

Lecture 4

Mania or Manipulation?

Reading: *EHFE* chp.8 and 10; Garber; Posthumous (1929); Defoe; Swift (Appendix to ch.10)

Topics

- Tulipmania: The Historical Record
- The Early History of Joint Stock Trading
- The Mississippi Scheme and the South Sea Bubble
- Daniel Defoe, *The Anatomy of Exchange Alley* (1719?)
- Jonathan Swift, *The Bubble* (1720)



The Modern View of Security Markets

- Human Science vs. Natural Science
 - Auguste Comte (1798-1857) and the rise of **positivism**
 - Positivism is a philosophical movement, concerned with epistemology, characterized by an emphasis upon science and scientific method as the only sources of knowledge
- Modern example of positivist statement in Finance:
 - ***“As the physicist builds models of the movement of matter in a frictionless environment, the economist builds models where there are no institutional frictions to the movement of stock prices”*** (Elton and Gruber 1984)

The Positivist Program

In a positivist framework:

The objective world is viewed as deterministic, operated by laws of cause and effect that can be identified if the unique approach of the scientific method is correctly applied.

Science is conceived as a mechanistic operation.

The unity of Science project

Rationality vs. Irrationality

- The assumption that economic agents are rational is a defining feature of economic theory.
 - ◆ This assumption is embedded in even the most elementary of economic statements such as:
 - ☞ 'more is preferred to less'
 - ☞ 'subject to a fixed budget constraint, increasing the relative price of good x will reduce consumption of good x'.
- 'Rationality is thus an a priori assumption rather than a description of the world'.
 - ◆ Problem: How to explain events with serious economic implications, such as the market manias, that arise due to apparently irrational behavior?

Explaining Irrational Market Events

- Mania, Manipulation or Market Failure?
 - ◆ Dutch tulipmania of 1634-1637
 - 👉 Numerous less than accurate accounts
 - Malkiel, Mackay (1852), GK dialogs
- Posthumous (1929)
 - ◆ Contains useful primary sources
- Garber
 - ◆ The modern view → prices were rational(!?)
 - ◆ Useful sources on the colleges and price data

The Dutch tulip mania (1634-37)

- Reading Chapter 10, *Early History* + Posthumous (1929)
- Considered to be one of the classic speculative manias due to inclusion in Isaac Mackay, *Extraordinary Popular Delusions and the Madness of Crowds* (1852).
- Mechanics of the mania
 - ◆ Different types of tulips → tulips entered Europe circa 1550 → common 'pound goods' and rare 'piece goods' → bulk of crazy prices were in piece goods → process of 'breaking' to produce unusual colors involves virus
 - ◆ This was not a financial crisis, confined to tulip traders and some speculators (mostly in taverns) – 'Appeal to Frederick' possible.

Dutch tulips



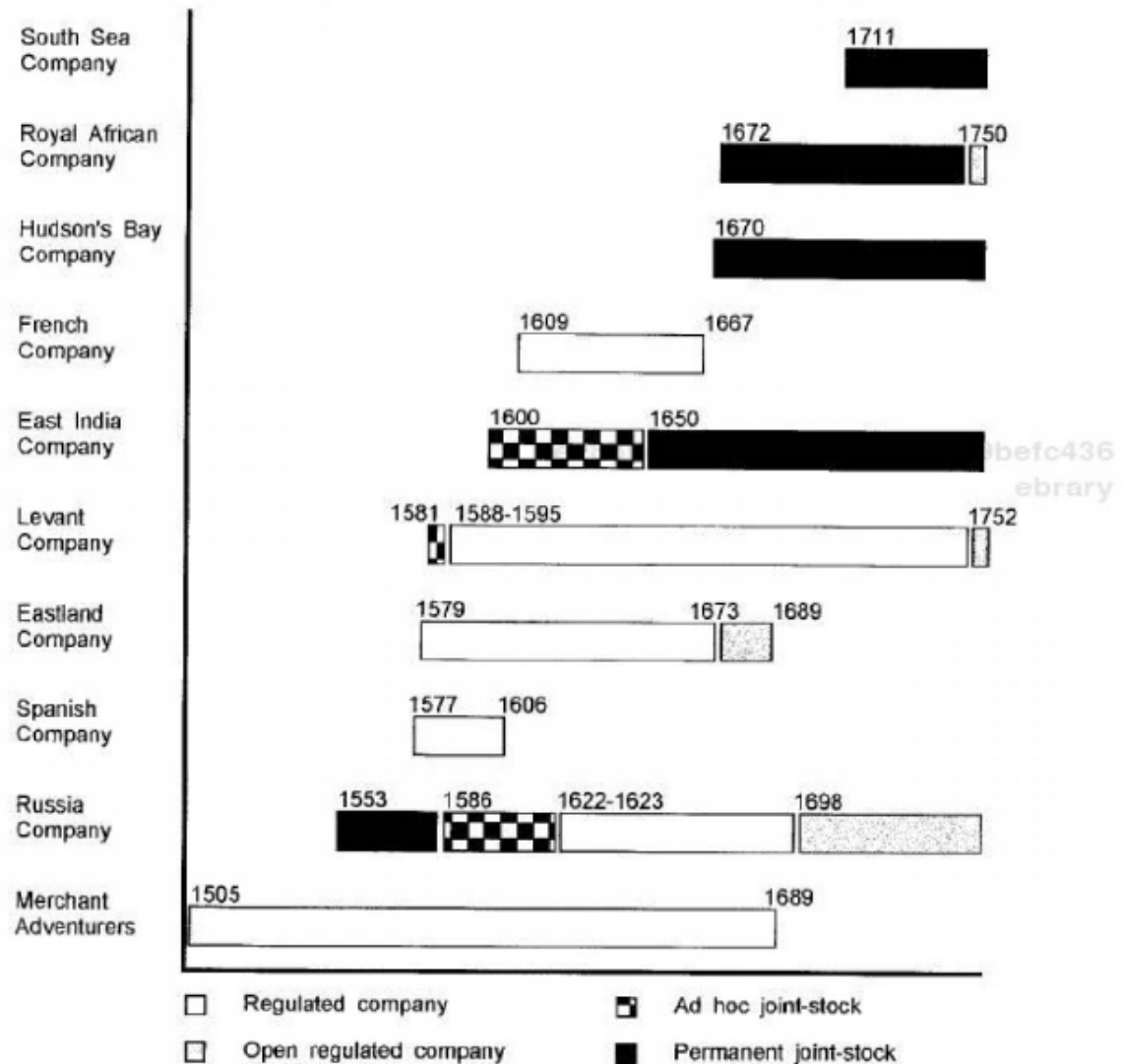
Early History of Equity Markets

- **Joint stock companies**

- ◆ Represented an evolution from the partnerships, medieval corporations and regulated companies that had previously characterized business organization.
- ◆ Hecksher (1955, v.1, p.392) characterizes joint stock companies as being 'capital associations of a corporate character'
- ◆ VOC (1600) first company with tradable shares
 - ☞ Earlier examples of British companies in mid-16th C. – Guinea Company, Muscovy Company

History of Early English Regulated and Joint Stock Companies

(Harris 2000, p. 52)



A timeline of dates in Stock Market Evolution

Reading: *Pioneers* ch. 2,3, 5

- 1602 VOC created, shares start trading
 - ◆ Isaac Le Maire and a group of bear speculators attempt to manipulate stock prices
- 1688 de la Vega *Confusion de Confusiones*
 - ◆ The Fourth Dialogue of *Confusion*, de la Vega lists twelve different ‘tricks’ that compose
‘the most speculative part of the business, ... the climax of Exchange transactions, the acme of Exchange operations, the craftiest and most complicated machinations that exist in the maze of the Exchange and which require the greatest possible cunning’.

The Amsterdam Exchange, mid-17th C.

- Trading in shares of the VOC commenced in 1602 prior to the opening of the exchange

- Only the VOC, the Dutch West Indies Company and two small insurance companies were traded by the end of the 17th C.

- The VOC charter contained explicit provisions to facilitate the trading of shares (required due to the long duration of the ventures to the East Indies)



de la Vega and the *Confusion of Confusions* (1688)

- First detailed description of stock trading on the Amsterdam exchange (or anywhere) – written by an observer not a participant – structured as a conversation (dialog) between a merchant, a shareholder, and a philosopher
 - ◆ Many interesting observations
 - ☞ de la Vega describes twelve different types of market manipulations
 - ☞ Identifies the use of ‘*opsies*’ (options) and *ducaton* (small unit) shares
 - ☞ Attempts to describe the vagaries of market pricing and make connections between ‘religion’ and stock trading

CONFUSION DE CONFUSIONES

Dialogos Curiosos

Entre un Philosopho agudo, un Mercader discreto, y un Accionista erudito

*Describiendo el negocio de las Acciones,
su origen, su ethimologia, su realidad,
su juego. y su enredo,*

Compuesto

por Don Iosséph de la Vega,

Que con reverente obsequio lo dedica
al Merito y Curiosidad

Del muy Ilustre Señor

Duarte Nunez da Costa.



En AMSTERDAM.

Año 1688.

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The Climate of Speculation

- If one were to lead a stranger through the streets of Amsterdam and ask him where he was, he would answer, “Among Speculators,” for there is no corner [in the city] where one does not talk of shares.
 - Confusion of Confusions, p.188
- ◆ de la Vega seeks to portray the ‘art’ of speculating on the stock exchange → it is not proper for a philosopher to speculate but the dialog is full of speculation

The Glorious Revolution and London Trading

- Glorious revolution of 1688 involved William of Orange taking over the crown of England → with William came financial practices developed by the Dutch on the Amsterdam exchange (*rescontre* settlement does not appear until the 18th century, when is not clear)
- Trading was initially on both the Royal Exchange and in Exchange Alley though after market failure of 1694 trading moved out of the Royal Exchange
- Difficulties of supply for joint stock meant that trading for future delivery had to have option like features → payment of a premium by long to enter contract

Waddling out, a 18th century British Cartoon

(notice the lame duck in the foreground)





Background to the Bubbles of 1719-20

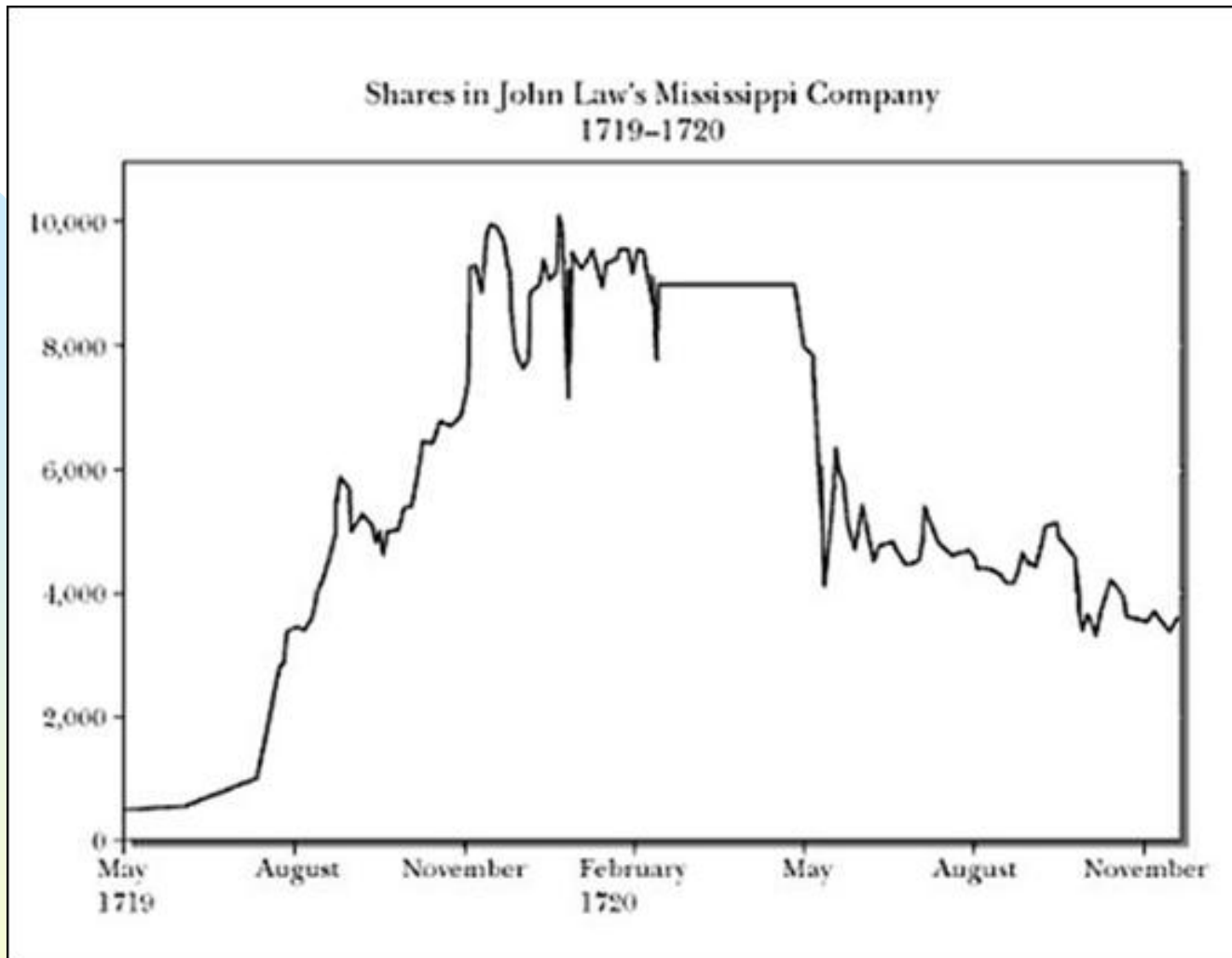
- 1688 Glorious Revolution
- 1694 Initial subscription to Bank of England stock (+ John Law kills Mr. Wilson in duel)
 - ◆ B of E had a monopoly on note issue
- Circa 1695 approx. 100 joint stock companies in England. Trading of debt and joint stock on the Exchange and in coffeehouses on Exchange Alley
 - ☞ Price collapse in 1696
- 1715 Duke of Orleans, Regent of France, assumes power and seeks to avert state bankruptcy → enlists the assistance of John Law

The Mississippi Scheme

- Mississippi Scheme preceded South Sea bubble in evolution and collapse
- 1717, Monopoly privileges granted to *Compagnie d'Occident* better known as Mississippi Company → later to receive monopoly grants for trade with East Indies, China and South Seas as well
 - ◆ Beginning of plan to use stock issues to refund the national debt of France
 - ☞ Plan involved a complicated company that eventually involved the French national bank which controlled the note issue, the Mississippi Company, a lease on the indirect taxes of the state, monopolies on sale of tobacco and refining of gold and silver
 - ☞ The manipulation involved promises of unsustainable 50% dividend payouts

John Law and the Mississippi Scheme

- John Law (1671-1729) the Great Projector
 - ◆ English dandy kills 'Beau' Wilson in duel (1694)
 - ◆ Sentenced to death, later commuted, escaped jail to Amsterdam
 - ◆ Travels Europe as gambler, returns to Scotland suggests banking scheme (1705))
- Workings of the Mississippi Scheme (1718-20) in France
 - ◆ Law forms private *Banque Generale Privee* (1716) which issues paper notes
 - ◆ *Banque Generale* acquired Mississippi Company (1717)
 - ◆ ***Banque Royale*** (1718) –national bank with note issue -- created from *Banque Generale* and three French companies operating in Louisiana merged into ***Compagnie Perpetuelle des Indes*** on 23 May 1719 with trade monopoly
 - ◆ Shares offered to public at 500 livres paid with bank notes or government debt -
- wild speculation in company shares begins (see next slide) – company acquires the Tax Farms
 - ◆ Promised dividends of 100% to be paid in bank notes
 - ◆ Law appointed French Controller General of Finances in 1720
 - ◆ Scheme begins collapse with devaluation of notes by 50% due to excessive over issue (associated largely with fueling share purchases)



Note: Shares were sold by subscription (initially partially paid)

Crowds of speculators outside Company offices on Rue Quincampoix at the height of the speculation



South Sea Bubble

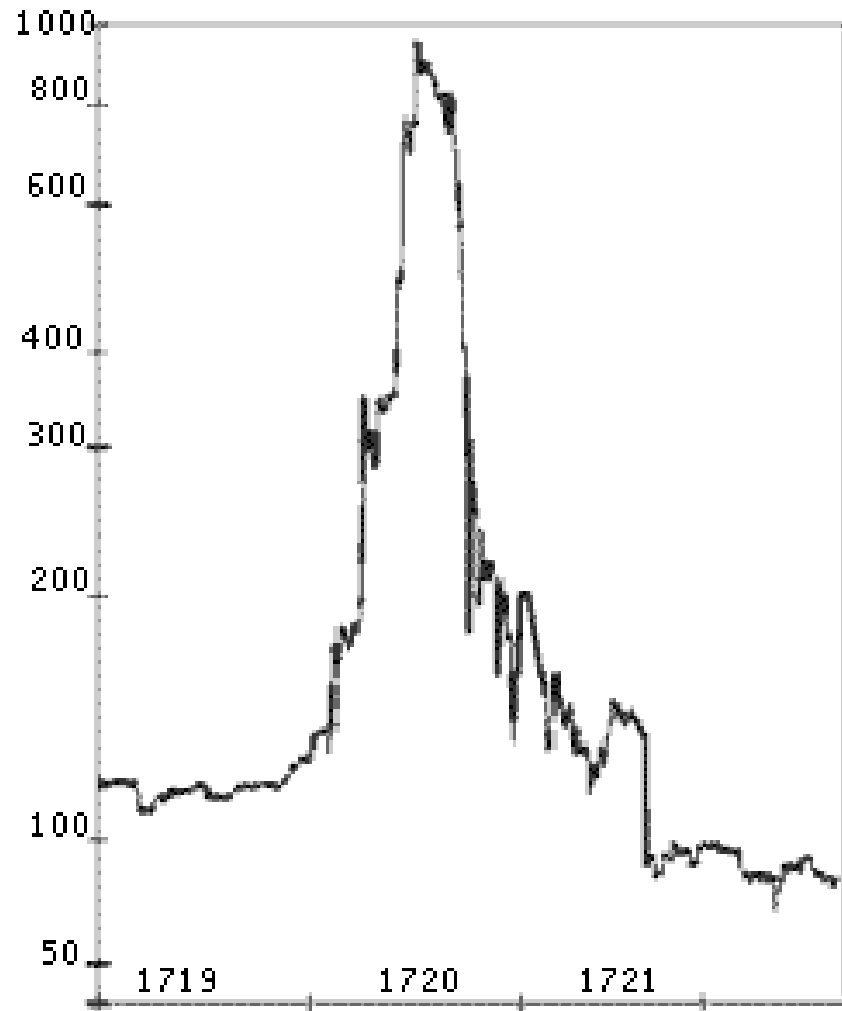
- South Seas Company not as ambitious as scheme in France
 - ◆ Bubble affected company with monopoly on trade with 'the South Seas and other parts of America' which were already largely controlled by the Spanish and Portuguese
 - ☞ Company granted charter in 1711
 - ☞ Used as a vehicle for government debt conversion
 - ☞ Involved a 1720 manipulation of price of stock using loans from Sword Blade Bank that were backed with stock as collateral
 - SSC also made unsustainable dividend promises

South Sea Bubble (1719-20)

- South Sea Company formed (1711) with trade monopoly to 'South Seas and other parts of America' – geographical confusion
 - ◆ Continuation of scheme to use sale of monopolies to companies for purposes of refunding government debt by exchange of shares for debt (this depends fundamentally on the exchange ratio)
 - ◆ Company did not realize significant profit, main activity involved the slave trade, many important politicians and aristocrats had significant positions in the Company
- The South Sea Bubble
 - ◆ Bubble begins in July 1719 with new round shares for government debt conversions – debt holders were obliged to convert at the market price
 - ◆ Shares also sold to public on subscription
- Impact of the Bubble Act (passed June 1720)
 - ◆ Bubble Act was aimed at small joint stock issues that were competing with funds for South Sea scheme
 - ◆ Prevented English joint stocks issues until 19th C.

Collapse of bubble happened when subscriptions on partially paid public shares had to be made starting in Summer 1720

Key Question in the Bubble is why individuals were tempted to 'purchase' shares in a company that did not have a significant profit record



The Anatomy of Exchange Alley

- The popularity of coffee houses
 - ◆ Origins in England circa 1652
 - ◆ Mideast Origins around mid-15th C.
 - ◆ Coffeehouses specialized in particular activities; penny universities, insurance brokers (Lloyds) and stock trading (Jonathan's and other coffeehouses in Exchange Alley opposite the Royal Exchange)
- The coffee houses were unregulated forums where the unsuspecting could fall victim
 - ◆ Swift, *The Bubble*
 - ◆ Defoe, *Anatomy of Exchange Alley*

Jonathan Swift (1667-1745)



Daniel Defoe (1660-1731)



The Bubble (Dec. 1720)

- “Ye wise Philosophers explain
What Magick makes our Money rise” (1)
- “Where hundreds and where thousands fell,
Fooks chiefly float, the Wise are drown’d” (13)
- “Directors fall as well as they
Their Fall is but a Trick to rise” (21)
- “Alas! All is not Gold that glistens;
Ten thousand sunk by leaping in” (28)

More from *The Bubble*

“A narrow Sound, though deep as Hell,
CHANGE-ALLY is the dreadfull Name” (35)

“While some build Castles in the Air,
Directors build ‘em in the Seas” (42)

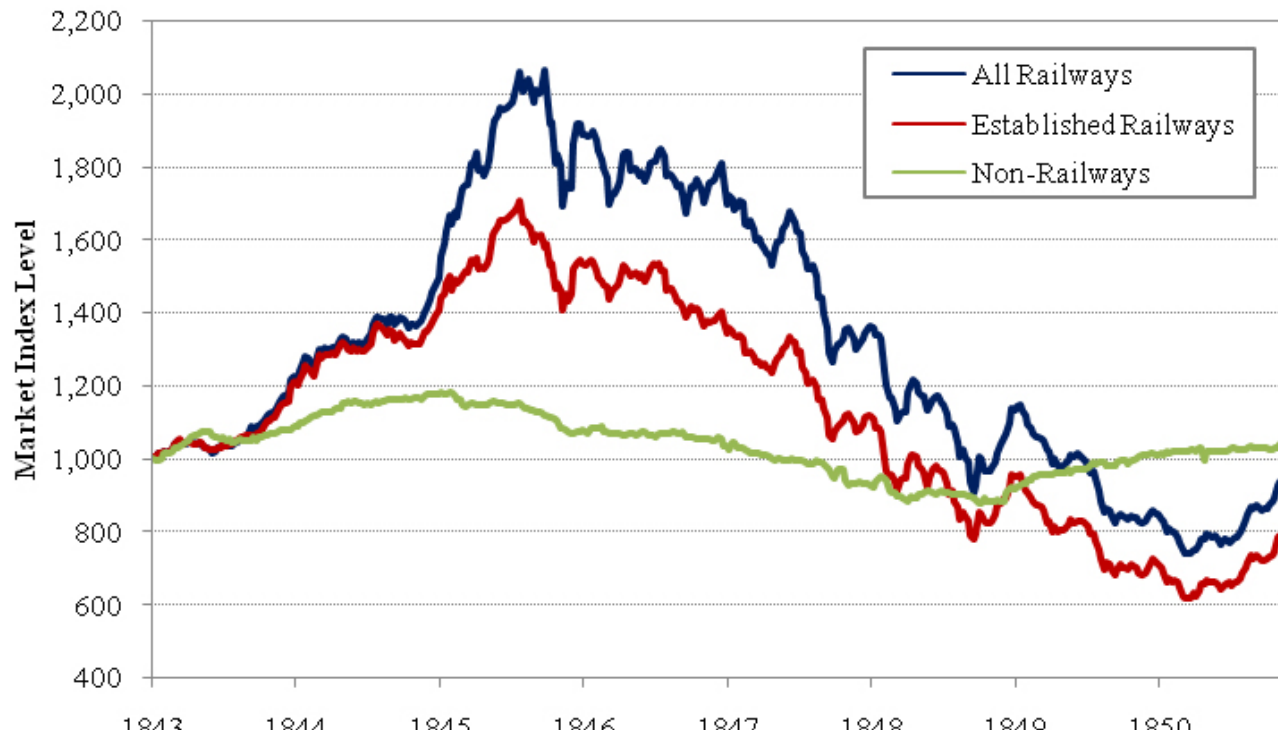
“May He whom Nature’s Law obey,
Who lifts the Poor, and sinks the Proud,
Quiet the Raging of the Sea,
And still the Madness of the Crowd”

Connections to Later Literature

- Castles in the Sky
 - ◆ Appears as the Island in the Sky, 'Laputa', in *Gulliver's Travels* (1726) which in one chapter satirizes 'one eye on the heavens and one eye pointed inward' of the philosophers
- Madness of Crowds
 - ◆ Appears in title of "Extraordinary Popular Delusions and the Madness of Crowds" by Charles Mackay (1852)

Canals, Railways and the Revival of Joint Stocks in England

- Early English Canal Ventures
 - ◆ Canal Age begins in 1755 near Liverpool
 - ◆ A speculative mania in Canal Shares in 1792
- Beginnings of English Joint Stock Revival
 - ◆ From Canals to Utilities and Insurance
 - ◆ Repeal of the Bubble Act (1825)
 - ◆ Chartered Companies Act (1837)
- The Railway Manias
 - ◆ First public railway in 1825
 - ◆ Two versions of the manias, 1834-7 (startups) & 1843-7 (both)
- The Joint Stock Companies Act (1844)
 - ◆ Limited Liability Act (1855) and Companies Act (1856)
 - 👉 Right of incorporation with limited liability completed



The Limited Liability Company and Stock Trading

- Emergence of the Limited Liability Company
 - ◆ Limited liability separate from corporate status
 - ◆ Following mid-19th C. English reforms, general registration with limited liability adopted in various countries
 - ☞ Some earlier beginnings in some US states
- The Capitals of Capital
 - ◆ By the end of the 19th century, important stock exchanges in the 'capitals of capital': London, New York, Paris and, to a lesser extent, Berlin.
 - ☞ These centers were bolstered by networks of provincial exchanges and trade on lesser exchanges in Amsterdam, Zurich, Brussels, Frankfurt and other centers. In the period up to World War I, London held a dominant position as the global financial centre
 - ◆ Around 1866 London still had a market cap of around \$10 billion compared to \$3 billion for New York

Early US Stock Trading

- Origins of the NYSE and the Curb (AMEX)
 - ◆ American tradition of incorporation
 - ◆ The Buttonwood Tree and the Tontine Café (1792)
 - ◆ New York Incorporation Act (1811)
 - ◆ New York Stock and Exchange Board (1817)
 - ◆ Merger with new rival Open Board in 1869
- Tales of the Erie Railway (1864-9)
 - ◆ Big-time speculators, Daniel Drew, Jay Gould and James Fisk vs. 'Commodore' Cornelius Vanderbilt, railway magnate, wanted to control the Erie in order to be able to control the pricing of railway freight rates into and out of New York City
- Rise of Trusts and Sherman Anti-Trust Act (1890)

Canadian Stock Market up to WWI

- Canada's was an integral part of the British Empire, easy access to extensive capital in London before 1914
 - ◆ Reduced its incentive to develop indigenous institutions
 - ◆ Golden Spike hammered in 1885 in BC Rockies by financier Donald Smith
- During the second half of the nineteenth century, Canada did develop an active securities market
 - ◆ By 1907 the rival Montreal and Toronto stock exchanges (founded in 1860's) were numbered among the principal exchanges of the world
 - ☞ Lesser development of exchanges in other centers early in 20th C.
 - ◆ Demand from Canadian investors for Canadian securities the backbone of the market



TORONTO STOCK EXCHANGE, c. 1901

The first quarters intended specifically for the Toronto Stock Exchange, this building also housed on the first floor A. E. Ames and Company, a brokerage firm that was also a member of the exchange. (Reproduced from Toward an Ideal Market [Toronto, 1983], 5.)

Growth of US Stock Markets

- From 1910-1930 the number of industrial stocks traded on US stock markets increased dramatically
- Participation of retail accounts and the number of investment companies also increased

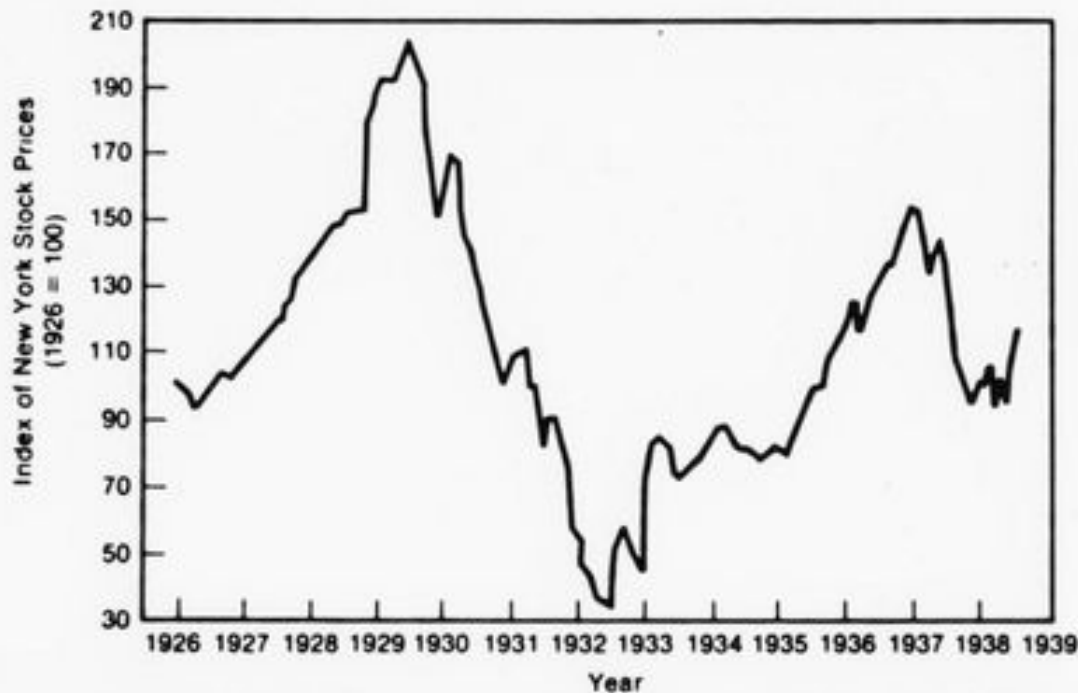
Table 2 Sectoral Breakdown of Traded Stocks on the NYSE

	1885	1890	1895	1900	1905	1910	1915	1920	1925	1930
Total	151	264	263	296	341	331	420	670	774	1,273
Railroads	122	194	160	161	168	146	146	150	131	151
(%)	(81)	(73)	(61)	(54)	(49)	(44)	(35)	(22)	(17)	(12)
Utilities	5	15	26	32	34	34	34	11	38	89
(%)	(3)	(6)	(10)	(11)	(10)	(10)	(8)	(2)	(5)	(7)
Industrials	24	55	76	103	139	151	240	509	605	1,033
(%)	(16)	(21)	(29)	(35)	(41)	(46)	(57)	(76)	(78)	(81)
Coal & mining	11	20	19	18	22	30	36	44	29	25
(%)	(7)	(8)	(7)	(6)	(6)	(9)	(9)	(7)	(4)	(2)
Other	13	35	57	85	117	121	204	465	576	1,107
(%)	(9)	(13)	(22)	(29)	(34)	(37)	(49)	(69)	(74)	(87)

Evolution of US Market and Retail Investor

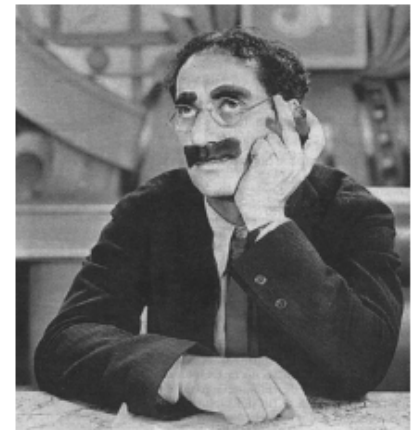
- Most companies did not provide timely and accurate financial information
 - ◆ Numerous companies involved in stock price manipulations, e.g., option pools
 - ☞ Insider trading was rampant; Bucket shops and boiler rooms common; leveraged investment companies widely used
- Buying of stock on margin, 20% down was typical of many retail investors
 - ◆ Banks were actively involved in making loans against stock market collateral
 - ☞ Created a run on banks and bank failures that contributed to economic contraction
 - ◆ When stocks were going up, this created the perception in stock market as a place to 'get rich quick' -- stock declines generated **cascading margin calls**
- Black Monday and Tuesday, Oct. 28-29, 1929
 - ◆ Recognized as worst days in US stock market history
 - ☞ This signals the beginning of a long down turn
- July 8, 1932 Dow-Jones reached lowest value of 41
 - ◆ Collapse of stock prices was due to factors associated with economic collapse commonly referred to as the Great Depression
 - ☞ What were the causes of the Great Depression?

NYSE Stock Prices and the Great Depression

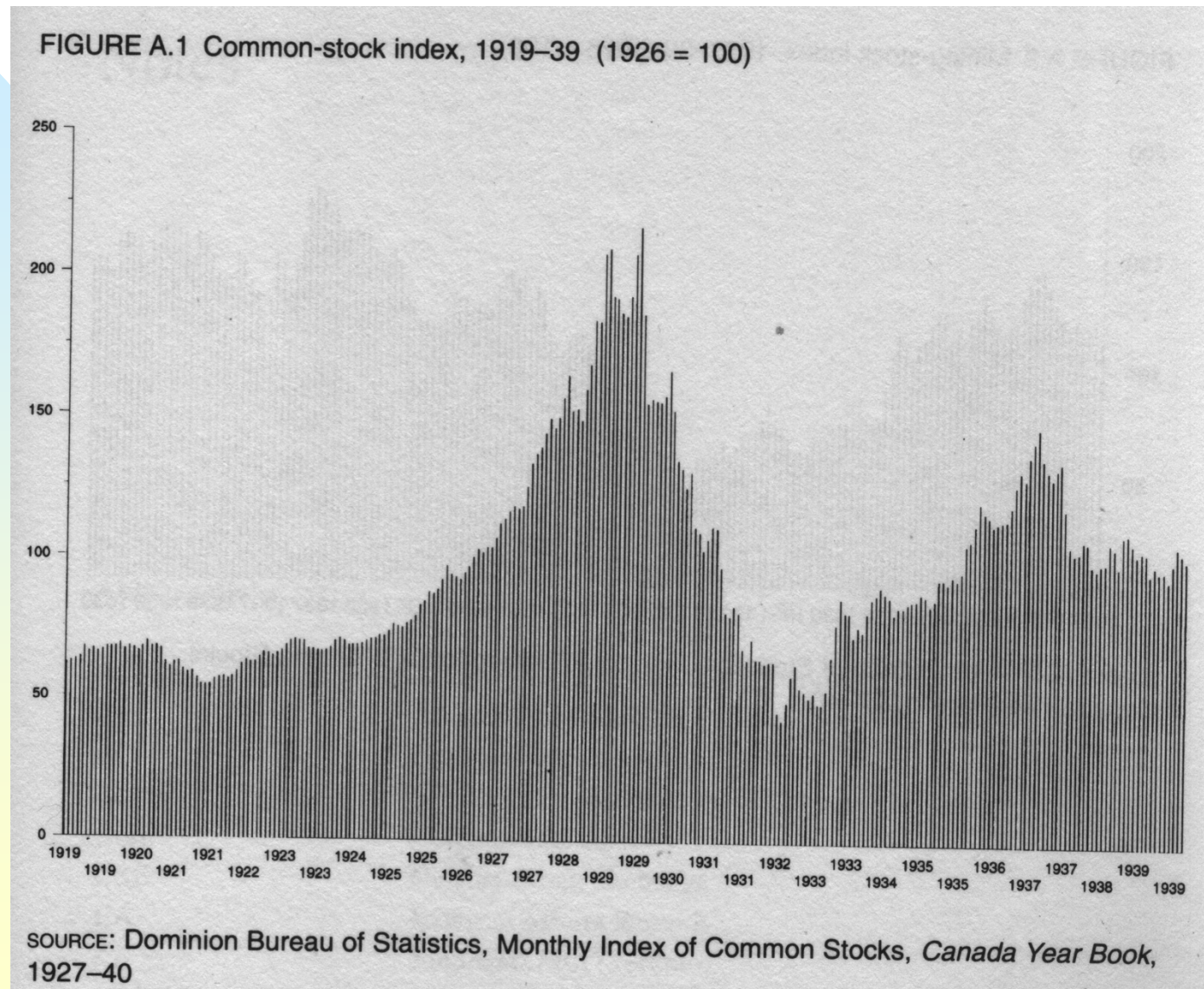


“All I lost was two hundred and forty thousand dollars ...
I would have lost more but that was all the money I had.”

Groucho Marx joking about the losses he actually suffered
during the stock market collapse of 1929 (Klein 2001, p.231).



Canadian Stock Market and the Great Depression



Impact of Crash and Great Depression in Canada

- Rise of margined retail stock investor and leveraged investment trusts during the 1920's, stock market collapse in 1929 and severe economic Depression in Canada similar to the US experience
 - ◆ Canada was reliant on external capital for growth
 - ☞ Circa 1930, approx. 40% of industrial companies and 55% of railways owned by non-residents
- Three significant markets during 1920's, TSE, MSE and the Standard Stock and Mining Exchange (SSME)
 - ◆ SSME formed in 1899-1901 to market mining stocks that the senior exchanges (TSE, MSE) generally avoided due to widespread abuses, favoring debentures and blue chips (e.g., banks and railways)
 - ☞ SSME was center of numerous abuses by member firms, boiler rooms, option pools, insider trading
 - ☞ SSME crippled by the Crash and eventually merged with TSE in 1934

Post-Depression US Security Market Reforms

- Attempts at state level reform pre-date the Crash to address widespread fraud in largely **self-regulated** securities markets; no federal presence
 - ◆ First significant 'blue-sky' law was Kansas in 1911
 - ☞ Companies selling shares in state required to register with state banking commission which had the authority to determine fairness of issue
 - Numerous states and other countries subsequently adopted the Kansas model
- Numerous federal reforms were introduced post-Crash across a number of areas impacted security markets
 - ◆ Securities Act (1933) and Securities Exchange Act (1934)
 - ☞ Eliminated many abuses, e.g., restricting margin lending, requiring regular filing of financial statements and preventing bucket shops
 - ◆ Glass-Steagall Act (relates to 4 provisions of the US Banking Act (1933))
 - ☞ Prevents commercial banks from acting as securities firms
 - ◆ Introduction of Deposit Insurance
 - ☞ Essential to eliminating bank runs
 - ◆ Various reforms of the housing market
 - ☞ Federal Housing Administration , mortgage insurance and 30 year fixed rate mortgage

Security Market Reform in Canada

- Canadian experience differs from US due to provincial oversight of securities markets
 - ◆ Following 'blue sky' law in Kansas, Manitoba introduced the Sales of Shares Act in 1912
 - ☞ Sask. and Alta. soon followed, Ontario passed blue sky law in 1923 and Sale of Shares Act in 1924; bucket shopping and some other onerous practices covered by federal fraud statutes
 - March 1928 Ontario pass Security Fraud Prevention Act (SFPA) in 1928 designed to strengthen basis for fraud beyond federal criminal code violation – prairie provincials passed similar legislation and BC worked with changes to the Companies Act – Quebec and NS were holdouts
 - ☞ There were legal rulings from the English Privy Council that provided exemptions from provincial 'blue sky' laws for federally chartered companies
- June 1930 Ira Solloway and Harvey Mills, owners of the largest brokerage in Canada, prosecuted in Alberta for bucketing
 - ◆ Both received jail time and large fines
 - ☞ 1930-31 a number of Toronto brokers prosecuted and jailed
- 1931 Ontario appointed new board to oversee SFPA
 - ◆ 1932 name of board changed to Ontario Securities Commission