economic negotiation, there will be no single European financial center apart from the world system. Like the banks in the hinterland of St. Louis and Chicago that kept correspondent balances in New York, European financial institutions will deal partly with the Community and partly outside. During the period of the Eurodollar, the separate financial markets of the Six were more effectively joined with the Eurodollar market than they were with each other. If a European center emerges as the apex of the world hierarchical system and Europe does not achieve effective integration, sections of the capital market in Europe may even be linked to the center through outside connections, as part of the world feeder system.

Policy. Governmental policy can accelerate or slow down the emergence of a given city as the primary financial center, but it can probably not change the outcome. Pushing too hard for centralization will create resistance, while strong efforts at decentralization can be overcome by private forces. It is uncertain whether the United States could recreate in New York a financial center for the world after its maladroit handling of the troubles of the dollar. Whether the Swiss or German authorities can prevent their financial capitals from being developed to serve as a world center is less uncertain. It is difficult to use exchange control to prevent inflows of hot money, but governments can forbid the development of the positive institutions that will effectively employ foreign monies in domestic and foreign lending.

Policy requires more than governmental agreement. The Segré report

(1967) on the unification of the European capital market was widely praised, but nothing happened. No European country was deeply committed to building a well-functioning European capital market. Accordingly, I predict, very tentatively, that Brussels will emerge as the financial center of the European Economic Community, for the following reasons: It serves as headquarters for the Commission; it attracts foreign corporations and will ultimately attract foreign and European banks; it tolerates the world intellectual medium of exchange, the English language. The process will be long and drawn out, for commitment to European integration does not go deep. France will push the advantages of Paris as the federal administrative center, and incidentally the center for financial institutions, but with little likelihood of consent from the other members. Sterling is too weak, and British savings too unavailable, to advance London's claim for consideration. While the advantages of centralization are less compelling than they were in the middle of the nineteenth century, they still exist. Thus I predict that, despite cultural resistance and only with difficulty, centralization will take place, but not before the late 1980s.

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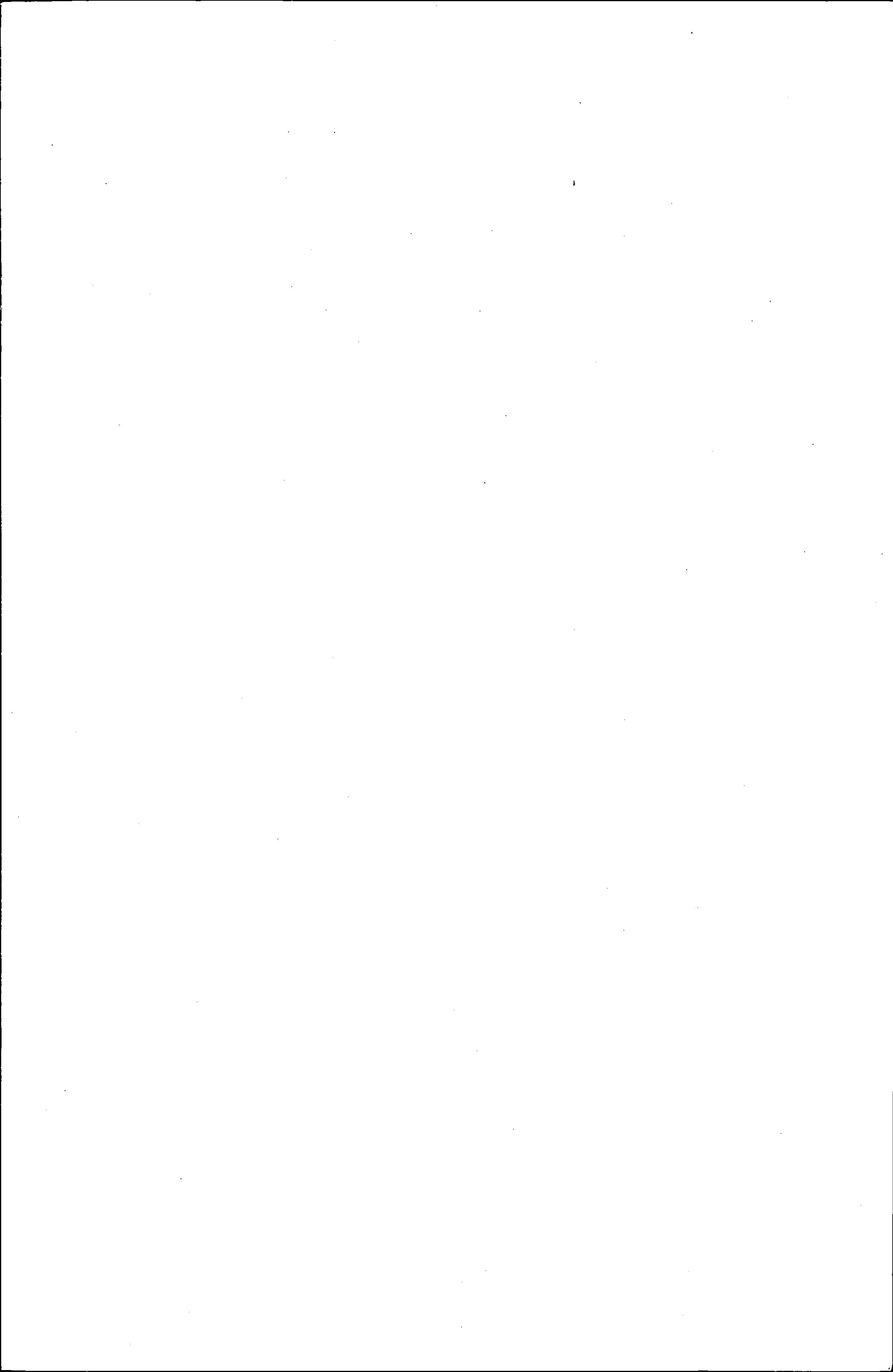

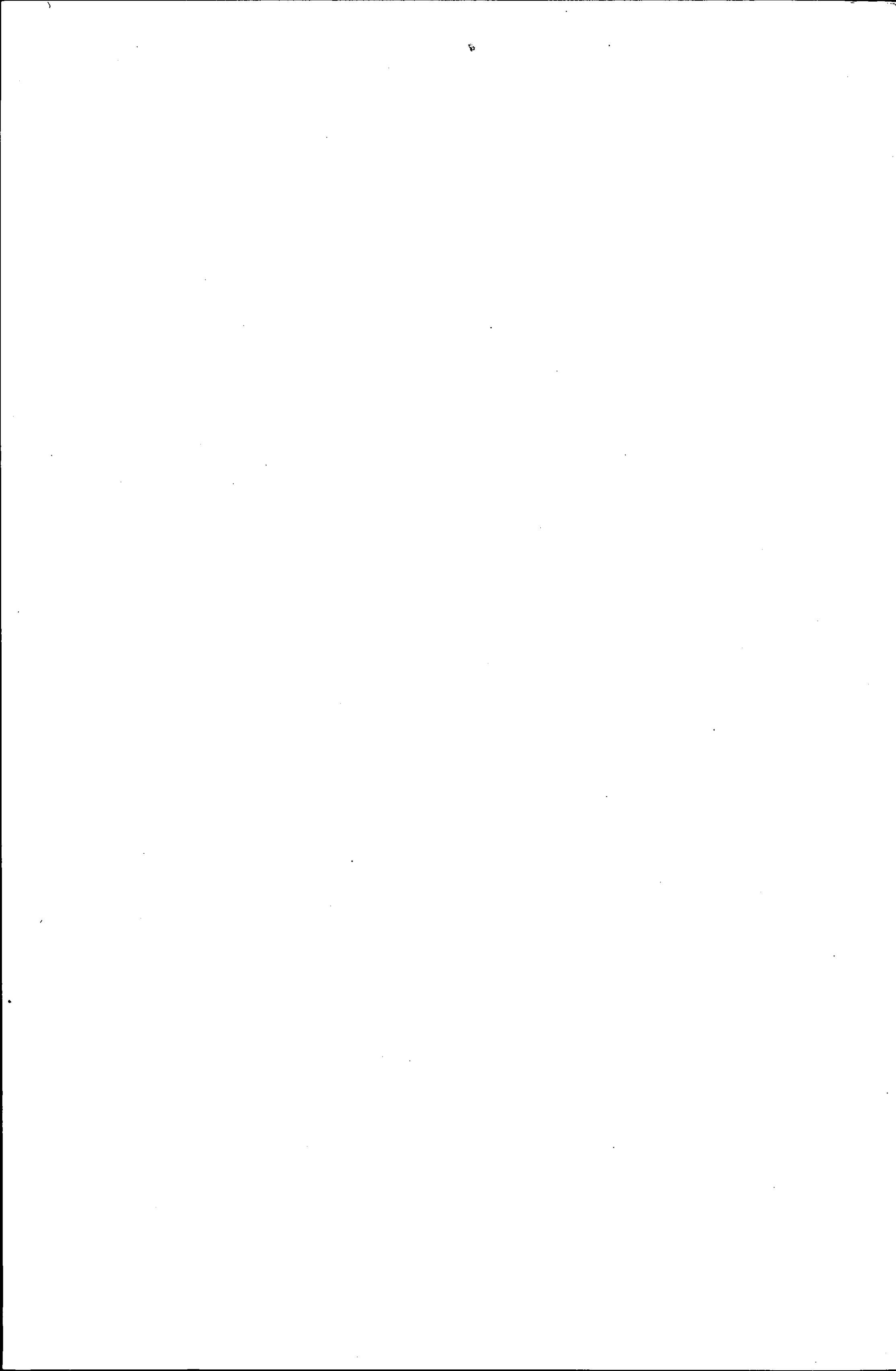

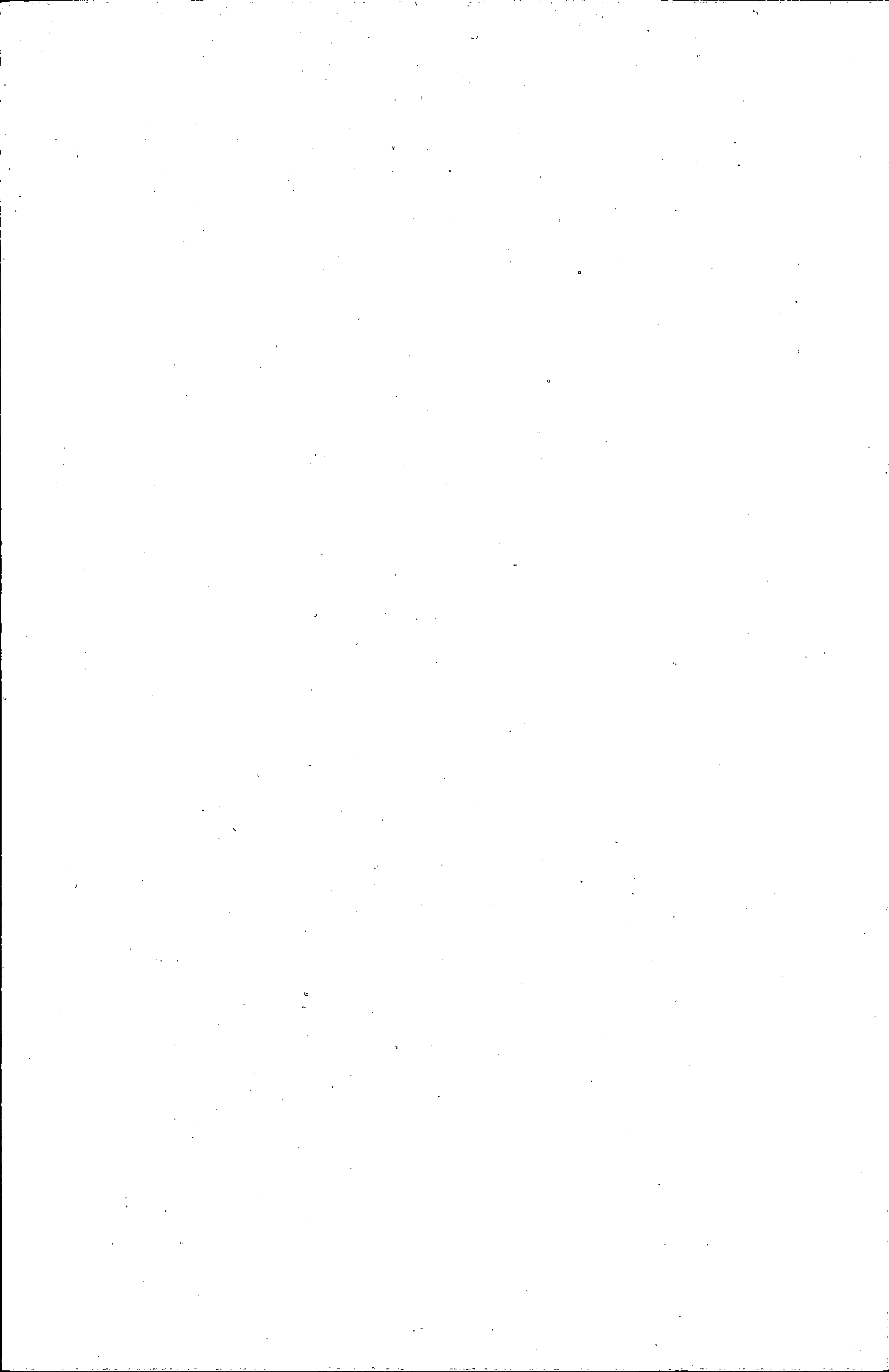

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