# The Stock Exchange: Source Companion

Ketineni Ramarao. An Industries of India study. November 2026. This companion lists, for each chapter of the book, the claims and figures that matter and the source behind each. Figures are given as the source states them, including its own rounding.

## How to read this companion

Small numbers in the book text are note numbers. Each note number in the left column below marks the book paragraph that carries the claim, shown by its first words. A note covers the paragraph it ends. Each source has a tag such as S17. A tag marked "full page read" means the whole page or document was retrieved and read. "Search excerpt" means the passage that supports the claim was read as a search excerpt from that page and the full page was not opened. Rows marked "author explanation" are definitions or reasoning written by the author; where the book explains a term in its own words, the row says so and no outside claim rests on it.

## Prologue, A Hundred Guilders

| | | |
|---|---|---|
| **1** *The charter was unusually open about this....* | Charter of 20 March 1602; Article 10 allowing all residents to buy shares; no minimum or maximum; posters announced the offering | S2 |
| **2** *People came all month. On the last...* | Subscription at Dirck van Os's house; directors Bicker, Pauw, Kaerel, de Velaer, Poppen and Buyck at 12,000 guilders each; 1,143 investors; 3,674,945 guilders for the Amsterdam branch; notary's midnight statement; Neeltgen Cornelis, 100 guilders | S2 |
| **3** *That ledger is a good place to...* | Transfer of shares provided for on the first page of the register | S2 |

## The Problem a Share Solves

| | | |
|---|---|---|
| **4** *This is the arrangement that existed in...* | Pre-1602 voyage-by-voyage financing; the VOC as the first company to issue shares to a broad public | S1 |
| **5** *A problem followed at once. If the...* | Ten-year general balance in 1612 and the transfer provision | S2 |
| **7** *The VOC was not one pool of...* | Six chambers and their percentages (Amsterdam 57, Middelburg 20, Enkhuizen 8, Hoorn 7, Delft 4, Rotterdam 3); almost 6.5 million guilders | S2 |
| **8** *A study of material industry that stays...* | VOC violence, the Banda Islands, forced labour and slave trading; Dutch exchange historians on the VOC's darker side | S3, S1 |
| **6** *Economists give this property a name: liquidity....* | Definitions of liquidity and of a share are the author's own explanation and carry no factual claim attributed to a source | author explanation |

## Inns, Squares and Bills

| | | |
|---|---|---|
| **9** *The word bourse, used across continental Europe...* | Van der Beurze family, Huis ter Beurze, three purses, Oude Beursplein; nation houses of Genoa, Florence and Venice | S8, S9 |
| **10** *The word bourse, used across continental Europe...* | Euronext dates the Bruges bourse to 1285 (cited in the later chapter on Europe); the family-and-inn origin is described as "commonly said" | S8, S84 |
| **11** *In the sixteenth century the trade moved....* | Antwerp Handelsbeurs, 1531, Domien de Waghemakere, Flamboyant Gothic, "world's first purpose-built commodity exchange"; London Royal Exchange inspired by it; trade in notes of promise | S11, S10, S12 |

| | | |
|---|---|---|
| **12** *Behind both inn and building stands a...* | Bills of exchange: medieval bill as an order to pay through an agent abroad; not negotiable or discountable before maturity because of the usury ban; Antwerp merchant court of 1506 gave holders the right to claim; earliest known discounting at Antwerp in 1536 | S109, S110 |
| **13** *Those certificates traded. Merchants bought and sold...* | Osaka rice certificates, Dojima, 1730 authorisation of spot and futures markets; earlier ban as gambling; falling prices in the late 1720s and samurai incomes | S13, S14, S15 |

## The First Continuous Market

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|---|---|---|
| **14** *Once the VOC's shares existed, they traded....* | Rapid growth of VOC share trading | S1 |
| **16** *The early market quickly produced a story...* | Isaac Le Maire: resignation 1605, bear raid from February 1609, squeeze by surprise dividend in March 1610 | S7 |
| **17** *In 1688 a Sephardic writer named Joseph...* | Vega: born Spain c.1650, died 1692; three characters; option premium anecdote (20 and 15 percent); first book on the stock trade; FT list of 1995 | S6, S4 |
| **18** *The scene tells us several things at...* | Behavioural finance reading of Vega: excessive trading, overreaction, disposition effect, herding, overconfidence, regret aversion | S5 |
| **15** *Once the VOC's shares existed, they traded....* | Beurs of Hendrick de Keyser: first merchants' exchange building in Amsterdam, built 1608 to 1611, on the Rokin near Dam Square | S111, S112, S1 |

## Coffeehouses and Bubbles

| | | |
|---|---|---|
| **19** *London's version of the early market grew...* | Coffeehouses and Jonathan's; London Stock Exchange established 1801; Philadelphia 1790 | S16 |

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|---|---|---|
| **20** *By the second decade of the eighteenth...* | Mississippi Company: 500 livres in January 1719, 10,000 by December 1719, 1,900 percent, soldiers at night, Rue Quincampoix, "millionaire" | S19, S20 |
| **22** *The South Sea Bubble has often been...* | South Sea Company: 1711, Assiento, 1720 debt recapitalisation, more stock sold than available, Stukeley quotations, Royal Society lost 600 pounds, parliamentary inquiry found insider trading and bribery, share-price charts for 21 August 1719 to 6 December 1720 | S17 |
| **21** *The most famous investor associated with the...* | Newton: 2,500 stock in 1713; loss "likely" but evidence "inconclusive"; the 20,000-pound figure is the Telegraph's | S17, S18 |

## Twenty-Four Men and a Tree

| | | |
|---|---|---|
| **24** *On 17 May 1792, twenty-four stockbrokers signed...* | Hamilton and the national debt; 17 May 1792; 24 brokers; 68 Wall Street; legend of the tree | S21, S22 |
| **25** *On 17 May 1792, twenty-four stockbrokers signed...* | Agreement's two provisions, 0.25 percent commission, preference clause text, secret meeting at Corre's Hotel, Tontine Coffee House from 1793 | S22 |
| **23** *Philadelphia moved first. In 1790 the brokers...* | Philadelphia Board of Brokers 1790 | S16 |

## Wires

| | | |
|---|---|---|
| **26** *In 1867, a telegrapher named Edward Calahan,...* | Calahan 1867 ticker, 1868 patent text | S23, S24 |

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|---|---|---|
| **27** *Thomas Edison did not invent the stock...* | Edison's Universal Stock Printer 1871 and synchronisation; printers falling behind by letters | S24 |
| **28** *By one account, by 1878 the exchange...* | Telephones at the exchange by 1878 (single secondary source; hedged in the text) | S25 |

## The Panic Machine

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|---|---|---|
| **29** *The panic itself began away from the...* | Call loans, trusts, 16 October 1907 Heinze and Morse corner of United Copper, Knickerbocker suspension on 22 October, call rate from 9.5 to 70 and then 100 percent, Morgan and Clearing House, link to the Federal Reserve | S26 |
| **30** *A second law, in 1934, extended oversight...* | 1929 crash, 83 percent loss by mid-1932, Pecora hearings, Securities Act of 27 May 1933, Kansas Act 1911, Martin Act 1921, Frankfurter, Landis, Cohen, Corcoran | S27, S28 |
| **31** *A second law, in 1934, extended oversight...* | The Securities Exchange Act of 1934 (signed 6 June 1934) created the SEC; Kennedy as first chairman | S108 |
| **32** *Insider trading law, which developed under this...* | 2000 rules on selective disclosure and insider trading | S29 |

## Many Rooms, One Idea

| | | |
|---|---|---|
| **33** *In 1875, twenty-five brokers each contributed one...* | Bombay: five brokers, banyan trees, 1875 association of 25 brokers at Re 1 each, 9 July 1875, Dalal Street, Rs 100 rent, Petit | S30, S31, S32 |
| **34** *When the samurai era ended in 1868,...* | Tokyo 1878 and the bond payments to former samurai | S33 |

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|---|---|---|
| **35** *Hong Kong's first formal exchange was the...* | Hong Kong 1891, 1914, 1921, 1947 | S34 |
| **36** *Shanghai's story has a gap. Securities trading...* | Shanghai: 1946 renaming, 1949 closure, 1981 and 1984 issues, 26 November and 19 December 1990 | S35, S36 |
| **37** *Not every exchange trades shares. The Chicago...* | CBOT 3 April 1848, 1858, 1859 charter, 1865 futures with margin | S37, S38 |
| **38** *The National Stock Exchange of India was...* | NSE: incorporated 1992, SEBI recognition April 1993, operations 1994, screen-based trading; WFE 2024 shares (97.7 percent of stock index options, 94.5 percent of currency options, CME 60.6 percent of interest rate options) | S39, S40 |

## Anatomy of an Order

| | | |
|---|---|---|
| **39** *When more than one order sits at...* | Price-time priority and call auction at the open | S42 |
| **40** *Continuous matching is only half of the...* | Deutsche Boerse opening auction phases and crossed book | S43 |
| **41** *Not every buyer meets a seller at...* | Specialists as assigned market makers at a post, now designated market makers with quoting obligations | S118, S117 |
| **42** *For most of the twentieth century, American...* | Decimalisation: first day all Nasdaq stocks traded in cents; 63 percent narrower spreads on 25 stocks (Instinet Research); move from fractions to dollars and cents | S44, S45 |
| **43** *For most of the twentieth century, American...* | One sixteenth of a dollar is 6.25 cents: computed directly (100 / 16 = 6.25) | arithmetic |

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|---|---|---|
| **44** *Almost all of this describes one exchange's...* | Regulation NMS and order protection; fragmentation of order flow | S46, S47 |

## After the Trade

| | | |
|---|---|---|
| **45** *In the United States, the National Securities...* | NSCC as central counterparty for virtually all broker-to-broker trades; CNS netting into one position per security per member | S48 |
| **47** *DTCC's depository subsidiary, the Depository Trust Company...* | DTC transfers; DTC designated systemically important in 2012; DTCC user-owned cooperative | S52, S49 |
| **48** *On 28 May 2024 the United States...* | T+1 on 28 May 2024; 3.7 billion dollars lower clearing fund requirements; 30 percent increase in same-day affirmation | S51, S50 |
| **49** *The post-trade system is quiet infrastructure. When...* | 1987: different clearing timelines across stock, options and futures | S56 |
| **50** *For most of the twentieth century, a...* | Back office crisis of the late 1960s (name only) | S58 |
| **51** *The next stage is a fuller dematerialisation,...* | Tokenisation no-action letter of December 2025 | S52, S53 |
| **46** *In the United States, the National Securities...* | Novation: the clearing house becomes buyer to every seller and seller to every buyer (BIS definition as quoted) | S119, S120 |

## The Rules of the Room

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|---|---|---|
| **52** *The World Federation of Exchanges' figures show...* | Listed companies at end 2024: Nasdaq 2,425 domestic and 864 foreign; NYSE 1,584 and 548 | S41 |

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|---|---|---|
| **53** *Global figures show the cycle. According to...* | WFE 2024: 1,133 IPOs; Americas up 52.4 percent; EY 1,215 deals, 121.2 billion dollars, down 10 and 4 percent; India first by deal count | S40, S85 |
| **54** *The most important rule in the room...* | Regulation FD and insider trading rules | S29 |
| **55** *A market that can fall fast needs...* | October 1988 market-wide breakers; limit up-limit down approved May 2012; 2010 pilot single-stock breakers and their flaw | S54, S55 |

## What a Price Knows

| | | |
|---|---|---|
| **56** *An earlier hint came in 1889, from...* | Bachelier 1900; Brownian motion before Einstein; expectation of the speculator is zero; George Gibson, 1889, The Stock Markets of London, Paris and New York: quotation reproduced word for word from the timeline | S76 |
| **57** *Second, William Sharpe, using Markowitz's theory as...* | Markowitz, Sharpe, Miller, 1990; CAPM | S73 |
| **59** *A very different finding came from Robert...* | Fama on short-run unpredictability; Shiller on price volatility; three-to-five-year forecastability | S75 |
| **60** *In 1973 Fischer Black and Myron Scholes...* | Black, Scholes, Merton; 1973 formula; derivatives and risk redistribution | S74 |
| **61** *Theory became a product on 31 August...* | Bogle, 31 August 1976, "Bogle's Folly" | S77, S78 |
| **58** *In the 1960s, Eugene Fama and collaborators...* | Explanations of diversification and of what the efficient market claim does and does not say are the author's explanations, drawing on the Nobel texts | S73, S75 |

## A Number for the Whole Room

| | | |
|---|---|---|
| **62** *Charles Dow began calculating a daily average...* | Dow 1896 with 12 stocks; transportation average 1884; additions in 1916 and 1928 to 30 | S92 |
| **63** *S&P Dow Jones Indices preserves a passage...* | Dow's tide and peg passage | S93 |
| **64** *Standard & Poor's got into the index...* | S&P 500 launch coverage in the New York Times of 5 March 1957; S&P composite indexes from the 1920s | S94 |
| **65** *Standard & Poor's got into the index...* | The Dow is price-weighted (S&P Dow Jones Indices page); S&P 500 weighted by float-adjusted market capitalisation and described as a proxy for the U.S. equity market | S115, S116, S92 |

## Two Peaks, Remembered

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|---|---|---|
| **66** *On 29 December 1989, the last trading...* | Nikkei record close of 39,098.68 on 22 February 2024 after a rise of 836.52 points, clearing 39,000 | S96 |
| **67** *On 29 December 1989, the last trading...* | Nikkei 38,915.87 on 29 December 1989; 39,098.68 on 22 February 2024; 34 years and 2 months; 2013 Bank of Japan easing; Reuters on foreign money and corporate reform | S95, S96 |
| **68** *The dot-com bubble developed during the late...* | Nasdaq Composite 5,048.62 on 10 March 2000, low 1,114.11 on 9 October 2002, minus 78 percent; crossed 5,000 again about fifteen years later; 600 percent rise 1995 to 2000 | S97, S98 |

## The Screen

| | | |
|---|---|---|
| **69** *It grew steadily. By 1980, Nasdaq was...* | NASD, pink sheets, Nasdaq 1971, no retail interface, Rule 394, 63 percent of NYSE volume by 1980, SOES 1984, SOES Bandits, SelectNet 1990, 31 percent fall and nearly 1 trillion dollars lost 13 to 19 October 1987 | S58, S59 |
| **70** *Regulators and economists identified several causes. International...* | Dow down 22.6 percent on 19 October 1987; New Zealand down 60 percent; international investors; portfolio insurance; clearing timelines | S56, S57 |
| **71** *The exchanges' reaction shows how fast the...* | Archipelago 1996, ArcaEx 2002, public 2004, 700 million shares a day, NYSE-ArcaEx April 2005, Nasdaq-Instinet, NYSE demutualised March 2006 | S60 |
| **72** *The trend toward demutualisation was not unique...* | Traditional mutual structure of exchanges | S61 |
| **73** *At the same time, regulation pulled in...* | Regulation NMS 2005 | S46, S47 |

## Screens Across the Channel

| | | |
|---|---|---|
| **74** *In the late 1970s the London Stock...* | Big Bang 27 October 1986; negotiated commissions; entry of banks; broker-dealers; screen trading and the floor abandoned after a few weeks; July 1983 agreement | S102, S103, S104 |
| **75** *On 22 September 2000, the exchanges of...* | Euronext 22 September 2000; single order book; 2007 NYSE merger; ICE acquisition November 2013; Euronext listed in 2014; origin dates 1285, 1485, 1602 and 1724 | S82, S83, S84 |

## Milliseconds

| | | |
|---|---|---|
| **76** *In 2010, a company called Spread Networks...* | Spread Networks cable completed 2010, construction cost estimated at 300 million dollars | S67 |
| **77** *The economists Eric Budish, Peter Cramton and...* | Frequent batch auctions: the paper's abstract proposes uniform-price sealed-bid double auctions at discrete intervals in place of the continuous limit order book; the paper was fetched (first 50,000 characters) | S67 |
| **79** *In the world of machinery, this part...* | NYSE center at Mahwah, Hudson Fiber Network route to four other sites | S69 |
| **78** *If speed is valuable, distance is expensive....* | Nasdaq NY11 in Carteret and the colocation expansion filing | S68 |
| **80** *On 6 May 2010, the prices of...* | Flash crash: indices down over 4 percent then 5 to 6 percent more; almost 8,000 securities; 75,000 contracts over 4 billion dollars; no one culprit | S62, S63 |
| **81** *Two years later, a smaller but sharper...* | Knight: 212 orders, 4 million executions, 154 stocks, 397 million shares, net long 3.5 billion in 80 stocks and short 3.15 billion in 74; loss over 460 million; 12 million dollar settlement | S64, S65, S66 |

## The Week the Plumbing Showed

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|---|---|---|
| **82** *GameStop, with other so-called meme stocks such...* | GameStop: 21,318 percent gross market value cleared on 28 January versus 4 January | S72 |
| **85** *The episode also showed a changed investing...* | Short interest and squeeze; characterisation as rebellion; NSCC and OCC record volumes on 27 January; clearing agencies led brokers to pause; younger investors and smaller accounts; Schwab said customers aged 40 and under with balances below 100,000 dollars drove a greater share of volume | S70 |

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|---|---|---|
| **84** *When a customer buys a stock through...* | Robinhood: 696 million dollars on deposit, deficit about 3 billion dollars on the morning of 28 January | S71, S72 |
| **83** *GameStop, with other so-called meme stocks such...* | Restrictions on trading by several platforms on 28 January 2021 are stated in the House committee staff report; the hearing is not separately sourced here | S72, S71 |

## Futures Learn Finance

| | | |
|---|---|---|
| **86** *On 16 May 1972, the Chicago Mercantile...* | 16 May 1972 seven currency futures; later interest-rate futures | S100, S99 |
| **87** *The CME's list of new contracts shows...* | Contract timeline 1972 to 1990 | S101 |
| **88** *In early 1982, stock index futures were...* | 1982: Value Line futures at the Kansas City Board of Trade and S&P 500 futures at the CME; about 2 million contracts per day | S99 |
| **89** *The link had a dark side in...* | SEC report on 1987 price discovery in futures and portfolio insurance | S58, S57 |
| **91** *Today the largest exchange groups run both...* | WFE 2024: CME 60.6 percent of interest rate options, 49 percent of interest rate futures | S40 |
| **90** *The link had a dark side in...* | Portfolio insurance developed by Leland and Rubinstein in 1976; index arbitrage and portfolio insurance both cited as program trading in the 1987 crash (secondary source) | S121, S122 |

## The Other Rooms

| | | |
|---|---|---|
| **92** *According to a market-structure compendium published by...* | 12.2 billion shares a day in 2024, up 10.2 percent; retail 17.9 percent, about 10 percent historically; after hours 10.8 percent, 5.5 percent from 4:00 to 4:30 p.m. | S105 |
| **94** *The U.S. regulator has acted on the...* | Robinhood December 2020: 65 million dollars; failure to disclose payments; best execution; 2015 to late 2018 | S106, S107 |
| **93** *When someone presses buy in an app,...* | Payment for order flow: off-exchange market makers pay retail brokers for order flow, which the staff report says can create a conflict of interest; retail orders tend to be small and uncorrelated, allowing tighter spreads; Reg NMS and alternative trading systems as venues | S70, S46, S47 |

## Who Owns the Room

| | | |
|---|---|---|
| **95** *The mix has been shifting. Intercontinental Exchange,...* | ICE 2024 net revenues 9.3 billion dollars, exchange 5.0, fixed income and data 2.3, mortgage technology 2.0; adjusted margin 59 percent | S79 |
| **96** *The mix has been shifting. Intercontinental Exchange,...* | Nasdaq 2024 net revenues 4.6 billion dollars, up 19 percent; annualised recurring revenue 2.8 billion | S80 |
| **97** *The history of the operators is one...* | NYSE Group and NYSE Euronext 2007; ICE 2013; Euronext 1,800 issuers, 6 trillion euros, 53 new listings in 2024 | S60, S82, S81 |
| **98** *Several operators dominate the global picture, each...* | ICE headquarters (Atlanta, Georgia) and Nasdaq headquarters (New York) from the cover pages of their 2024 Form 10-Ks; Nasdaq supplies technology to more than 135 marketplaces and regulators in more than 55 countries; CME Group's share of interest rate derivatives from the WFE report; DTCC as a user-owned cooperative from DTCC pages; other operators are named only as large markets from the WFE listings and capitalisation tables | S113, S114, S40, S41, S48, S49 |

## The Map Today

| | | |
|---|---|---|
| **99** *Global equity market capitalisation increased by 13.4...* | 125.71 trillion dollars, +13.4 percent; 13 trillion added; trading value +15.5 percent; Asia-Pacific drivers | S40 |
| **100** *This is a snapshot, not today's ranking....* | Domestic market capitalisation at end of December 2024 (a historical snapshot, labelled as such in the book): NYSE 31,576,034; Nasdaq US 30,609,651; Shanghai 7,186,253; Japan 6,556,560; NSE 5,696,539; Euronext 5,441,764; HKEX 4,549,721; Shenzhen 4,528,667 (USD millions) | S41 |
| **101** *Market capitalisation measures value. A different measure...* | Listed companies Nasdaq 3,289 and NYSE 2,132 | S41 |
| **102** *One of the most discussed facts about...* | 4,943 firms in 1976 and 3,627 in 2016; 23 to 11 per million | S86 |
| **103** *A study from Dartmouth's Tuck School describes...* | 50 percent decline after the 1996 peak | S87 |
| **104** *On new listings, the WFE counts 1,133...* | IPO figures | S40, S85 |

## What the Exchange Feeds

| | | |
|---|---|---|
| **105** *In the 2022 Survey of Consumer Finances,...* | 58.0 percent of households in 2022 and 52.6 percent in 2019; 76.14 million; median 52 thousand and mean 489.49 thousand dollars | S88 |
| **106** *Axios, reporting on the survey, noted that...* | Axios on record ownership and comparison countries | S89 |

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|---|---|---|
| **107** *From the stock price grows an entire...* | Derivatives volumes: WFE 2024 peak volumes in single stock options, single stock futures, stock index options, ETF options and ETF futures; NSE 97.7 percent of stock index options | S40 |
| **108** *An exchange also serves government. Public debt...* | Tokyo bonds 1878; 1790s government debt | S33, S21, S16 |

## What Holds It Back

| | | |
|---|---|---|
| **109** *The first constraint is the one the...* | 83 percent fall; 1920s and 1930s laws; flash crash reconstruction | S27, S62 |
| **110** *The third constraint is physical. Light in...* | Spread route 16 to 13 ms; Knight 45 minutes | S67, S64 |
| **112** *The sixth constraint is that exchanges operate...* | Dojima ban and permission; Shanghai closure and 1990 reopening | S15, S35, S36 |
| **111** *The third constraint is physical. Light in...* | Light in silica fibre travels at about two thirds of vacuum speed (secondary source); later microwave links cut New York to Chicago to about 8.5 ms (Budish, Cramton and Shim); the chapter's other structural points are the author's own reasoning from the cited facts, not claims of fact | S123, S67 |

## What Comes Next

| | | |
|---|---|---|
| **113** *Nasdaq's trading hours currently run from 9:30...* | Nasdaq hours; SEC approval April 2026; announced target start 6 December 2026 at 9 p.m. Eastern; the SEC approval itself (S91) is the April 2026 approval, while the dependence of the 6 December date on additional SEC approval and on confirmation that the securities information processor is ready for overnight trading is supported only by the secondary source S124; one-hour pause | S90, S91, S124 |

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|---|---|---|
| **114** *In December 2025 the DTCC announced that...* | DTC tokenisation letter, 11 December 2025 | S52, S53 |
| **115** *Fewer companies list on American exchanges than...* | IPO count and Americas increase | S40 |
| **116** *The register of the VOC's Amsterdam chamber...* | Epilogue: the VOC register held in the National Archives in The Hague | S2 |

## Timeline and glossary

| | | |
|---|---|---|
| *no marker* | Timeline entries restate facts cited above; the 1801 London date is from S16 and the Hong Kong 1891 date from S34 | S16, S34 |

## Source list

**S1** Exchange history (Beurs van Amsterdam history site): VOC, the start of global share trading
https://beursgeschiedenis.nl/en/all-moments/voc-the-start-of-global-share-trading/
*search excerpt*

**S2** The World's First Stock Exchange: The world's first IPO
https://www.worldsfirststockexchange.com/2020/10/15/the-worlds-first-ipo/
*full page read*

**S3** The World's First Stock Exchange: About this website (VOC conduct)
https://www.worldsfirststockexchange.com/
*page read*

**S4** Confusión de confusiones (1688): a historical stock exchange drama
https://www.worldsfirststockexchange.com/2021/01/22/confusion-de-confusiones-1688-a-historical-stock-exchange-drama/
*full page read*

**S5** Journal of Behavioral Finance paper linking Vega to behavioural finance
https://www.tandfonline.com/doi/full/10.1080/15427560.2014.968722
*search excerpt (abstract)*

**S6** Sotheby's: The First Book to Describe a Stock Exchange (Vega biography)
https://www.sothebys.com/en/articles/the-first-book-to-describe-a-stock-exchange
*search excerpt*

**S7** Economic History Review: the Le Maire bear raid, 1609 to 1610
https://onlinelibrary.wiley.com/doi/10.1111/ehr.70142
*search excerpt*

**S8** Wikipedia: Bourse at Bruges
https://en.wikipedia.org/wiki/Bourse_at_Bruges
*search excerpt*

**S9** Visit Bruges: Oude Beursplein
https://www.visitbruges.be/en/things-to-do/culture-and-heritage/oude-beursplein-old-stock-exchange-square
*search excerpt*

**S10** The Low Countries: The Handelsbeurs in Antwerp
https://www.the-low-countries.com/article/the-handelsbeurs-in-antwerp-the-worlds-first-stock-exchange/
*search excerpt*

**S11** Wikipedia: Stock Exchange, Antwerp
https://en.wikipedia.org/wiki/Stock_Exchange,_Antwerp
*search excerpt*

**S12** Brussels Times: How Belgium created and almost lost the world's first stock exchange
https://www.brusselstimes.com/belgium/59675/how-belgium-created-and-almost-lost-the-worlds-first-stock-exchange
*search excerpt*

**S13** Japan Exchange Group: Dojima Rice Exchange
https://www.jpx.co.jp/dojima/en/
*search excerpt*

**S14** Springer: The Dojima Rice Exchange (book)
https://link.springer.com/book/9789812878199
*search excerpt*

**S15** Harvard Business School faculty page on the 1730 Dojima petition
https://www.hbs.edu/faculty/Pages/item.aspx?num=36846
*search excerpt*

**S16** Library of Congress: Wall Street history, exchanges
https://guides.loc.gov/wall-street-history/exchanges
*search excerpt*

**S17** Oxford, Newton and the Mint: Newton and the South Sea Bubble
https://newtonandthemint.history.ox.ac.uk/global-financial-world/newton-and-the-south-sea-bubble
*full page read*

**S18** Telegraph: How not to invest like Sir Isaac Newton
https://www.telegraph.co.uk/finance/personalfinance/investing/10848995/How-not-to-invest-like-Sir-Isaac-Newton.html
*search excerpt*

**S19** Mississippi Department of Archives and History: John Law and the Mississippi Bubble
https://mshistory.mdah.ms.gov/issue/john-law-and-the-mississippi-bubble-1718-1720
*search excerpt*

**S20** Brill chapter on the Mississippi Company (millionaire; Rue Quincampoix)
https://brill.com/display/book/9789004523838/BP000032.xml?language=en
*search excerpt*

**S21** New-York Historical Society: Taming Traders
https://www.nyhistory.org/exhibitions/taming-traders-origins-new-york-stock-exchange
*full page read*

**S22** Wikipedia: Buttonwood Agreement
https://en.wikipedia.org/wiki/Buttonwood_Agreement
*full page read*

**S23** Library of Congress: Ticker tapes and parades
https://blogs.loc.gov/inside_adams/2022/11/ticker-tapes-parades/
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**S24** Rutgers Edison Papers: Stock ticker
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**S25** Investopedia: Trading floor
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**S26** Federal Reserve History: Panic of 1907
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**S27** SEC Historical Society: New foundations timeline
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**S28** National Archives: The Pecora investigation
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**S29** SEC: Selective disclosure and insider trading rules (2000)
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**S30** Wikipedia: Bombay Stock Exchange
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**S31** Quartz: BSE IPO, 142 years after taking roots under a banyan
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**S34** HKEX: Hong Kong stock market historical events
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**S35** Shanghai Stock Exchange: Overview
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**S36** Goldman Sachs history: 1990 Shanghai Stock Exchange reopens
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**S37** CFTC: History before the CFTC (CBOT)
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**S38** CME Group: Midwest grain trade, history of futures exchanges
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**S39** NSE India: History and milestones
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**S40** World Federation of Exchanges: FY 2024 Market Highlights report
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**S41** World Federation of Exchanges: Market statistics, February 2025 issue
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**S42** TAIFEX: Matching principles
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**S43** Deutsche Boerse: Market model, stock trading (opening auction)
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**S45** SEC testimony on decimalization, 24 May 2001
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**S47** SEC Release 34-51808: Regulation NMS
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**S48** DTCC: Central netting (CNS)
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**S49** DTCC: Life cycle of a trade
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**S51** DTCC: SEC announces T+1 implementation date
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**S52** SEC no-action letter to DTC, 11 Dec 2025 (tokenization)
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**S53** DTCC press release, 11 Dec 2025: paving the way to tokenized DTC-custodied assets
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**S54** SEC press release 2012-107: limit up-limit down
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**S55** SEC: Circuit breakers bulletin
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**S56** Federal Reserve History: Stock market crash of 1987
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**S57** Investopedia: What caused Black Monday
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**S58** SEC Historical Society: Nasdaq (automating the exchanges 1976-1995)
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**S60** SEC Historical Society: Reorganizing the NYSE (ArcaEx, demutualization)
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**S61** IOSCO paper on demutualization
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**S62** SEC and CFTC: Findings regarding the market events of May 6, 2010
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**S63** CFTC Commissioner Chilton statement, 7 Oct 2010
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**S64** SEC Administrative Proceeding on Knight Capital, Release 34-70694
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**S65** SEC press release 2013-222: Knight Capital settlement
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**S66** Knight Capital press release, 2 Aug 2012 (SEC filing)
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**S67** Budish, Cramton and Shim, NBER conference paper
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**S68** Nasdaq SEC comment response on NY11 data center expansion
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**S69** Data Center Dynamics: NYSE data center carrier neutral (Mahwah)
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**S70** SEC staff report on equity and options market structure conditions in early 2021
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**S71** TechCrunch: Robinhood report on the meme-stock episode (quoting House committee report)
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**S72** House Financial Services Committee majority staff report on the meme stock event
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**S74** Nobel Prize, 1997 economics press release
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**S76** Efficient Market Hypothesis timeline
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**S77** Vanguard: 50 years, 50 facts, indexing since 1976
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**S79** ICE: full year 2024 results
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**S81** Euronext: leading European listing venue, 30 Dec 2024
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**S83** Euronext: building leading European market infrastructure
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**S84** ICE developer portal: Euronext history
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**S85** EY: 2024 IPO wrapped
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**S86** NBER Reporter: The shrinking universe of public firms
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**S87** Dartmouth Tuck: Where did all the public companies go?
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**S88** SEC: U.S. households' participation in capital markets (Survey of Consumer Finances 2022)
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**S90** Nasdaq: what is 23/5 trading
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**S91** SEC Release 34-105199: Nasdaq 23-hour trading approval, 10 April 2026
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**S92** S&P Dow Jones Indices: The S&P 500 and the Dow
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**S93** S&P Dow Jones Indices: Where it all began (Dow's tide passage)
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**S94** Library of Congress: Debut of the Standard and Poor's 500
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**S95** Nippon.com: Nikkei 225 passes its 1989 high
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**S97** Wall Street Journal: Nasdaq and the 5,000 level in 2015
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**S98** Wikipedia: Dot-com bubble
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**S99** CME Group: The birth of stock index futures
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**S100** CME Group: Product anniversaries (FX futures, 16 May 1972)
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**S101** CME Group: Introduction of new futures contracts and indexes
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**S102** HMRC internal manual: Big Bang
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**S104** London Stock Exchange: Big Bang at 40
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**S108** Library of Congress: Signing of the Securities Exchange Act of 1934
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**S109** Munro, University of Toronto: Early modern finance, negotiability of bills (lecture slides)
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**S110** Munro, University of Toronto: The medieval bill of exchange
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**S111** Stadsarchief Amsterdam: 1611, the Exchange
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**S112** Beurs van Berlage: facade stone from the first merchants' exchange
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**S113** Nasdaq, Inc. Form 10-K for 2024
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**S114** Intercontinental Exchange Form 10-K for 2024
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**S115** S&P Dow Jones Indices: The Dow, investment themes page
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**S116** S&P Dow Jones Indices: S&P U.S. Indices Methodology (index weighting)
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**S117** NYSE: Designated Market Makers
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**S118** Investopedia: Specialist (duties compared with DMMs)
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**S123** ScienceDesk: speed of light in optical fibre
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