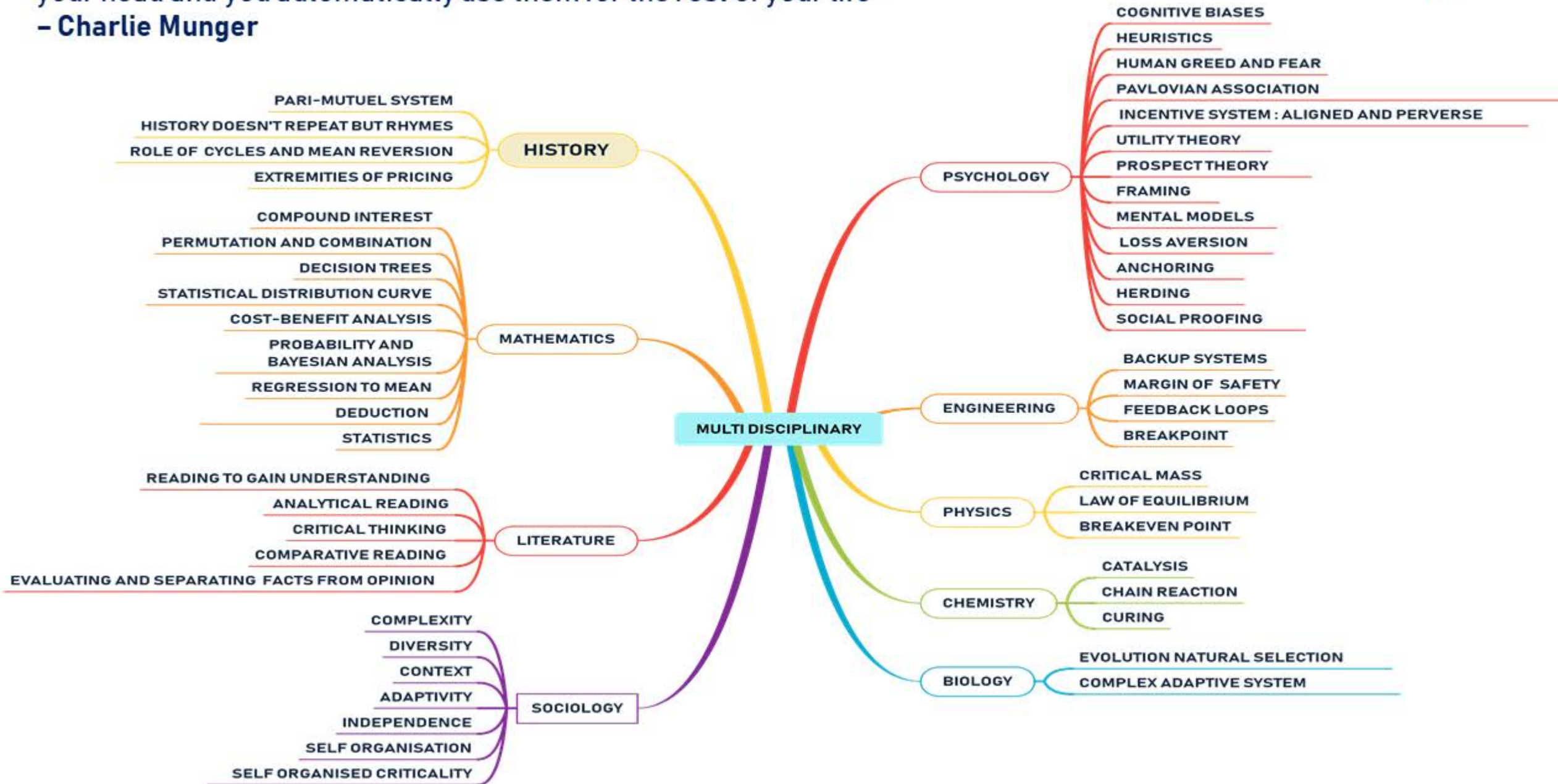


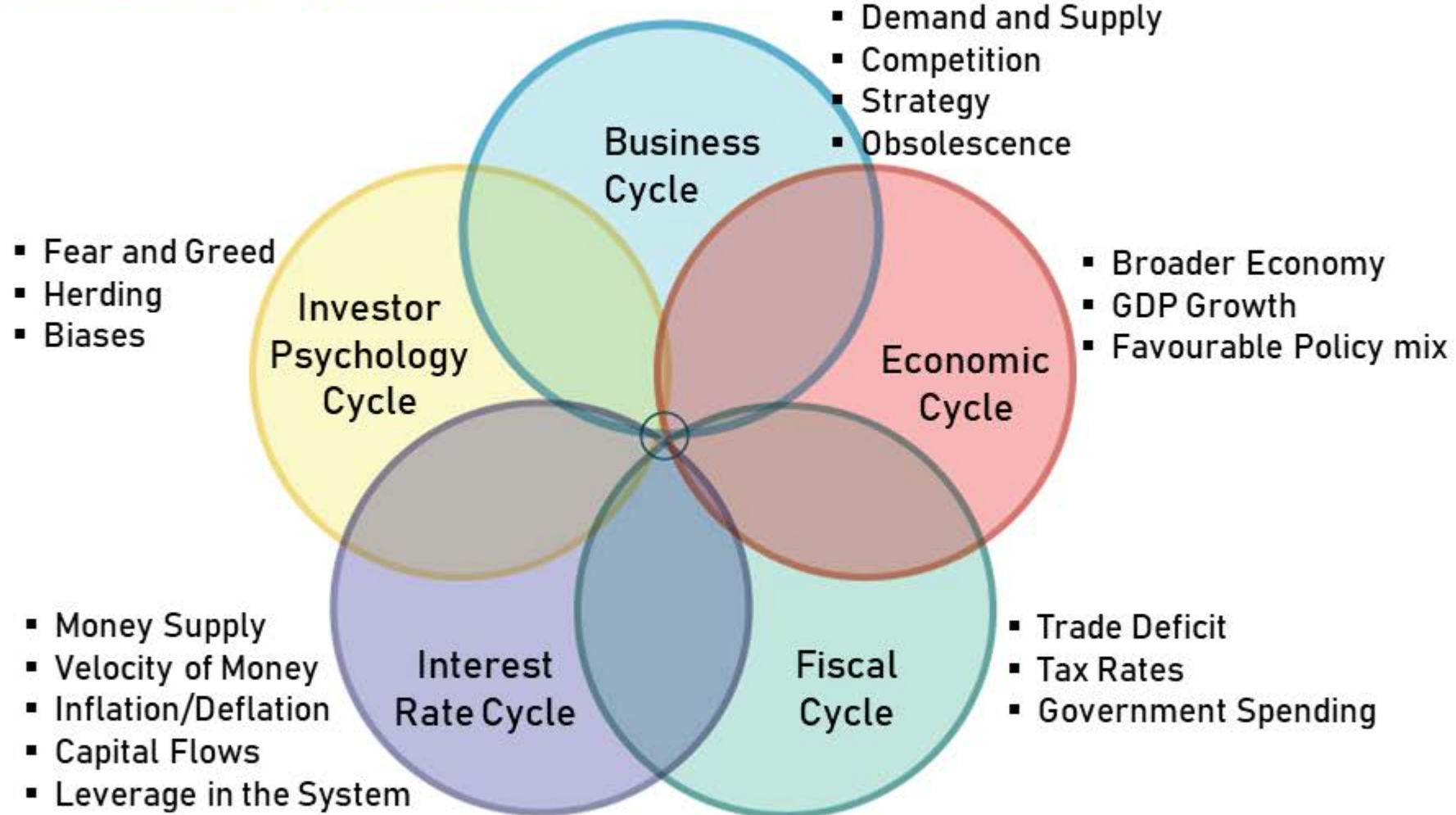
Investing Framework : Learning from the History of Capital Markets

Kuntal Shah
June 2019

“You have to learn all the big ideas in the key disciplines in a way that they’re in a Mental Latticework in your head and you automatically use them for the rest of your life”
– Charlie Munger



“The stock market is the story of cycles and human behaviour that is responsible for over-reactions in both directions” – **Seth Klarman**



Man-made phenomena, liquidity dependent, inherently interconnected and a complex adaptive system

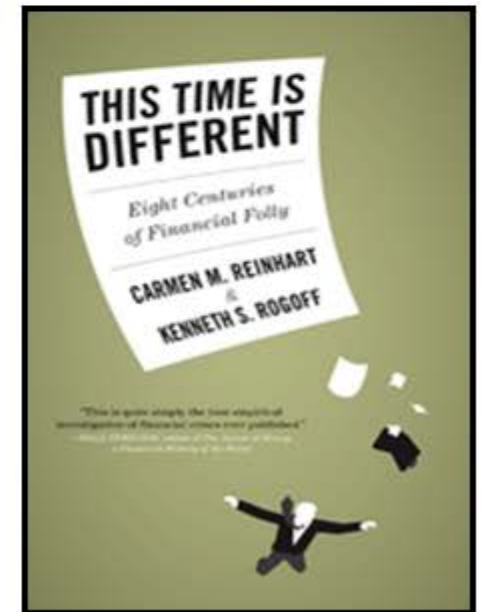
“What the wise man does in the beginning, the fool does in the end” – Warren Buffett

The Three Stages of a Bull Market:

- When a few people begin to feel things will get better
- When most people recognize that improvement is underway
- When everyone thinks things will get better forever

The Three Stages of a Bear Market:

- When a few people realize that things are overpriced and riding for a fall
- When most people see that a decline is taking place
- When everyone thinks things will get worse forever



A Zebra in Lion Country – Ralph Wanger

FM = Above-average performance
Zebra = Fresh Grass



Risk = Dislike FM = fired Zebra = Eaten by Lion
 Move in herds Look alike Stick close together



Zebra's Place --> Relation to Herd
If (Safe). Outside Herd = Fresh Grass, Middle = Trampled Grass



Outside Herd = Aggressive, Eat Well but risk being eaten
Middle of Herd = Eat less but not get eaten

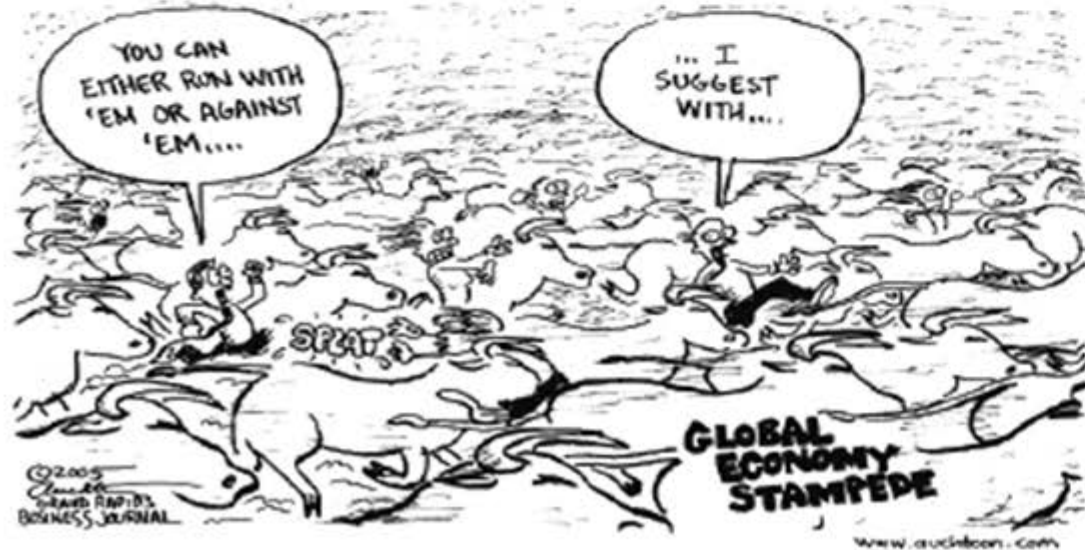


“Worldly wisdom teaches that it is better for reputation to fail conventionally than to succeed unconventionally” – John Maynard Keynes

FM \neq Outside Zebra (Career Risk)
FM = Center of Herd (Optimal Placement)
Buys Popular Stocks = Faultless

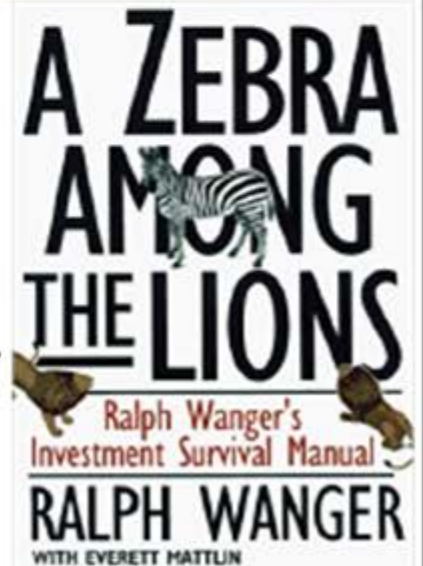


Seek safety in conventional ideas
Avoid success unconventionally



You cannot be fired for buying Johnson and Johnson

“Men, it is has been well said, think in herds. It will be seen that they go mad in herds, while they only recover their senses slowly, one by one”
- Charles Mackay



Investors Could Ride the Wave to Riches or Experience a Hard Landing



“There is a tide in the affairs of men, which taken at the flood, leads on to fortune” – **Julius Caesar**

“Experience tends to confirm a long held notion that being prepared, on a few occasions in a lifetime, to act promptly in scale, in doing some simple and logical thing, will often dramatically improve the financial results of that lifetime” – **Charlie Munger**



“Cash combined with courage in a time of crisis is priceless” – **Warren Buffett**

“Every great crisis reveals the excessive speculations... which commonly indeed had not begun, or had not carried very far those speculations till they were tempted by the daily rise of price and the surrounding fever” – **Walter Bagehot**

Bulls Make Money, Bears Make Money. Pigs? They Get Slaughtered



B

George Soros
Broke The Bank
of England, 1992



E

Jesse Livermore
Shorted the Panic
of 1907



A

Tudor Jones
Predicted
Black Monday, 1987



R

John Paulson
Used credit default swaps
against Subprime, 2007



Michael Burry
Shorted the
Subprime Crisis, 2008



B

Henry Hoare
Successfully navigated
South Sea Bubble, 1720



U

Stanley Druckenmiller
Broke pound. Made 1B\$
in one day, 1992



L

Michael Steinhardt
Bought Treasury bonds
as Yield spiked, 1981



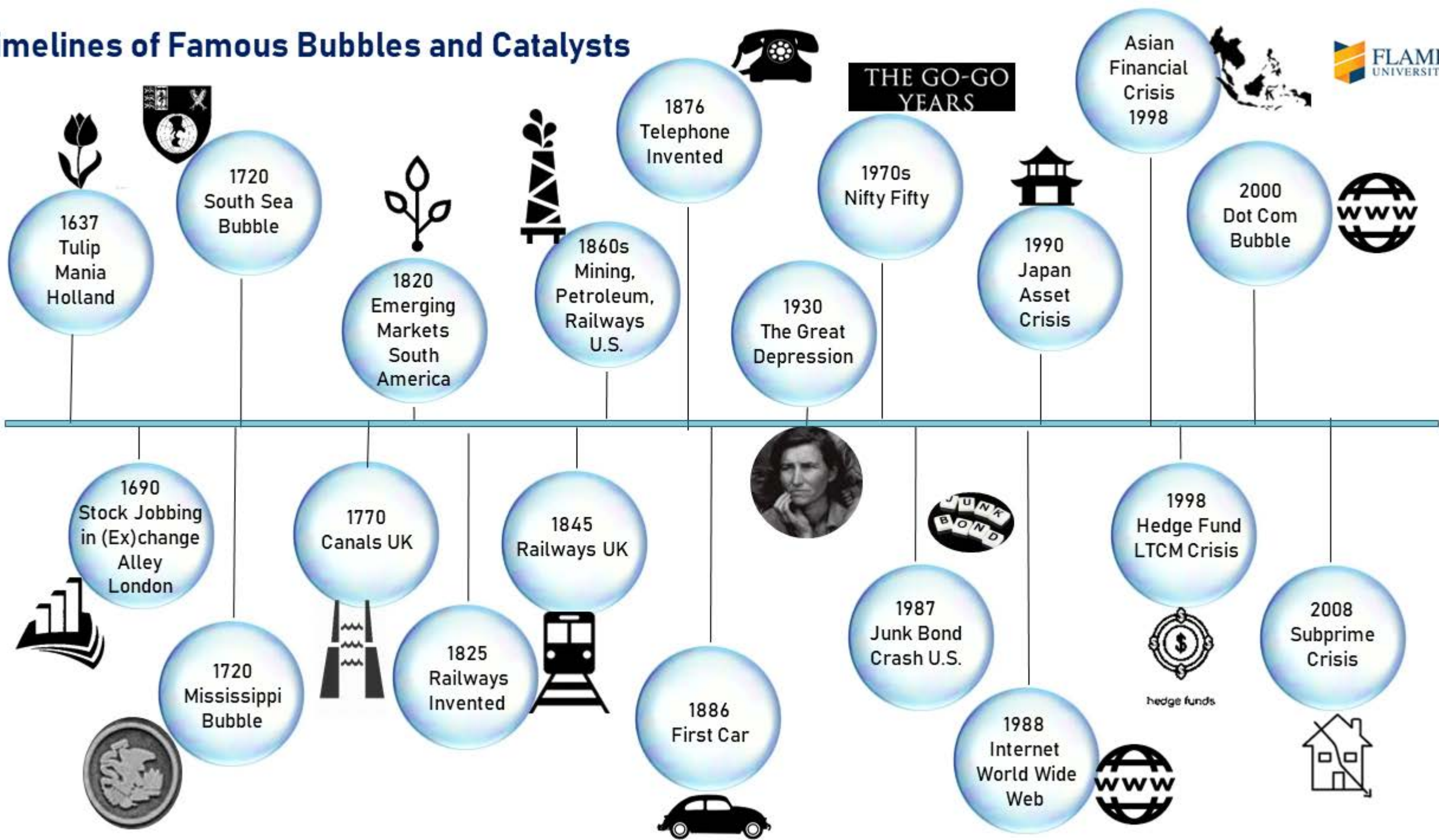
L

John Templeton
Bought the Dregs of the
Stock Market, 1939

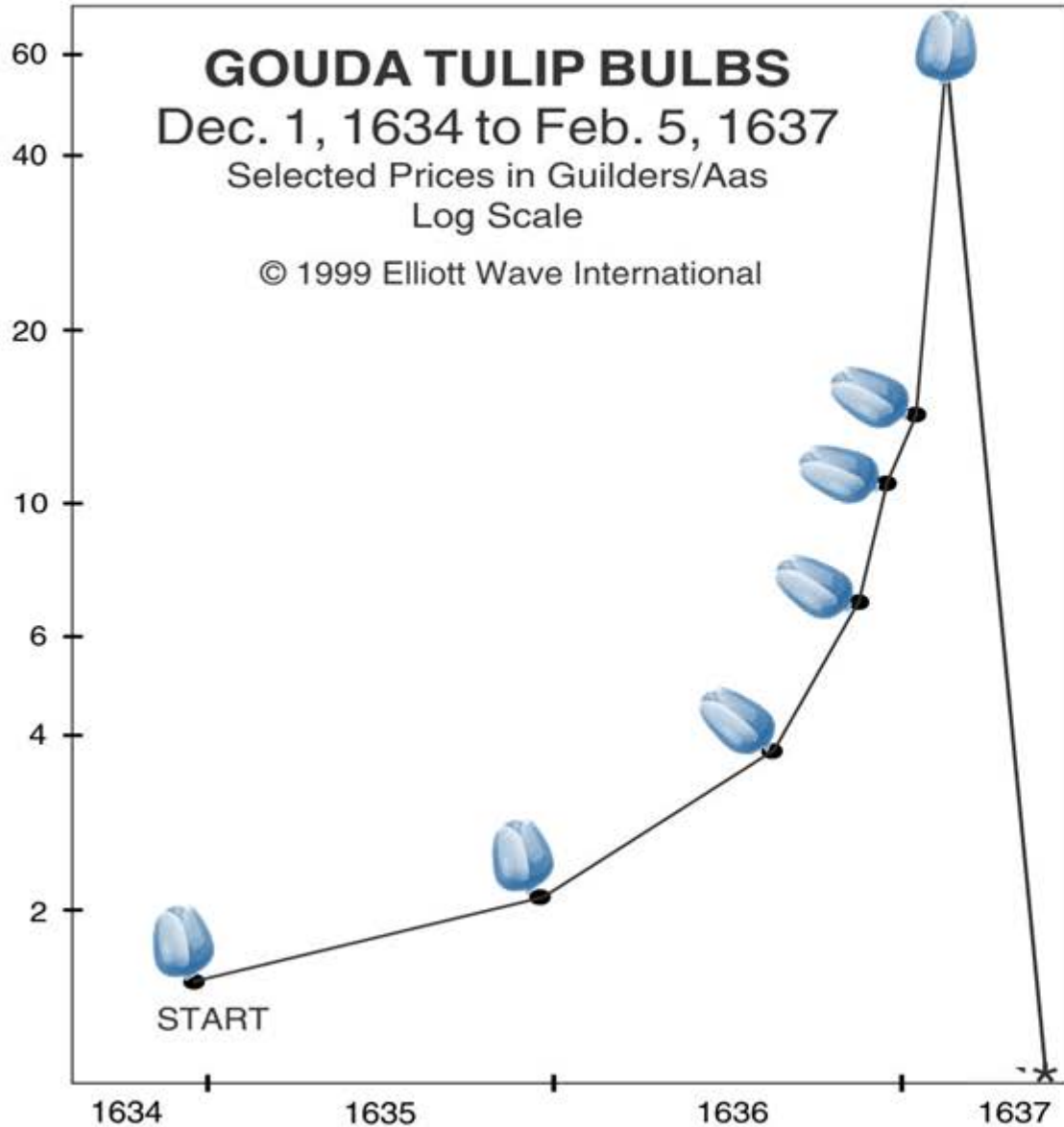


Kyle Bass
Successfully Navigated
The Subprime Crisis

Timelines of Famous Bubbles and Catalysts

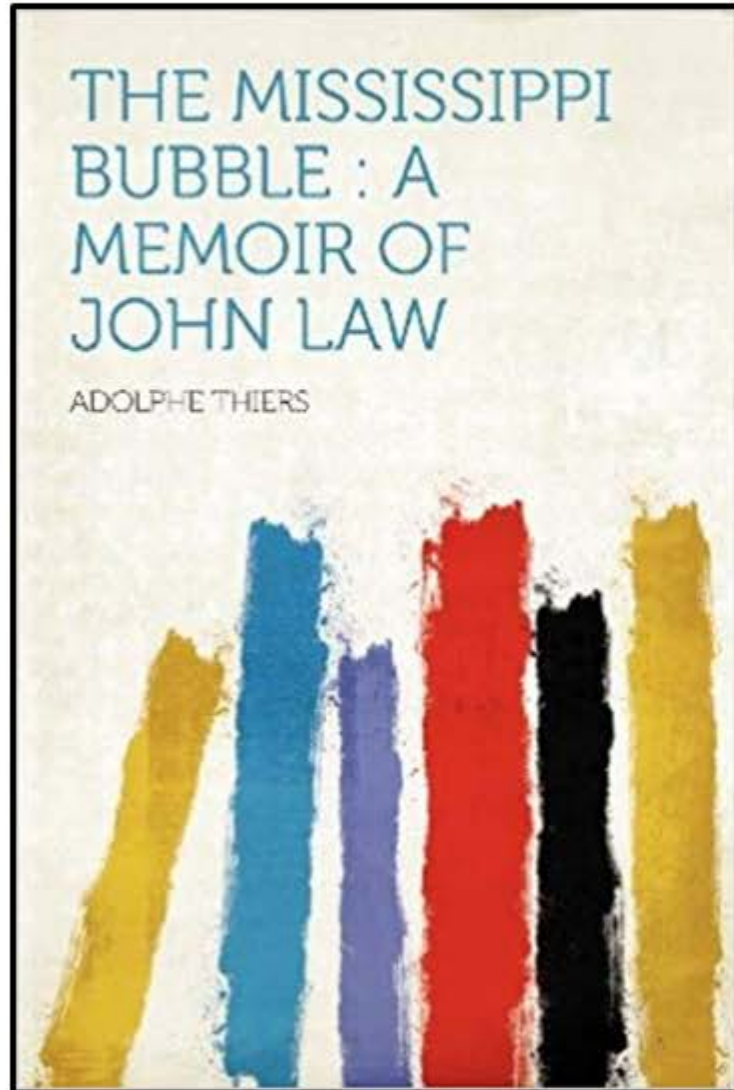


Tulip Bubble



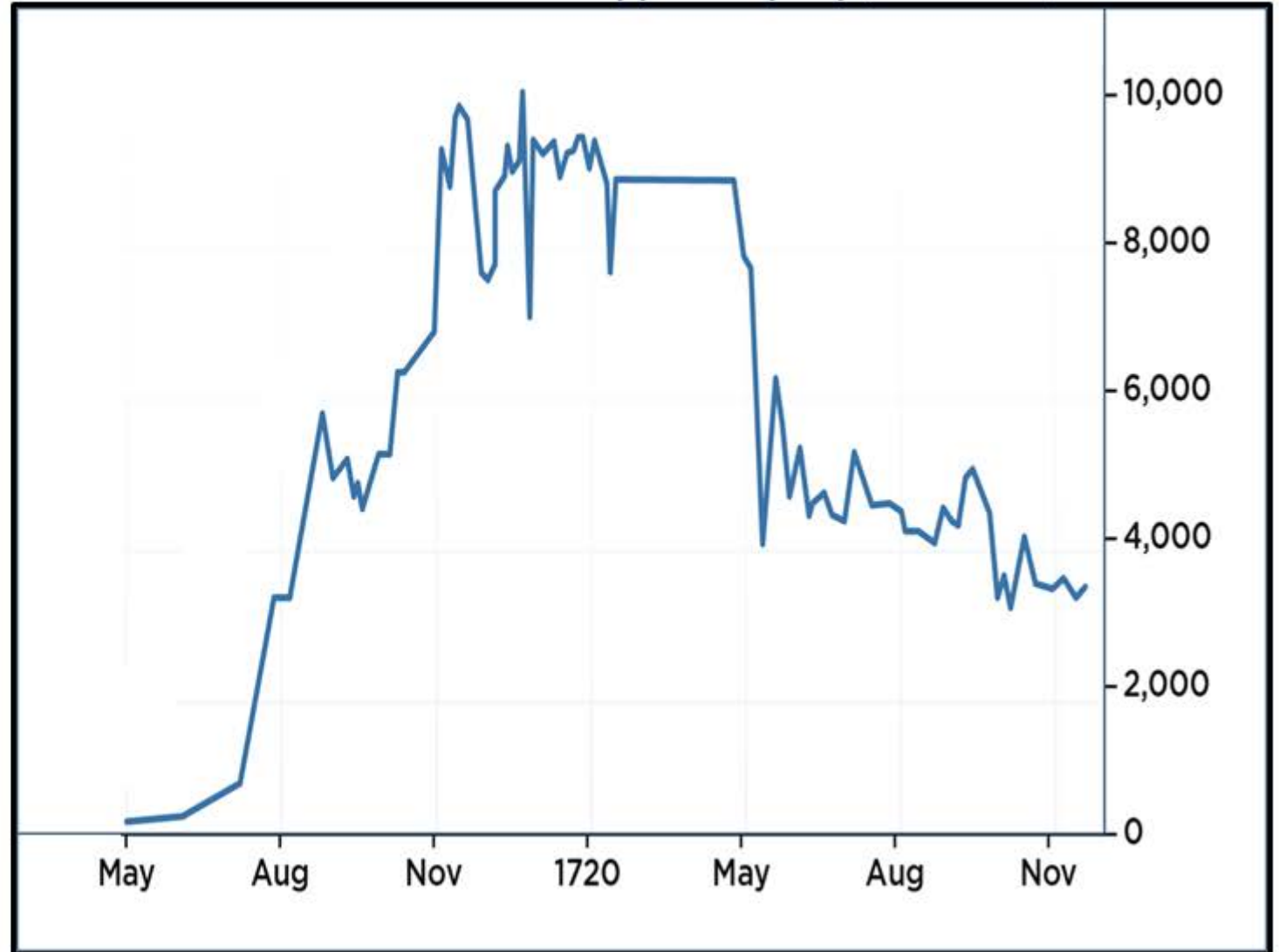
| Basket of Goods Allegedly Exchanged for a Single Bulb of the <i>Viceroy</i> | |
|---|--------------|
| Two Lasts of Wheat | 448f |
| Four Lasts of Rye | 558f |
| Four Fat Oxen | 480f |
| Eight Fat Swine | 240f |
| Twelve Fat Sheep | 120f |
| Two Hogsheads of Wine | 70f |
| Four Turns of Beer | 32f |
| Two Tons of Butter | 192f |
| 1000 lbs of Cheese | 120f |
| A Complete Bed | 100f |
| A Suit of Clothes | 80f |
| A Silver Drinking Cup | 60f |
| Total | 2500f |

Mississippi Bubble



Source : thebubblebubble.com

Shares in John Law's Mississippi Company (1719-1720)



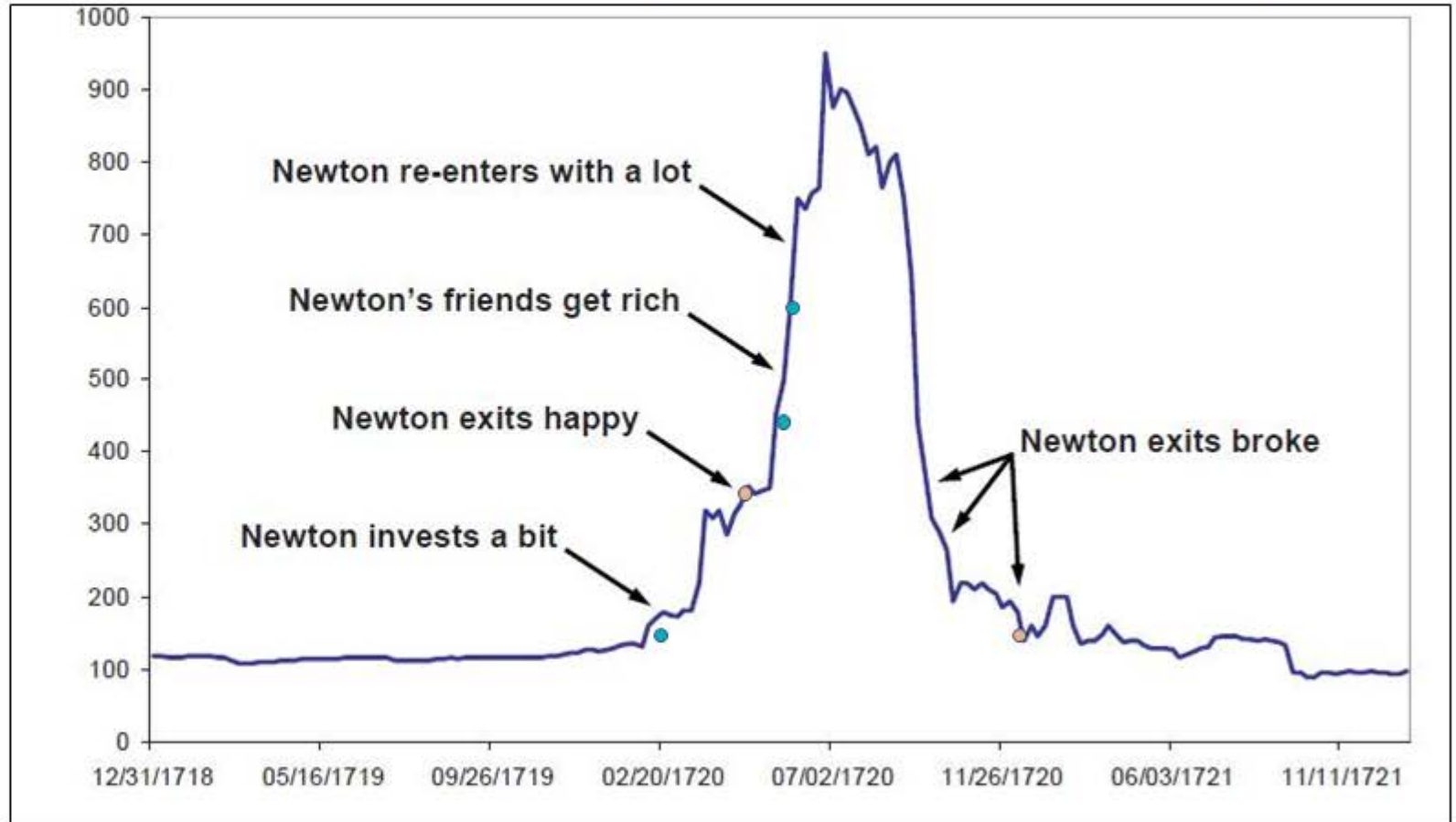
South Sea Bubble

“I can calculate the movement of the stars, but not the madness of men” - Isaac Newton

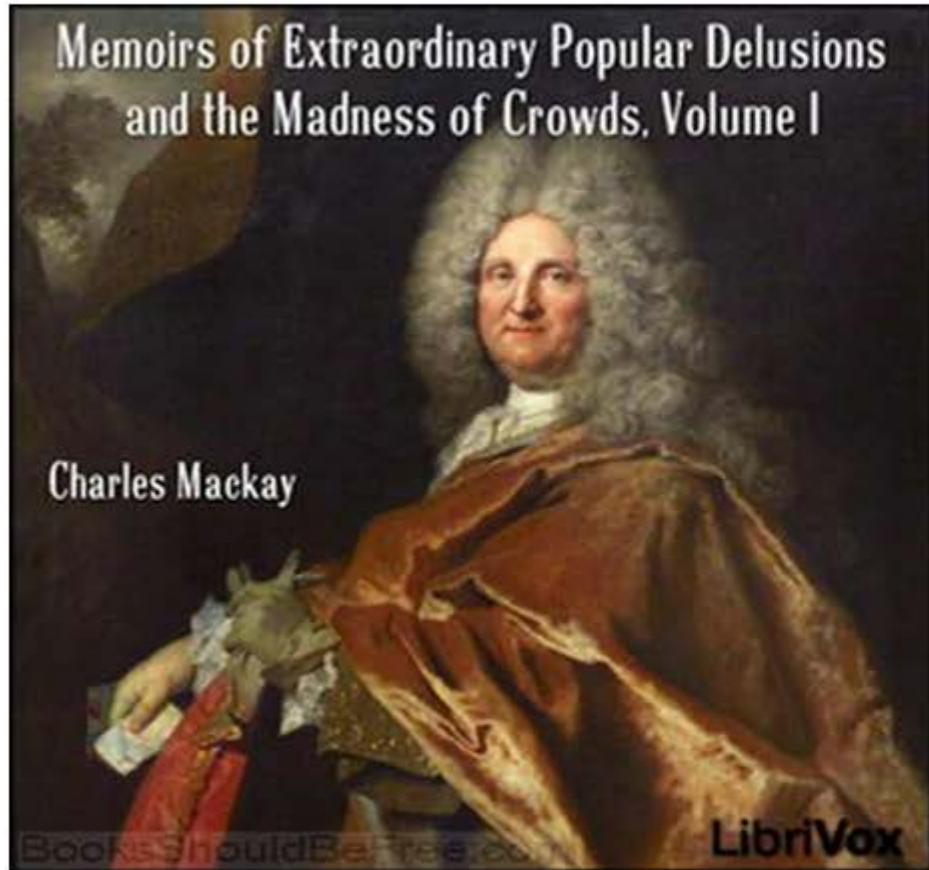


Source : thebubblebubble.com

South Sea Stock (December 1718 – December 1721)



Charles Mackay's Story : Another Example of a Renowned Expert on Bubbles Who Decided that "This Time is Different"



An investigation of Mackay's newspaper writings shows that he was one of the most ardent cheerleaders for the [Railway Mania](#), the greatest and most destructive of these episodes of extreme investor exuberance.

Source : Andrew Odlyzko . thebubblebubble.com

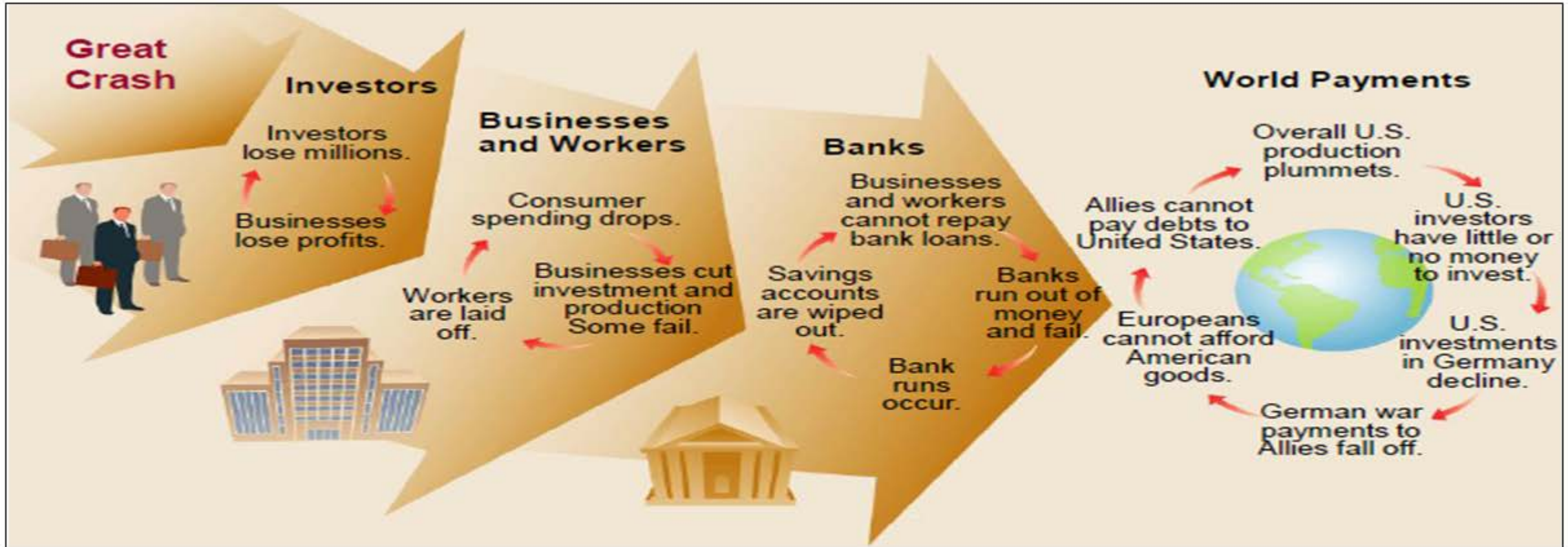
Index of British Railway share price



1840s : Media branded railway companies as fool proof investments

1844-1846 : Constructed approx. 55% of entire existing modern railway network

The Great Depression : Policy Errors Exacerbated Pain and Caused Depression and a Generation of Lost Decades



BROOKLYN DAILY EAGLE

89th YEAR--No. 295.

★ NEW YORK CITY, THURSDAY, OCTOBER 24, 1929. ★

NEWS

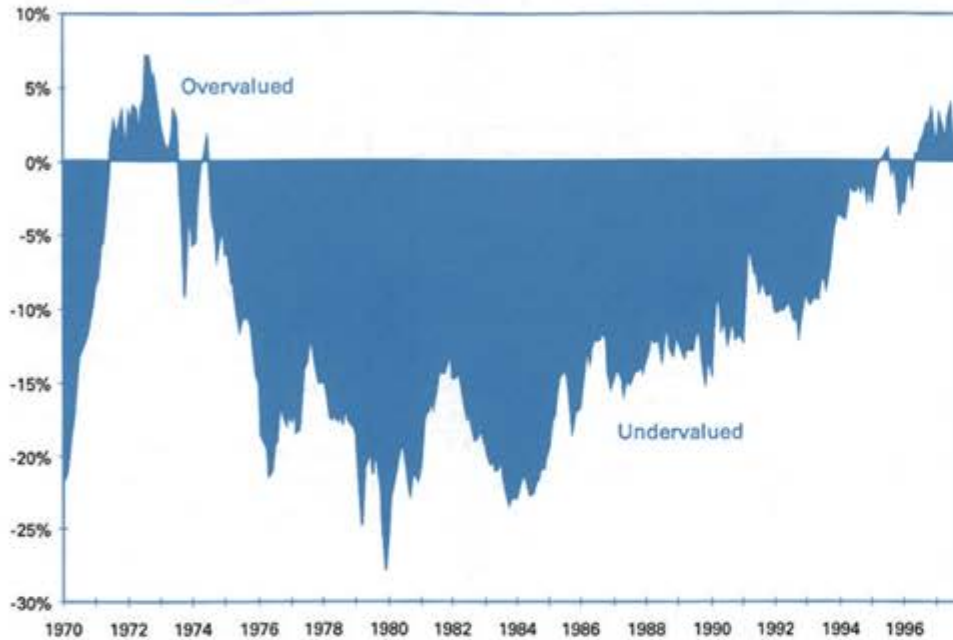
32 PAGES

THREE CENTS

WALL ST. IN PANIC AS STOCKS CRASH

Bubble of Nifty Fifty Stocks of 1970

Valuation of Equally-Weighted Nifty Fifty Portfolio Relative to the S&P 500; Dec 1970 through Aug 1998



Date Started : 1/11/1973
Date Ended : 12/06/1974
Total Days : 694
Starting DJIA : 1051.70
Ending DJIA : 577.60
Total Loss : -45.1%

Source : Forbes 1977 Revisited Nifty Fifty

| Cheap Stocks | | | |
|------------------|--------|--------------|--------------------------|
| Company | Symbol | Starting P/E | 10- Yr Annualized Return |
| Philip Morris | MO | 25.9 | 6.85% |
| Bristol Myers | BMY | 27.6 | 5.35% |
| Pfizer | PFE | 29 | 2.63% |
| PepsiCo | PEP | 20.3 | 2.83% |
| Procter & Gamble | PG | 32 | -1.59% |
| IBM | IBM | 37.4 | -2.53% |
| Dow Chemical | DWDP | 25.5 | -0.85% |

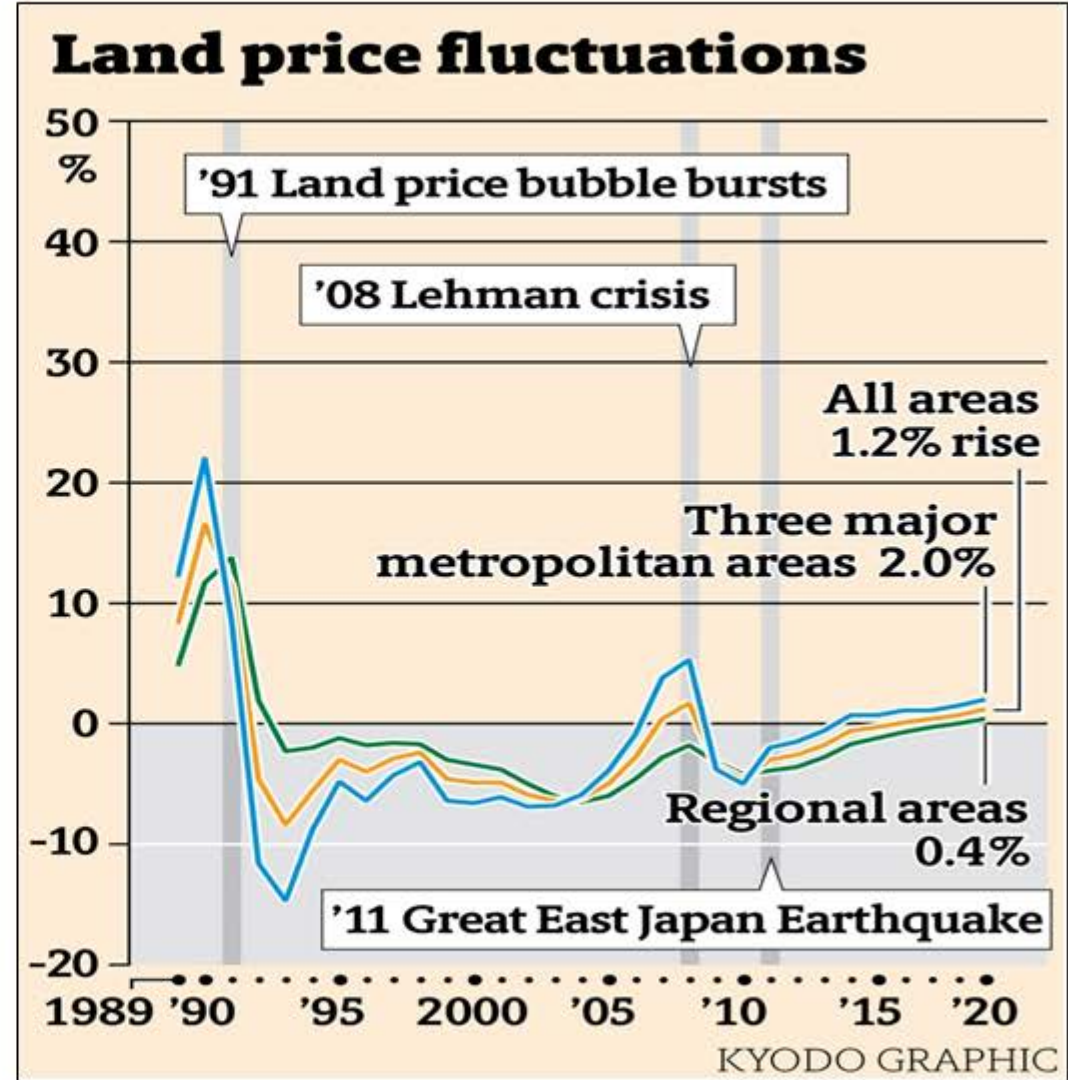
| Expensive Stocks | | | |
|----------------------------|--------|--------------|--------------------------|
| Company | Symbol | Starting P/E | 10- Yr Annualized Return |
| McDonald's | MCD | 85.7 | 1.75% |
| Int'l Flavors & Fragrances | IFF | 75.8 | -5.24% |
| Walt Disney | DIS | 81.6 | -3.78% |
| Johnson & Johnson | JNJ | 61.9 | 1.72% |
| Coca Cola | KO | 47.6 | -6.93% |
| Eli Lilly | LLY | 46 | -0.72% |
| Merck | MRK | 45.9 | -0.23% |

| Nifty 50 Stocks | | |
|-----------------|---------------------------------|---------------------------------|
| Security | Price-Earnings Multiple 1972 | Price-Earnings Multiple 1980 |
| Sony | 92 | 17 |
| Polaroid | 90 | 16 |
| McDonald's | 83 | 9 |
| Intl. Flavors | 81 | 12 |
| Walt Disney | 76 | 11 |
| Hewlett Packard | 65 | 18 |

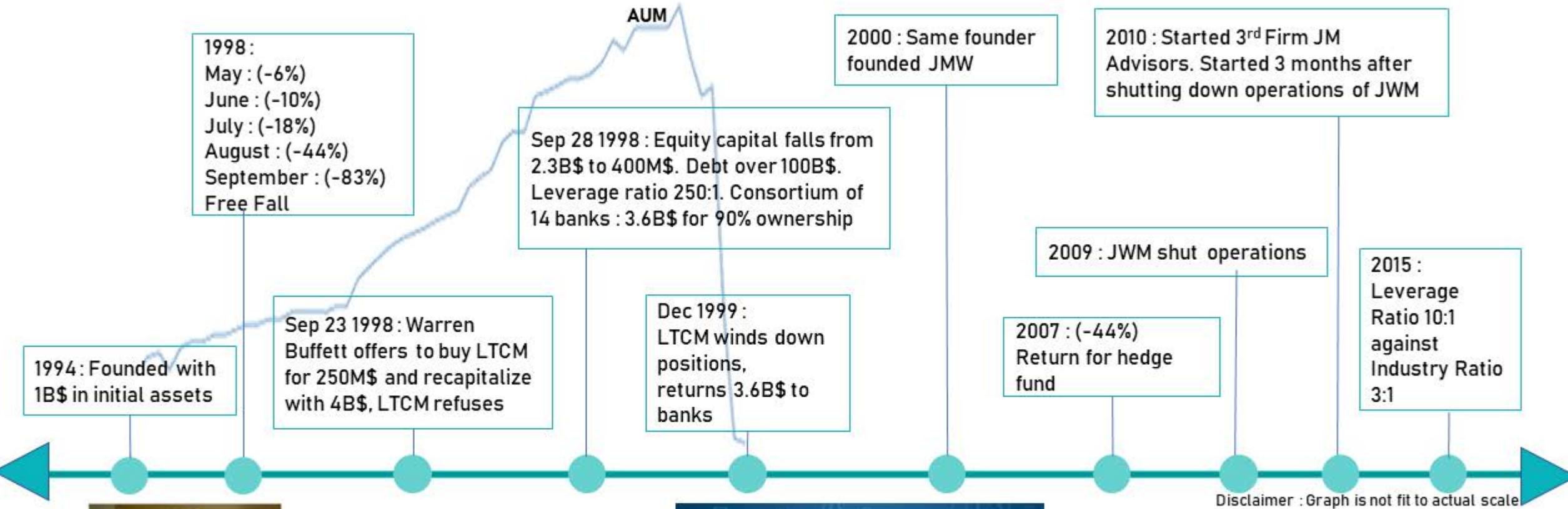
Japan Asset Bubble



At one stage the land surrounding the Imperial Palace in Tokyo was estimated to be worth more than the whole of California...



(1998) Russian Crisis Led to the LTCM Saga : "It Ain't Over Till It's Over" - Yogi Berra



John Meriwether
 Founder of *LTCM*,
JMW and *JM Advisors*



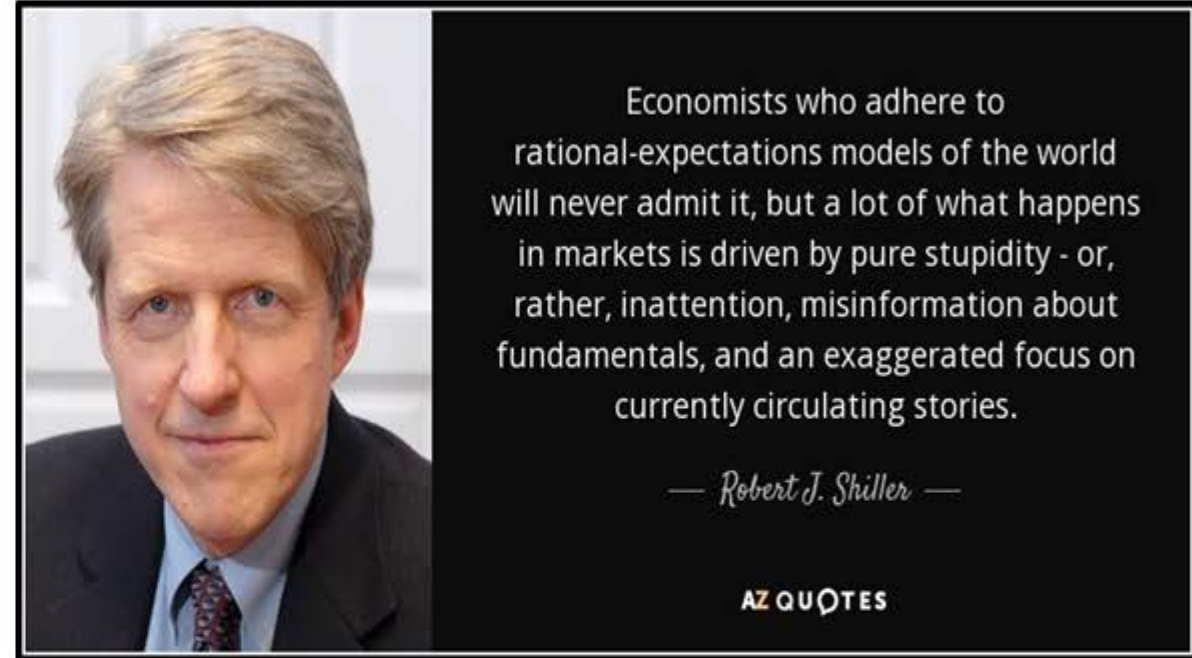
Myron Scholes and Robert Merton won
 The Nobel prize for their theory -
How Options are Priced in Efficient Market

Opposite Views on The Efficient Market Hypothesis (EMH)



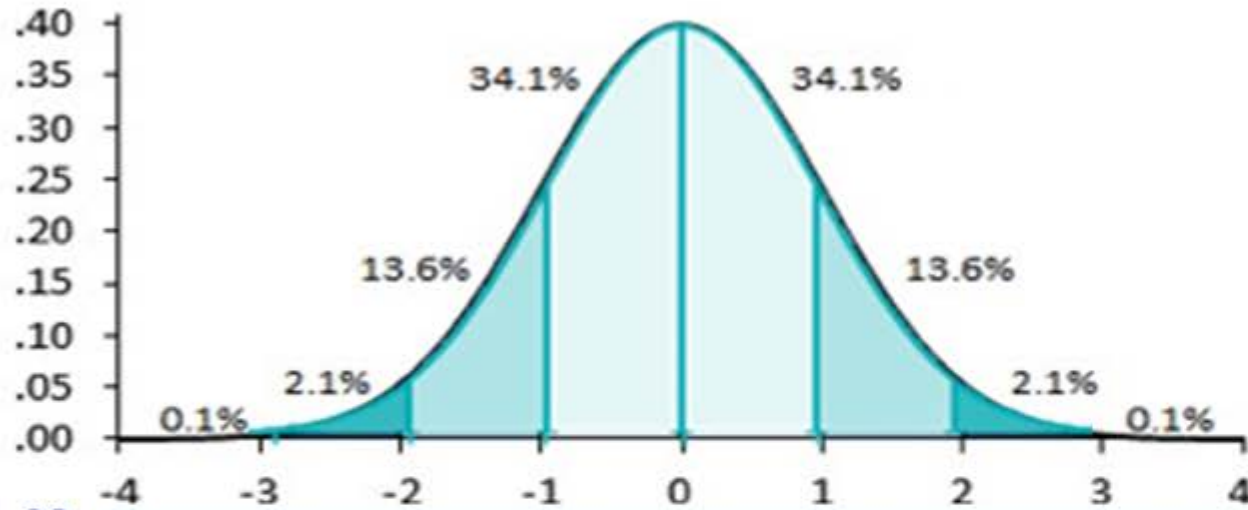
Robert Merton and Myron Scholes won The Nobel Prize for a new method to determine the value of Derivatives. The study is based on the efficient market theory. Their methodology has paved the way for economic valuations in many areas. It has also generated new types of financial instruments and facilitated more efficient risk management in society.

Unfortunately they don't take the Nobel Prize back !!



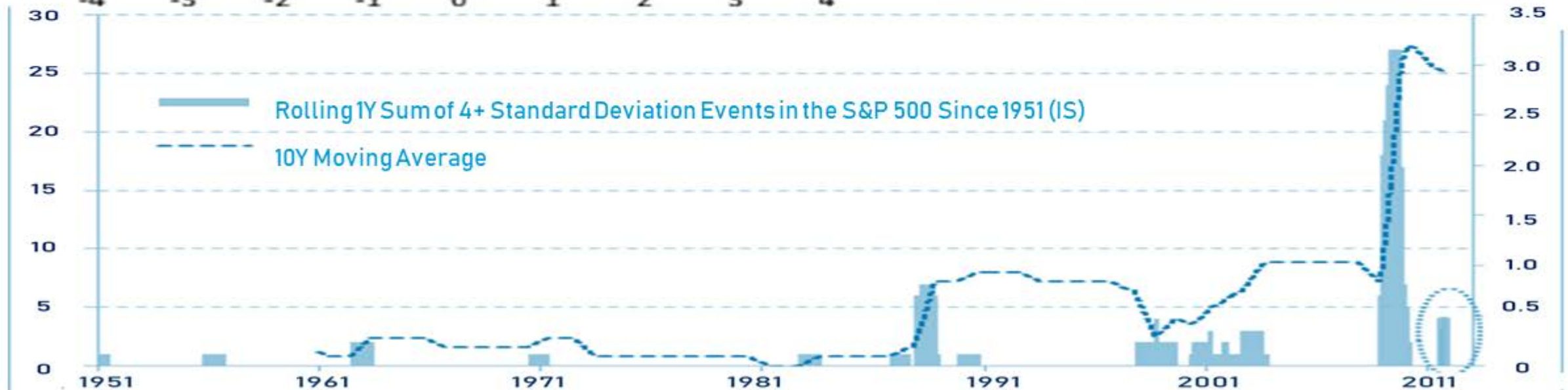
The Nobel Prize winning economist Robert Shiller says that the long term expansion in the economy, housing and stock markets, combined with continued low interest rates, could mean the U.S. is due for a recession. But, human behavior makes it very difficult to make such predictions.

Models Based on Bell Curve Distributions Massively Underestimate the Probability and Impact of Outlier Events



Translation of Risk as measured by SD

| | |
|------|----------------------|
| 1 SD | 1 every 6 Years |
| 2 SD | 1 every 44 Years |
| 3 SD | 1 every 740 Years |
| 4 SD | 1 every 31,575 Years |



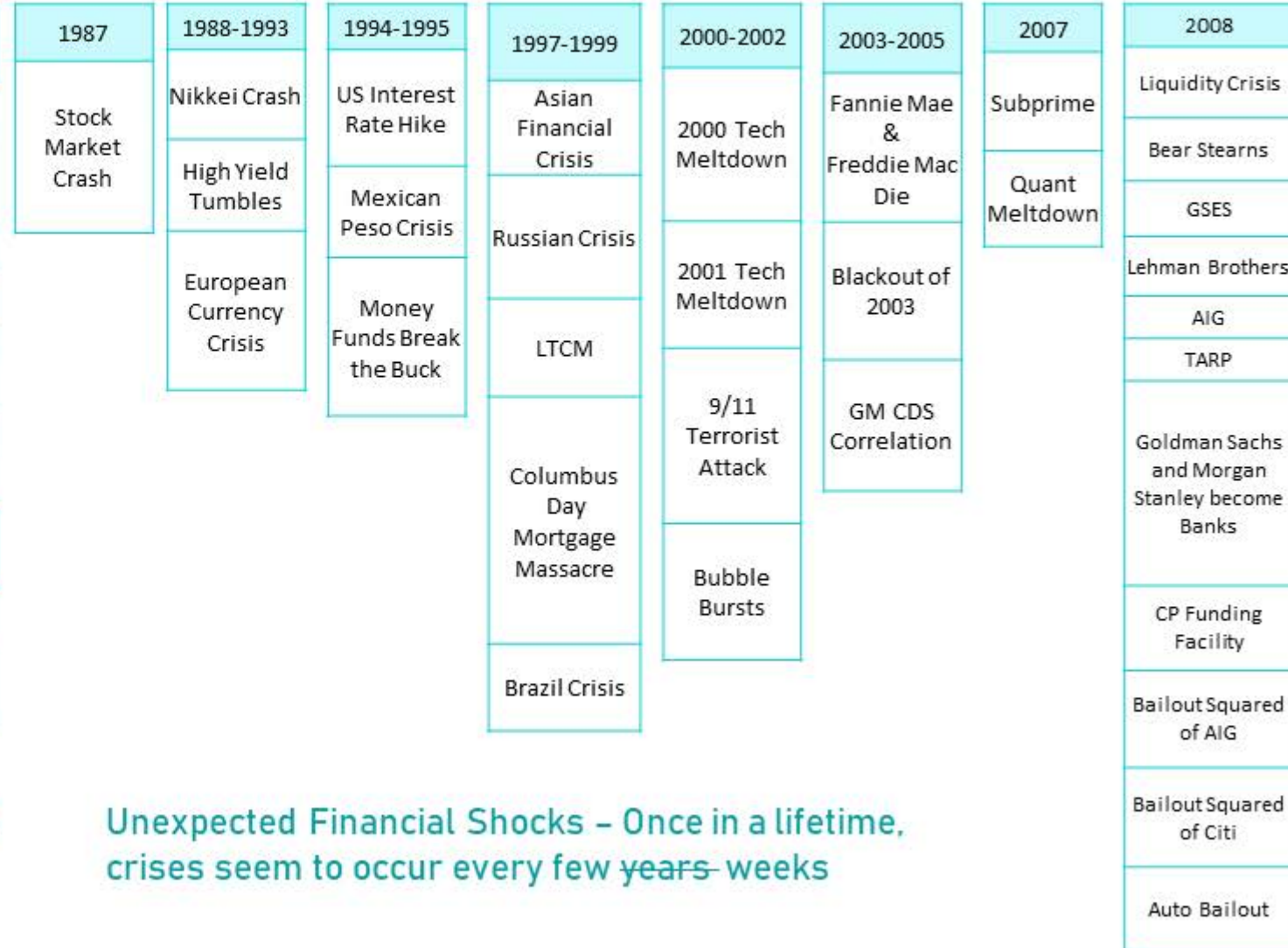
Does The Efficient Market Hypothesis (EMH) Work?

The Prima Facie Case Against EMH is the Existence of Bubbles

| Six largest movements of the Dow-Jones Industrial Average (Oct 2008) | | |
|--|------------|---|
| A Non-Normal October | | |
| Date | Change (%) | Average Frequency Under Normal Law |
| 7/10/2008 | -5.11 | Once in 5,435 years |
| 9/10/2008 | -7.33 | Once in 3,373,629,757 years |
| 13/10/2008 | 11.08 | Once in 603,033,610,921,669,000,000,000 years |
| 15/10/2008 | -7.87 | Once in 171,265,623,633 years |
| 22/10/2008 | -5.86 | Once in 117,103 |
| 28/10/2008 | 10.88 | Once in 73,357,946,799,753,900,000,000 years |

(1) Daily Returns from 01/01/1971 to 31/10/2008

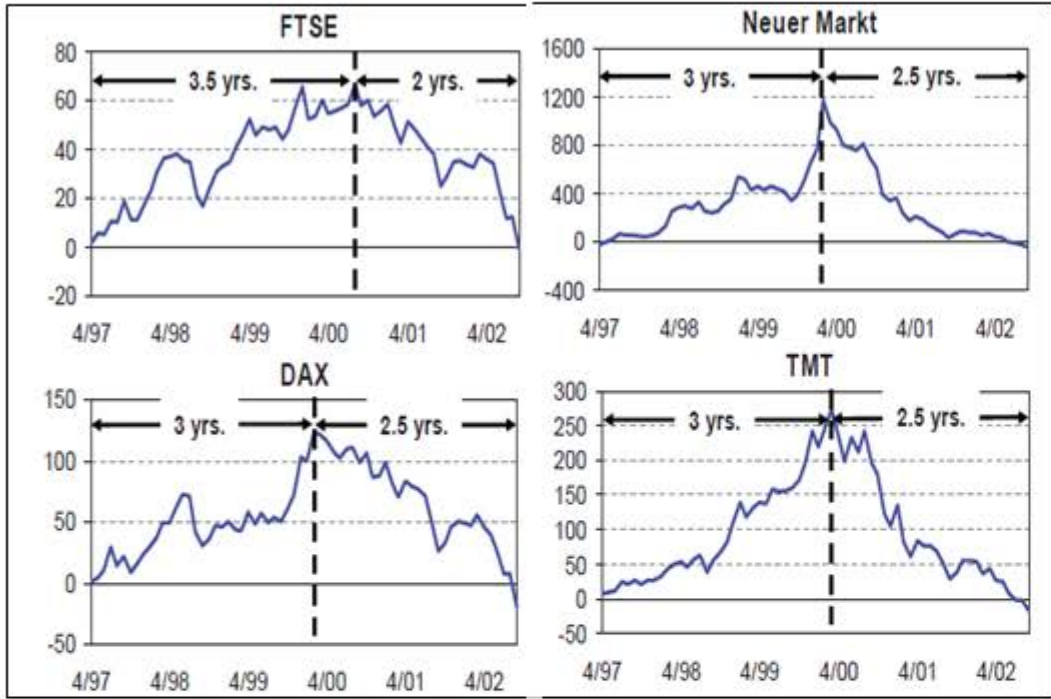
(2) The Mean of the Distribution is set to Zero and the Standard Deviation computed over the whole sample (St. Dev. = 1.032%).



“In theory there is no difference between theory and practice. But, in practice, there is” – Yogi Berra

Unexpected Financial Shocks – Once in a lifetime, crises seem to occur every few years- weeks

Dot-Com Bubble of 2000s

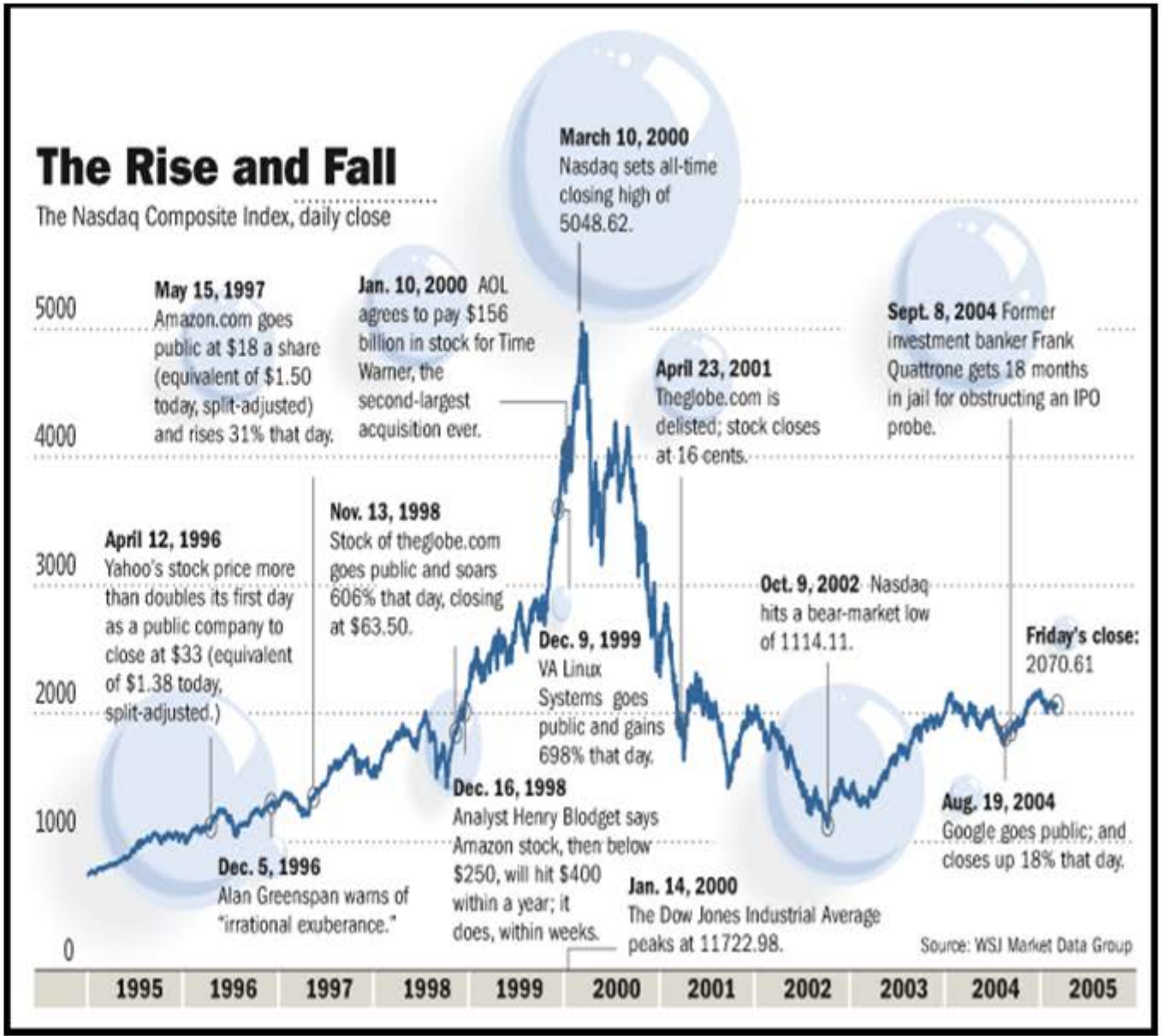


BARRON'S COVER

What's Wrong, Warren?

Berkshire's down for the year, but don't count it out

By Andrew Bary • Updated Dec. 27, 1999 12:01 a.m. ET

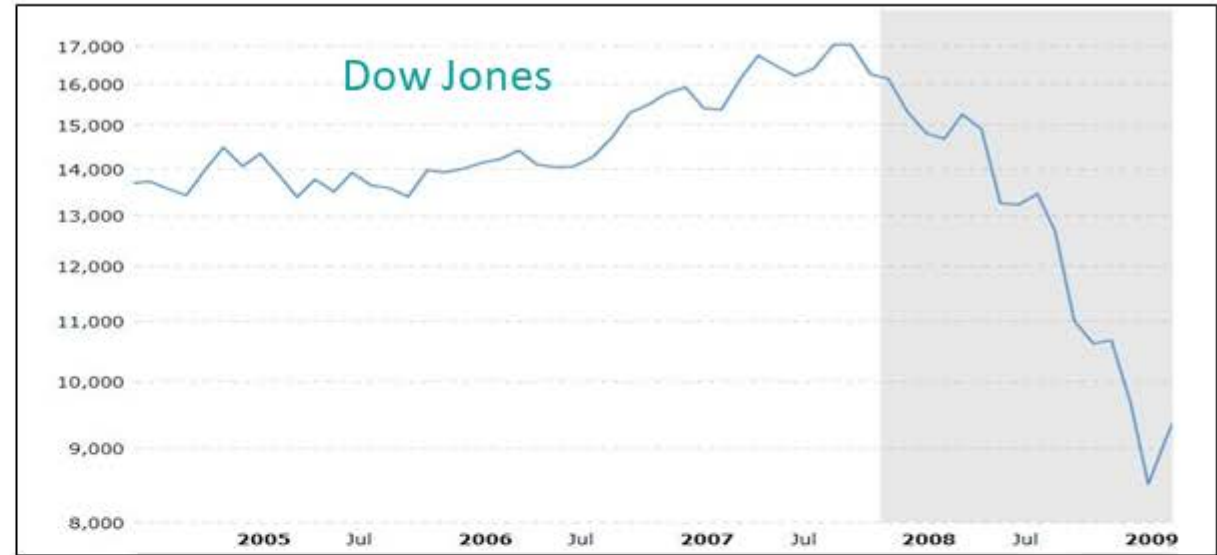
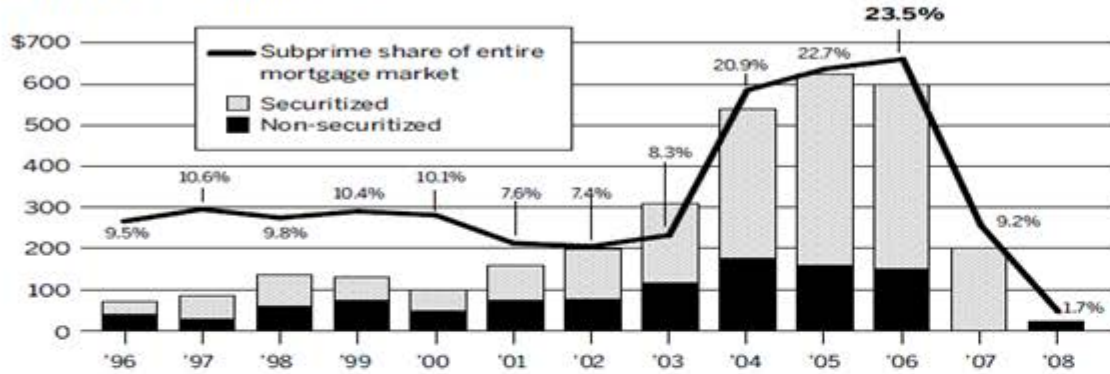


The 2008 U.S. Subprime Crisis Led to The International Banking Crisis

Subprime Mortgage Originations

In 2006, \$600 B of subprime loans were originated, most of which were scrutinized. That year, the subprime lending accounted for 23.5% of all mortgage originations

IN BILLIONS OF DOLLARS



Mortgage-Related Losses to Financial Institutions from the Subprime Crisis, as of June 18, 2008

| Institution | Loss (\$ billions) | Institution | Loss (\$ billions) |
|---------------------------|--------------------|------------------------------|--------------------|
| 1. Citigroup | 42.9 | 11. Washington Mutual | 9.1 |
| 2. UBS | 38.2 | 12. Credit Agricole | 8.3 |
| 3. Merrill Lynch | 37.1 | 13. Lehman Brothers | 8.2 |
| 4. HSBC | 19.5 | 14. Deutsche Bank | 7.6 |
| 5. IKB Deutsche | 15.9 | 15. Wachovia | 7.0 |
| 6. Royal Bank of Scotland | 15.2 | 16. HBOS | 7.0 |
| 7. Bank of America | 15.1 | 17. Bayerische Landesbank | 6.7 |
| 8. Morgan Stanley | 14.1 | 18. Fortis | 6.6 |
| 9. JPMorgan Chase | 9.8 | 19. Canadian Imperial (CIBC) | 6.5 |
| 10. Credit Suisse | 9.6 | 20. Barclays | 6.3 |

Source: Bloomberg News, June 18, 2008

(www.bloomberg.com/apps/news?pid=newsarchive&sid=a5GaiVCMZu_M)

The bottom falls out for Lehman Brothers, Bear Stearns



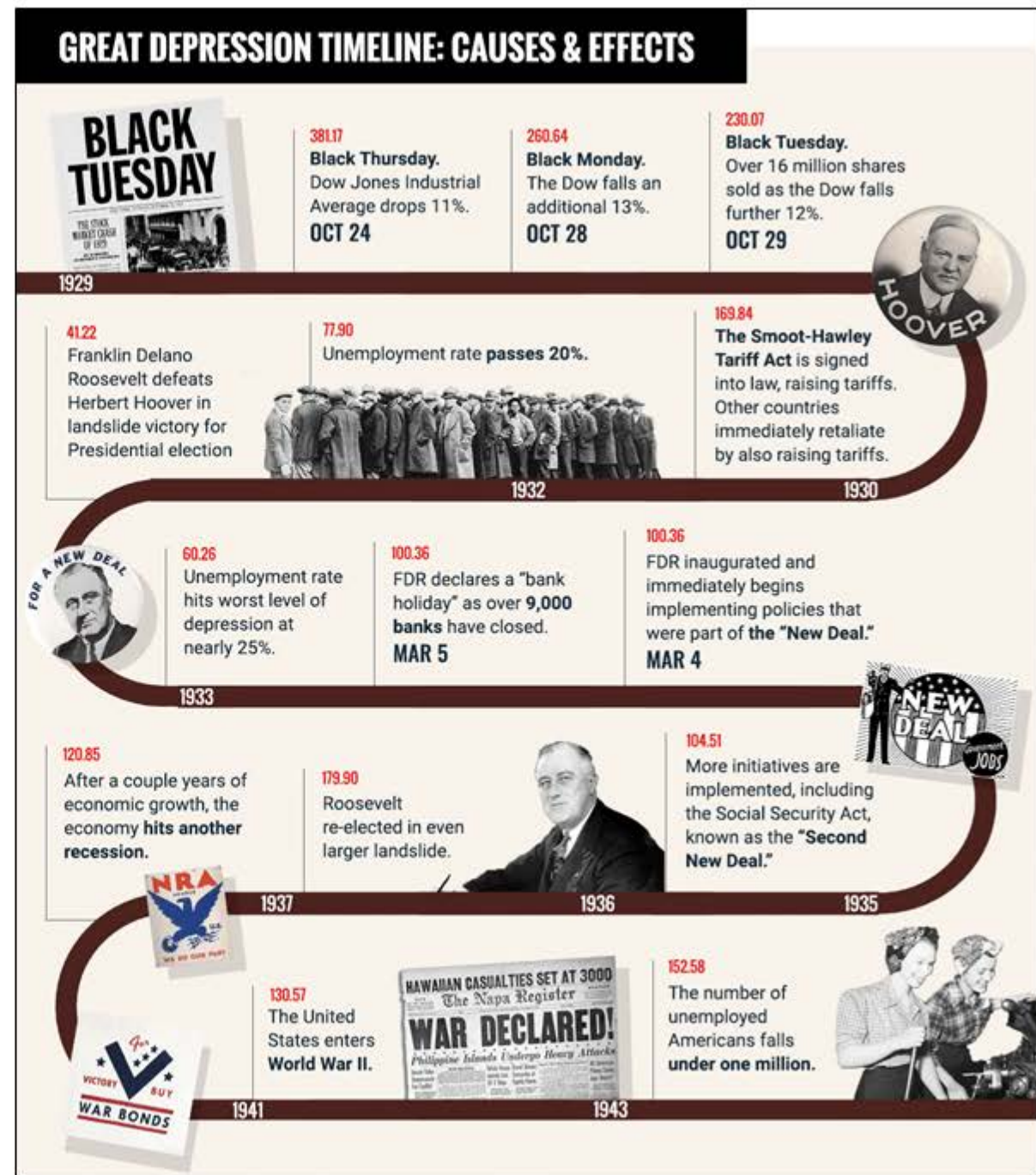
Special Case, Great Depression of 1929 : A Case of Lost Generation

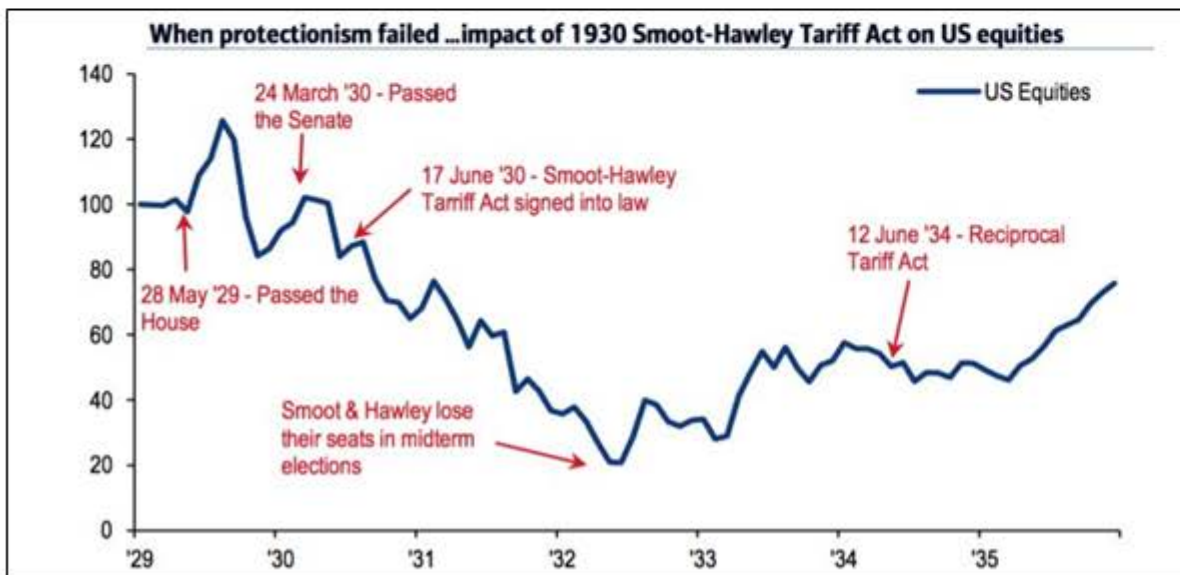
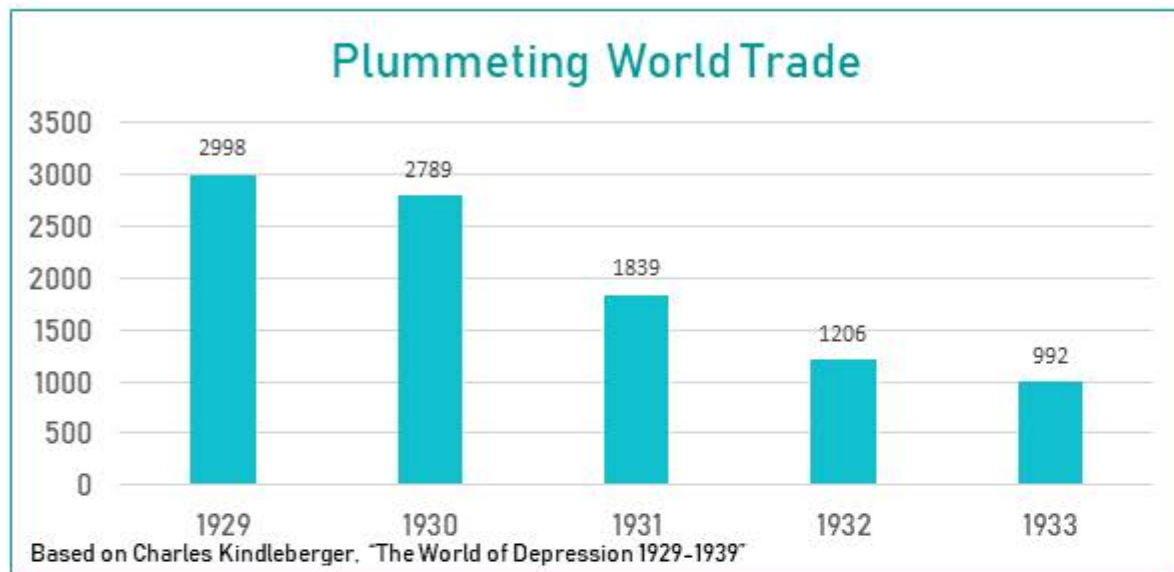
Kalidas

How a Policy Error Led to Global Depression

Timeline

- Beginning in 1928, stock-market speculation became a national pastime in the USA
- Prices increased 10 to 15 percent a day
- A future of endless prosperity was taken for granted
- The Hawley-Smoot Tariff was the highest tariff in U.S. History and it is widely agreed that it aggravated the Great Depression
- Then came the Great Depression and prices collapsed
- Real output (GDP) fell 29% from 1929 to 1933
- Unemployment increased to 25% of labor force
- Consumer prices fell 25% ; wholesale prices 32%
- About 7000 banks failed

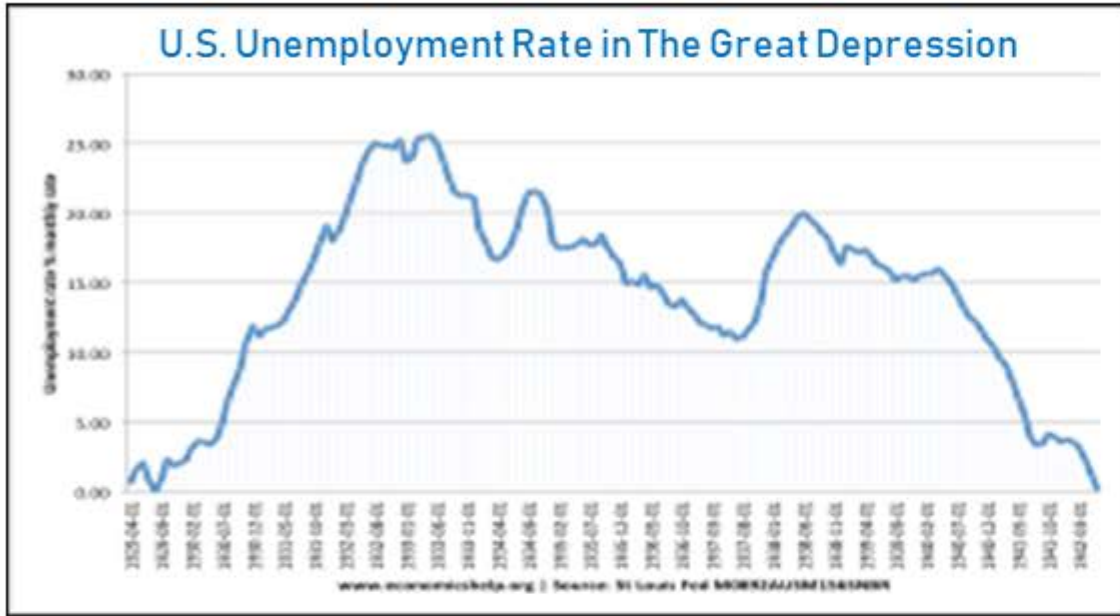




The Hawley-Smoot Tariff Act

- The Hawley-Smoot Tariff was the highest tariff in U.S. History
- Foreign countries refused to trade with the United States
- It is often blamed for worsening The Global Depression

Banks Failed and Unemployment Spiked



1. 7000 banks failed - Many during The Panic
2. The Number of banks fell from 25,000 in 1929 to 15,000 by 1934
3. Possible Causes :
 - Loss of deposits → Decline in expenditures
 - Customer relationships broken → Harder to borrow
 - Money supply contraction

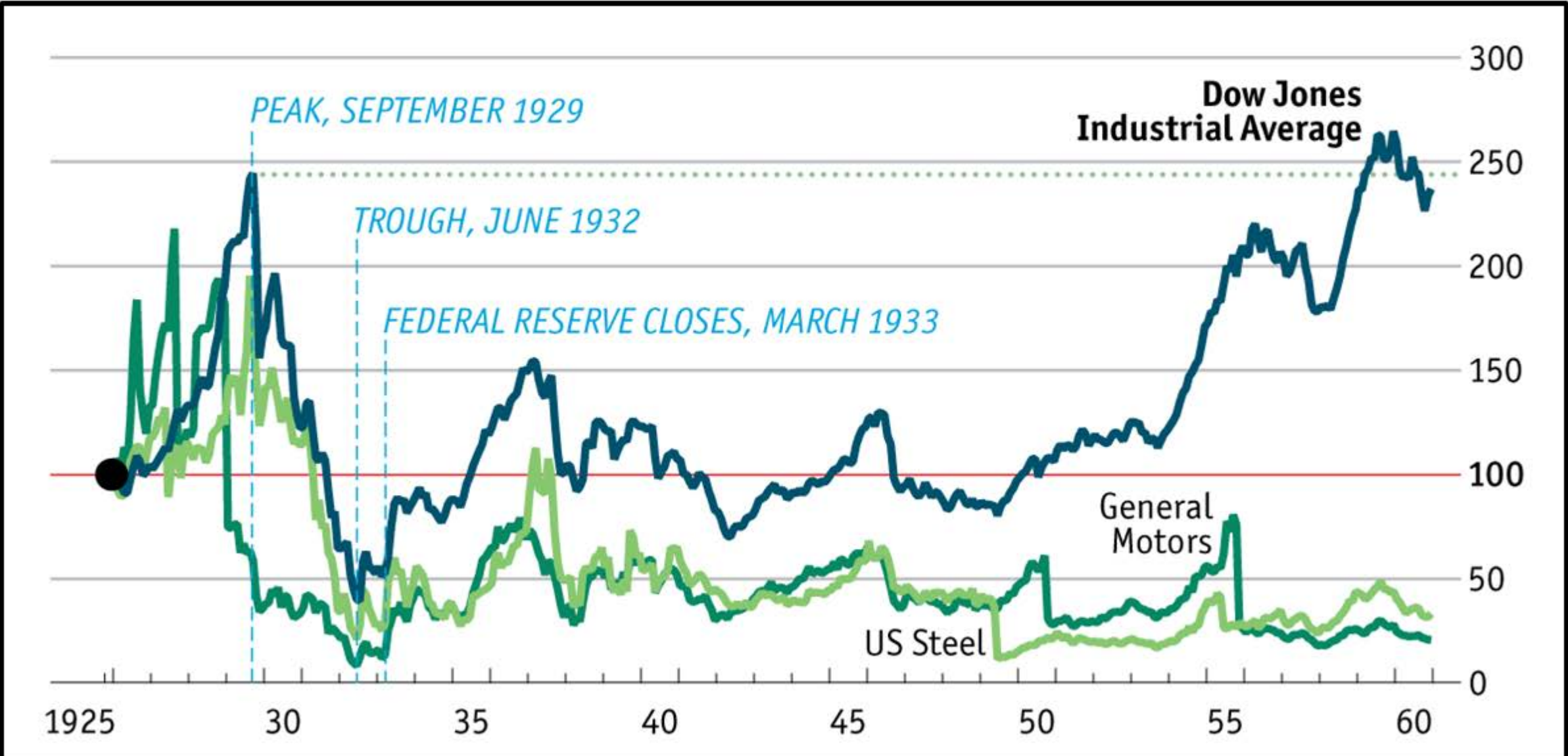


The Great Depression vs. The Great Recession

| | Great Depression | Great Recession |
|---|--|---|
| Bank Failures | 9,096 - 50% of Banks (Jan. 1930- March 1933) | 57 - 0.6% of Banks (Dec. 2007 - May 2009) |
| Unemployment Rate | 25% | 8.5% |
| Economic Decline | -26.5% (1929-1933) | -4.1% (Last Quarter 2007 - Second Quarter 2009) |
| Biggest Decline in Dow-Jones Industrial Average | -89.2% (Sept. 3, 1929 - July 8, 1932) | -53.8% (Oct. 9, 2007 - March 9, 2009) |
| Change in Prices | -25% (1929 - 1933) | +0.5% (Dec. 2007 - March 2009) |
| Emergency Spending Programs | 1.5% of GDP for 1 year (Increase in 1934 Budget Deficit) | 2.5% of GDP for 2 years (2009 American Reinvestment and Recovery Act) |
| State's Response | Raise taxes, cut spending | Federal stimulus plan gives fiscal relief to states to lessen impact of tax increases |
| Increase in Money Supply by Federal Reserve | 17% (1933) | 125% (September 2008 - May 2009) |



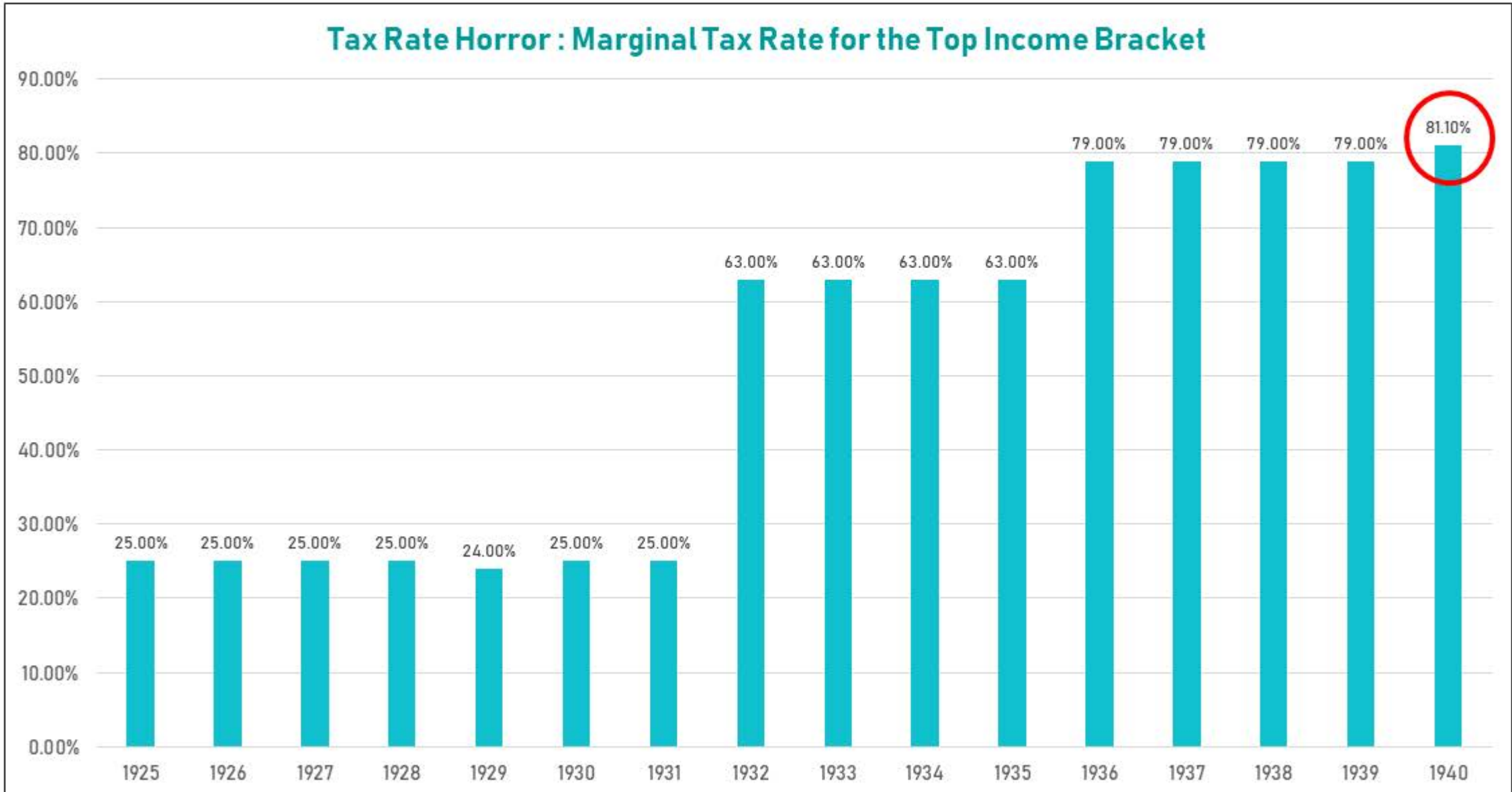
The Long Climb Back : The Market Took 30 Years to Recover



Sources: Federal Reserve Bank of St Louis; Centre for Research in Security Prices

December 1925 share prices rebased to 100

Look Who Ended Up Paying the Price for Ending The Great Depression !



Framework to Spot Bubbles

“Wishful thinking bias appears to play a role in the propagation of a speculative bubble”

- Robert Shiller

How to Spot Bubbles & Busts



Source : WSJ

The Hardest Bubble to Spot is the One You are in..



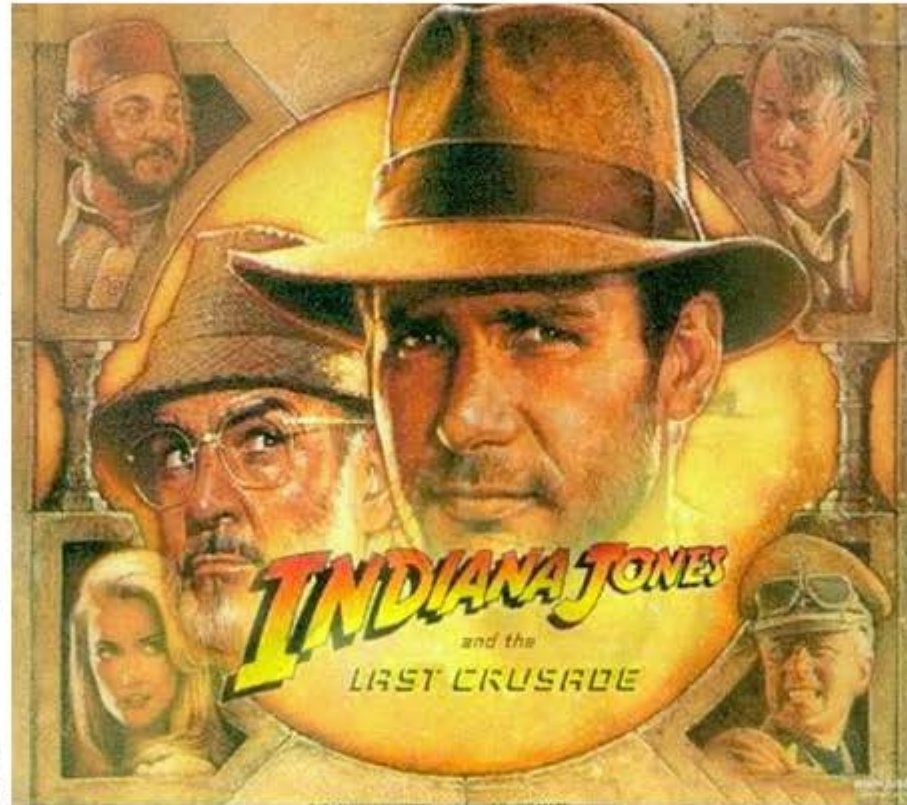
Bubbles and Crashes are Like Sequels to Popular Movies



Leader



Partnerships



Source : Movie 'Indiana Jones and the Last Crusade', Amazon



Joint Venture Partner



Exit Strategy



Domain Leader/
Idea Person



Investor/
Director



Competition



Equipment



Intellectual Property

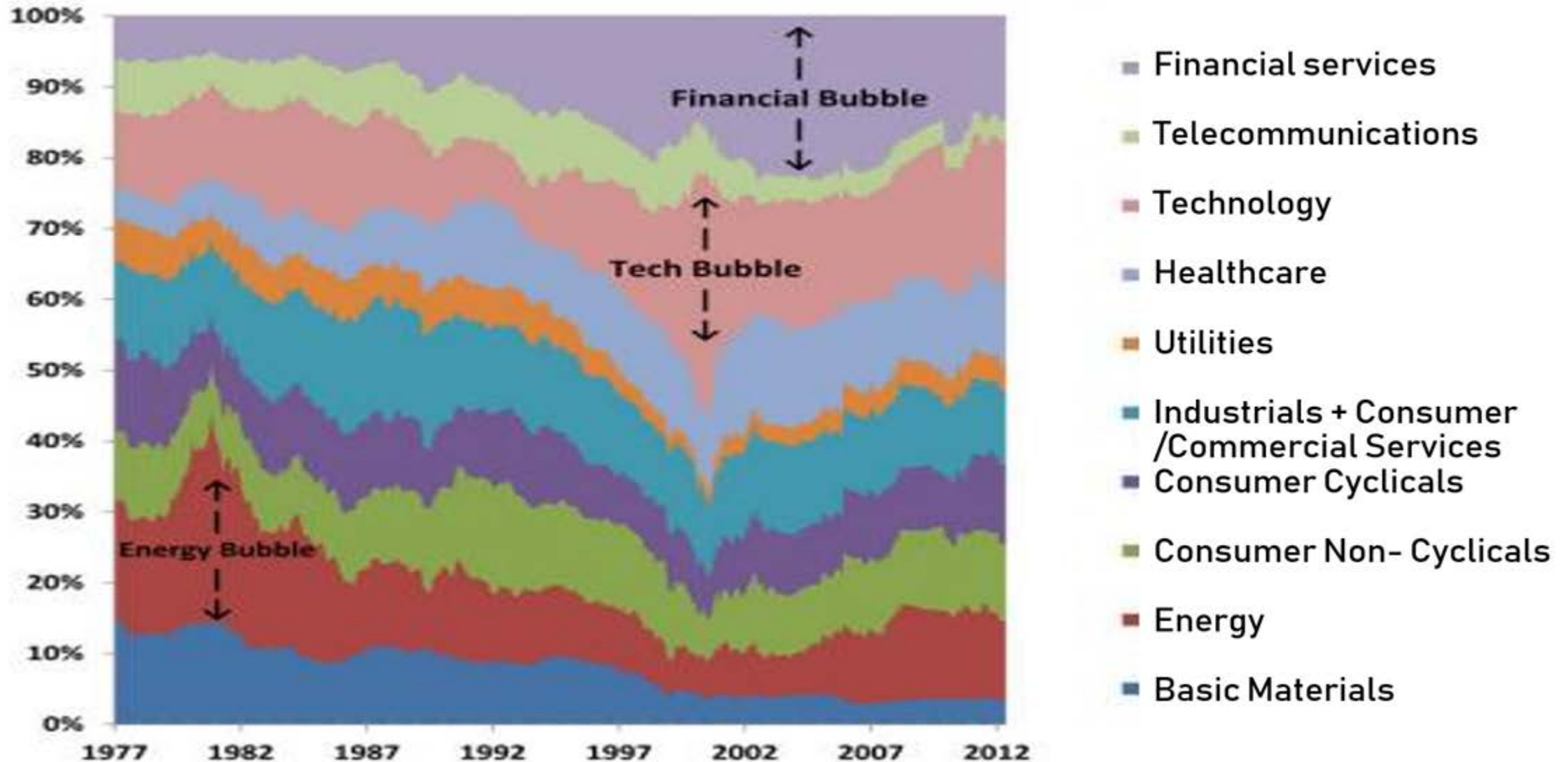


Capital

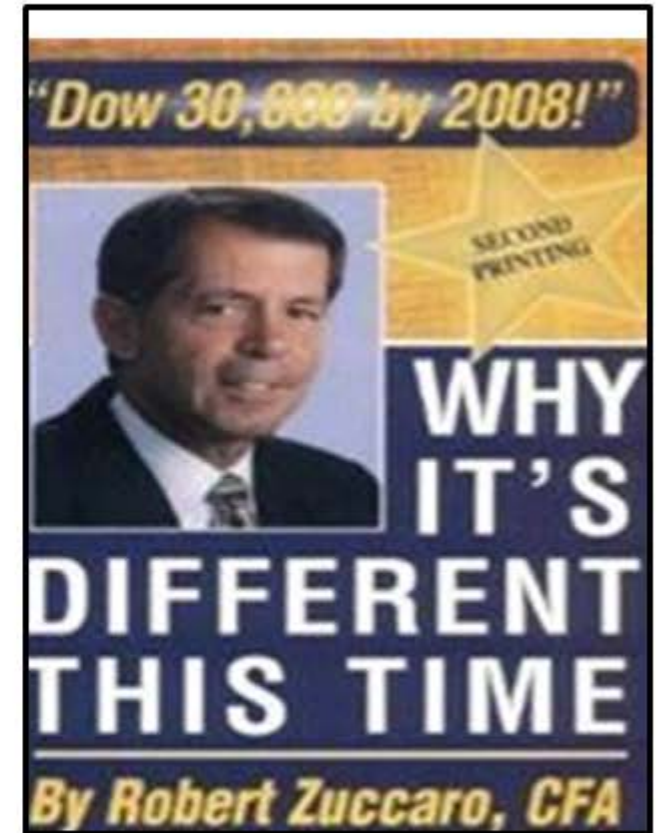
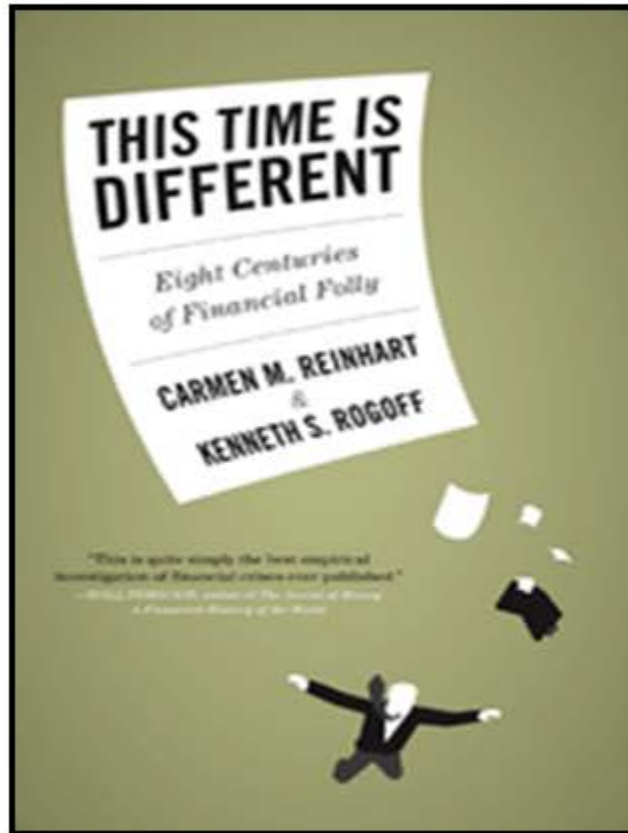


Research & Development

Sectoral Market Share Within an Asset Class

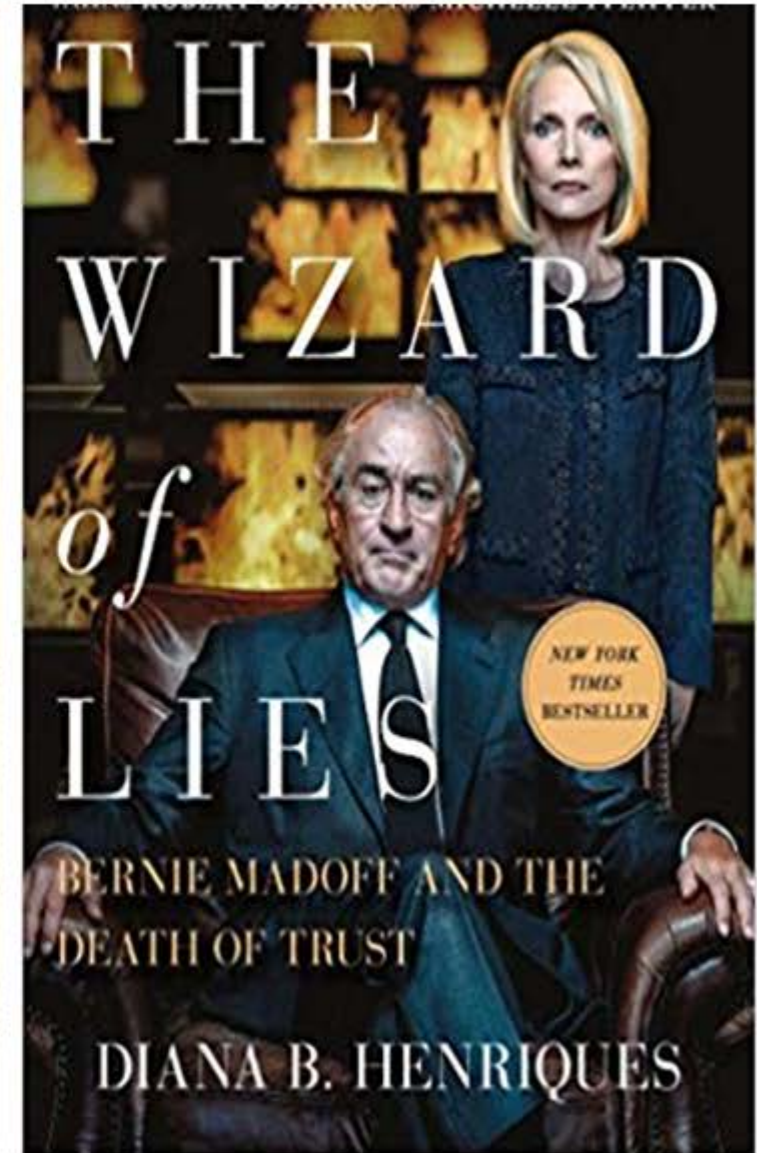
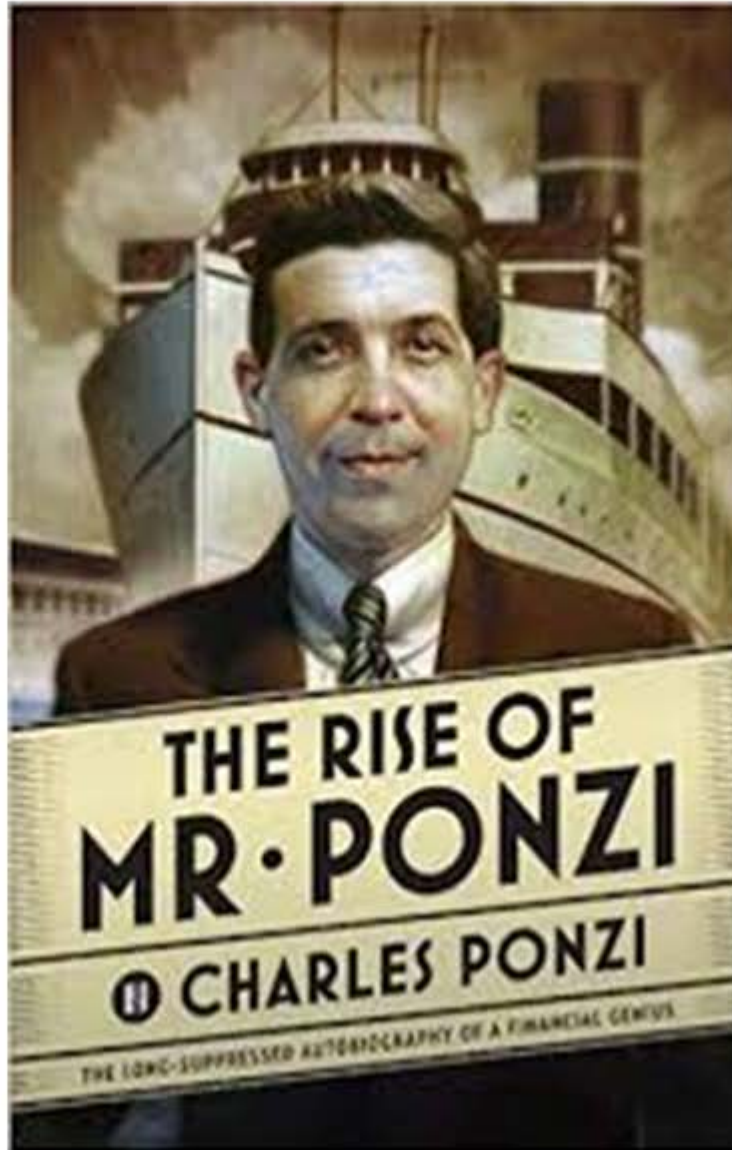


“The four most dangerous words in investing are, ‘*this time is different*’”
– John Templeton

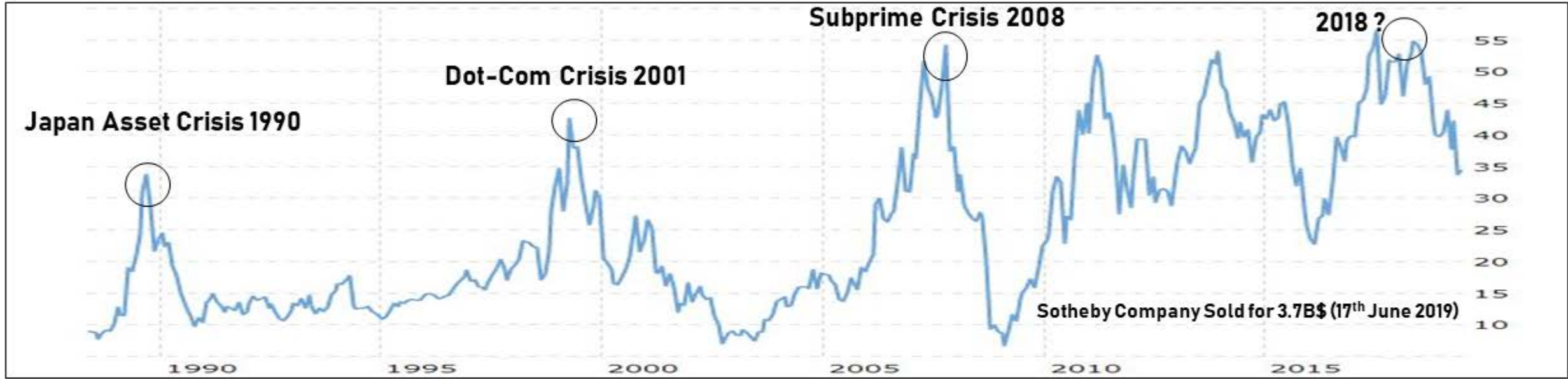


“Bull markets are born on pessimism, grow on scepticism, mature on optimism, and die on euphoria. The time of maximum pessimism is the best time to buy, and the time of maximum optimism is the best time to sell” – John Templeton

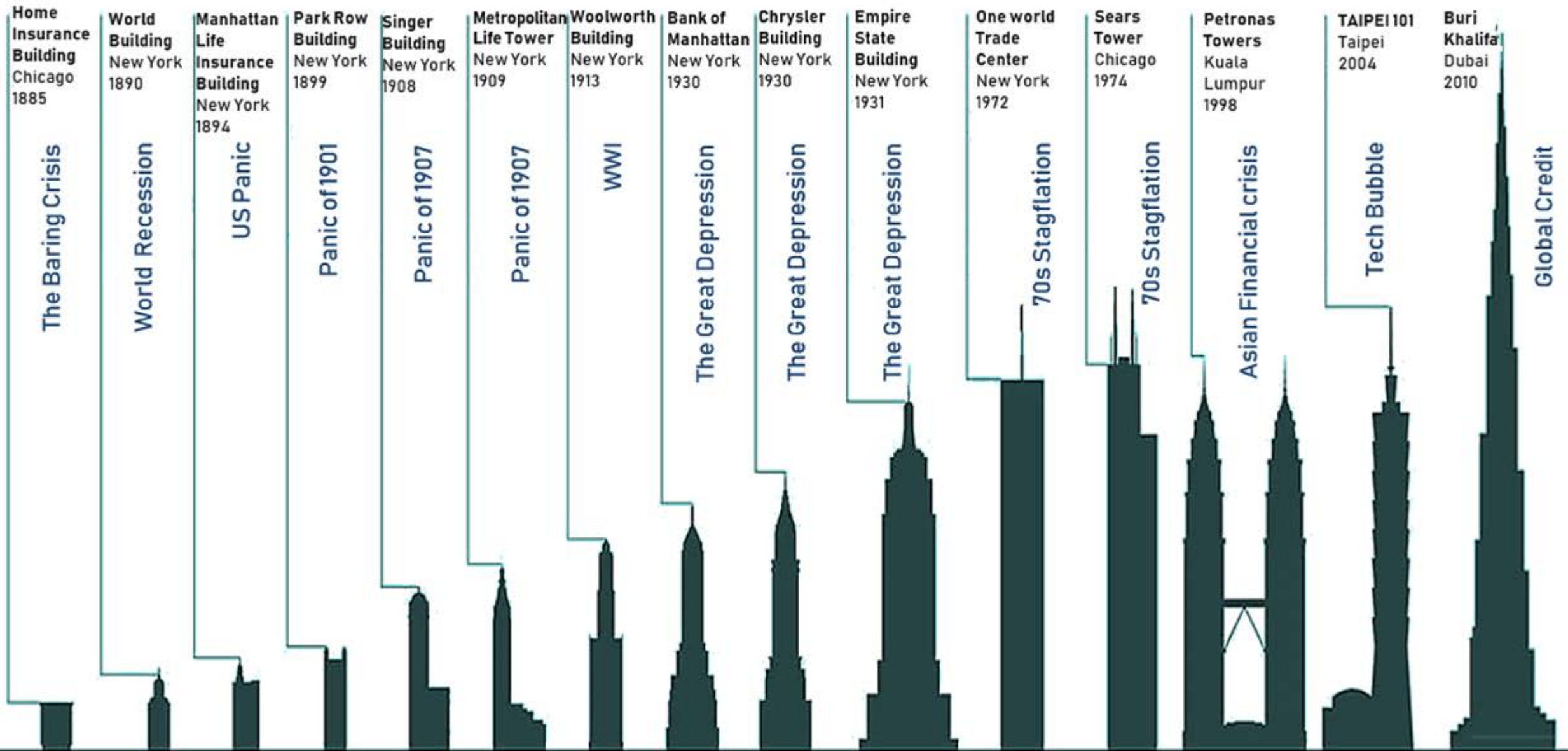
Signs of Conspicuous Consumption and Frauds



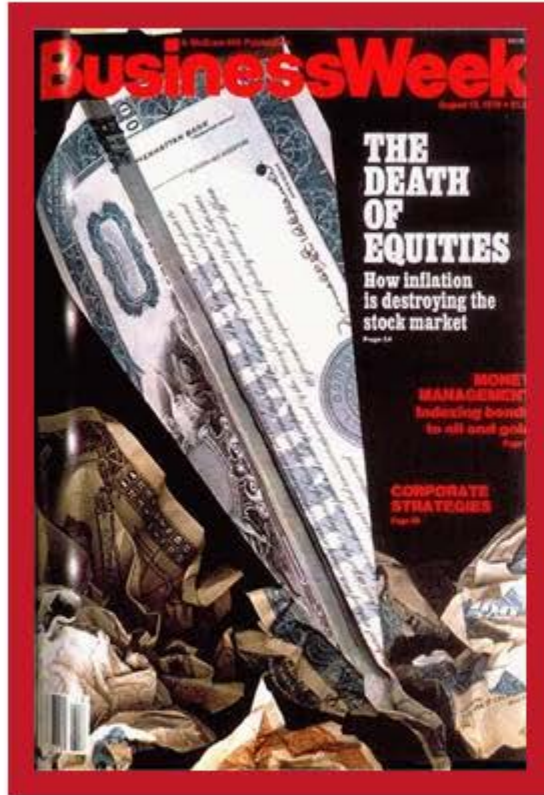
Sotheby's 31 Year Stock Price History



The Skyscraper Curse



Contra Indicators



Asset Class : US Equities

August 1978

1979-1990 : **+14% CAGR**
(Dow Jones)



Asset Class : Treasury Notes

March 1982

1983-2012 : **-6% CAGR**
(in Bond Value)



Asset Class : US Equities

June 2000

2000-2003 : **-39% CAGR**
(NASDAQ)



Asset Class : Real Estate

June 2008

2008-2013 : **-11% CAGR**
(in Real Estate Value)

Signs of Excessiveness and Extremism

TOP SIGNS

1. Large no. of IPOs
2. Rapidly Rising Prices
3. Excess Leverage
4. Availability of Credit
5. Over-optimistic Front Covers of Newspapers & Magazines
6. Very High Trading Volumes
7. Historically High P/E & EV/EBITDA Multiples
8. Art & Luxury Markets Booming
9. Financial Press and Financial TV become Favourites
10. "This Time is Different" Declared
11. Amateur Investors move to Equity Asset Class
12. Innovation Leads to Euphoria
13. Social Proof Leads to Herding

BOTTOM SIGNS

1. No Mergers and Acquisitions
2. No IPOs
3. No new money for Venture Capital
4. Low Price/Sales & EV/EBITDA Multiples
5. Many Companies Trading below Book Value
6. Very Low P/E Multiple
7. Central Banks eased for 6 to 12 Months
8. Recession Declared Officially, News is Stale
9. Previously Favourite Sectors are Hated
10. Credit only available to High Quality Borrowers
11. Investors are Cautious and Out of the Market
12. Negative Front Covers of Newspapers and Magazines
13. Negative and Depressed Consumer Sentiment

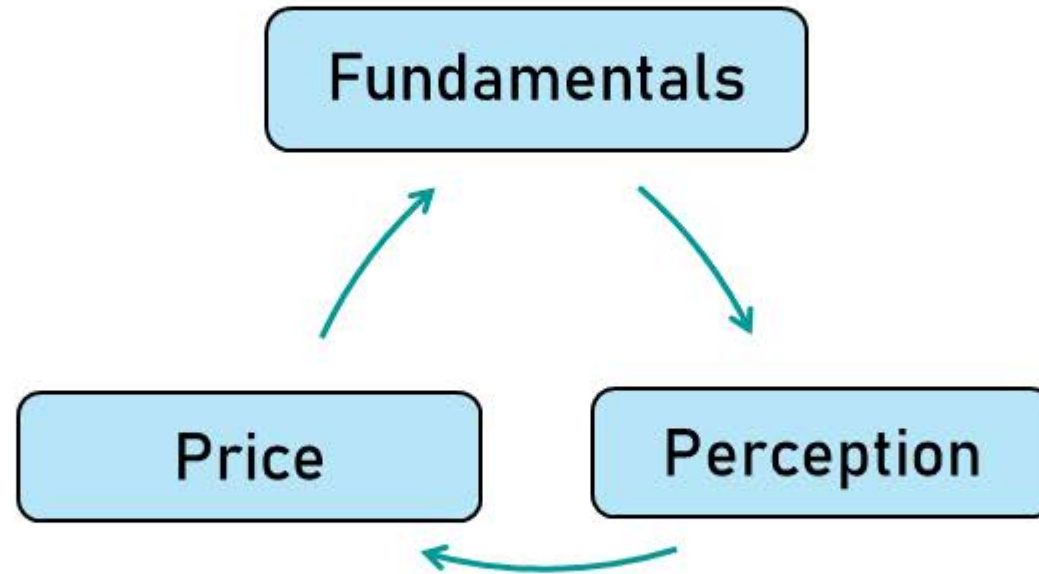
Moral Hazard : Survival of the Reckless at the Taxpayers' Expense



George Soros' Theory of Reflexivity : Reflexivity Creates Virtuous and Vicious Cycles

Equilibrium Theory:

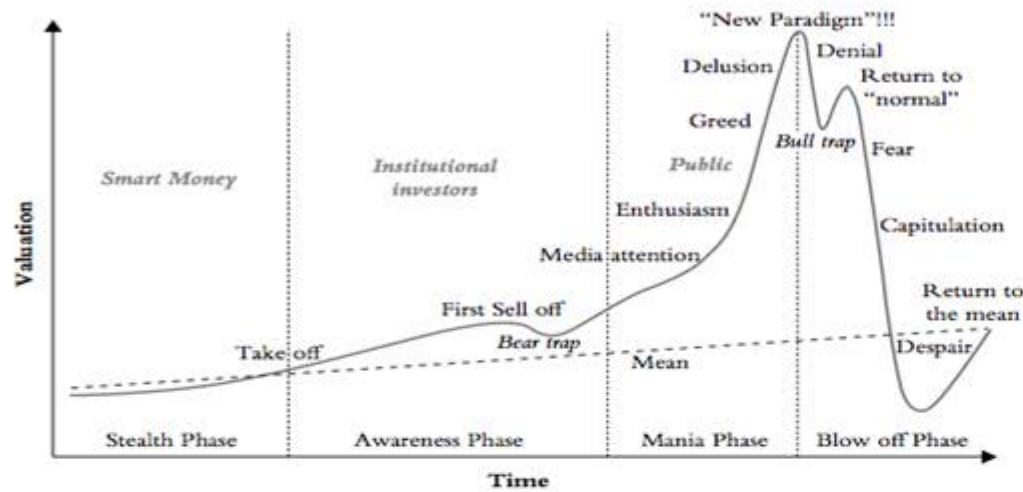
- Information becomes immediately available to everyone
- People are Rational Actors
- Economic Systems go quickly to Equilibrium
- A Theorist is outside the system observed
- Theories do not alter the system described



Reflexivity Theory:

- People act on incomplete information
- People are influenced by their Biases
- Social Systems display Boom and Bust cycles
- Observers are part of the system observed
- Theories are means to change the system described

Minsky and Kindleberger Model



Anatomy of a Typical Bubble

SOURCE: Jean-Paul Rodrigue

THE MINSKY MODEL

Displacement:
Macroeconomic shock creates new profit opportunities

Bank credit feeds the boom

The urge to speculate

Interest rates, velocity of money and prices rise

Overtrading and gearing

Insiders take profits

Financial distress and rush for liquidity

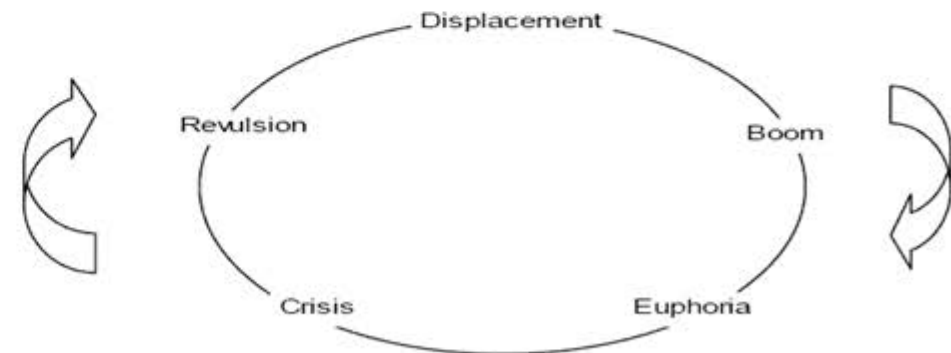
Revulsion, fraud and discredit

Lender of last resort restores order by promising sufficient liquidity

Cycle repeats

Source: Adapted from Charles Kindleberger's *Manias, Panics, and Crashes: A History of Financial Crises: 1978, 1989.*

Anatomy of a bubble: the Kindleberger-Minsky model

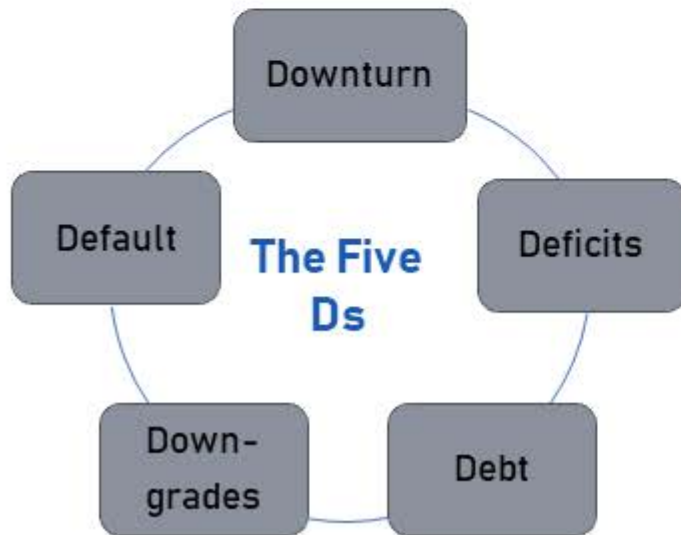
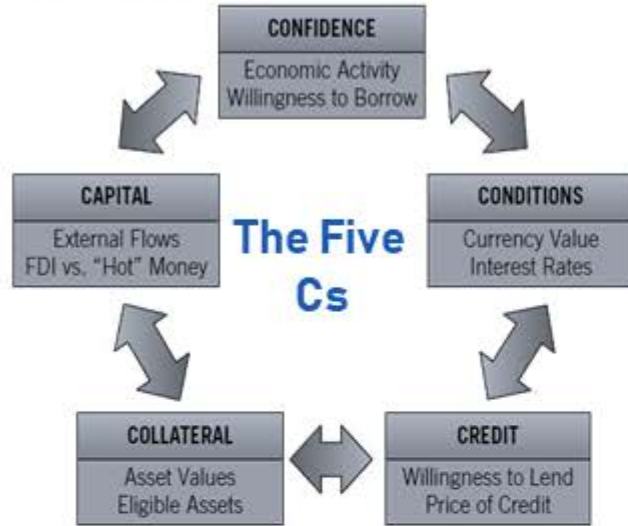


Source: Kindleberger, SG Cross Asset Research

| | Wall Street Crash (1929) | Japanese real estate and stock market crash | Asian Financial Crisis |
|-----------------------|---------------------------------|---|---|
| Displacement | End of post-war boom | Economic expansion phase | Financial deregulation, exchange rate pegs |
| Speculative Asset | US stocks | Nikkei shares and land | e.g. real estate, unsustainable investments |
| Monetary expansion | Stocks bought on margin – calls | From low interest rate policy | Bank lending |
| Lender of last resort | Federal reserve | Bank of Japan | IMF, World Bank, ADB |

Source :Charles Kindleberger's *Manias, Panics and Crashes.*

Five-Lens Framework by Vikram Mansharamani



Source: Boombustology

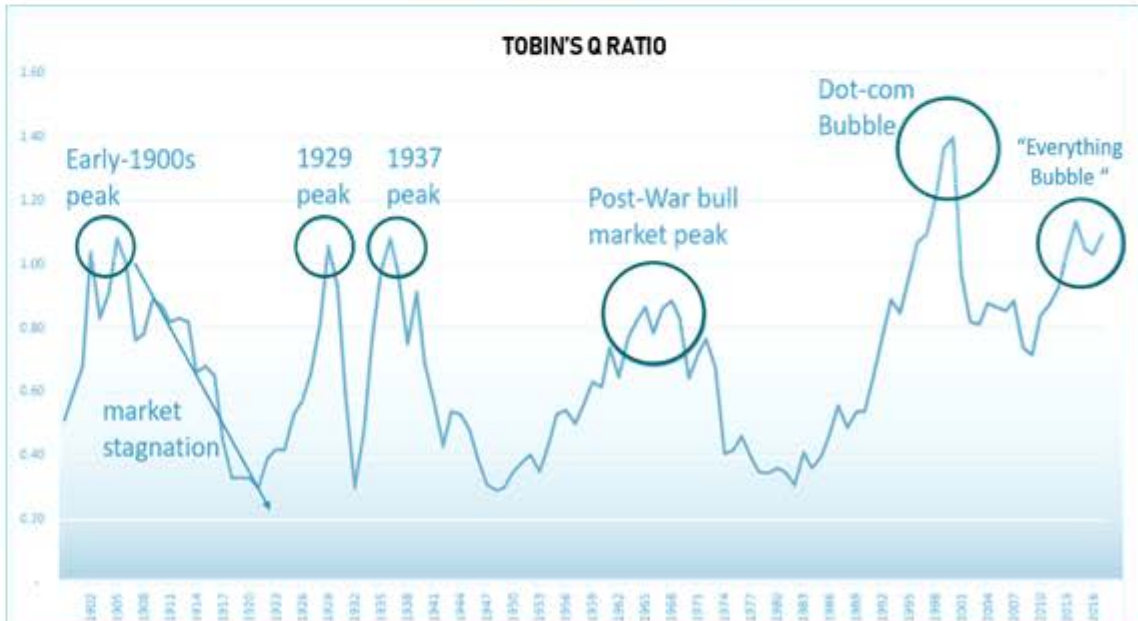
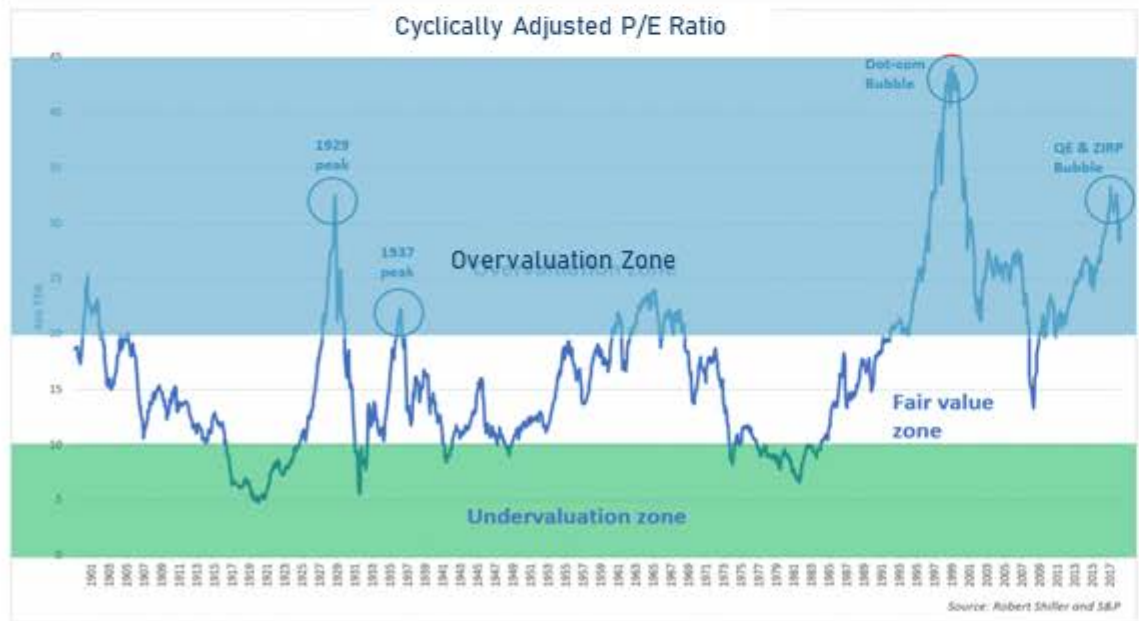
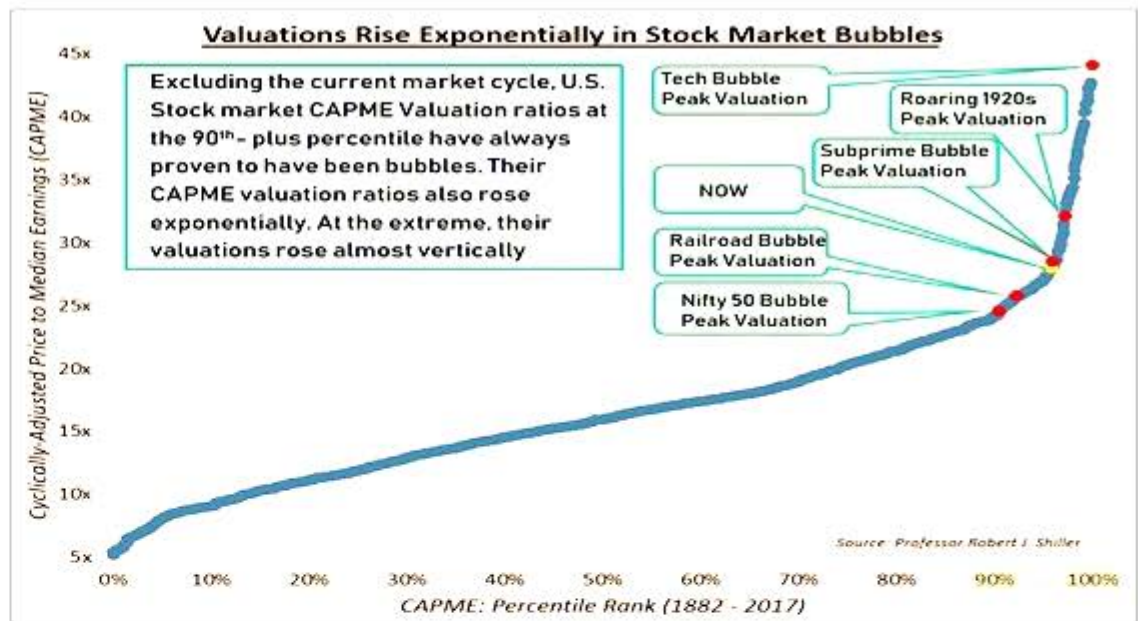
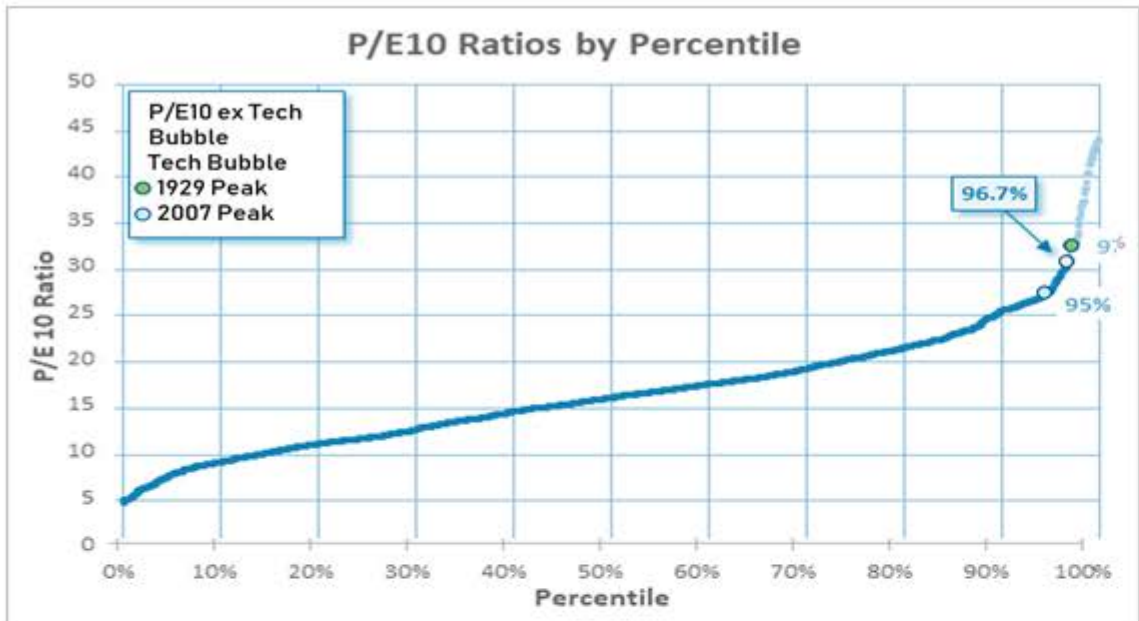
| | Tulip Mania | Great Depression | Japanese Boom Bust | U.S. Housing Bust |
|------------------------------|-------------|------------------|--------------------|-------------------|
| Microeconomics | | | | |
| Credit Criteria | | X | X | X |
| Collateral / Credit | X | X | X | X |
| Hot Money | X | | | |
| Macroeconomics | | | | |
| Financial Innovation | X | X | X | X |
| Cheap / Excessive Money | X | X | X | X |
| Moral Hazard | X | X | X | X |
| Psychology | | | | |
| Conspicuous Consumption | X | X | X | X |
| New-Era Thinking | X | X | X | X |
| Politics | | | | |
| Supply / Demand Manipulation | X | | X | X |
| Regulatory Shift | X | X | X | X |
| Biology | | | | |
| Amateur Investors | X | X | X | X |
| Silent Leadership | X | X | X | X |
| Popular Media | | | X | X |

Valuation at the Extremities

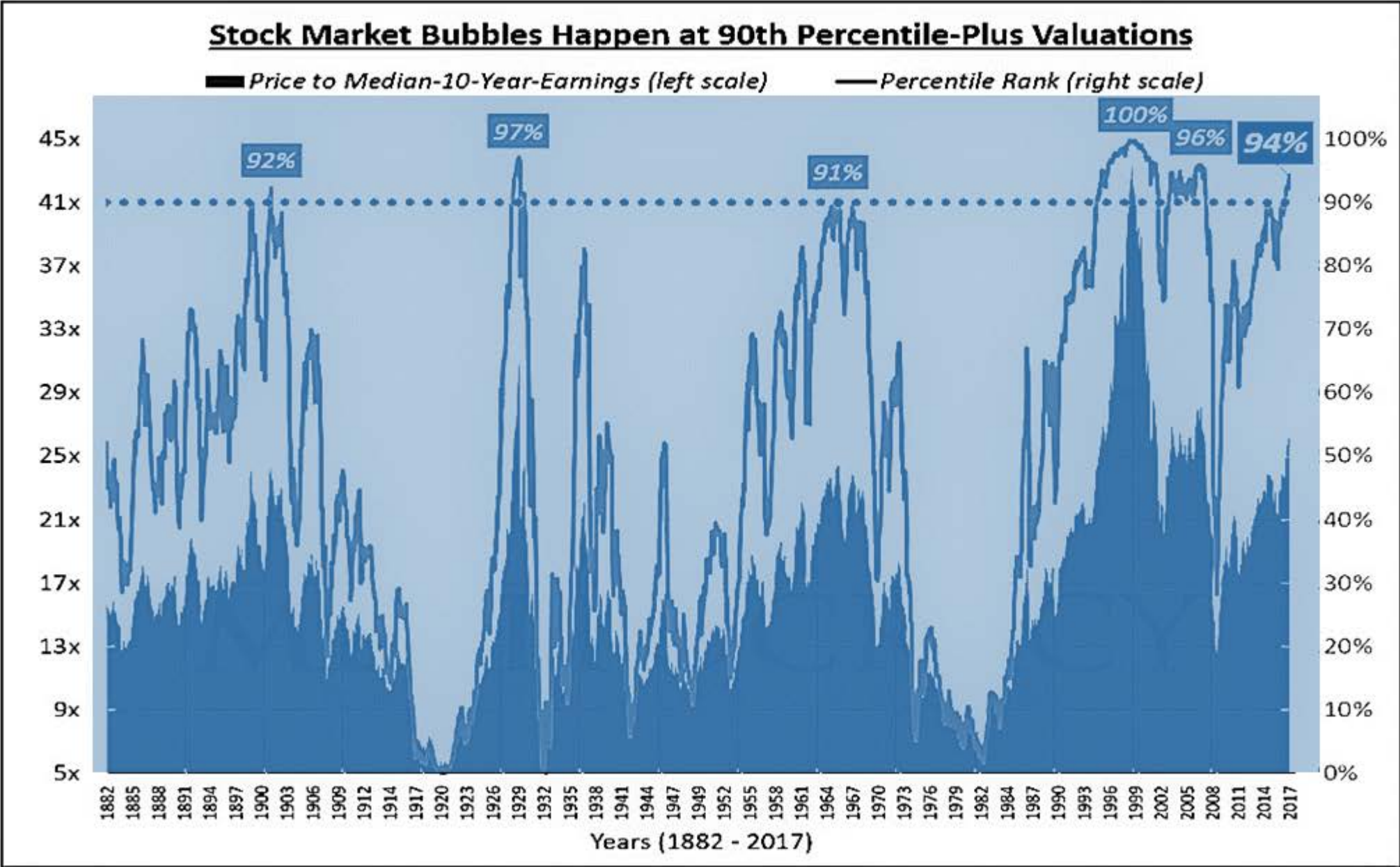


“The Fed, in effect, has become a serial bubble blower” - **Stephen Roach**

Easy Money and Congenial Interest Rates are Necessary Conditions for Bubbles

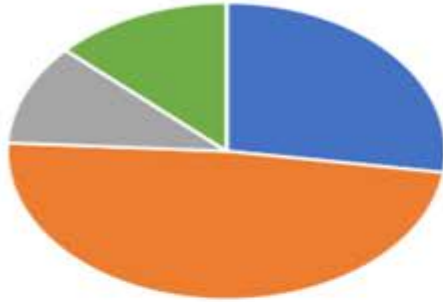


The Stock Market Pendulum Always Swings the Other Way



Sources of Stock Price Appreciation

November 1907 to November 1916



August 1921 to September 1929



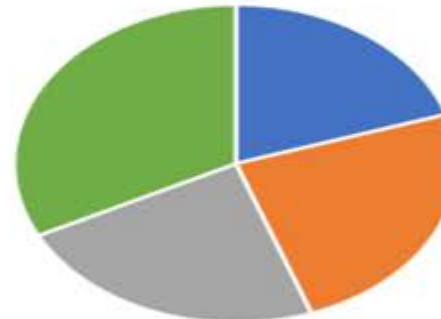
June 1932 to May 1946



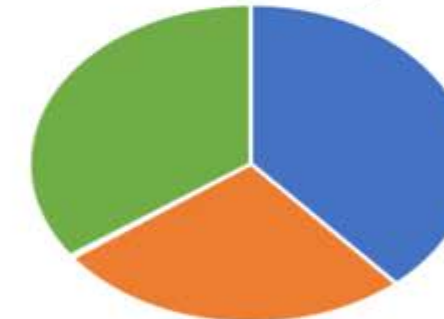
May 1947 to December 1961



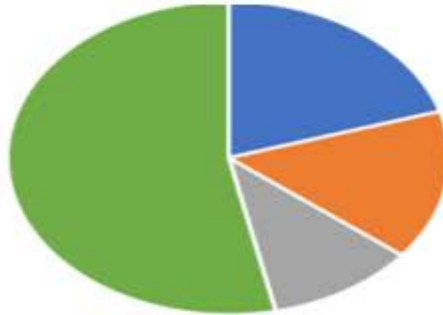
June 1962 to December 1968



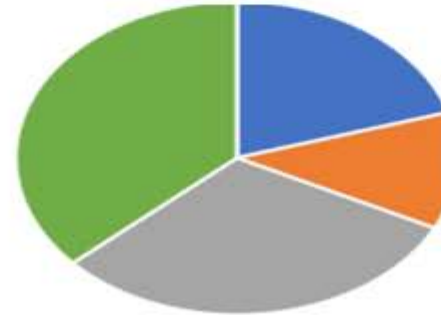
December 1974 to August 1987



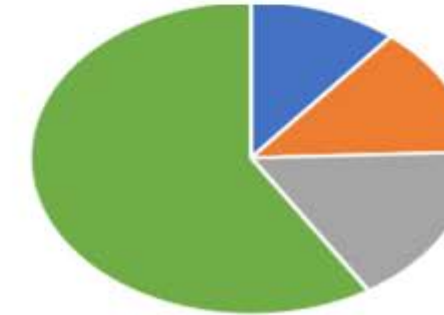
December 1987 to August 2000



February 2003 to October 2007




March 2009 to December 2018



 Inflation

 Dividend Yield

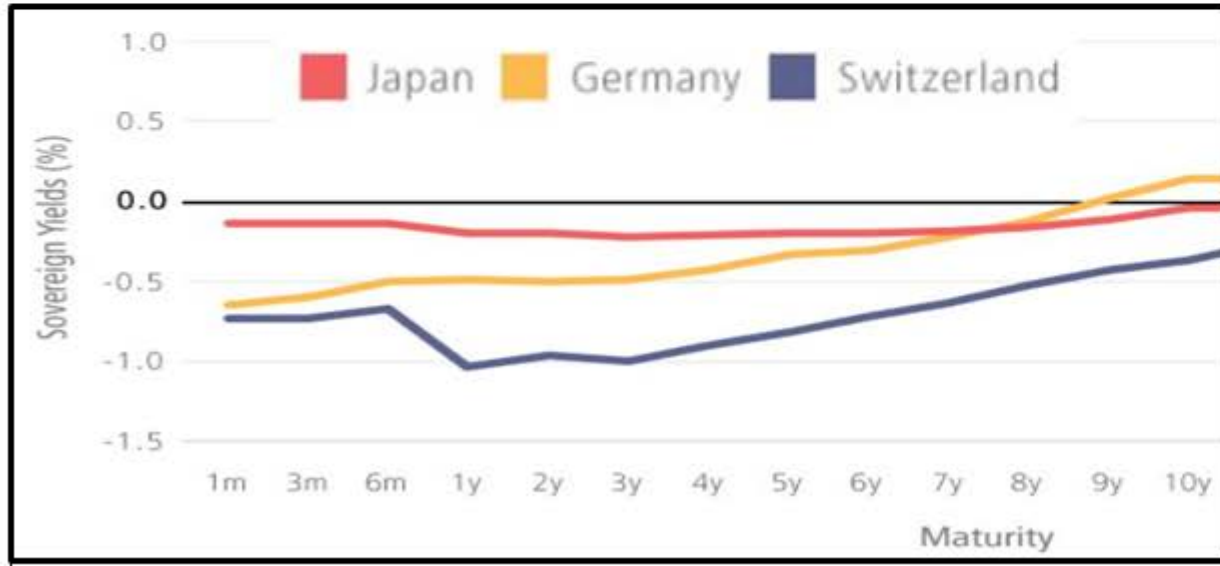
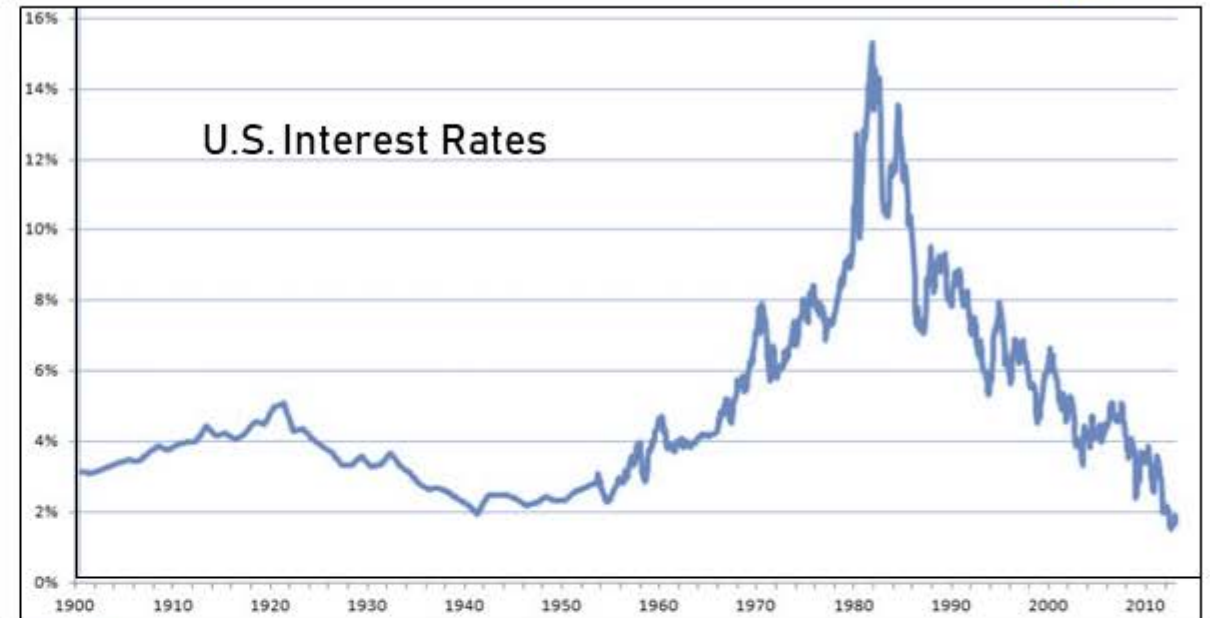
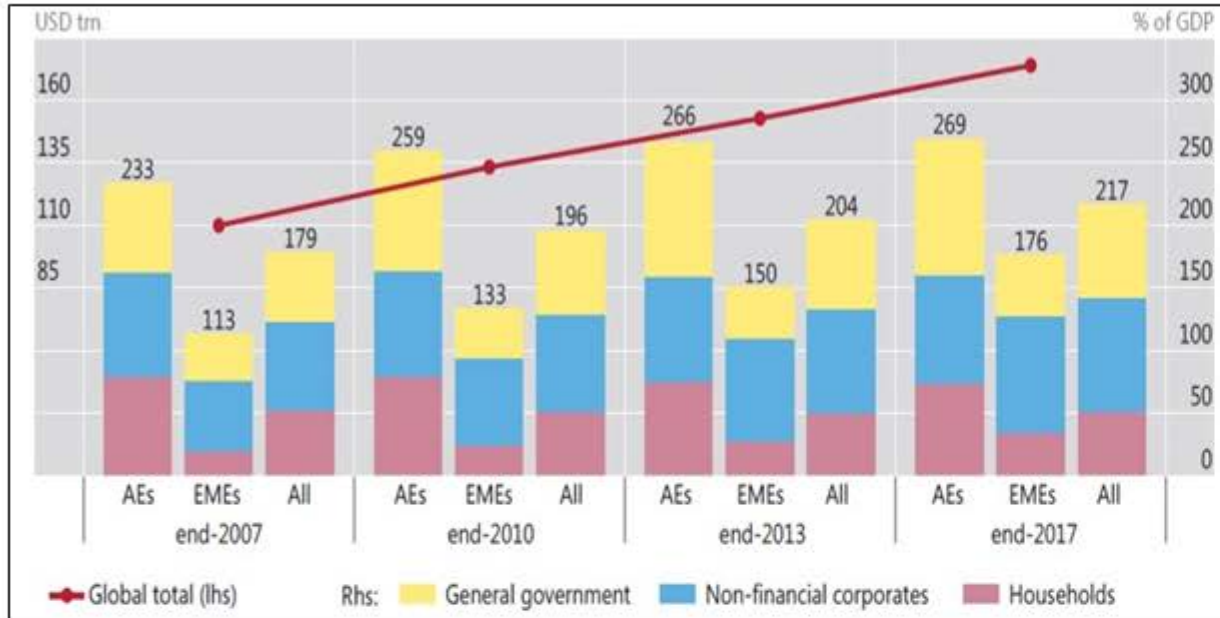
 Earnings Growth

 Valuation Changes

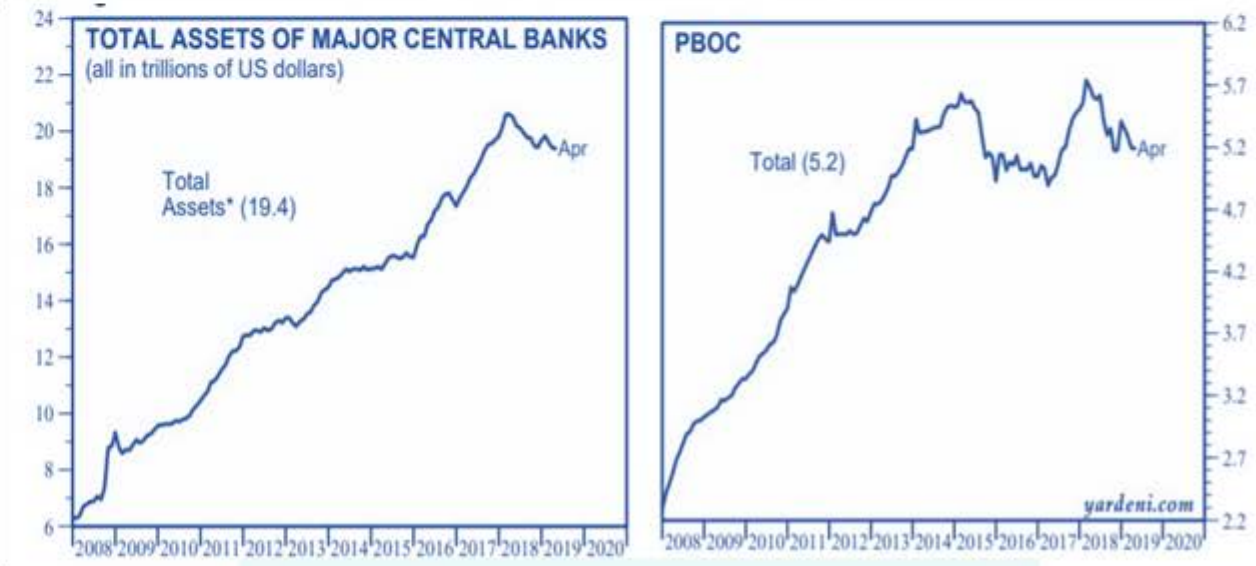
Measuring the Current Temperature



Elevated Debt Levels and Rock Bottom Interest Rates



Source: Bloomberg, PIMCO



Assets of central banks ballooned after 2008

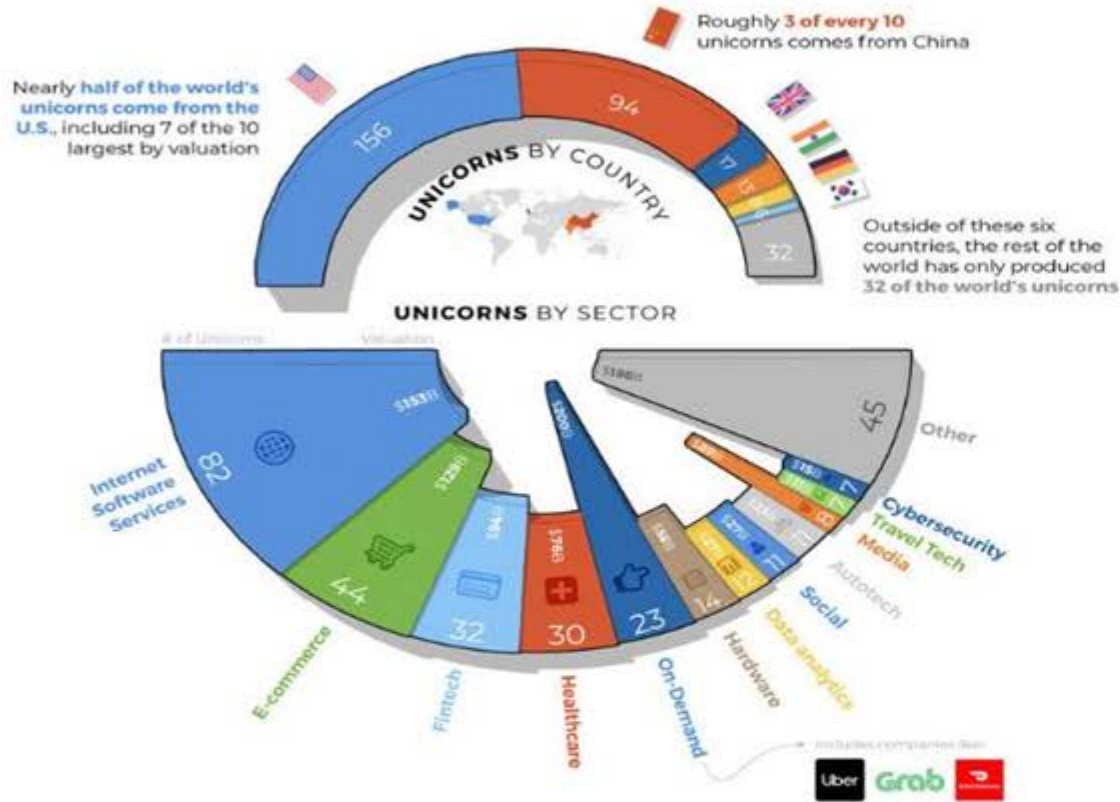
Negative Bond Yields and Currency Interplays : Supply or Price but not Both?



Source: Bloomberg. Seekingalpha.com

| The Negative Bond Yield Matrix | | | | | | | | | | | | | |
|--------------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Country | 6Mo | 1Yr | 2Yr | 3Yr | 4Yr | 5Yr | 6Yr | 7yr | 8Yr | 9Yr | 10Yr | 15Yr | 30yr |
| Switzerland | -0.75 | -0.64 | -0.89 | -0.91 | -0.89 | -0.87 | -0.79 | -0.76 | -0.69 | -0.63 | -0.52 | -0.29 | -0.01 |
| Germany | -0.58 | -0.68 | -0.74 | -0.76 | -0.74 | -0.68 | -0.64 | -0.58 | -0.46 | -0.4 | -0.31 | -0.1 | 0.27 |
| Netherlands | -0.59 | | -0.72 | -0.7 | -0.64 | -0.61 | -0.5 | -0.42 | -0.32 | -0.25 | -0.15 | -0.01 | 0.3 |
| Japan | -0.13 | -0.17 | -0.2 | -0.22 | -0.23 | -0.22 | -0.22 | -0.22 | -0.21 | -0.16 | -0.12 | 0.07 | 0.36 |
| Denmark | -0.66 | | -0.7 | -0.7 | | -0.68 | | | -0.45 | | -0.28 | | |
| Austria | | -0.54 | -0.65 | -0.63 | -0.57 | -0.47 | -0.39 | -0.28 | -0.22 | -0.14 | -0.03 | 0.31 | 0.7 |
| Finland | | | -0.66 | -0.63 | -0.61 | -0.54 | -0.45 | | -0.19 | | -0.01 | | 0.56 |
| Sweden | -0.4 | | -0.62 | | | -0.55 | | -0.26 | | | -0.01 | 0.18 | |
| France | -0.59 | -0.6 | -0.68 | -0.66 | -0.62 | -0.53 | -0.41 | -0.31 | -0.21 | -0.1 | 0.02 | 0.38 | 1.15 |
| Belgium | -0.57 | -0.58 | -0.6 | -0.66 | -0.6 | -0.54 | -0.42 | -0.25 | -0.14 | -0.06 | 0.09 | 0.4 | |
| Slovakia | | -0.33 | | | | -0.24 | -0.5 | | 0 | 0.18 | 0.26 | | |
| Ireland | -0.41 | -0.55 | -0.45 | | -0.46 | -0.39 | -0.24 | -0.14 | 0.45 | | 0.22 | 0.58 | 1.16 |
| Slovenia | | -0.48 | -0.3 | | | -0.31 | | -0.14 | | | 0.25 | | |
| Spain | -0.41 | -0.39 | -0.4 | -0.34 | -0.27 | -0.21 | -0.06 | 0.08 | 0.2 | 0.29 | 0.43 | 0.8 | 1.47 |
| Portugal | -0.38 | -0.34 | -0.37 | -0.25 | -0.17 | -0.14 | 0.05 | 0.16 | 0.28 | 0.44 | 0.55 | 0.95 | 1.5 |
| Malta | -0.23 | -0.2 | | -0.1 | | 0.02 | | | | | 0.74 | | |
| Bulgaria | | -0.13 | | -0.01 | | 0.05 | | 0.37 | | | 0.58 | | |
| Italy | -0.16 | -0.02 | 0.22 | 0.71 | 1.03 | 1.31 | 1.53 | 1.61 | 1.77 | 1.82 | 2.12 | 2.45 | 3.17 |
| USA | 2.19 | 2.03 | 1.81 | 1.75 | | 1.78 | | 1.89 | | | 2.03 | | 2.52 |

Crazy Rich and Profitless Unicorns






Last year, 84% of all IPOs were of Profitless Cos.

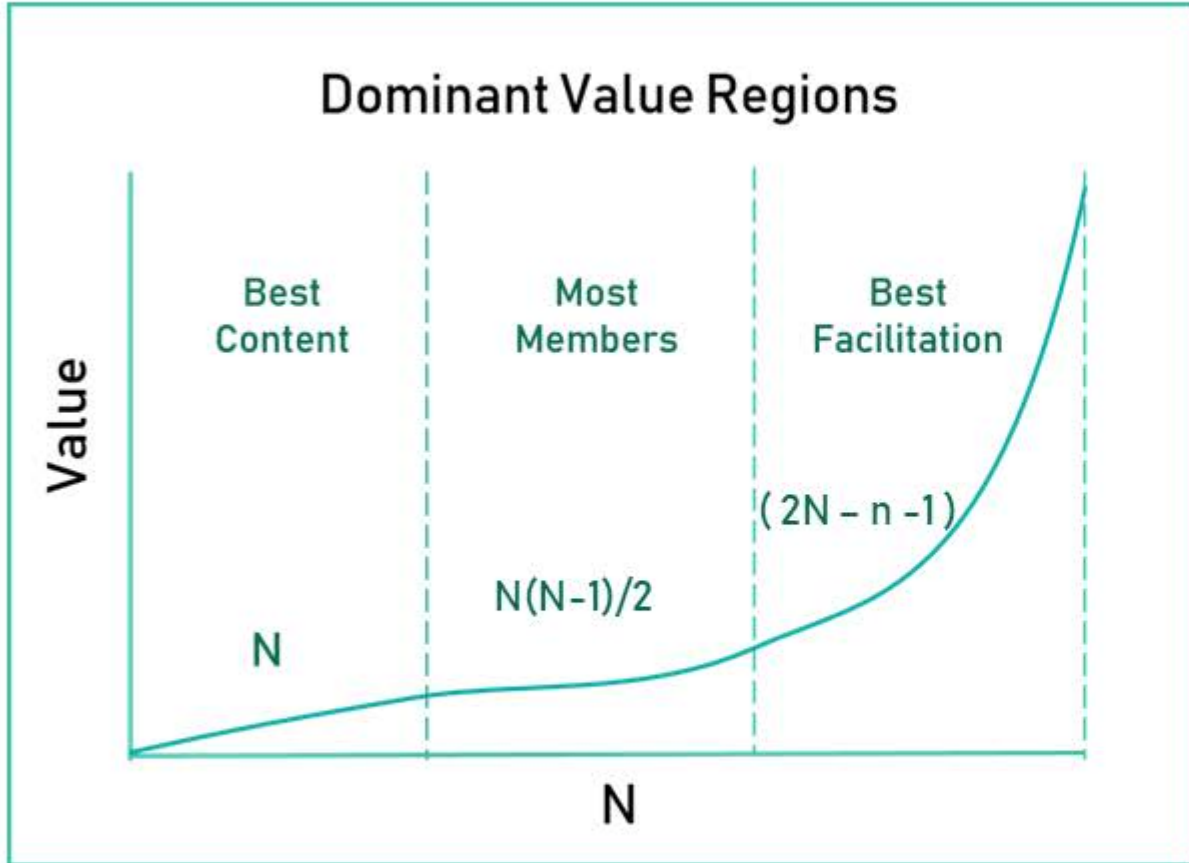


| Company | Current Valuation (U.S. \$B) | Last Revenue (U.S. \$M) | Last Profit (U.S. \$M) |
|-----------|------------------------------|-------------------------|------------------------|
| Uber | 75 | 11,300 | -3000 |
| Lyft | 18 | 2,100 | -911 |
| Pinterest | 15 | 775 | -74 |
| Zoom | 27 | 330 | 8 |
| Slack | 17 | 400 | -140 |
| Chewy | 5 | 3,500 | -268 |
| WeWork | 47 | 1,820 | -1900 |
| Netflix | 150 | 16,614 | 1211 |
| Tesla | 37 | 21,416 | -1004 |

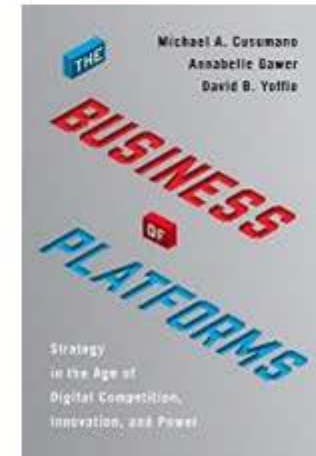
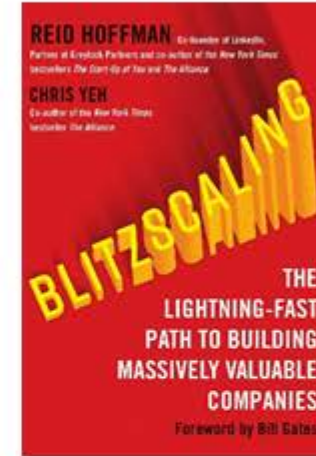
Network Business Dynamics & Exponents of Scale

| Network Scaling Laws | | | |
|---|---|---|---|
| | SARNOFF BROADCAST | METCALFE NETWORK | REED COMMUNITY |
| Diagram |  |  |  |
| No. of Possible Connections (based on an 'N' of 100) | Total Value of Network = 100 | $N(N-1)/2$ No. of possible connections : 4950 | $2^N - n - 1$ No. of possible connections = 1,267,650,600,228,229,401,496,703,205,376 |
| Value of Network | Linear value of Services that are aimed at Individual Users Proportional to the no. of viewers (N) | "Square" Value from facilitating Transactions Proportional to square of no. of connected users (N^2) | Exponential Value from Facilitating Group Affiliations Value of group-forming network is proportional to no. and ease with which groups form within it (subgroups grow faster than sheer no. of P2P Participants) ($2^N - n - 1$) |
| USP | Best Content | Most Members | Best Facilitation |
| Examples | Broadcast : Yahoo WireService, On Sale | Peer to Peer : Instagram, E-mail | Group Forming : Slack , Whatsapp Groups |
| Connecting 2 Networks | $N + M$ | $N^2 + M^2 + 2NM$ | $2^N \times 2^M$ |

Network Economics & Laws of Disruption : Value Migration & Source of Value Creation



The value of network is dependent on scale, functionality, ways of collaborating, ease of use, and context



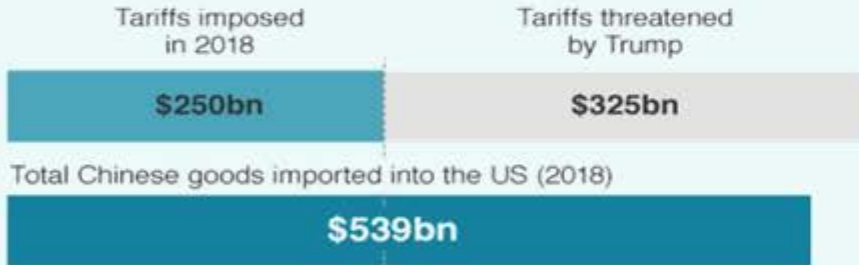
China ?

“What the public narrative is and what they have been doing behind the scenes are two completely different stories”
 – Kyle Bass

Escalating Trade War with United States and weak domestic banks with high NPA ratio

- Asset Liability Mismatch
- Shadow Banking System
- Capital Control
- Kyle Bass (NPA is 20% rather than reported 1.7%)

US tariffs on China

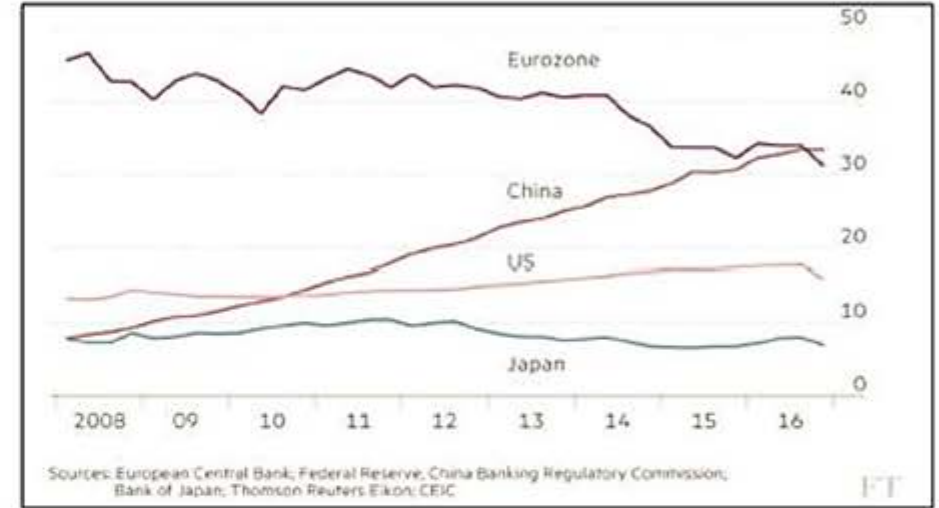


Chinese tariffs on US

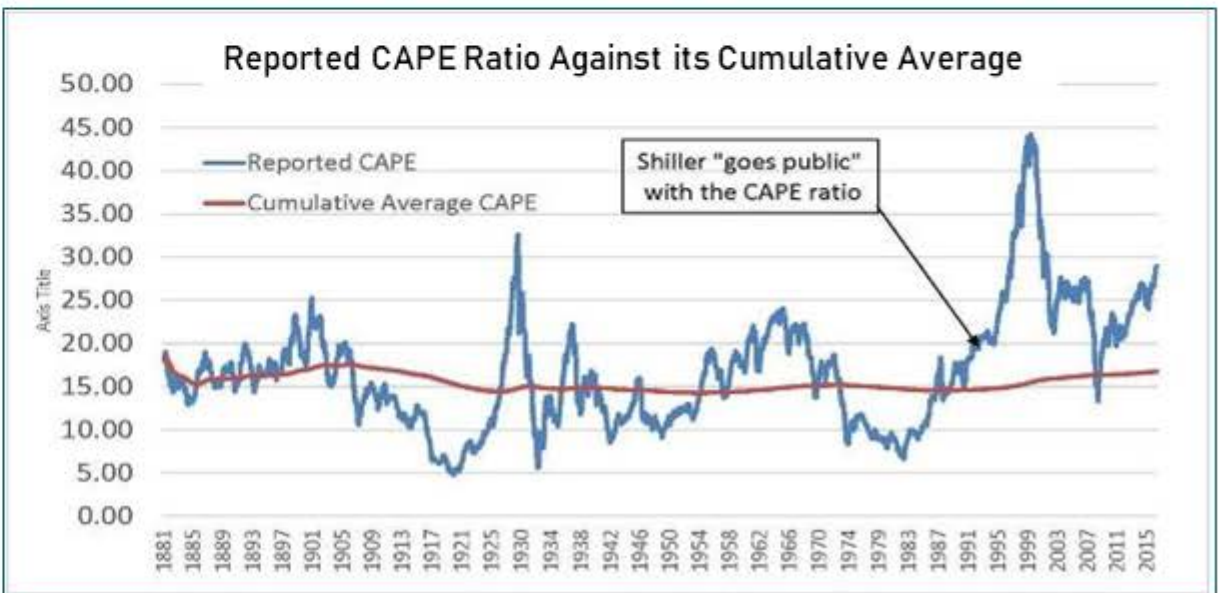
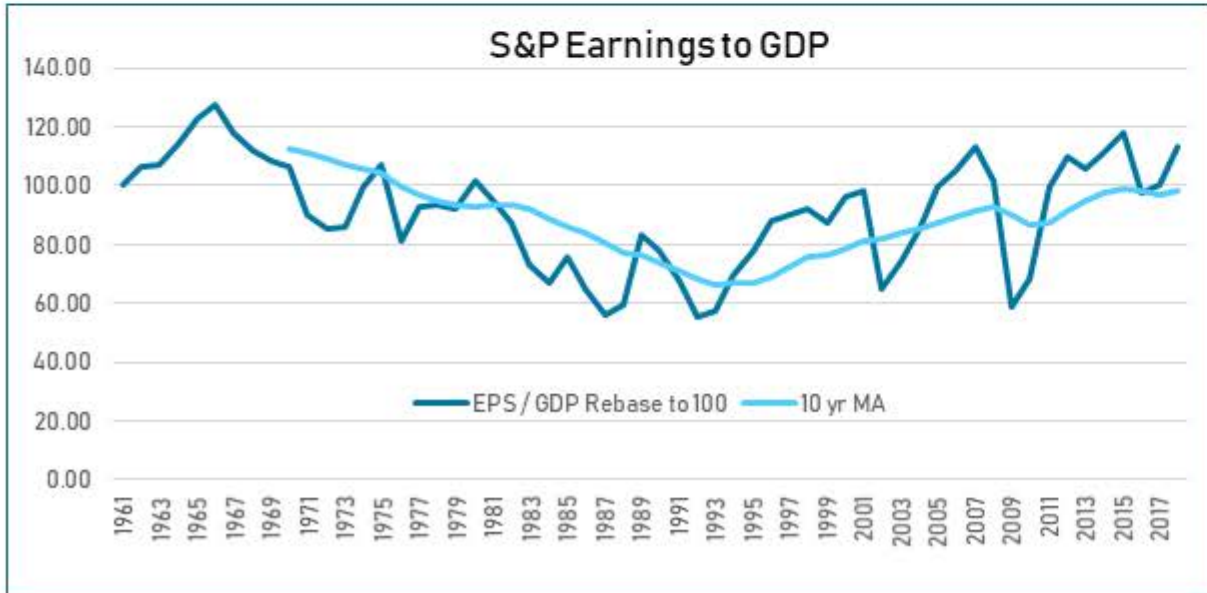
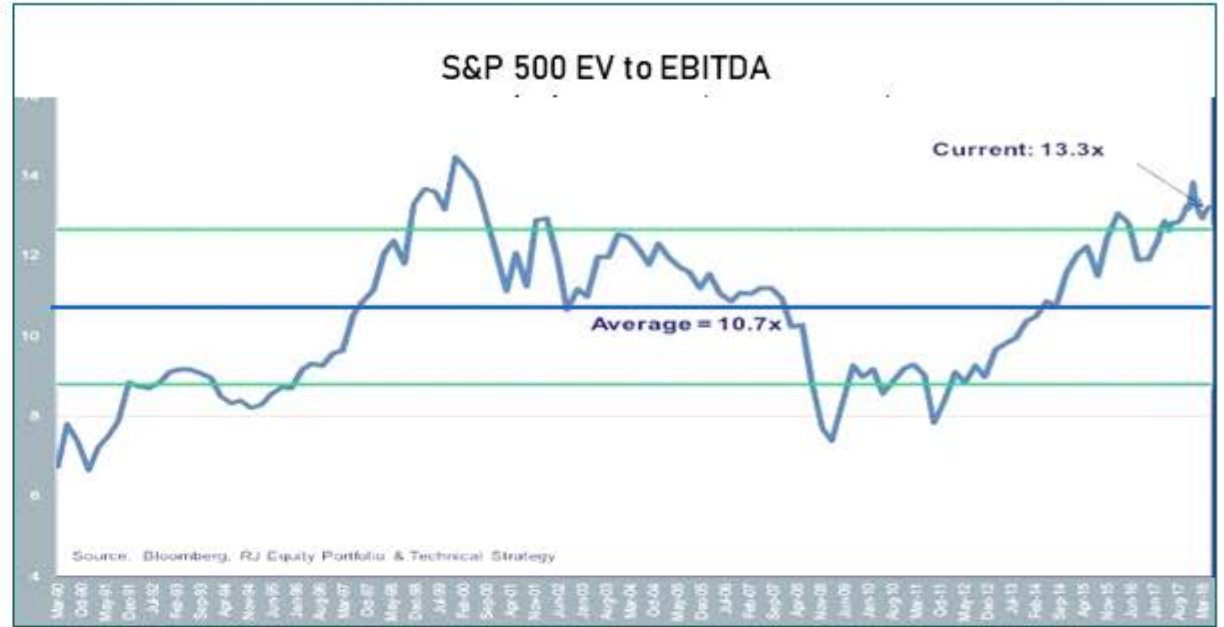
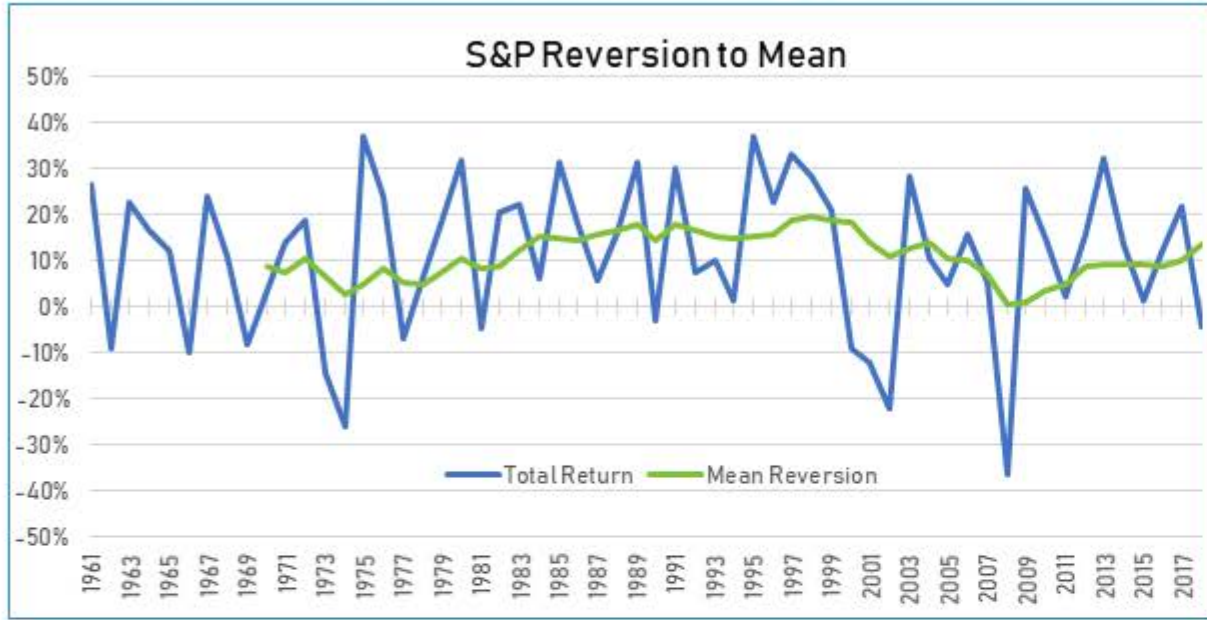


Source: Bloomberg, CEIC, MISM

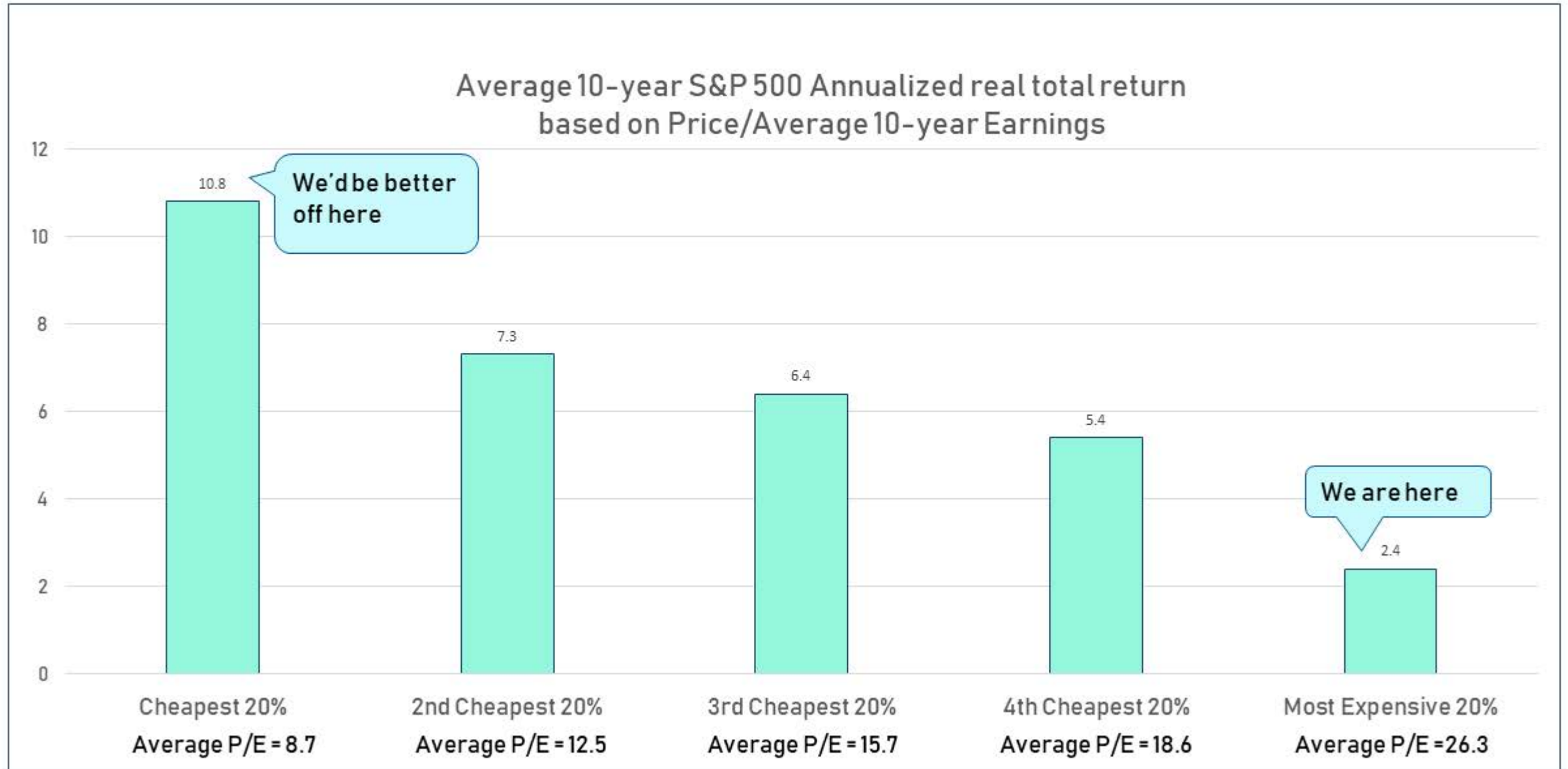
China is Building 370 Skyscrapers



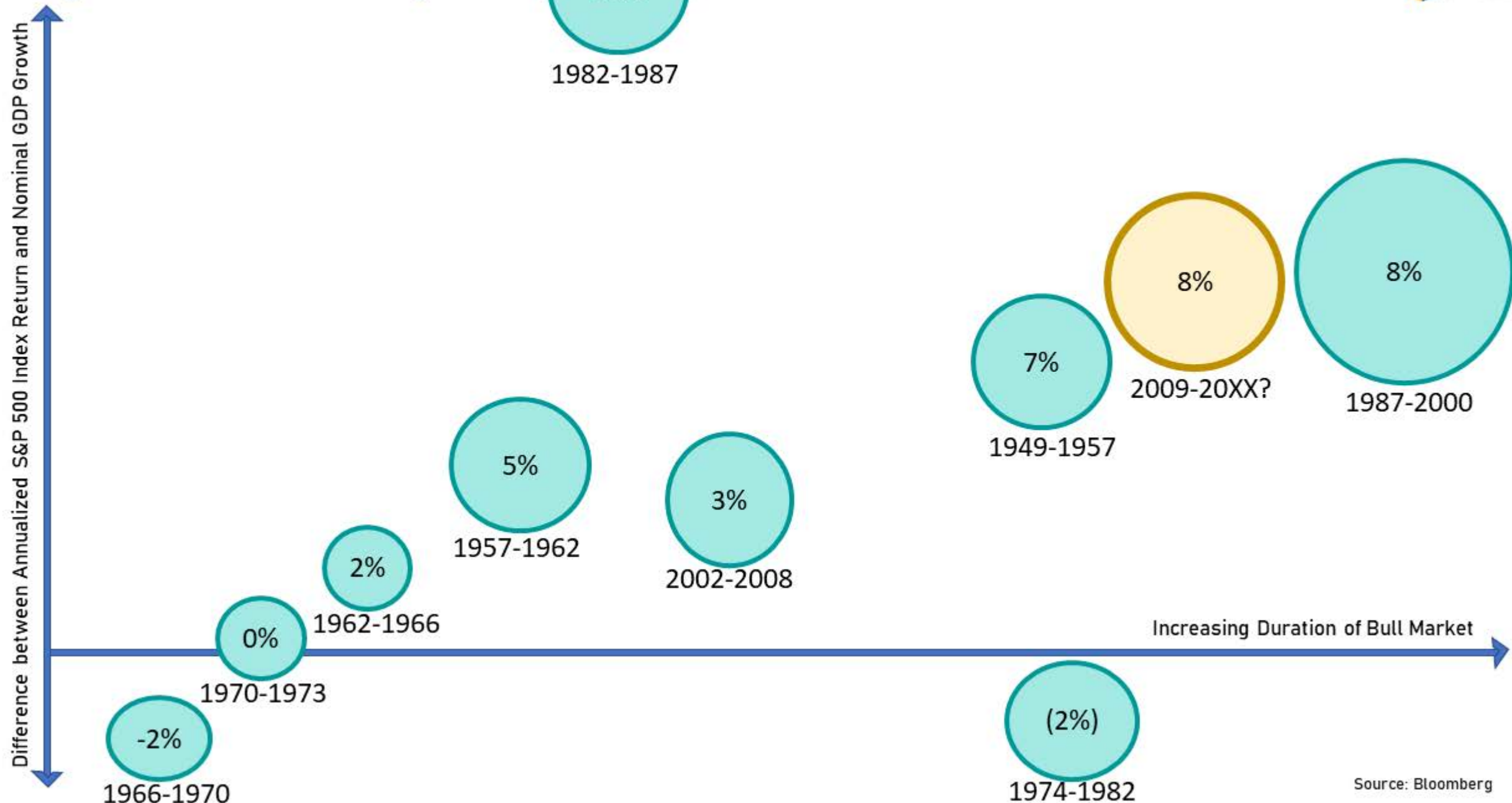
Reversion to Mean : Nature, Business and Psychology are all Cyclical




Reversion to Mean : Nature, Business and Psychology are all Cyclical, so are Valuations



Largest Bull Run in History?



Lessons From Past Bubbles

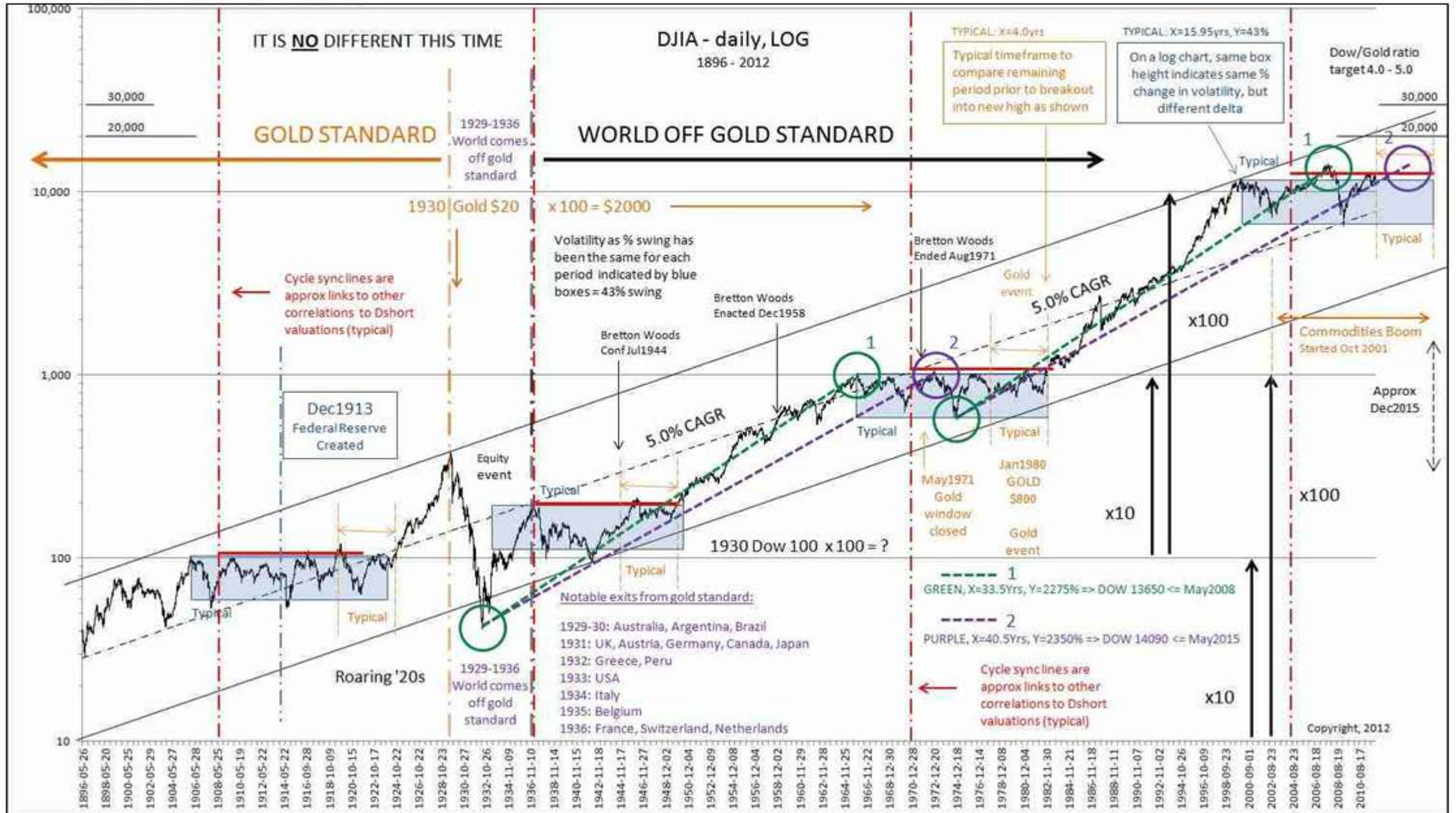
A wide-angle photograph of a modern architectural complex. In the foreground, a large, shallow, rectangular water feature with a light green tiled bottom is visible. To the right, a prominent red, geometric wireframe sculpture stands on a dark grey platform. The background features a large, multi-story building with a facade of light-colored stone or concrete panels. The sky is clear and blue. The overall scene is bright and well-lit, suggesting a sunny day.

“Every age has its peculiar folly : Some scheme, project, or fantasy into which it plunges, spurred on by the love of gain, the necessity of excitement, or the force of imitation”
- Charles Mackay

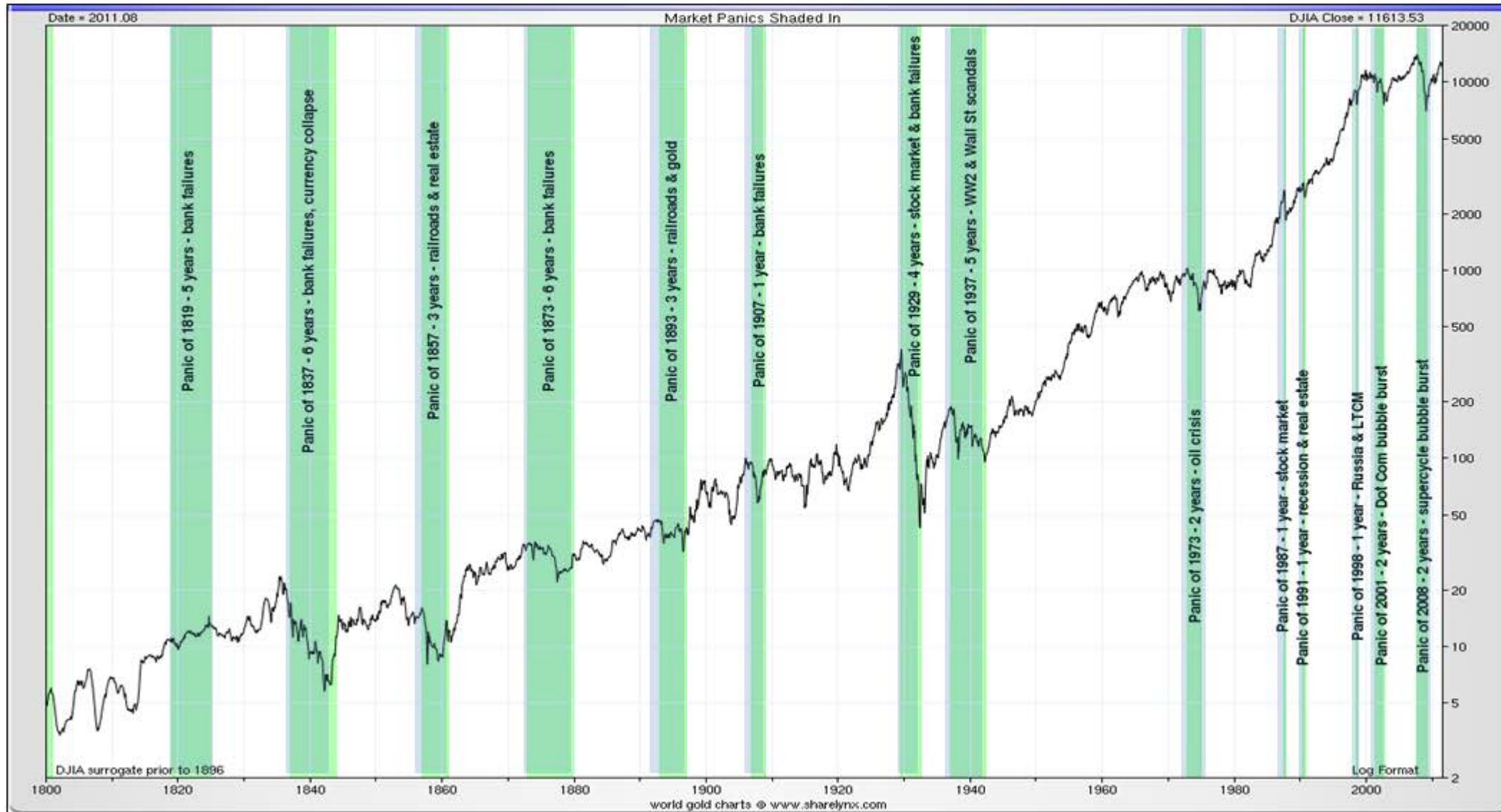
Bubbles and Crashes Occur Across Timelines, Geographies and Asset Classes

| Early Modern States | The Age of Steam & Industrialization | Globalization | After Bretton Woods | Contemporary Inflections |
|---|--|--|----------------------------------|--|
| 1557 State Bankruptcy (Spain and France) | 1836 Market Crash in UK | 1890 'Barings' Crash in UK | 1958 Market Panic in France | 1987 Market Crash in US, UK, Australia |
| 1607 Spain Bankrupt | 1837 Market Crash in France and US | 1893 Land Boom Crash in Australia | 1961 Property Crash in Australia | 1990 Market Panic in Japan |
| 1614 Bankruptcy (Augsburg) | 1847 Market Crash in UK | 1893 'Silver Crash' in US | 1962 Crash in Canada | 1994 Market Crash in Mexico |
| 1637 End of Netherlands Tulip Bubble | 1848 Market Crash in Germany | 1907 Market Crash in France and Italy | 1963 Crash in Italy | 1997 'South East Asian Crisis' - Panic in Thailand, Indonesia, Malaysia, S Korea, Russia, Brazil |
| 1720 Mississippi Crisis in France | 1857 Lombard Street Banking Crisis in UK | 1907 '1907 Panic' in US | 1964 Market Panic in UK | 2000 Dot-Com and Telecommunications Crash |
| 1720 South Sea Bubble crisis in England | 1857 Market Crash in France, US and Germany | 1921 Market Crash in UK and US | 1967 'Transistor' Crash in US | 2008 Global Financial Crisis |
| 1763 Amsterdam Crisis in Netherlands | 1864 Market Crash in France | 1922 Swedish Bank Crisis | 1968 Crash in France | |
| 1772 Collapse of Ayr Bank in Scotland precipitates British Banking Crisis | 1866 Over end, Gurney Banking Crisis-UK (owes £4.1m , National Budget is £67.8m) | 1927 'Black Friday' in Germany and Brazil | 1971 MinSec Panic in Australia | |
| 1793 Market Crash in UK | 1866 Market Crash in Italy | 1929 Wall Street 'Great Crash' in US | 1973 Wall St Crash in US | |
| 1799 Market Crash in Hamburg | 1869 Black Friday in US | 1931 Market Crash in UK, Germany, Austria, Japan | 1979 Market Crisis in US | |
| 1810 Market Crash in UK | 1873 Market Crash in Germany and Austria, Panic of 1873 in US | | | |
| 1811 Austria bankrupt | 1882 Market Crash in France | | | |
| 1816 Market Crash in UK | | | | |
| 1818 Market Crash in US | | | | |
| 1825 'Latin American' Crash in UK | | | | |
| 1827 Market Crash in France | | | | |

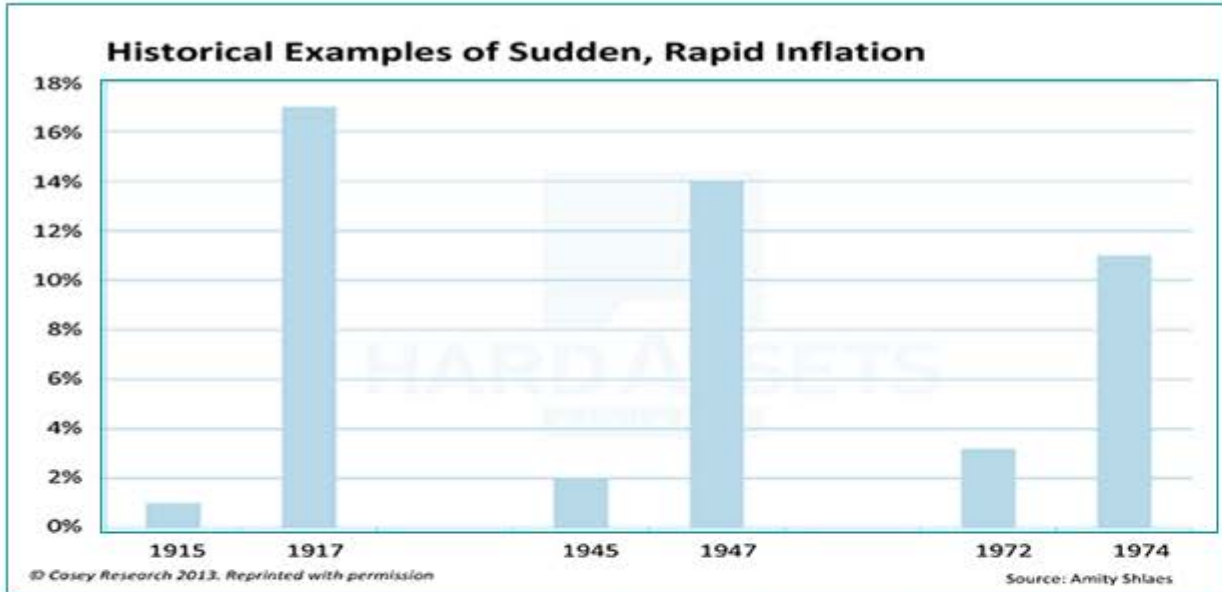
Monetary Printing Press : Gold Standard is (Not) the Solution



Duration of Boom and Bust : Decreasing Duration and Increasing Frequency



Inflation can Rise Suddenly



BROOKINGS

| Sector | Early | Mid | Late | Recession |
|------------------------|-------|-----|------|-----------|
| Financials | + | | | - |
| Consumer Discretionary | ++ | | -- | |
| Technology | + | + | -- | -- |
| Industrials | ++ | + | | -- |
| Materials | | -- | ++ | - |
| Consumer Staples | - | | + | ++ |
| Healthcare | -- | | ++ | ++ |
| Energy | -- | | ++ | |
| Telecom | -- | | | ++ |
| Utilities | -- | - | + | ++ |

Source : Fidelity

ECONOMIC CYCLE

RECOVERY PHASE

- Stimulatory economic policies
- Confidence picks up
- Inflation falling

MARKETS :

- Short rates low or falling
- Bond yields bottoming
- Stock market rising
- Commodities rising
- Property prices bottoming

EARLY UPSWING PHASE

- Increasing confidence
- Healthy economic growth
- Inflation remains low

MARKETS :

- Short rates at neutral
- Bond stable
- Stock market strong
- Commodities strong
- Property prices picking up

LATE UPSWING PHASE

- Boom mentality
- Inflation gradually picks up
- Policy becomes restrictive

MARKETS :

- Short rates rising
- Bond yields rise
- Stock market topping out
- Commodities rising strongly
- Property prices rising strongly

ECONOMY SLOWS/ENTERS RECESSION

- Confidence suddenly drops
- Inflation continues to rise
- Inventory correction begins

MARKETS :

- Short rates peaks
- Bond yields tops out
- Stock market starts falling
- Commodities starts falling
- Property prices tops out

RECESSION

- Confidence weak
- Inflation peaks
- Production falling

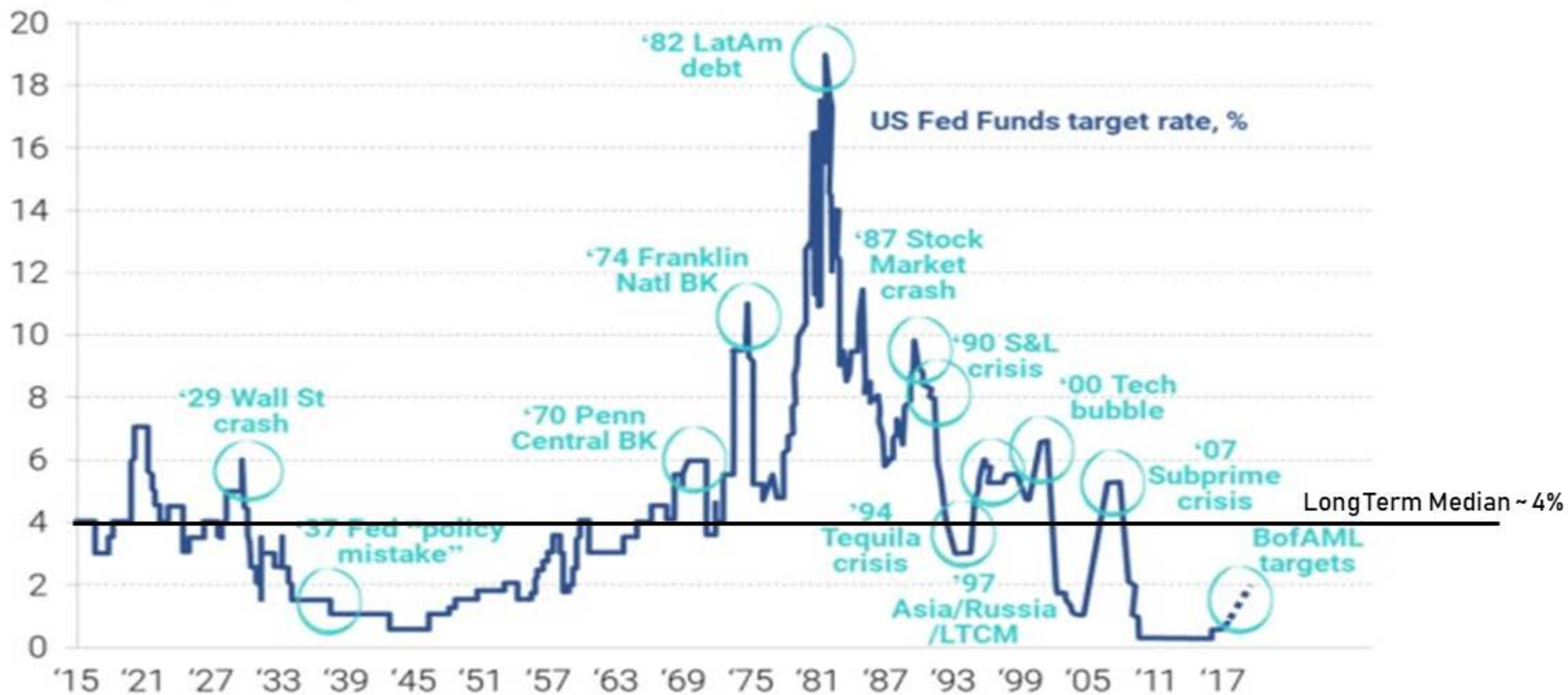
MARKETS :

- Short rates drops
- Bond yields drops
- Stock market bottoming
- Commodities weak
- Property prices weak

ACG ADVISORS

Fed Tightening Usually Ends with a Financial “Event”

Since 2010 Fed rate is increasing and is currently at 2.5%, the long term median comes around 4%



Source: Palisade Research, BofA Merrill Lynch Global Investment Strategy, Global Financial Data

Process to Avoid Group Thinking

When nine people agree on something, it's the tenth man's responsibility to disagree. no matter how improbable the idea



Source: Movie 'World War Z' -

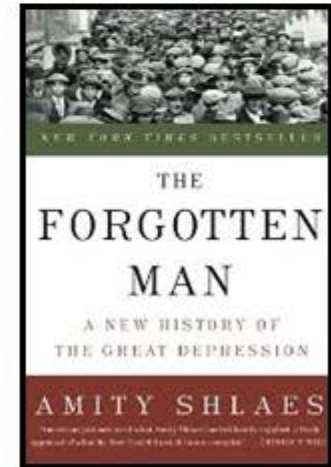
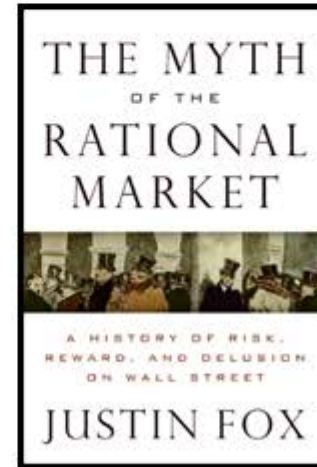
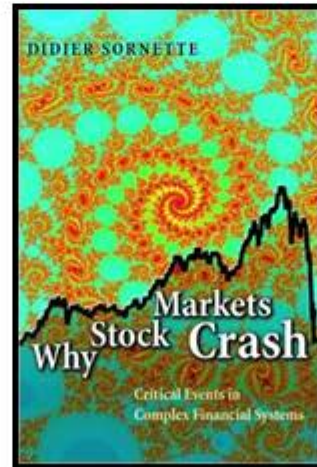
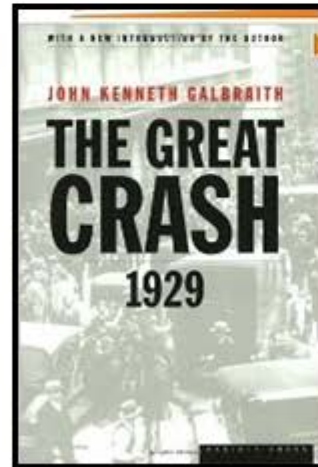
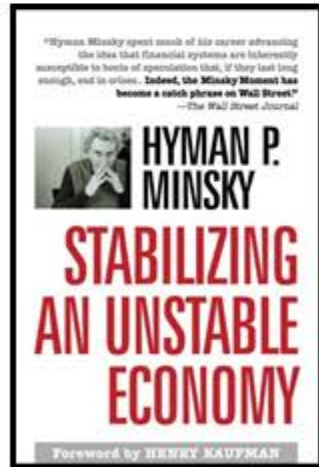
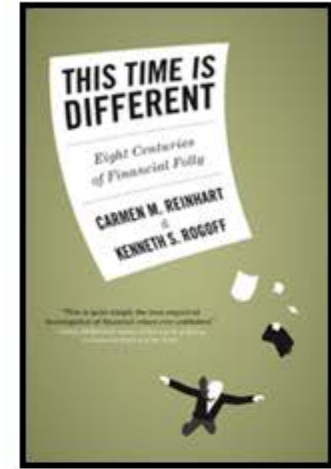
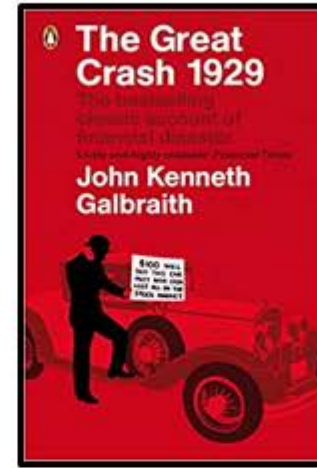
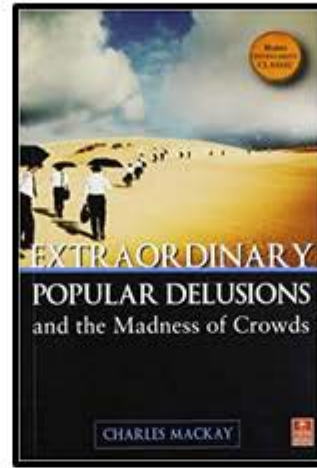
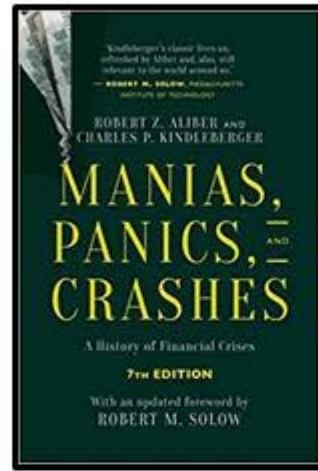
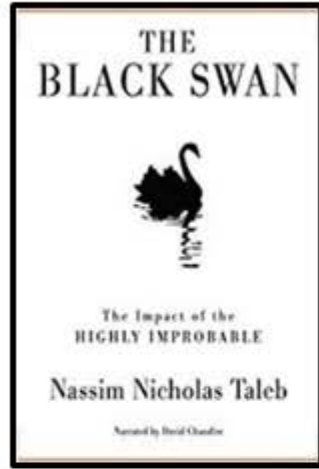
https://www.primevideo.com/?ref=dvm_pds_gen_in_as_s_gt_34819|c_270302514869_m_Sgsepm7X-dc_s_

Additional Reading Resources

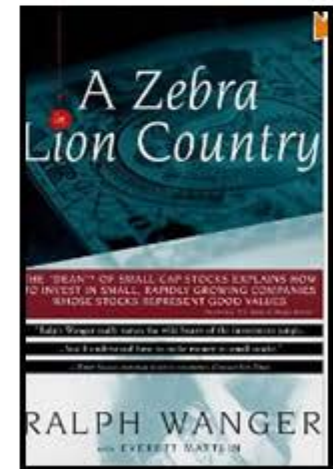
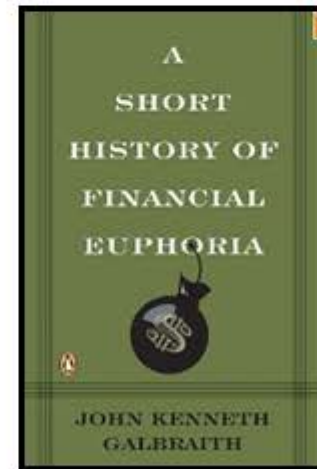
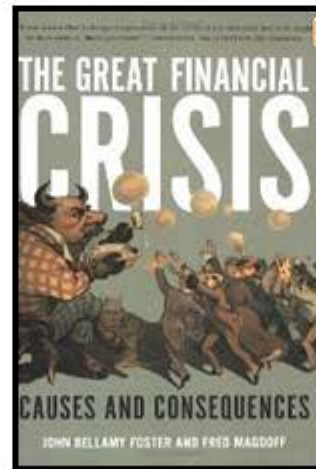
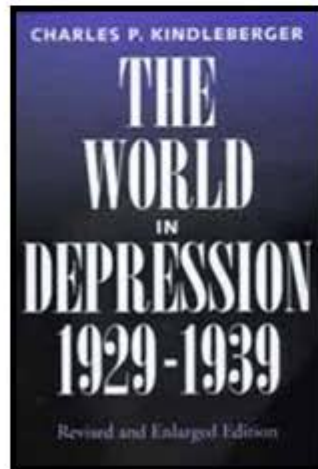
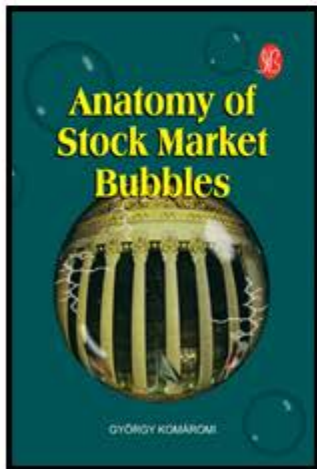
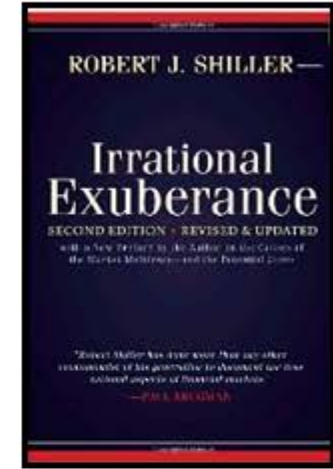
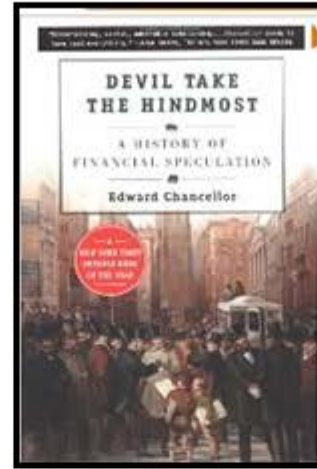
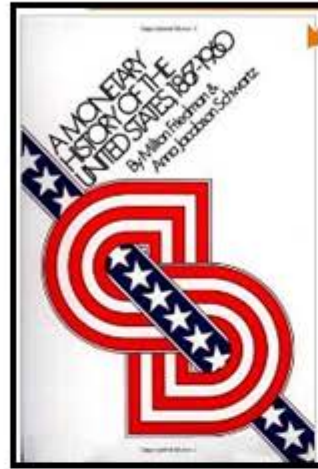
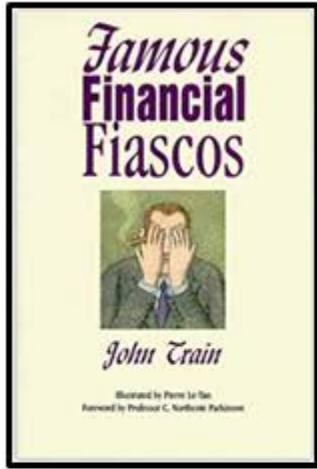
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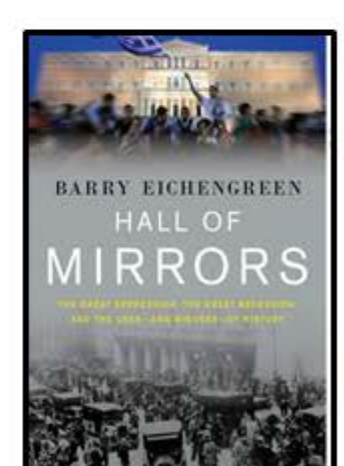
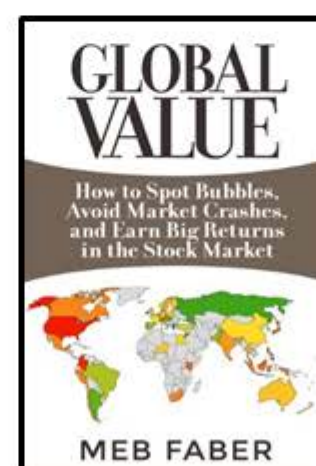
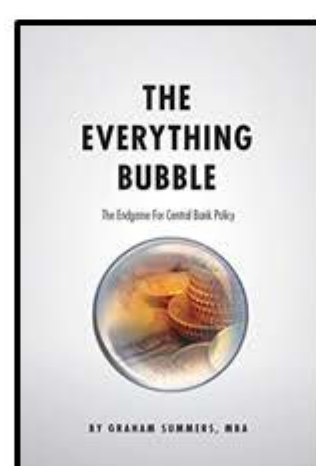
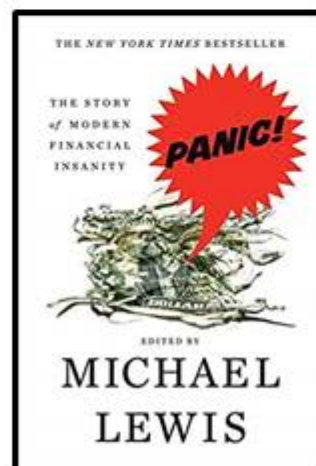
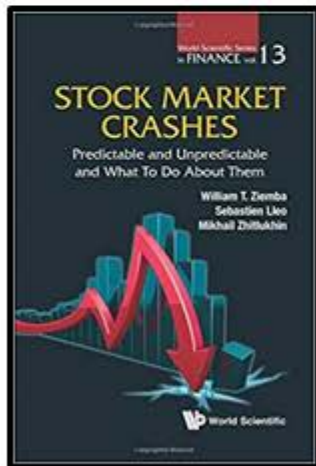
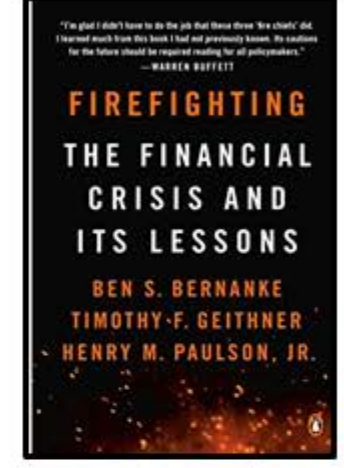
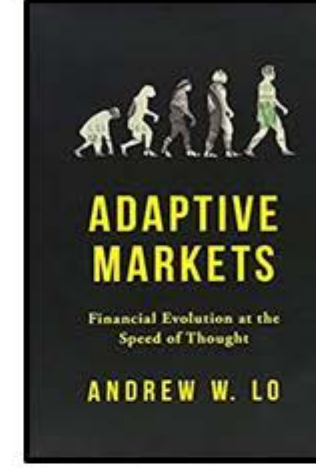
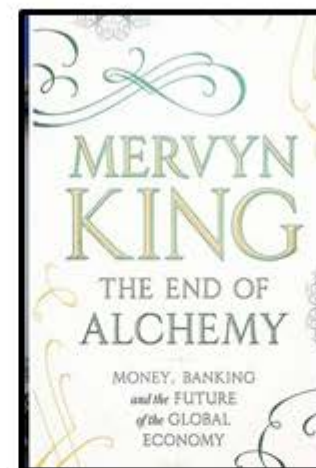
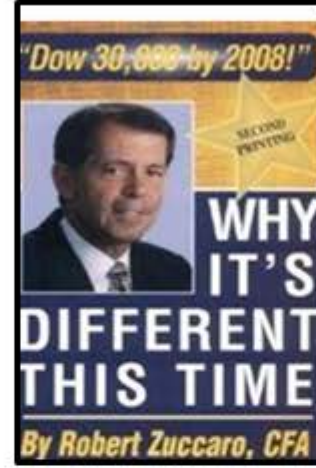
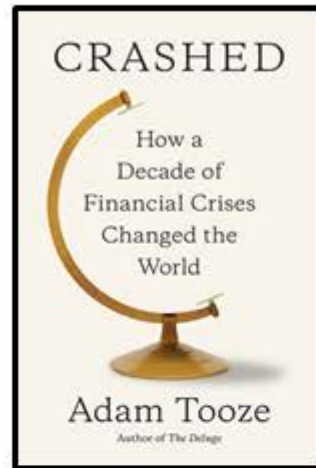
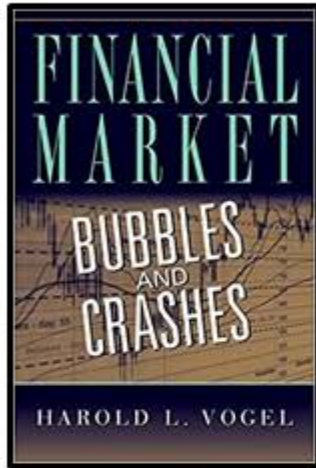
“What we learn from history, is that we do not learn from history” – Benjamin Disraeli



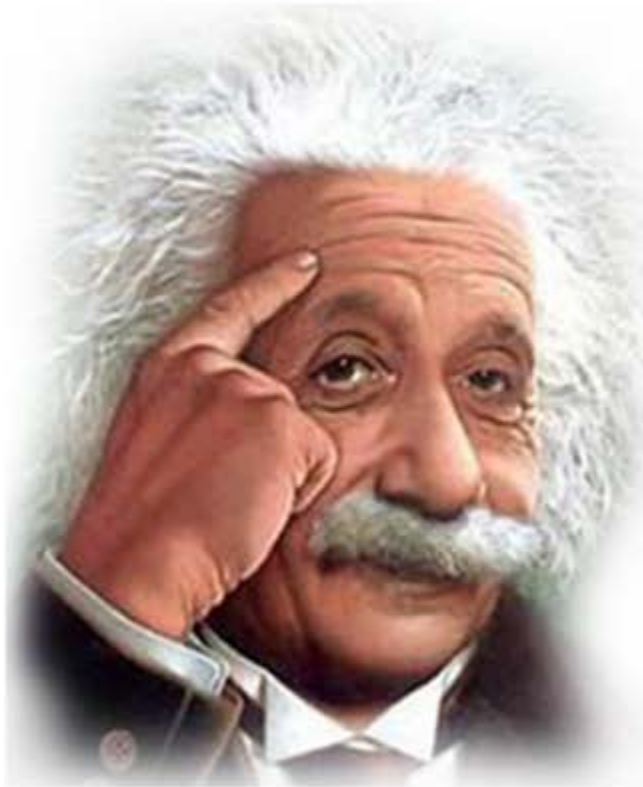
“Many shall be restored that now are fallen and many shall fall that now are in honor” – Horace



“Those who do not remember the past are doomed to repeat it” – George Santayana



Questions?



Not everything that can be
counted counts,
and not everything
that counts can be counted.

Albert Einstein

Thanks to the Team at Oaklane Capital Management LLP :

Mr Ankit Shah

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Mr Utsav Adani

Ms Neharika Bayas

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