Boston Stock Exchange

During the 1800s, Boston had the largest regional stock exchange in the United States. During the first half of the 1800s, Boston listed more stocks than the New York Stock Exchange (NYSE), though the market capitalization of the NYSE was greater than that of Boston. GFD has data on 746 common stocks that were listed on the Boston Stock Exchange, more than any other regional. It wasn't until the 1920s with the rise of the Chicago Stock Exchange and the New York Curb (later renamed the American Stock Exchange), that Boston lost its crown as the largest regional exchange.

The Rise and Fall of the Boston Stock Exchange

The Boston Stock Exchange was founded on October 13, 1834 by 13 brokers. Obviously, the number 13 was no unlucky for them. The Exchange was acquired by the NASDAQ in 2007. We have data from Boston beginning in 1789, and Joseph Martin kept detailed records on Boston stocks enabling us to understand the evolution of Boston stocks throughout the nineteenth century. Table 1 provides a decade-by-decade breakdown of the number of stocks that traded on the Boston Stock Exchange between 1800 and 1920.

Year	Banks	Insurance	Transports	Industrials	Total
1800	2	0	0	0	2
1810	4	2	0	0	6
1820	8	0	0	0	8
1830	17	16	0	0	33
1840	24	25	11	23	83
1850	29	19	43	41	132
1860	40	24	40	82	186
1870	50	13	45	101	209
1880	59	19	76	140	294
1890	59	14	92	198	363
1902	69	7	65	267	408
1913	79	7	35	299	420
1919	90	7	76	439	612

Table 1. Stocks Traded on the Boston Stock Exchange, 1800 to 1919

To really understand the relative size of Boston to New York, Table 2 uses data collected by Global Financial Data to compare the number of Common Stocks, ADRs and REITs listed on the two exchanges as well as the market capitalization of the shares that were traded in Boston and New York. Shares in the Bank of the United States are excluded.

During the first three decades of trading on the Boston Stock Exchange, most of the transactions were in either shares of the Bank of the United States or in government securities. When the charter of the Second Bank of the United States was not renewed and the Federal government succeeded in paying off most of its debt, there were few securities left to trade. Sixteen mill stocks began trading in Boston in

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1835. Most of them had a $1000 par value. Railroad securities began trading in Boston in 1836 and as new railroads opened in New England, more railroad securities listed on the Boston Stock Exchange. Between the bank, insurance, railroad and milling stocks, Boston ended up with more securities listed on its exchange than there were on the NYSE.

With the exception of the period from 1840 to 1870, New York had more securities that traded than Boston, though the market capitalization of the shares listed in New York was always greater than the market cap of shares traded in Boston. As is illustrated in Table 2, before the Civil War, the differences in the market cap were small. In the 1840s, manufacturing companies began locating around Boston and railroads were built in New England. Both of these industries contributed to the growth of the number of firms that were listed on the Boston Stock Exchange. After the Civil War, copper mining companies in Boston listed on the Boston Stock Exchange, further increasing the number of companies that listed in Boston. The Calumet & Hecla Mining Co. was the most successful mine of the dozens of Lake Superior Copper Mines that listed in Boston. Nevertheless, after the Civil War, the NYSE became the center of trading in the United States. The introduction of the telegraph in the 1860s and the telephone in the 1870s enabled investors to place orders without even being at an exchange. This new technology centralized stock trading benefitting the NYSE at the expense of the Boston and other regional exchanges.

	Securities		Market Capitalization	
	Boston	New York	Boston	New York
1800	2	4	2	5
1810	5	18	6	13
1820	7	30	7	19
1830	37	60	20	39
1840	136	111	50	78
1850	119	126	105	152
1860	153	119	125	224
1870	176	126	218	846
1880	178	317	360	2,174
1890	196	414	430	2,816
1900	193	377	757	7,480
1910	148	428	931	13,762
1920	132	667	626	18,988
1930	123	1150	439	56,209
1940	62	1277	165	42,410
1950	45	1466	285	102,088
1960	27	1693	264	351,523
1970	13	2002	141	634,915

Table 2. Securities Traded and Market Capitalization, Boston and New York, 1800 to 1970

Boston continued to grow, increasing both the number of listed companies and its market capitalization until World War I. After the war, the New York Curb began growing in importance which limited the number of companies that listed on the Boston Stock Exchange. In 1934, the Securities and Exchange was created which placed restrictions on the listing of new securities. Unlisted securities were discouraged. The over-the-counter market grew and both banks and insurance companies were able to trade on the over-the-counter market rather than on the Boston Stock Exchange. Consequently, the slow but steady decline in the number of securities that both listed and traded in Boston began.

Data Sources

We have drawn from a number of resources in order to put together long-term data on stocks that traded in Boston. We have collected data on stock prices, dividends, corporate actions and shares outstanding in order to calculate indices for the Boston Stock Exchange from 1789 until 1950.

Data for the Boston Stock Exchange comes from a number of sources. Price data from 1789 to 1859 is taken from Richard E. Sylla, Jack Wilson and Robert E. Wright, "The Price Quotations in Early U.S. Securities Markets 1790-1860." Between 1859 and 1877, local newspapers were used to collect monthly data on individual securities. *The Commercial and Financial Chronicle* began publication on July 1, 1865 and the end-of-month issue is used from 1865 to 1895 to collect price data. The Commercial and Financial Chronicle's *Quotation Supplement* began publication on May 11, 1895 and it is used between 1895 and 1928. *The Bank and Quotation Record* is used beginning in February 1928. In addition to the Commercial and Financial Chronicle, W.B. Dana published the *Handbook of Securities* which provided monthly data on Boston stocks between 1886 and 1925. In addition to this, the *Investor's Pocket Manual* was used between 1913 and 1928. *Stock Fluctuations* was published by Kidder, Peabody & Co. in Boston between 1902 and 1919 and provided additional data on all of the stocks that listed in Boston.

A great source for data on Boston stocks is Joseph G. Martin, *A Century of Finance*, Boston, 1898 which covers the period from 1798 until 1898 providing annual data on high and low prices, dividends and shares outstanding. Henry E Wallace and Charles M. Goodsell, eds., *The Manual of Statistics: Stock Exchange Handbook*, New York was published between 1884 and 1923 and provides a good source for data on dividends and shares outstanding. The *Commercial and Financial Chronicle* began publishing the Financial Review in 1879 which provided monthly data on Boston stock prices beginning in 1886. The *Investors' Supplement* began publication in April 1875 and provided information on securities traded in New York and other cities. Poor's *Manual of Industrial Securities* was published between 1900 and 1940 and Moody's *Manual of Industrial Securities, Manual of Railroad and Corporation Securities, Manual of Railroads/Transportation Securities* and *Moody's Manual of Bank & Finance Securities* published between 1900 and the present. The *Dividend Record*, published by Standard and Poor's and by Moody's were also used from 1929 on. Using all of these sources, we were able to put together data on 1155 securities that traded in Boston between 1792 and 1972.

Stocks Listed on the Boston Stock Exchange

There were over 1000 stocks that listed on the Boston Stock Exchange between 1834 and 1950, and GFD has data on Boston stocks since 1784. Data for the Union National Bank and the First Bank of the

United States begins in 1798. Data for the Massachusetts National Bank and the Old Boston National Bank begins in 1803. The number of banks that were listed on the Boston SE gradually increased, reaching 50 by 1870 with over 80 banks listing by 1900. Before the 1834, most of the trading in Boston was in national securities, either the Bank of the United States or in federal government bonds issued to replace the debt that had accumulated during the Revolutionary War. By 1836, the government debt had been paid off and the government did not renew the charter of the Second Bank of the United States, allowing brokers to focus on local securities.

The largest number of companies that listed in Boston were the railroads. Over 180 railroad securities were listed on the Boston SE between 1835 and 1898. Some of these railroads, such as the Atchison, Topeka and the Santa Fe or the Boston and Maine Railroad eventually moved onto the NYSE, but many such as the Central Massachusetts Railroad, the Fitchburg Railroad Co. or the Vermont and Massachusetts Railroad remained exclusively on the Boston Stock Exchange, allowing investors opportunities that were unavailable on the NYSE.

Boston provided additional opportunities for speculation and investment in the Lake Superior Copper Mining companies and the manufacturing companies that produced textiles for the rest of the United States and Great Britain. The Calumet Mine and the Hecla Mine, which merged into the Calumet and Hecla Mining Co. in 1865 is the best known of the Lake Superior Copper Mining Companies. In addition to them, the Copper Falls Mining Co., the Franklin Mining Co., the Pittsburgh and Boston Copper Mining Co., the Pewabic Mining Co. and the Quincy Mining Co. All of them provided spectacular, though volatile returns to investors.

Similarly, many of the manufacturing companies proved to be good investments. Although the par on most of the manufacturing stocks was $1000, some of them, such as the Amoskeag, Boott Mills, Columbian, Lawrence, Merrimack, Otis, and Pacific Mills provided both capital gains and dividends. Many of the manufacturing companies were still around after World War II.

Insurance stocks, on the other hand, were a mixed bag. The Boston Fire of 1872 drove all but two of the insurance companies into bankruptcy. If few people remember the Great Boston Fire of 1872, it is only because the Chicago fire which happened in 1871 was more spectacular. The fire imposed severe losses on investors, but the insurance companies were able to raise new capital in 1873 to restart several of the insurance companies that had lost everything they had.

Because of the differences in the investment opportunities in Boston, as opposed to New York, you would expect different outcomes for stocks on the two exchanges, but as we find out below, the differences were smaller than one would expect.

Boston Stock Exchange Index

We put together an index of stocks that were listed on the Boston Stock Exchange. Only stocks that delisted from the Boston Stock Exchange were included. Any stock that listed on the NYSE was automatically excluded. Both Banks of the United States were omitted. We chose the 15 largest stocks by market capitalization in January each year and created an index of those stocks for that year. When a new year began, a new index of the 15 largest stocks was created and chain-linked to the previous year's index. In this way, we created an index of Boston stocks that goes from 1792 until 1950. After 1950, there was a limited number of stocks that still traded in Boston, so we discontinued the index.

The relative performance of GFD's Boston Stock Exchange and the US-100 index, which includes shares from all exchanges, is provided in Table 1. The Boston Stock Exchange appears to have outperformed the US-100 Index between 1792 and 1914. After World War I, the US-100 provided a higher return. However, data for the Bank of the United States is included in the US-100 index and excluded from the Boston SE Index. Because of the collapse in the price of Bank of the United States stock during and after the Panic of 1837, the Boston index had far outperformed the US-100 by 1842, and it took over 70 years for the rest of the stock market to catch up with Boston.

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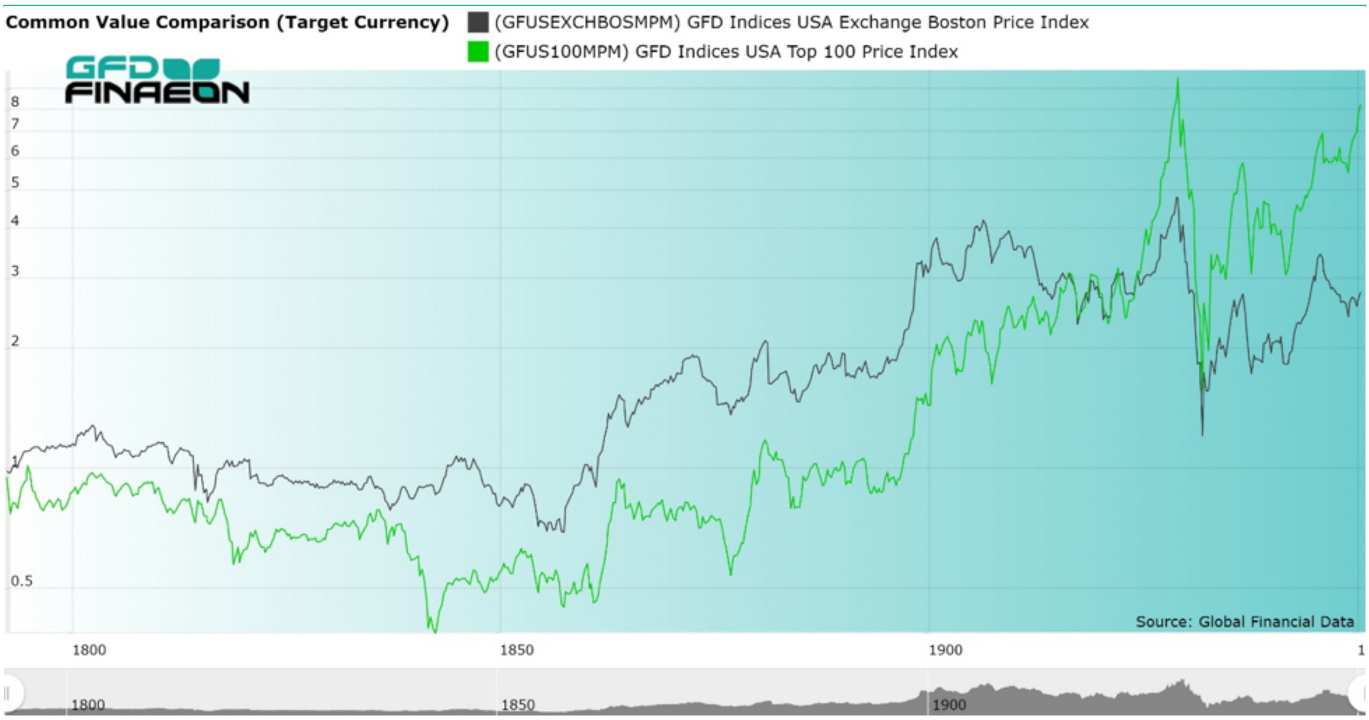

Figure 1. Boston Stock Exchange Index and US-100 Index, 1792 to 1972

We did a second comparison of the Boston SE Index and the US-100 beginning in 1842 by which time the Bank of the United States had collapse in price. This comparison is provided in Figure 2. This shows that the Boston Index underperformed relative to the US-100. The two indices provided similar returns until 1900, but after 1900, the US-100 clearly outperformed the Boston Index. Large industrial companies began listing on the NYSE in the 1890s. The new industries did not list on the Boston Stock Exchange and the NYSE began to outperform Boston.

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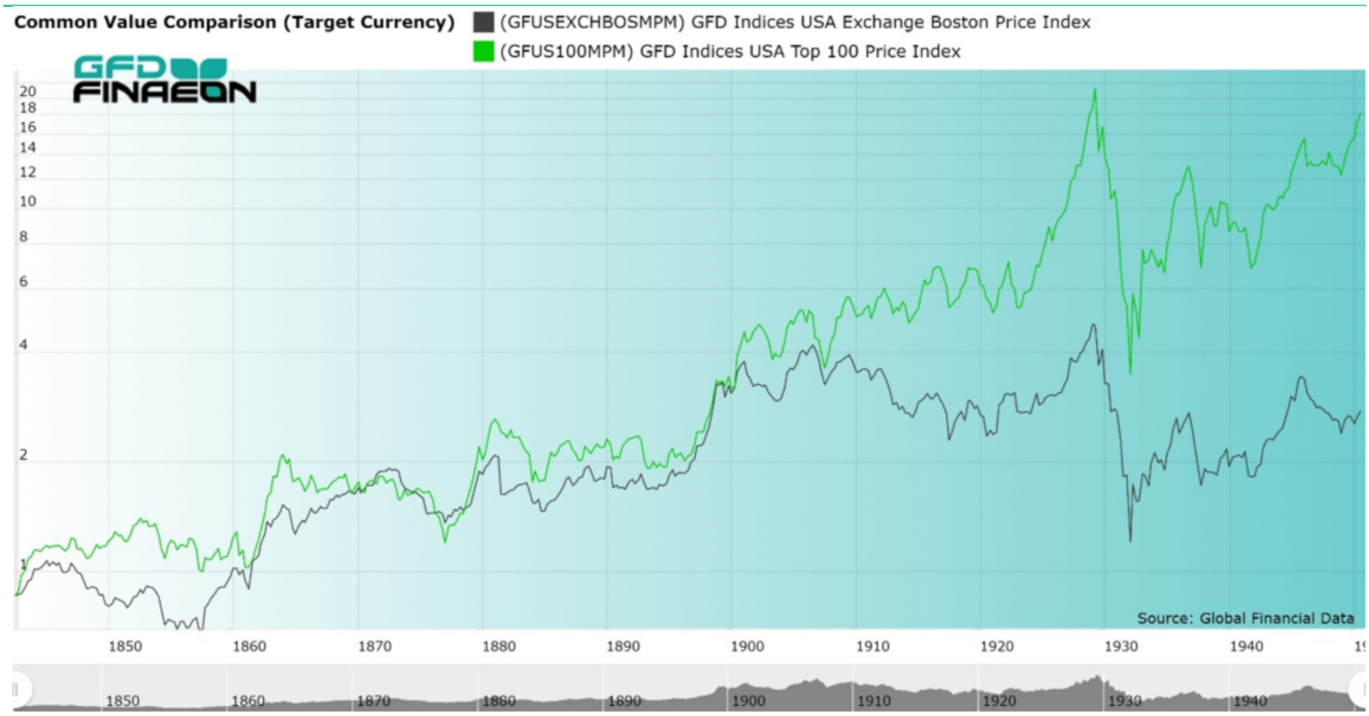

Figure 2. Boston Stock Exchange Index and US-100 Index, 1842 to 1950

Returns to the Boston Stock Exchange Index and the US-100 are provided in Table 3. Boston provided higher returns between 1792-1842 and 1792-1900, but in the other three periods ending in 1950, 1792-1950, 1842-1950 and 1900-1950, the US-100 provided the higher returns. We provided both price and return data for the US-100 but because the dividend record is not complete for Boston, we only provided price data.

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Years	Price Boston	Price US-100	Return US-100
1792-1842	-0.03	-1.8	4.11
1792-1900	1.19	0.57	6.81
1792-1950	0.65	1.37	4.45
1842-1950	1.09	2.87	8.94
1900-1950	-0.02	3.52	8.64

Table 3 Annual Returns to the Boston SE and the US-100

Conclusion

There are significant differences between the investment opportunities that were available in Boston and New York City. New York provided more companies to invest in and larger capital markets than Boston. After the telegraph and telephone came into existence, investors could contact brokers in New York from anywhere in the country to invest in companies that listed on the NYSE.

Boston provided the chance to invest in Lake Superior Copper mines and local manufacturing companies which were not available in New York. However, New York provided access to national railroads from the Union Pacific to the New York Central, the Illinois Central and the Chicago, Burlington and Quincy, each of which was the largest corporation in the United States at one point in time. Over the long run, New York provided better investment opportunities than Boston. The further you move into the twentieth century, the higher the returns to New York than to Boston. With the development of the Curb/AMEX in New York and the introduction of new rules regulating new listings by the SEC in 1934, regional exchanges such as Boston could no longer compete with the NYSE or the AMEX. Combine this fact with lower returns in Boston after 1900 and it is no wonder that the Boston Stock Exchange shrank in size throughout the 1900s. Even though Boston underperformed, the Boston SE Index zigged and zagged in a similar pattern to stocks that listed on the NYSE. This shows that the overall tenor of the market is perhaps the most important factor in determining returns.