# The History of US Stock Exchange and Market Events[9]

- **1790**, Board of Brokers of Philadelphia (will become the Philadelphia Stock Exchange) – This was the formation of the oldest stock exchange in the U.S.
- **1792**, The Buttonwood Agreement – This was an effort to organize securities trading in New York City, akin to their Philadelphia peers. The agreement was signed by 24 stockbrokers outside of 68 Wall Street in New York, under a buttonwood tree, and contained two provisions: (1) brokers were to deal only with each other, eliminating the auctioneers, and (2) commissions were set at 0.25%. It was the first example of self regulation.
- **1817**, New York Stock and Exchange Board (will become NYSE) – The stock brokers in the Buttonwood Agreement instituted new reforms and reorganized, adopting restrictions on manipulative trading and formal structures of governance. The brokers began renting out exclusive space to trade securities, which previously took place at the Tontine Coffee House. Prior to settling at its current 11 Wall Street location in New York (the exchange used to have a second building at 18 Broad Street), several locations were used between 1817 and 1865.
- **1834**, Boston Stock Exchange (BX, formerly BSX or BSE) – The third oldest exchange in the U.S. opened
- **1864**, Open Board of Stock Brokers – This exchange, with a similar membership model, opened to directly compete with the NYSE
- **1864**, Oil Exchange (Pittsburgh Coal Exchange, Pittsburgh Oil Exchange; will become Pittsburgh Stock Exchange) founded
- **1865**, NYSE acquired New York Gold Exchange
- **1867**, stock tickers were introduced
- **1869**, Open Board of Stock Brokers merged with NYSE
- **1875**, Board of Brokers of Philadelphia renamed itself the Philadelphia Stock Exchange (PHLX)
- **~1880**, New Orleans stock Exchange began operating

[9] Other U.S. regional stock exchanges include: Buffalo Stock Exchange, Colorado Springs Stock Exchange, Denver Stock Exchange, Detroit Stock Exchange, Hartford Stock Exchange, Honolulu Stock Exchange, Louisville Stock Exchange, Milwaukee Stock Exchange, Richmond Stock Exchange and Wheeling Stock Exchange. This section is not meant to be exhaustive of all U.S. exchanges or highlights in the history of stock markets.

- **1884**, Washington Stock Exchange began operating
- **1881**, Baltimore Stock Exchange opened
- **1882**, Chicago Stock Exchange (CHX) founded
- **1882**, San Francisco Stock and Bond Exchange founded
- **1885**, Cincinnati Stock Exchange founded
- **1888**, Salt Lake Stock and Mining Exchange founded (will become Intermountain Stock Exchange)
- **1894**, Pittsburgh Oil Exchange rebranded as Pittsburgh Stock Exchange
- **1896**, Dow Jones Industrial Average (DJIA) was first published in The Wall Street Journal
- **1897**, Spokane Stock Exchange began operating
- **1899**, Cleveland stock Exchange founded
- **1899**, Los Angeles Oil Exchange founded
- **1899**, St. Louis Stock Exchange opened
- **1906**, the DJIA exceeded 100
- **1907**, Panic of 1907 (1907 Bankers' Panic, Knickerbocker Crisis) – This was a financial crisis lasting three weeks starting in mid-October, when the NYSE fell ~50% from last year's peak. With the country in an economic recession, panic spread and caused runs on banks and trusts. The panic was triggered by the failed attempt to corner the market on United Copper Company stock. This lead to the collapse of the Knickerbocker Trust Company, New York's third largest trust, creating a domino effect of regional banks withdrawing reserves from New York City banks. Financier J.P. Morgan stepped in with other bankers to provide money to stabilize the banks. The event emphasized the inability of the country's Independent Treasury system to inject liquidity back into the market and eventually led to the creation of the Federal Reserve System.
- **1907**, the curb brokers gained rights of seniority but intentionally averted organizing to avoid authorities forcing them to sell exchange memberships
- **1908**, the New York Curb Market Agency was established, with formal trading rules for curbstone brokers
- **1910**, the informal Curb Association formed to weed out "undesirables"
- **1911**, the New York Curb Market Association was formed with a formal constitution
- **1914**, World War I stock exchange closures
- **1915**, quoting and trading in stocks changed from percent of par value to dollars
- **1920**, Wall Street bombing (outside the NYSE building)
- **1923**, Poor's Publishing introduced the Composite Index (now the S&P 500)
- **1927**, Seattle Stock Exchange began operating

- **1928**, San Francisco Stock and Bond Exchange took the name San Francisco Stock Exchange
- **1929**, central quote system established
- **1929**, Minneapolis-St. Paul Stock Exchange opened
- **1929**, New York Curb Market Agency changed its name to New York Curb Exchange
- **1929**, Wall Street Crash of 1929 (the Great Crash) – As the Roaring Twenties rolled on, the stock market soared despite the Fed's warning of excessive speculation (leading to a mini crash in March, stopped by a credit backstop by National City Bank). During the decade, the stock market had increased tenfold. Yet, the U.S. economy showed signs of trouble, with declines in steel production and auto sales, coupled with an increase in consumer debt based on easy credit. After gaining ~20% between June and September, the market corrected in September, after financial expert Roger Babson predicted a crash. Then, on September 20, the London Stock Exchange crashed, when top British investor Clarence Hatry and many of his associates were jailed for fraud and forgery, weakening optimism and creating instability in the U.S. stock market. On October 24, the market declined but was stemmed by strategic blue chip stock buying by a group of banks. Media coverage over the weekend increased the hysteria, and the DJIA declined ~13% on October 28, Black Monday (it fell another ~12% the next day). By mid-November, the DJIA had lost almost half of its value, with the slide continuing through the summer of 1932 when the DJIA troughed 89% below its peak. The DJIA did not return to its pre-crash heights until November 1954.
- **1933**, Securities Act of 1933
- **1934**, Securities Exchange Act of 1934 and the establishment of the SEC
- **1935**, Seattle Stock Exchange merged with Seattle Curb and Mining Exchange
- **1938**, San Francisco Stock Exchange absorbed the San Francisco Curb Exchange
- **1938**, Maloney Act Amendments to the Securities Exchange Act of 1934, authorizing the formation of national securities associations to supervise the conduct of their members subject to the oversight of the SEC, i.e. self-regulatory organizations (SRO)
- **1939**, National Association of Securities Dealers established as a SRO to play a leading role in the management of stock trading in the markets
- **1942**, Seattle Stock Exchange closed
- **1949**, Philadelphia Stock Exchange and Baltimore Stock Exchange merged
- **1949**, CHX merged the St. Louis, Cleveland and Minneapolis/St. Paul exchanges to form the Midwest Stock Exchange
- **1953**, New York Curb Exchange changed its name to the American Stock Exchange (AMEX)
- **1954**, Philadelphia-Baltimore Stock Exchange merged with the Washington Stock Exchange
- **1954**, DJIA surpassed its 1929 peak in inflation-adjusted dollars
- **1956**, DJIA closed above 500 for the first time

- **1956**, Pacific Coast Stock Exchange was formed with the merger of the San Francisco Stock and Bond Exchange and the Los Angeles Oil Exchange
- **1957**, Poor's Publishing merged with Standard Statistics Bureau and the Standard & Poors composite index grew to track 500 companies on the NYSE (now known as the S&P 500)
- **1959**, New Orleans Stock Exchange merged with the Midwest Stock Exchange
- **1968+**, The Paper Crisis – Equities ADV hit 12M shares per day, with piles of stock certificates and other paperwork overwhelming many Wall Street back offices, those responsible for settling and clearing trades. NYSE was forced to restrict trading to four days a week, but it was not enough to stop a flood of fails (failures by firms to receive or deliver securities within five days of a trade). Many firms lost control of their records and costs, leading to around a sixth of all NYSE member firms disappearing either through merger or closure. Capitalizing on the confusion, organized crime syndicates made off with >$400M in stolen securities in 1971, according to the U.S. Attorney General's office.
- **1969**, Philadelphia-Baltimore-Washington Stock Exchange acquired the Pittsburgh Stock Exchange
- **1969**, Institutional Networks Corp (Instinet) founded
- **1970**, Securities Investor Protection Corporation (SIP) established
- **1971**, National Association of Securities Dealers Automated Quotations (NASDAQ, now Nasdaq) founded as the world's first electronic stock market
- **1972**, DJIA closed above 1,000 for the first time
- **1972**, Salt Lake Stock and Mining Exchange changed its name to Intermountain Stock Exchange
- **1973**, the Pacific Coast Stock Exchange was renamed the Pacific Stock Exchange
- **1973**, The Depository Trust Company (DTC) was created to alleviate the paper crisis
- **1976**, as another solution to the paper crisis, the National Securities Clearing Corporation (NSCC) was formed to clear U.S. equities, using multilateral netting
- **1980s**, Savings and Loan Crisis – Lasting through the 1980s and into the early 1990s, more than 700 U.S. savings and loan associations failed. The S&Ls were lending long term at fixed rates using short-term money and became insolvent when interest rates rose.
- **1982**, LatAm Sovereign Debt Crisis – Mexico, Brazil and Argentina (and others) borrowed money for development and infrastructure programs, and LatAm debt roughly quadrupled in seven years. With the U.S. recession in the late 1970s, interest rates rose while LatAm currencies devalued significantly. Mexico was the first country to acknowledge it could not repay its debt, and many LatAm nations eventually received bailouts from the IMF.
- **1985**, NASDAQ-100 Index introduced
- **1986**, COMEX acquires Intermountain Stock Exchange

- **1987**, Black Monday – On October 19, 1987, the DJIA dropped 23% in the day. The Wednesday before Black Monday, the U.S. House of Representatives filed legislation to eliminate tax benefits for financing mergers. Stock values re-adjusted, as many companies were no longer viewed as takeover targets. That same day, the trade deficit for August came in notably above expectations, causing the dollar to decline as expectations increased for the Fed to tighten rates, pressuring stocks. By Thursday, markets continued to decline, with flight to safety moves as funds flowed to bonds from stocks. That Friday, many stock index options expired, and previous price movements eliminated at-the-money options preventing investors from rolling into new contracts/hedges easily. People sold futures contracts to hedge, creating a significant price discrepancy between the values of the stock index and its underlying stocks. There was substantial selling pressure on the Monday open at the NYSE. Specialists were not able to settle the imbalances, delaying the open by an hour. With the delay in trading in stocks, the futures markets opened using stale prices on the indexes. Once the NYSE opened, stock prices dropped massively.
- **1989**, Junk Bond Crisis – During this decade, junk bonds became popular for use in leveraged buyouts and as a business financing mechanism, and the market grew exponentially. While the start of the junk bond collapse is debated, it culminated with the failure of Drexel Burnham Lambert, due to its substantial participation in junk bonds. The crisis led to a recession in the U.S.
- **1991**, DJIA exceeded 3,000
- **1991**, Spokane Stock Exchange closed
- **1993**, Midwest Stock Exchange changed its name back to CHX
- **1994**, TerraNova Trading was founded; it started excepting orders on Archipelago in 1997
- **1994**, Tequila Crisis – A nearly 50% devaluation in the Mexican peso (driven by a reversal in economic policy removing tight currency controls) caused interest rates to increase significantly and led Mexico to need a bailout for its bonds.
- **1995**, DJIA exceeded 5,000
- **1996**, real-time tickers introduced
- **1999**, DJIA exceeded 10,000
- **1999**, The Depository Trust & Clearing Corporation (DTCC) formed as a holding company for DTC and NSCC
- **1997-1998**, Asia Crisis – The Thai Baht collapsed, leading to Thailand not being able to repay its debt. The crisis spread across the region, particularly South Korea, Indonesia, Laos, Hong Kong and Malaysia. (This also contributed to the failure of Long-Term Capital Management, which was bailed out by the Fed and a group of banks to prevent a wider collapse of the financial markets.)
- **1998**, Attain (will become Direct Edge) founded
- **1999-2000**, Dotcom Bubble – Following a rush into technology and Internet stocks, despite the fact that many of them made essentially no money, a slowing economy and rising interest rates forced the dotcoms to go bankrupt.

- **2000**, National Association of Securities Dealers spun off the Nasdaq Stock Market into a publicly traded company
- **2001**, trading in fractions ($^{n}/_{16}$) replaced by decimals (increments of $0.01), or decimalization
- **2001**, September 11 terrorist attack stock exchange closures
- **2003**, Cincinnati Stock Exchange rebranded as the National Stock Exchange (NSX)
- **2004**, NYSE merged with Euronext, forming the first transatlantic stock exchange
- **2005**, Archipelago acquired the Pacific Exchange
- **2005**, NASDAQ acquired Insitnet (from Reuters, which acquired it in 1987)
- **2005**, Bats Global Markets (BATS) founded
- **2006**, NYSE merged with Archipelago Exchange (ArcaEx, now NYSE Arca), an exchange on which both stocks and options are traded
- **2006**, DJIA topped 12,000
- **2007**, DJIA exceeded 14,000
- **2007**, Nasdaq merged with OMX, a leading exchange operator in the Nordic countries and renamed itself the NASDAQ OMX Group
- **2007**, Knight Capital Group spun off Attain (which it bought two years earlier) and rebranded it as Direct Edge, as an electronic communication network
- **2007**, CBOE Stock Exchange (CBSX) launched in partnership with four liquidity providers
- **2007**, BX was purchased by NASDAQ
- **2007**, PHLX was purchased by NASDAQ
- **2007**, FINRA was formed, merging NASD and the regulation, enforcement and arbitration functions of NYSE
- **2007-2008**, Global Financial Crisis – The housing (price) bubble burst when mortgage delinquency rates began rising in August 2006. This led to a rapid devaluation of financial instruments (MBS, CDS, etc.). As values continued to quickly decline, buyers disappeared and the financial institutions holding these securities faced a liquidity crisis. It became difficult to borrow money, resulting in a decrease in home buyers and a corresponding plunging of home prices. What began with a crisis in the U.S. subprime mortgage market developed into a full-blown international financial services crisis.
- **2008**, Bats Global Markets became an operator of a licensed U.S. stock exchange
- **2008**, NYSE Euronext acquired AMEX; AMEX was integrated with the Alternext European small-cap exchange and was renamed NYSE Alternext US
- **2009**, after the DJIA reached a 12-year low at 6,547.05, it rebounded to >10,000 in October

- **2009**, NYSE Alternext US rebranded as NYSE Amex Equities
- **2010**, Direct Edge received approval to operate licensed national securities exchanges
- **2010 Flash Crash**, In May 2010, the U.S. equity markets experienced "a severe disruption", as a large number of stock prices suddenly dropped by significant amounts in a very short time period and then equally suddenly reversed to pre-decline levels. This led to a large number of trades being executed at temporarily depressed prices, including many that were more than 60% away from pre-decline prices.
- **2011**, Bats Global Markets acquired Chi-X Europe
- **2011**, CBSX acquired NSX
- **2012**, NYSE Amex Equities changed its name to NYSE MKT
- **2012**, Hurricane Sandy stock exchange closures
- **2013**, IEX (Investors Exchange) opened for trading, operating as an ATS
- **2013**, ICE acquired NYSE Euronext
- **2013**, DJIA ended the year above 16,500
- **2014**, DJIA closed above 17,000 in July and above 18,000 in December
- **2014**, CBSX closed
- **2014**, NSX ceased trading operations
- **2014**, Direct Edge merged with BATS
- **2015**, NSX resumed trading operations under new ownership
- **2016**, IEX received SEC approval as an official exchange
- **2017**, NYSE MKT renamed NYSE American
- **2017**, ICE acquired NSX, rebranded as NYSE National
- **2017**, IEX received SEC approval to list companies
- **2017**, CBOE acquired BATS
- **2017**, DJIA crossed 20,000 for the first time
- **2018**, DJIA crossed 25,000 for the first time
- **2018**, ICE entered an agreement to acquire CHX (pending regulatory approval at publication of this report)

# Appendix

## Terms to Know

| | |
|---|---|
| FINRA | Financial Industry Regulatory Authority |
| SEC | Securities and Exchange Commission |
| SRO | Self-Regulatory Organization |

| | |
|---|---|
| ADV | Average Daily Trading Volume |
| ATS | Alternative Trading System |
| Best Ex | Best Execution |
| Dark Pool | Private trading venues, not accessible by the public |
| ECN | Electronic Communication Network |
| EMS | Equity Market Structure |
| ETF | Exchange-Traded Fund |
| ETP | Exchange-Traded Product |
| HFT | High-Frequency Trading |
| IOI | Indication of Interest |
| IPO | Initial Public Offering |
| MM | Market Maker |
| OTC | Over-the-Counter |
| PFOF | Payment For Order Flow |
| SI | Systematic Internaliser |
| Tick Size | Minimum price movement of a trading instrument |

| | |
|---|---|
| EMSAC | Equity Market Structure Advisory Committee |
| NMS | National Market System |
| Reg NMS | Regulation National Market System |
| SIP | Security Information Processor; aggregates all exchange's best quotes, sent back out to the market in one data stream |

| | |
|---|---|
| Bid | An offer made to buy a security |
| Ask, Offer | The price a seller is willing to accept for a security |
| Spread | The difference between the bid and ask price prices for a security, an indicator of supply (ask) and demand (bid) |
| NBBO | National Best Bid and Offer |
| Locked Market | A market is locked if the bid price equals the ask price |
| Crossed Market | A bid is entered higher than the offer or an offer is entered lower than the bid |
| Opening Cross | To determine the opening price of a stock, accumulating all buy and sell interest a few minutes before the market open |
| Closing Cross | To determine the closing price of a stock, accumulating all buy and sell interest a few minutes before the market close |

| Order Types | |
|---|---|
| AON | All or none; an order to buy or sell a stock that must be executed in its entirety, or not executed at all |
| Block | Trades with at least 10,000 shares in the order |
| Day | Order is good only for that trading day, else cancelled |
| FOK | Fill or kill; must be filled immediately and in its entirety or not at all |
| Limit | An order to buy or sell a security at a specific price or better |
| Market | An order to buy or sell a security immediately; guarantees execution but not the execution price |
| Stop | (or stop-loss) An order to buy or sell a stock once the price of the stock reaches the specified price, known as the stop price |

| Investors | |
|---|---|
| Institutional | Organization, fewer protective regulations as assumed to be more knowledgeable and better able to protect themselves* |
| Retail | Individual, a non-professional investor |
| Accredited | Individual, income > $200K ($300K with spouse) in each of the prior 2 years OR net worth >$1M, excluding primary residence |

*Types of institutional investors: endowment funds, commercial banks, mutual funds, hedge funds, pension funds and insurance companies

## ATS Data

| Equity ATS Name | MPID | Total Shares | % of Total Shares | Total Trades | % of Total Trades | Avg. Trade Size | # Times the Avg. |
|---|---|---|---|---|---|---|---|
| UBS ATS | UBSA | 11,558,612,209 | 20.17% | 74,684,445 | 26.58% | 155 | 0.8x |
| CROSSFINDER | CROS | 6,131,230,224 | 10.70% | 37,641,434 | 13.40% | 163 | 0.8x |
| LEVEL ATS | EBXL | 4,036,471,200 | 7.04% | 20,531,738 | 7.31% | 197 | 1.0x |
| SUPERX | DBAX | 4,030,627,076 | 7.03% | 21,670,068 | 7.71% | 186 | 0.9x |
| MS POOL (ATS-4) | MSPL | 3,895,161,690 | 6.80% | 16,362,217 | 5.82% | 238 | 1.2x |
| BARCLAYS ATS ("LX") | LATS | 3,453,137,482 | 6.03% | 18,958,277 | 6.75% | 182 | 0.9x |
| JPM-X | JPMX | 3,240,235,070 | 5.65% | 16,794,978 | 5.98% | 193 | 0.9x |
| BIDS TRADING | BIDS | 2,719,614,540 | 4.75% | 2,278,461 | 0.81% | 1,194 | 5.9x |
| SIGMA X2 | SGMT | 2,462,502,574 | 4.30% | 15,631,833 | 5.56% | 158 | 0.8x |
| INSTINCT X | MLIX | 2,214,264,890 | 3.86% | 10,332,918 | 3.68% | 214 | 1.0x |
| INSTINET CONTINUOUS BLOCK CROSSING SYSTEM (CBX) | ICBX | 1,674,461,755 | 2.92% | 7,999,595 | 2.85% | 209 | 1.0x |
| POSIT | ITGP | 1,607,349,782 | 2.81% | 5,530,164 | 1.97% | 291 | 1.4x |
| MS TRAJECTORY CROSS (ATS-1) | MSTX | 1,211,480,500 | 2.11% | 7,255,670 | 2.58% | 167 | 0.8x |
| VIRTU MATCHIT | KCGM | 1,146,037,324 | 2.00% | 6,339,584 | 2.26% | 181 | 0.9x |
| DEALERWEB | DLTA | 1,054,776,222 | 1.84% | 2,931 | 0.001% | 359,869 | 1764.1x |
| IBKR ATS | IATS | 1,003,202,015 | 1.75% | 3,666,525 | 1.30% | 274 | 1.3x |
| CROSSSTREAM | XSTM | 804,362,651 | 1.40% | 2,392,943 | 0.85% | 336 | 1.6x |
| LIQUIDNET H2O | LQNA | 790,199,400 | 1.38% | 45,824 | 0.02% | 17,244 | 84.5x |
| CITI CROSS | CXCX | 622,238,237 | 1.09% | 3,072,427 | 1.09% | 203 | 1.0x |
| JPB-X | JPBX | 618,955,773 | 1.08% | 5,795,286 | 2.06% | 107 | 0.5x |
| BLOCKCROSS | BLKX | 618,438,688 | 1.08% | 55,655 | 0.02% | 11,112 | 54.5x |
| LIQUIDNET ATS | LQNT | 587,409,900 | 1.03% | 16,107 | 0.01% | 36,469 | 178.8x |
| USTOCKTRADE SECURITIES, INC. | USTK | 442,665,109 | 0.77% | 742,620 | 0.26% | 596 | 2.9x |
| CODA MARKETS, INC. | PDQX | 323,599,205 | 0.56% | 1,510,480 | 0.54% | 214 | 1.0x |
| MS RPOOL (ATS-6) | MSRP | 318,863,430 | 0.56% | 1,542,721 | 0.55% | 207 | 1.0x |
| INSTINET CROSSING | XIST | 306,502,028 | 0.53% | 86,037 | 0.03% | 3,562 | 17.5x |
| LUMINEX TRADING & ANALYTICS LLC | LMNX | 174,025,591 | 0.30% | 5,286 | 0.002% | 32,922 | 161.4x |
| CITIBLOC | CBLC | 124,141,506 | 0.22% | 7,957 | 0.003% | 15,602 | 76.5x |
| CIOI | CIOI | 88,912,991 | 0.16% | 1,498 | 0.001% | 59,354 | 291.0x |
| AQUA SECURITIES L.P. | AQUA | 24,689,596 | 0.04% | 2,808 | 0.001% | 8,793 | 43.1x |
| XE | WDNX | 16,415,697 | 0.03% | 15,435 | 0.01% | 1,064 | 5.2x |
| PRO SECURITIES ATS | PROS | 2,196,731 | 0.004% | 4,799 | 0.002% | 458 | 2.2x |
| BARCLAYS DIRECTEX | BCDX | 18,000 | 0.00003% | 1 | N/A | 18,000 | 88.2x |
| **Grand Total** | | **57,302,799,086** | | **280,978,722** | | **204** | |

Source: FINRA (as of 1Q18)

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