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The London and New York Stock Exchanges, 1850–1914

RANALD C. MICHIE

This paper compares two financial institutions that provided the same functions at the same time, but in different countries and with different memberships. Though the London and New York stock exchanges appear to be alike between 1850 and 1914, they were not, as each responded in its own way to the forces acting upon it. The result was a radically different organization of the securities market in Britain and the United States. This had important implications for the money and capital markets and consequences for business and the economy.

SINCE the pioneering work by Rondo Cameron and his associates in the 1960s there has been a growing recognition of the importance of financial institutions in economic development.[1] This goes far beyond mere generalizations on the role they performed in mobilizing capital. It has sought to investigate national differences and evaluate their consequences for the economies concerned.[2] Equivalent financial institutions were identical neither in form nor function in every country; nor were they purely passive intermediaries, acting as catalysts but having no influence of their own. The nature of each financial institution in each country affected the performance of its tasks, and thus their individual contributions to economic growth and development could differ markedly. Financial institutions cannot be dismissed as having no significance in understanding differing economic behavior; nor can the tacit assumption be made that economies obtained the institutions they deserved. Such beliefs greatly simplify economic analysis but omit much.

Once established, for example, financial institutions generated a life

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[1] R. Cameron, "Banking in the Early Stages of Industrialisation: A Preliminary Survey," *Scandinavian Economic History Review*, 2 (1963); R. Cameron, ed., *Banking in the Early Stages of Industrialization: A Study in Comparative Economic History* (New York, 1967); R. Cameron, ed., *Banking and Economic Development* (New York, 1972).

[2] See also L. E. Davis, "Capital Mobility and American Growth," in R. W. Fogel and S. L. Engerman, eds., *The Reinterpretation of American Economic History* (New York, 1971), pp. 185–86. K. E. Born, *International Banking in the 19th and 20th Centuries* (Leamington, Spa, 1983), p. 164.

of their own, in which survival and the self-interest of their members could take precedence over economic requirements, forcing change in the institution. Established financial institutions could become powerful enough to force other areas of the economy to adjust, or to delay new developments, rather than accept change themselves. As the U.S. Congressional Committee investigating the control of money and credit observed in 1913, "A Stock Exchange is a market, controlled by rules, where securities consisting chiefly of the stocks, bonds and other securities of corporations are bought and sold."[3] The qualification implied by the caveat "controlled by rules" needs to be studied before any judgment can be passed on the merits of an institution such as a stock exchange.

The London and New York stock exchanges emerged at almost the same time from a need to organize the street trading in government debt. The London Stock Exchange was established in 1773, achieving a formal existence in 1801; the New York Stock Exchange was established informally in 1792, achieving formal existence in 1817. The virtually simultaneous appearance of the exchanges creates an air of similarity between them, yet those that probed deeper, such as W. R. Lawson, formed a contrary opinion:

> In attempting to fathom the mysteries of American finance, the English critic has to disabuse himself of all preconceived notions derived from the humdrum routine of an English Stock Exchange. The one thing is entirely different from the other, both in itself and in its surroundings.[4]

A common heritage, customs, laws, language, and usage did not mean that the New York Stock Exchange was a copy of its London counterpart, transplanted into a different environment. From the outset there were important differences, and each exchange evolved differently.

Primarily, of course, both were trade associations representing the collective interests of their membership, facilitating business between members by providing a convenient forum and a common set of rules. Eventually a building was required for business, free from the disruption of bystanders. The way in which each institution built was to create a major division. When the London Exchange decided to build its own exchange in 1801 it did so by issuing shares that could be purchased by anyone. Consequently there was a divorce between those who used the building for the conduct of their business—the members—and those

[3] U.S. Congress, *Report of the Committee Appointed to Investigate the Concentration of Control of Money and Credit*, 28 Feb. 1913, p. 33.

[4] W. R. Lawson, *The Scottish Investors' Manual* (Edinburgh, 1884), p. 35; see also E. V. Morgan and W. A. Thomas, *The Stock Exchange: Its History and Functions* (London, 1962), p. 68; P. Wyckoff, *Wall Street and the Stock Markets: A Chronology, 1644–1971* (Philadelphia, 1972), pp. 5, 8; H. E. Krooss and M. R. Blyn, *A History of Financial Intermediaries* (New York, 1971), p. 56; R. Sobel, *The Big Board: A History of the New York Stock Market* (New York, 1965), p. 21.

who controlled the building and saw it as a business—the owners. In 1878, for example, there were 2,009 members of the London Stock Exchange but only 508 shareholders in the building, of whom a number were nonmembers. It was only in 1876 that all new members were required to purchase at least one share as a condition of entry. Gradually the members and owners became an identical body, but the process was not complete by World War I.[5] In contrast, when finally in 1863 the New York Stock Exchange decided to construct its own building, the money was raised from among the membership, through high entry and membership fees and by loans based on the security of the real estate acquired. There could be no conflict between members and owners in New York: they were the same people.[6]

This distinction between the exchanges was reflected in the way each was run. In London there were two committees controlling all affairs, the Committee of Trustees and Managers, representing the interests of the owners, and the Committee for General Purposes, representing the interests of the members. All other committees were subcommittees of these. There could be considerable friction, as no higher authority was available to arbitrate between conflicting interests. On the New York Stock Exchange, by contrast, there was one Governing Committee, which acted as final arbiter. Most of its power was devolved to other permanent committees with responsibility for particular areas, such as admissions.[7]

The resulting contrast is clearest in the disputes over new technology and the admission of new members. The ticker tape machine and later the telephone relayed information immediately from the floor of the exchange to interested parties outside. This was of great benefit in keeping members constantly informed when they were not in the exchange and in widening the market beyond the confines of those actually on the floor. In New York there was an immediate recognition that improved communications could aid the business of members, and both the ticker tape (1867) and the telephone (1878) were introduced as soon as available.[8] In London the ticker was not introduced until 1872 and the telephone not until 1882–1883. The membership of the London

[5] Parliamentary Papers, 187, IX, Royal Commission on the London Stock Exchange, Report, pp. 5–6, Minutes, pp. 4, 16–17; H. Keyser, *The Law relating to Transactions on the Stock Exchange* (London, 1850), pp. 20–21; Morgan and Thomas, *Stock Exchange*, pp. 70, 74, 143.

[6] J. E. Meeker, *The Work of the Stock Exchange* (New York, 1930), pp. 64–69.

[7] Morgan and Thomas, *Stock Exchange*, chap. 9; Meeker, *Work of the Stock Exchange*, chap. 16.

[8] Archives of the New York Stock Exchange [henceforth, NYSE], Stock and Exchange Board, 15 Nov. 1867; NYSE, Committee of Arrangements, 2 Nov. 1878, 23 Dec. 1881, 9 Nov. 1885, 9 May 1887, 11 July 1895, 12 May 1902; NYSE, N. Green (Gold and Stock Telegraph Co.) to Chairman, NYSE, 26 Dec. 1884; NYSE, Memorandum on Foreign Ticker Services, 3 May 1897. E. C. Stedman, ed., *The New York Stock Exchange* (New York, 1905), pp. 440–41; B. E. Schultz, *Stock Exchange Procedure* (New York, 1936), p. 12; NYSE, Special Committee on Odd Lots, Report, 6 June 1907.

Stock Exchange were aware of the benefits, but the owners—a quite different group—were concerned that the new technology would give outsiders access to prices and to the floor without fees. This would reduce the value of the exchange itself. The opposition of the owners had to be overcome. As more of a common identity between owners and members was created the opposition to the new technology diminished. Little sign of resistance was seen after 1890.[9]

Of more lasting consequence was the differing attitude towards membership between London and New York. The owners of the London Stock Exchange derived their income from the entry and subscription fees paid by the members. As they did not wish to discourage membership or encourage the creation of a rival exchange with lower fees, the owners actively courted membership by keeping the fees they charged at moderate levels. In 1904, for instance, it was estimated that it cost only £1,200 to become a member of the London Stock Exchange after purchasing the requisite number of shares. The Committee for General Purposes rarely refused any well-qualified candidate. Between 1900 and 1909, for example, 2,297 new members were admitted and the general feeling was that it was easy and inexpensive to gain entry. It was only after 1910 that any attempt to examine applicants was made, and then only because of overcrowding in the exchange and the growing power of the members *qua* owners. Membership rose from 864 in 1850 to 5,567 in 1905, falling to 4,855 in 1914.[10]

On the New York Stock Exchange the members recognized the advantages membership brought, and were loathe to dissipate them. By 1862 it cost a new member $3,000 to gain admission, raised to $10,000 in 1866. Later, through the ownership of the building, a member of the New York Stock Exchange came to share in a valuable property. To allow retiring members to realize their investment it was decided in 1868 to make memberships saleable, though restricting entry. The total number of members was set at 1,060. The only increase in numbers before 1914 came in 1879, when 40 new seats were created and sold in order to finance improvements to the building. The only way a new member could gain admission to the exchange was to pay the substantial entry and membership fees, and then buy the seat of an existing

[9] London Stock Exchange [henceforth, LSE], Trustees and Managers, 7 Oct. 1868, 5 Feb. 1873, 5 Nov. 1879, 20 Jan. 1880, 11 July 1888, 7 Nov. 1888, 2 Jan. 1889, 14 Oct. 1891, 3 June 1903; LSE, General Purposes, 1 Oct. 1872, 10 April 1907; LSE General Purposes—Sub-Committee on Exchange Telegraph Co., 16 April 1886-30 Dec. 1908.

[10] Royal Commission, Report, p. 6, Minutes, pp. 10–13, 166; LSE, Trustees and Managers, 14 Oct. 1891; LSE, Statement of foreigners admitted as members, 1 Jan. 1900–31 Dec. 1909; F. Chiswell, *Key to the Rules of the Stock Exchange* (London, 1902), p. 28; J. E. Day, *Stockbroker's Office Organisation Management and Accounts* (London, 1911), p. 3; Morgan and Thomas, *Stock Exchange*, pp. 140–44, 157–58, 160.

member. The price varied, of course, with the prosperity of the market, but rose from a range between $4,000 and $4,500 in 1870 to $64,000 and $94,000 in 1910.[11]

London always had outside brokers, who occasionally transacted a substantial business; and in a few cases rival exchanges were established. Yet they normally did not survive more than a few years. (The one exception was the Mincing Lane market, founded in 1909 to provide for dealings in the shares of plantation companies, particularly rubber growing, and its appearance and permanency coincided precisely with growing restriction on membership by the Stock Exchange.)[12] The street markets, such as Shorter's Court and Throgmorten Street, were not alternatives, being mere after-hours markets catering to time differentials (since exchanges in other countries were still open when London was officially closed).[13] With minor exceptions the London Stock Exchange provided the sole market for securities in London, by being willing to expand its membership in line with demand. London possessed one integrated securities exchange without barriers and with a common set of rules, open to all.

The New York Stock Exchange coped badly with the increased demand for membership. During the Civil War, for example, there was a great increase in security trading (in response to the growth of government debt and the conditions of uncertainty) but the exchange admitted few members. The result was the growth of numerous established brokers operating outside the exchange and the eventual creation of rival bodies. It was not until 1869, when the New York Stock Exchange merged with its main rival, the "Open Board," that a unified market was again established. Yet, it was not long before there was again an active outside market, and other exchanges. The most serious challenge came in 1885, when a number of rival exchanges merged to form the Consolidated Stock Exchange, with 2,403 members. From then until World War I there was considerable rivalry between the two. The New York Exchange forbade its members to belong to both institutions, and attempted to stop all communication between the two floors. To avoid incurring the wrath of the New York Exchange, many other brokers

[11] NYSE, Committee on Membership Rights, 17 Oct. 1868; W. Armstrong, *Stocks and Stock-Jobbing in Wall Street* (New York, 1848); H. Hamon, *New York Stock Exchange Manual* (New York, 1965), p. 112; Anon., *History of the New York Stock Exchange* (New York, 1887), pp. 1, 5; Sobel, *Big Board*, pp. 86–88; Schultz, *Procedure*, p. 13; Wyckoff, *Wall Street*, pp. 150–51.

[12] Royal Commission, Minutes, p. 27; LSE, General Purposes—Sub-Committee on Exchange Telegraph Co., 13 Aug. 1894, 13 Sept. 1894; LSE, General Purposes—Sub-Committee on Mincing Lane, 23 Sept. 1909; Anon., *A New Survey of London* (London, 1853), vol. 1, p. 378; Universal Stock Exchange, *Stock Exchange Investments* (London, 1897), introduction and pp. 168, 173; R. Burt, "The London Mining Exchange, 1850–1900," *Business History*, 14 (1972), pp. 126–42; Morgan and Thomas, *Stock Exchange*, pp. 141, 227.

[13] C. Duguid, *The Stock Exchange* (London, 1913), p. 120; Financial Times, *Investors Guide* (London, 1913), p. 67; Chiswell, *Key*, p. 71.

remained unorganized, unhoused, and unregulated, conducting their business in groups on the street, the "curb" market.[14]

By 1913 the New York Stock Exchange had 1,100 members, the Consolidated 1,225, and the Curb at least 200. The Curb and the Consolidated enjoyed a substantial turnover, by dealing in securities for which the New York Exchange did not provide a market. In 1908, for example, the number of shares of common stock traded on the three New York markets was estimated at 424 million, of which only 46.5 percent was done on the New York Stock Exchange. Of course, the value of business would be much greater on the New York Stock Exchange, since the values of the stocks it traded were higher, and there was a substantial turnover in bonds (estimated at $1.1 billion in 1908, compared to $66 million on the Curb, and nothing at the Consolidated). There was nothing intrinsically disadvantageous about this specialization in the securities market if common rules of operation and intimate interconnection existed. The problem was, however, that the New York Stock Exchange refused to recognize the existence of the rival exchanges. Artificial barriers, for example, were placed between itself and the Consolidated, which prevented the Consolidated from gaining ready access to the current prices on the main market, forcing it to deal at wider prices. No restrictions were placed on communication with members of the curb market. An estimated 85 percent of the business of curb brokers was derived from members of the New York Stock Exchange, but fear of restrictions from that institution prevented the curb from implementing rules to govern its conduct, which would have broadened its appeal.[15] Therefore, unlike London, the New York Stock Exchange covered only a part of the New York market and prevented the remainder from operating as efficiently as possible.

The handling of commission rates was a second difference between

[14] J. K. Medbery, *Old Times in Wall Street: A Study for To-day* (New York, 1886), pp. 110, 131; Anon., *The New York Stock Exchange* (New York, 1886), pp. 21, 28; S. A. Nelson, *The Consolidated Stock Exchange of New York* (New York, 1909), pp. 45, 23, 25; Consolidated Stock Exchange, *Annual Report* (1886), pp. 68, 73–74, and *Annual Report* (1913), p. 19; and U.S. Congress, *Regulation of the Stock Exchange: Hearings before the Committee on Banking and Currency* (Washington, 1914), p. 78; W. E. Samson, *The Mysteries of Wall Street* (New York, 1884), p. 66; S. A. Nelson, ed., *The ABC of Wall Street* (New York, 1900), pp. 69, 73; Jones and Baker, *The History of the New York Curb* (New York, 1916), p. 8; R. Sobel, *The Curbstone Brokers: The Origins of the American Stock Exchange* (New York, 1970), p. 105; NYSE, Committee on Arrangements, 31 March 1886; S. S. Huebner, ed., *Stocks and the Stock Market* (Philadelphia, 1910), p. 2.

[15] U.S. Congress, *Money Trust Investigation: Investigation of Financial and Monetary Conditions in the United States* (Washington, D.C., 1912), pp. 1297, 2194. NYSE, Special Investigation of the Curb Market, 29 March 1908; NYSE, Special Committee on Mining Dept., 20 Nov. 1879; NYSE, Special Committee on the NY Mining Exchange, 16 Jan. 1885; National Monetary Commission, *Statistics for the United States, 1867–1909* (Washington, D.C., 1910), p. 9; Consolidated Stock Exchange, Annual Report, 31 May 1903, 31 May 1908, 31 May 1909; L. C. Van Riper, *Ins and Outs of Wall Street* (New York, 1898), pp. 25–26; E. G. Nourse, *Brokerage* (New York, 1910), p. 88; Wyckoff, *Wall Street*, p. 155; Nelson, *ABC of Wall Street*, p. 18; H. S. Martin, *The New York Stock Exchange* (New York, 1919), pp. 104–5; W. C. Van Antwerp, *The Stock Exchange from within* (New York, 1913), pp. 428–431.

New York and London. Though the London Stock Exchange did issue guidelines on the commissions, they were not mandatory until 1912. Brokers competed in offering favorable rates to attract customers, especially those with a large volume of business to transact. As one broker admitted to the commission examining the London Exchange in 1878, "I do business for less than scale where the transactions are numerous, and are both ways, and go on through the whole year; but as a rule, for general transactions, we adhere to one particular scale, and I believe that other brokers likewise do so."[16]

As a result of this flexibility the members of the London Exchange could offer tempting terms to banks, finance houses, and outside brokers. Other means of trading were little resorted to. Some brokers, for example, operated almost solely for a few major customers, paid a fee rather than a commission.[17] This flexible system, however, was undermined in 1912 by the introduction of minimum commission rates. It was a move long desired by many members to reduce competition among themselves, and was finally inaugurated as a means of preventing nonmembers from gaining favorable access to the exchange. Exceptions to the minimum scales were allowed in foreign business, where the rates could be reduced by up to 75 percent; but for domestic customers it meant an increase in charges, and caused a decline in business.[18]

In sharp contrast to London, one of the main motives behind the formation of the New York Stock Exchange was to enforce a common set of charges, and this remained of fundamental importance to the exchange. The Governing Committee, for example, pronounced in April 1894 that, "The commission law is the fundamental principle of the Exchange, and on its strict observance hangs the financial welfare of all the members and the life of the Institution itself."[19] In the 1860s it was possible to reduce the minimum commission (1/4 percent of par value), by one-half to such important customers as bankers and outside brokers. When 1/8 percent became the minimum rate, however, no further reductions were allowed.

The 1/8 percent commission was considered high, and encouraged many to deal outside. Charged on par value, the rate was particularly onerous on shares with a low real value, such as many mining and later industrial shares.[20] There was one loophole, however, exploited to the

[16] Royal Commission, Minutes, 1878, p. 29.

[17] LSE, General Purposes, 27 June 1900, 11 July 1904, 15 Oct. 1905. Duguid, *Stock Exchange*, p. 34; Day, *Stockbroker's Office*, p. 80.

[18] LSE, General Purposes—Sub-Committee on Commissions, 8 May 1912, 16 May 1912, 4 July 1912, 30 Sept. 1912, 24 Jan. 1913; LSE, General Purposes, 13 Jan. 1912, 15 Jan. 1912, 25 April 1912, 30 April 1912, 1 June 1912, 21 Sept. 1912, 30 Sept. 1912, 20 Jan. 1913, 24 Jan. 1913.

[19] NYSE, Governing Committee, 13 April 1894; see also Constitution of the New York Stock and Exchange Board, 21 Feb. 1820, Article 10.

[20] NYSE, Committee on Commissions, 14 May 1889, 29 March 1910; NYSE, Governing Committee, 23 Oct. 1878, 22 May 1889, 12 Nov. 1902, 30 March 1910; NYSE, Special Investigation of the Curb Market, 4 April 1906; NYSE, Special Committee on Bucket Shops: Digest, 25 June 1913, p. 83.

full. Members buying and selling for each other were only charged a 1/32 percent, or a quarter the minimum rate, and the rate could go to as low as 1/50 percent for deals on the floor between brokers. The privilege extended to all partners in a member firm. Any individual, firm, or other unincorporated body could do so on good terms by buying a seat or joining a member firm. The result was the creation of ever larger stockbroking firms.[21]

Unlike the London Exchange, the New York Exchange allowed members to join other stock exchanges (though this was rescinded for New York City when the Consolidated Stock Exchange was formed). A New York member, therefore, could do business for a member of another stock exchange at the reduced rate of commission, providing that both were members of the same firm. By 1912, 106 out-of-town stockbroking firms from 22 different cities were members of the New York Stock Exchange, while New York broking firms had a total of 258 out-of-town offices.[22] The firms represented on more than one market conducted most of the business between exchanges. It was estimated in 1913 that 48 percent of the transactions on the New York Stock Exchange originated from outside the city.[23]

Despite this dispensation, the New York Stock Exchange had difficulties defending its high rates. The Consolidated Stock Exchange charged only 1/16 percent. With the ticker and telephone it was possible for nonmembers to deal at the current market prices but charge less for the service. In consequence the New York Stock Exchange had to take progressively more stringent measures to prevent competitors from gaining access to current prices. The mere removal of tickers from the Consolidated Stock Exchange and the offices of outside brokers was not sufficient. Through telephone communication with accommodating members of the New York Stock Exchange, and the continuous quotation of security prices, outside brokers could still gain access to current prices.

Even when New York Stock Exchange members were forbidden to have telephonic links with members of the Consolidated Stock Exchange, the practice continued through third parties, such as members of other exchanges who had legitimate access to New York prices, by

[21] *Railroad Review*, 24 Dec. 1887; NYSE, Van Antwerp to G. A. Neeley, 30 June 1913, Van Antwerp Papers; NYSE, Committee on Commissions, 8 Jan. 1883; S. S. Pratt, *The Work of Wall Street* (New York, 1903), p. 93; LSE, General Purposes, 13 Feb. 1907; G. R. Gibson, *The Stock Exchanges of London, Paris and New York: A Comparison* (New York, 1889), p. 34.

[22] NYSE, Committee on Commissions, 16 May 1881, 20 June 1881, 14 July 1911, 12 Nov. 1913; NYSE, Committee on Admissions, 29 Jan. 1902; NYSE, Special Committee on Wire Privileges, 11 Jan. 1900; NYSE, Van Antwerp to G. A. Neeley, 30 June 1913; Boston Stock Exchange, Constitution (1905), Article 29; W. A. Armstrong, *Stocks and Stock-Jobbing in Wall Street* (New York, 1848), p. 36; Anon., *New York Stock Exchange* (New York, 1886), pp. 63, 115; NYSE, Committee on the Constitution, 4 Dec. 1911.

[23] Money Trust Investigation, Minutes, p. 827; C. W. Barron et al., *The Boston Stock Exchange, 1834–1893* (Boston, 1893) (no pagination); Van Antwerp, *The Stock Exchange*, p. 428.

either tickers or direct telephone lines.[24] Exchanges distant from New York were increasingly seen as competitors, since rapid communication meant that a security could be bought or sold where the commission was smallest. The very method used to conduct this inter-exchange business was itself deemed to transgress the minimum commission rules. Each broker charged the other a commission for buying or selling, with the result that no commission need actually be paid. The outcome was joint-account trading in which costs and profits or losses were divided but no commission was received.[25] Eventually the New York Stock Exchange banned joint-account arbitrage within the United States in 1881, repealed the prohibition in 1883, and finally reinstituted it again in 1894. The dealing in the differences between domestic exchanges was prohibited in 1896 and the transmission of continuous quotations of security prices was prohibited in 1898.

Such prohibitions were difficult to enforce. Much of the dealing took place within the same firm.[26] And even though evasion was widespread, the regulations restricted the amount of business transacted between the New York Exchange and other domestic exchanges, creating price differentials.[27] When it was realized in 1911 that the London Stock Exchange was becoming a major competitor of the New York Stock Exchange in United States securities, joint-account trading between New York and London was also prohibited, which forced brokers to charge the 1/8 percent on every transaction. This made it more difficult to maintain an active market in certain securities, match bargains, or keep prices in line.[28]

[24] F. L. Eames, *The New York Stock Exchange* (New York, 1894), p. 90; E. C. Stedman, ed., *The New York Stock Exchange* (New York, 1905), p. 11; NYSE, Committee on Arrangements, 10 May 1886; NYSE, Committee on Commissions, 21 Feb. 1894; Nelson, *Consolidated Stock Exchange*, p. 75.

[25] NYSE, Governing Committee, 13 April 1894; Huebner, *Stocks*, p. 7.

[26] Reply by the New York Stock Exchange to the Governor's Committee on Speculation in Securities and Commodities, 1909, Horace White Papers, New York Historical Society, p. 27; NYSE, Governing Committee, 12 Jan. 1881, 27 June 1883, 13 April 1894, 23 April 1894, 31 May 1894, 23 Dec. 1897, 26 Jan. 1898; NYSE, Committee on Arrangements, 1 July 1895, 11 Jan. 1897, 29 Oct. 1900, 18 Feb. 1903, 9 May 1904, 14 June 1904; NYSE, Committee on Commissions, 5 Jan. 1904; NYSE, Matter of Domestic Arbitrage and Quotations, 14 June 1904; Pratt, *Work*, p. 115; Stedman, *New York Stock Exchange*, p. 505.

[27] NYSE, Committee on Commissions, 29 Feb. 1912; NYSE, Special Committee on Wire Connections, transcripts, 11 Jan. 1900; NYSE, Special Investigation Committee on Continuous Quotation, transcripts, 21 Jan. 1903–5 Feb. 1903; NYSE, Special Committee on Copper Stocks, 18 May 1903. See also Boston Stock Exchange, Governing Committee, 10 April 1894, 3 Feb. 1898, 11 April 1898, 20 March 1914, and Committee on ways and means of increasing Business, 18 July 1904; W. C. Cornwell, "Bonds as Additional Banking Reserve," in W. H. Hull, ed., *Bonds as Investment Securities* (Philadelphia, 1907), p. 118.

[28] NYSE, Special Committee of Inquiry into the Stock Commission Business Report, 21 Aug. 1887; Committee on Commissions, 14 Aug. 1907, 14 Dec. 1910, 29 Feb. 1912, 9 April 1912, 30 Oct. 1912; NYSE, Governing Committee, 23 Feb. 1911, 20 April 1911, 25 Feb. 1914; NYSE, Special Committee on Foreign Business, Digest, 1934–1935. *New York Commercial*, 26 Feb. 1914; *Brooklyn Daily Eagle*, 1 March 1914; Pratt, *Work*, p. 114; W. E. Rosenbaum, *The London Stock Exchange; Its Features and Usages* (New York, 1910), pp. 3–7; Boston Stock Exchange, Ways and Means Committee, 18 July 1904, and Governing Committee, 20 March 1914.

Another third substantial difference between the two exchanges was the system of trading adopted in each. In the eighteenth century a time period between sale or purchase and delivery or payment was essential in order to cope with problems of communication and transportation. By the early nineteenth century this had become a rule on the London Stock Exchange: all deals were made for the next settlement date, at which time all deliveries and payment had to be made. The settlement dates occurred every 19 and 20 days and were known in advance. Business could be done for cash; but trading "for the account" was the normal practice.[29]

The delay was found to have other advantages. Much of the trading was of a technical or speculative nature, operators buying what they could not afford or selling what they did not possess in the expectation of reversing the deal at a profit. This could be done "for the account," with no need to pay or make delivery. The existence of a settlement date did, however, force such operations to be concluded in some actual payment. An active and continuous market for securities was created, encouraging the holding of stocks. Buying for a rise or selling for a fall, and trying to close their deals before settlement day, the speculators helped smooth fluctuations in the market. This again encouraged investors to purchase stocks. Essentially, the fortnightly settlement was a compromise between the convenience of deals for various durations and the need to restrain speculative excesses by limiting the duration.[30]

Delivery and payment on the following day was the normal pattern of trading in New York. It was possible to extend the duration of the deal, but the extension involved paying interest to the broker holding the stock. The system was adequate for the local investment market of New York in the early nineteenth century but it posed many problems when turnover increased and trading became more speculative. Time contracts became common, but these could be costly: they involved a deposit of 20 percent of the securities' value, and a 7 percent rate of interest. Attempts were made repeatedly to introduce a London-style settlement system, but all foundered.

Time contracts themselves were increasingly regarded with ill favor on the stock exchange, and ceased to be of importance after 1857. Public opinion in the United States was much more set against gambling than in Britain, and there was always the threat that time contracts and

[29] S. R. Cope, "The Stock Exchange Revisited: A New Look at the Market in Securities in London in the Eighteenth Century," *Economica*, 45 (1978), pp. 8, 15; J. F. Wheeler, *The Stock Exchange* (London, 1913), p. 41; Duguid, *The Stock Exchange*, p. 56; Day, *Stockbroker's Office*, p. 41; Royal Commission, Report, p. 20, and Minutes, pp. 21, 45; R. E. Molshelmer and G. S. Gardner, *The Law and Customs of the Stock Exchange* (London, 1905), p. 15.

[30] For the benefits of an active market, and how it was created, see A. Cragg, *Understanding the Stock Market* (New York, 1929), p. 196; H. J. Howland, "Gambling Joint or Market Place? An Inquiry into the Workings of the New York Stock Exchange," *The Outlook*, 28 June 1913, pp. 436–37.

the introduction of a system of delayed settlements would provoke anti-gaming legislation. The New York Exchange took the threat seriously. The scandals of the early years of the Exchange had created mistrust among members, and a day's grace was all that many members would extend. The crisis of 1857 had led to the collapse of many stockbroking firms and the abrogation of their time contracts, bringing down other brokers.[31] The lack of trust lingered long into the second half of the nineteenth century. In New York the buying and selling operations were repeatedly interrupted by the need to deliver actual securities or finance real payments, disrupting the smooth functioning of the market by discouraging technical and speculative operations.

For example, brokers in New York needed continuous access to funds to finance their holdings. In London much of the broking took place within the account period, and incurred no finance charges. If it was necessary to hold the securities for a longer length of time it was relatively easy to obtain credit from banks, renewable every settlement day. Only twice a month did the need for cash make itself felt on the London money market. Call money, or money available daily, was also employable on the London Exchange, since securities could be bought for immediate delivery and paid for in cash. There were considerable operations of this kind in British government stock, for instance. Altogether, on August 31, 1914, the members of the London Stock Exchange owed £80.8 million mainly to financial institutions, on account of their holdings of securities.[32] In London there was reasonable harmony between the security market and the money market.[33]

Some historians, among them Myers and Hedges, have suggested that it was the very appearance of a call-loan market that led the New York Stock Exchange to persevere with daily settlements, by making money easily and cheaply available to finance the holding of securities. But an even better short-term money market existed in London at an even

[31] Memorial and Remonstrance of the Board of Stock and Exchange Brokers of the City of New York to the State of New York, 23 March 1836, pp. 2, 4–6, 11; Money Trust Investigation, *Report*, p. 116; J. E. Hedges, *Commercial Banking and the Stock Market before 1863* (Baltimore, 1938), pp. 97–98; M. G. Myers, *The New York Money Market* (New York, 1931), vol. 1, pp. 132–33, 305, 424; Schultz, *Procedure*, p. 8.

[32] C.A.E. Goodhart, *The Business of Banking, 1891–1914* (London, 1972), pp. 18, 122–27; E. Withers, *The English Banking System* (Washington, D.C., 1910), pp. 37–38; E. E. Spicer, *An Outline of the Money Market* (London, 1908), p. 19; the following three articles are all in *Journal of the Institute of Bankers*: A. C. Cole, "Notes on the London Money Market," 25 (1904), pp. 134–35; F. E. Steele, "On Changes in the Bank Rate of Discount," 12 (1891), pp. 496–97; and W. A. Cole, "The Relations between Banks and the Stock Exchanges," 20 (1899), p. 409; A. Crump, *The Theory of Stock Speculation* (London, 1874), p. 19; F. Lavington, *The English Capital Market* (London, 1921), p. 142; E. C. Maddison, *On the Stock Exchange* (London, 1877), pp. 93–94; Royal Commission, Minutes, pp. 37–40; LSE, General Purposes Sub-Committee of a non-permanent character, 10 Sept. 1914.

[33] Goodhart, *Business*, p. 218; W. M. Blaisdell, *Financing Security Trading* (Philadelphia, 1935), pp. 33, 48, 84, 151–52; J. H. Hollander, *Bank Loans and Stock Exchange Speculation* (Washington, D.C., 1911), pp. 4, 24.

earlier date, and it did not encourage any move towards more frequent settlements.[34] In fact dealers most involved with the New York money market were the ones who pressed the New York Exchange to abandon daily settlements. The need to finance every transaction lasting longer than a day took a substantial proportion of the liquid funds available in New York. In 1913, for instance, the ratio of security loans to commercial bank deposits was 37.7 percent in New York compared with only 13.3 percent in London.[35]

The daily settlement system tended to exaggerate crises. The short time before payment was due meant that it was difficult for either bankers or brokers to take measures to avoid crisis. Any tightening of the money available on the call-loan market had an immediate and all-embracing impact, since almost all borrowings were for day-to-day money. If stocks could not be immediately liquidated, or if prices dropped to the extent that loans were no longer covered, the brokers would be unable to repay the banks. For example, in 1890, when Decker, Howell & Co. failed, the Bank of North America had to suspend operations, leading to a general restriction of credit.[36]

The New York Stock Exchange provided a large, essential, and remunerative home for the short-term funds lodged in New York banks; the daily settlement system meant that they absorbed a much greater proportion of these funds than they need have done. But it was only by being able to call on foreign money markets, especially London, that crises were as readily surmounted as they were before 1914.[37]

Another, fourth area in which there was a clear distinction between the London and New York stock exchanges was in the division of members into jobbers and brokers in London. The jobber made a market in securities by being always ready to quote prices, and buy and sell accordingly; the broker transacted business on commission on

[34] Myers, *New York*, pp. 131–33; Hedges, *Commercial Banking*, pp. 75, 97–98; *Banker's Circular* (London), 15 Feb. 1828, 19 Oct. 1832; L. Davis, "The Capital Markets and Industrial Concentration: The U.S. and U.K.—A Comparative Study," *Economic History Review*, 19 (1966), p. 260.

[35] Blaisdell, *Financing*, pp. 33, 84, 152, 156–58, 165; J. P. Ryan, "Call Money Rates and Stock Prices," in T. Gibson, *Special Market Letters for 1908* (New York, 1909), p. 96; A. A. Osborne, *Speculation on the New York Stock Exchange, September 1904–March 1907* (New York, 1913), p. 108; Nourse, *Brokerage*, pp. 209–10, 214–15, 223.

[36] T. F. Woodlock, *The Stock Exchange and the money market* (New York, 1908), pp. 28–29; *New York Tribune*, 28 Oct. 1879, 7 May 1884, 15 May 1884, 12 Nov. 1890, 19 Nov. 1890; Ryan, "Call Money Rates," p. 96; C.A.E. Goodhart, *The New York Money Market and the Finance of Trade* (Cambridge, Mass., 1969), p. 17.

[37] W. M. Grosvenor, *American Securities: The Causes influencing investment and speculation and the fluctuations in values, 1872–1885* (New York, 1885), pp. 23–24; H.G.S. Noble, *The New York Stock Exchange in the Crisis of 1914* (New York, 1915), p. 14; N. N. Owens and C. O. Hardy, *Interest Rates and Stock Speculation* (New York, 1925), pp. 5–6; U.S. Congress, *Regulation of the Stock Exchange: Hearings before the Committee on Banking and Currency* (Washington, D.C., 1914), Brief of Counsel on behalf of the New York Stock Exchange, pp. 529, 551, 553; NYSE, S. F. Streit, *Report on European Stock Exchanges* (New York, 1914), pp. 8, 16–17.

behalf of clients. Both categories had long existed in London, but it was not until 1847 that each was forbidden to undertake the activities of the other. The ruling was designed to ensure fair and accurate pricing, by forcing the broker to deal through a jobber, rather than quote his own price to the client.[38] Direct trading between brokers remained common, particularly in the less active securities, where there was not sufficient business to justify jobbers making a market. Nevertheless, as long as the floor of the stock exchange encompassed the whole market the demarcation between jobber and broker could be preserved. When it became possible to telephone outside, however, the distinction began to collapse. Jobbers established direct and close contacts with brokers on other stock exchanges at home and abroad, for whom they also acted as dealers. Brokers with provincial or overseas contacts started to quote prices in order to compete with the jobbers, while others established links with financial institutions, on whose behalf they tried to make markets in specific securities. At least seven different types of operators were observed by April 1903.[39]

On the New York Stock Exchange the evolution was reversed. As the volume and variety of business grew the brokers specialized in specific tasks. As early as 1865 a class of brokers had appeared who traded on their own account and were referred to as stockjobbers. These grew in number and sophistication, some specializing in making a market in a particular stock or stocks at a single trading post, others roaming the market to deal in a particular group of securities. To ensure that the broker's client received the market price under the New York system, the broker was obliged to declare his bids and offers openly in the ring or pool where the stock was dealt. So came the "open outcry" in New York, in contrast to the quiet negotiation of London.[40]

Apart from the noise, there was little difference in the specialization of the membership of each exchange, at least until 1909. In that year the London Stock Exchange implemented a new rule, reinforcing the

[38] Royal Commission, Report, p. 9; F. Playford, *Practical hints for Investing Money—with an explanation of the mode of transacting business on the Stock Exchange* (London, 1856), pp. 10–11; W. E. Hooper, ed., *The Stock Exchange in the Year 1900* (London, 1900), p. 198.

[39] Royal Commission, Minutes, pp. 29, 126, 130, 206; Day, *Stockbroker's Office*, pp. 44, 218, 219; C. Duguid, *The Story of the Stock Exchange* (London, 1901), p. 350; *Financial News* (London), 8 March 1905; *Investors Review* (London), 15 Feb. 1908; *Times* (London), 21 Feb. 1908; LSE, General Purposes, 27 June 1900, 17 Dec. 1902, 23 April 1903, 18 Dec. 1903, 11 July 1904, 15 Oct. 1906, 27 Nov. 1906.

[40] NYSE, Committee on Arrangements, 5 Nov. 1877, 17 March 1884, 22 June 1891; Answers from the Committee of NYSE to supplemental questions, 1909, Horace White Papers, New York Historical Society, pp. 3, 35–36; Hamon, *Manual*, p. 107; Howland, *Gambling*, pp. 427–40; Van Antwerp, *Stock Exchange*, pp. 279–80; Schultz, *Procedure*, pp. 55, 58, 64; Money Trust Investigation, *Report*, pp. 743–44, 753–55; *New York Tribune*, 6 July 1914; *New York Herald*, 4 May 1902; W. C. Van Antwerp to Editor, *Saturday Evening Post* (Philadelphia), 13 June 1913; NYSE, Committee on Commissions, 25 Nov. 1900; H. S. Martin, *The New York Stock Exchange* (New York, 1919), pp. 143–53.

division between broker and jobber. It was increasingly felt by many members that the direct contacts with provincial brokers, established by some jobbers, siphoned business away from the London Stock Exchange to other centers. With the aim of breaking these links the jobber/broker distinction was revived. The introduction of minimum commission rates in 1912 was part of the same attack, as it was felt that jobbers maintained their links by passing the business through accommodating brokers for small commissions. The flexibility of the London Stock Exchange's membership to respond to the individual needs of their clients was circumscribed, and the exchange lost business, especially from the provinces.[41]

Fifth and finally there was a growing divergence between the London and New York exchanges in the matter of the securities they quoted. Increasingly London provided a market for securities from the whole world, while New York traded almost exclusively in American stocks and bonds.[42] Important differences appeared, too, in the type of securities quoted on each. During the early nineteenth century neither exchange exercised much supervision over the securities quoted, listing anything that generated business: government securities, and shares of local banks, insurance companies, utilities, and, later, railways.[43] As the number of securities seeking quotation rose, however, the exchanges became more selective. The London Stock Exchange discriminated almost solely by size; the minimum capital was set at around £100,000 by the early twentieth century. Nevertheless, the London Stock Exchange did continue to offer a listing to smaller concerns, especially those with a head office in London, making it relatively easy to obtain a quotation. An official listing was not in any case essential for a security to be traded on the exchange. The paid-up value of the securities quoted rose from £2.3 billion in 1873 to £8.8 billion in 1903 and £11.3 billion in 1913.[44] With the exception of rubber plantation companies shares after 1909 the London Stock Exchange offered a home to

[41] W. A. Thomas, *The Provincial Stock Exchanges* (London, 1973), pp. 90–91, 202; LSE, General Purposes, 13 Jan. 1908, 10 Feb. 1908, 17 Feb. 1908, 2 July 1908, 23 July 1908, 11 June 1909, 1 March 1910, 13 Jan. 1912, 1 June 1912, 2 Sept. 1912, 30 Sept. 1912, 8 July 1914.

[42] W. J. Greenwood, *Foreign Stock Exchange Practice and Company Laws* (London, 1911), p. 204; A. K. Cairncross, *Home and Foreign Investment, 1870–1913* (Cambridge, 1953), pp. 90, 95; T. Skinner, *The Stock Exchange Year Book and Diary* (London, 1974), p. iii; Morgan and Thomas, *Stock Exchange*, p. 97; Van Antwerp, *Stock Exchange*, pp. 345–58; Pratt, *Work*, p. 35.

[43] C. Fenn, *A Compendium of the English and Foreign Funds* (London, 1837, 1840); NYSE, D. K. Van Veghten, Prices of Stocks and Rates of Exchange, 27 Oct. 1820–19 April 1821; NYSE, G. A. Rollins, Call Quotation Book, 17 Sept. 1835–26 March 1836.

[44] Royal Commission, Minutes, pp. 29, 59, 66, 77, 79, 150, 369; *Economist*, 30 May 1885; LSE, General Purposes, Sub-Committee of a non-permanent character, 25 April 1898, 27 April 1899, 25 April 1900, 22 April 1901; Morgan and Thomas, *Stock Exchange*, pp. 282–83; General Securities Corp., *Investors' Handy Book of Active Stocks and Shares* (London, 1912), p. ix; M. Edelstein, "Rigidity and Bias in the British Council Capital Market, 1870–1913," in D. N. McCloskey, ed., *Essays on a Mature Economy: Britain after 1840* (London, 1971), p. 87.

almost all securities that required a market and could expect to generate business.

New York also faced problems in accommodating the increasing number of securities. But these were much more serious, because of the exchange's limitation on membership and the organization of its market. The value of securities it quoted did rise, from about $3 billion in 1868 to $13.8 billion in 1902, about one-third of the London level.[45] This reflected a deliberate policy of exclusion, rather than any lack of applications for listings, for increasingly strict conditions were imposed on companies seeking a quotation for their securities. The New York Stock Exchange was much more selective than London in the securities it quoted.[46]

As a result of this difference in policy, the average size of each issue from an industrial and commercial company, quoted on the New York Stock Exchange, was $24.7 million by 1914, but the average size of the capital possessed by an industrial or commercial company, quoted on the London Stock Exchange, was only £1.03 million. To obtain a quotation on the New York Exchange a company had to be at least five times bigger than its London counterpart.[47] The same was true for government securities, since the issues of many city or state authorities were too small to warrant a quotation.[48] It was not mere size that led to exclusion. The New York Stock Exchange became very discriminating about the type of securities it permitted to be quoted. Mining and petroleum companies were refused quotation for a long time, because the uncertain nature of their business was felt to make trading in their securities hazardous. A similar view prevailed with industrial and commercial companies in their formative years. Once the companies had established themselves, and gained a market for the securities elsewhere, the New York Exchange then granted them access to its floor.[49]

[45] Pratt, *Work*, pp. 51, 82; Schultz, *Procedure*, p. 14.

[46] W. C. Van Antwerp to E. F. Abbott, Citizens Bank, Kansas, 7 July 1914; Myers, *New York*, pp. 42–43; *New York Evening Post*, 3 May 1913; Greenwood, *Foreign Stock Exchange*, p. 198.

[47] Calculation based on the *Commercial and Financial Chronicle* (New York), 28 Feb. 1914, and the *Stock Exchange Official Intelligence* (London, 1914). As with London, only a small number of issues were very actively traded.

[48] Fisk and Hatch, *Memoranda concerning Government Bonds* (New York, 1882), p. 23; N. W. Harris and Co., *Municipal Bonds* (New York, 1897), p. 20; S. A. Nelson, *The Bond Buyers' Dictionary* (New York, 1907), p. 81; N. W. Halsey and Co., *The most satisfactory bonds* (New York, 1912), p. 15.

[49] T. R. Navin and M. V. Sears, "The Rise of a Market for Industrial Securities," *Business History Review*, 29 (1955), p. 136; M. V. Sears, "Gold and the Local Stock Exchanges of the 1860s," *Explorations in Entrepreneurial History*, 2nd ser., 6 (1968/69), pp. 200–1. U.S. Congress, Regulation of the Stock Exchange, p. 120; NYSE, Committee on unlisted securities, 17 Nov. 1897, 22 Sept. 1908; NYSE, Committee on mining securities, 28 April 1880; NYSE, Committee on Stock List, 7 March 1872, 9 July 1884; NYSE, Committee on Arrangements, 10 June 1881; NYSE, Governing Committee, 25 Jan. 1882, 8 March 1882, 1 Nov. 1882, 11 May 1886, 13 April 1887, 12 Nov. 1902; NYSE, Special Committee on unlisted dept.—minority report, 22 Jan. 1896; NYSE, Special Committee on Wire Connections—Transcripts, 18 Jan. 1900.

The attitude had major repercussions. By ignoring a wide range of securities, it encouraged the fragmentation of the market. The lack of official recognition by way of a quotation made "risky" securities less suitable for collateral on borrowed funds. Quoted securities were regarded as temporary homes for liquid funds, necessitating immediate marketability at a well-publicized price. Without a quotation a security was deprived of access to important funds.[50] As the Report into the Control of Money and Credit concluded in 1913, "Manifestly, a security privileged to be bought and sold on such an exchange obtains a wider market and a more definite current value than one which is not."[51] Since only heavily capitalized and well-established corporations could get a listing for their securities on the New York Exchange, while much smaller concerns could get one on the London Exchange, there was a far greater incentive given to the creation of large corporations in the United States than in Britain. There was everywhere of course a movement towards a growing scale of enterprise in business. But real causes could not account for the size of firms created, especially considering that many mergers involved nothing more than a loose grouping of independent units, with no benefit from economies of scale. A quotation enhanced the value of a company and allowed it to gain additional and cheaper sources of capital, enabling it to absorb other lesser known enterprises by swapping its more valuable quoted securities for the less valuable unquoted stock. In Britain the differential to be obtained through amalgamation, by swapping one type of quoted security for another, was much smaller. The merger movement in Britain was neither so widespread nor on the same scale as the United States. In 1905, for example, the average capitalization of the fifty largest British companies was only £4.4 million while the equivalent figure in the United States was $79.5 million.[52]

What, then, can be concluded concerning the differences and similarities between the two stock exchanges, and what were the consequences of these? Before 1909, or 1912 certainly, the London Exchange was a liberal institution, admitting most people who applied for membership and quoting the securities of most companies and governments that requested it. The way they conducted business within the exchange was left fairly uncontrolled, which allowed the exchange to cope with an expansion of both membership and the variety and volume of securities.

[50] J. Hicking and Co., *Men and Idioms of Wall Street* (New York, 1875), p. 17; NYSE, Reply by the NYSE to the Governor's Committee on Speculation, pp. 32–33; NYSE, Governing Committee, 16 March 1910.

[51] Money Trust Investigation, *Report*, p. 33.

[52] P. L. Payne, "The Emergence of the Large-Scale Company in Great Britain, 1870–1914," *Economic History Review*, 20 (1967), pp. 519, 523, 527, 533–34, 537–40; A. D. Chandler, *The Visible Hand: The Managerial Revolution in American Business* (Cambridge, Mass., 1977), pp. 332–33, 338, 373–74, 376; Krooss and Blyn, *A History of Financial Intermediaries*, p. 129.

The London Exchange provided an integrated but fairly open market for securities, which existed in harmony with the money market and with the capital-raising activities of private and public enterprise. The new regulations of 1909 and 1912, however, reimposed the broker/jobber division, and introduced mandatory minimum commissions, adding to the gradual restriction on membership. The strengths of the London Stock Exchange were undermined. The result was that in the five years before World War I, the London Stock Exchange's role as an efficient and competitive market, attracting business both nationally and internationally, was eroding.

The New York Exchange's restrictive policy on membership and quotation, its high and inflexible minimum commission rates, and its methods of trading fragmented the securities market in New York. By persistently interfering in the relations between itself and other markets, the New York Stock Exchange reduced the efficiency of the securities market. Yet the growth of large, diversified broking firms, operating nationally, and the evasion or circumvention of certain of the rules, allowed the market to operate fairly successfully, as, for example, in the intimate relationship between members and the "curb" market. Nevertheless, the New York Stock Exchange's commitment to the daily settlement of trading, and its growing restriction of quotation to large, established corporations, had profound influences upon the United States economy. Financial crises were exaggerated and merger encouraged.