<u>Irrational Exuberance</u>
Robert Shiller

The Stock Market Level in Historical Perspective

p.7 Ten year average price-earnings ratio used to smooth out earnings bursts and declines

p.9 Significant peaks in CAPE
June 1901 (25.2)
September 1929 (32.6)
January 1966 (24.6)
January 2000 (44.3)

p.13 "It is natural to suppose that when one is getting so much lower dividends from the shares one owns, one ought to expect to earn lower investing returns overall. The dividend is, after all, part of the total return one gets from holding stocks (the other part being the capital gain), and dividends historically represent the dominant part of the average return on stocks. The reliable return attributable to dividends, not the less predictable portion arising from capital gains, is the main reason why stocks have on average been such good investments historically."

Precipitating Factors: The Internet, the Baby Boom, and Other Events

p.18 Twelve factors that have impacted the market since 1982 and consequently drove a surge in price (not warranted by rational analysis of fundamentals)
1) the arrival of the internet
2) the decline of foreign economic rivals
3) cultural changes favoring business success and materialism
4) capital gains tax cuts
5) impact of the baby boom (Harry Dent et al.)
6) expansion in media reporting
7) analysts increasingly optimistic forecasts
8) expansion of defined contribution plans
9) growth of mutual funds
10) decline of inflation and the money illusion
11) expansion of trading (discount brokers and day traders)
12) the rise of gambling opportunities

p.23 "In the late 1980s and early 1990s, downsizing (the movement to release surplus staff and the consequent decline in job security) led to a change in the way people viewed their lives. The experience of being laid off, or at least of knowing others who had been, was often viewed as a violation of an implicit pact of loyalty between employee and employer. Such an experience encouraged workers to take control of their own lives and to rely less on employers, to become in effect economic entities unto themselves, rather than parts of a larger economic organization."

p.30 conflicts of interest with analysts recommendations

p.31 "Analysts have few worries about being uniformly optimistic regarding the distant future; they have concluded that such generalized optimism is simply good for business. Certainly they perceive that their fellow analysts are demonstrating such long-run optimism, and there is, after all, safety in numbers."

p.35 Massachusetts Investors Trust, created in 1924--first mutual fund p.40 Reference to Thaler and Benartzi: more time spent studying stock market prices has an impact on the demand for stocks

p.42 "...it is worth remembering that there is no air-tight science of stock market pricing. Economists have certainly made progress in understanding financial markets, but the complexity of real life continues to prevail."

Amplification Mechanisms: Naturally Occurring Ponzi Processes

p.44 Amplification mechanisms include: investor confidence, investor expectations for future performance, and influences on investor demand for stocks

p.45 90%+ of wealthy investors agree that the stock market is the best investment

p.46 Why many wealthy investors believe the market will rebound shortly after a decline: "Their belief in the resilience of the market seems to stem from a generalized feeling of optimism and assurance, rather than a belief in the long-run stability of prices."

p.51 Reference to Suze Orman

p.55 "Economists usually like to model people as calculating optimally their investment decisions based on expectations of future price changes and estimates of the risk in alternative investments. However, in fact, the typical investor's actual decision about how much to allocate to the stock market overall, and into other asset classes such as bonds, real estate, or other investments, tends not to be based on careful calculations."

p.57 "The emotional state of investors when they decide on their investments is no doubt one of the most important factors causing the bull market."

p.59 "Statman and Thorley conclude that this persistent effect of returns on volume is due to the impact of higher returns on investor confidence. Even though a rising market "lifts all boats," there is still a tendency for investors to interpret their investing success as confirmation of their own abilities, and this reinforces their interest in trading stocks."

p.60 Feedback theory:
-Adaptive Expectations: past price increases generate expectations of further price increases
-Investor Confidence: Feedback occurs not so much because of sudden price increases, but due to a pattern of consistency in price increases
-Habit Formation: People are slowly habituated to a higher level of consumption that they can expect from higher market values

p.62 "If we suppose that there are other kinds of feedback loops operating in the economy, besides simple price-increase-to-further-price-increase feedback, then we may conclude that the apparent randomness of the stock market, the tendency it has to create sudden moves for no apparent reason, might not be so inexplicable after all."

p.63 "In fact I find little evidence that people have been thinking, during the recent market highs at the dawn of the new millennium, that we are in a temporary speculative bubble. The conspicuous feature of the current high pricing is high confidence that the market will always do well."

p.64 The existence of feedback loops in financial markets cannot be proven, but Ponzi schemes may provide evidence that feedback loops do play a role in financial markets

The News Media

p.72 Role of news media: "The news media are in constant competition to capture the public attention they need to survive. Survival for them requires finding and defining interesting news, focusing attention on news that has word-of-mouth potential (so as to broaden their audience), and, whenever possible, defining an ongoing story that encourages their audience to remain steady customers."

p.74 "There is no shortage of media accounts that try to answer our questions about the market today, but there is a shortage within these accounts of relevant facts or considered interpretations of them. Many news stories in fact seem to have been written under a deadline to produce something--anything--to go along with the numbers from the market."

p.75 Niederhofer study on news headlines and changes in stock market price

p.79 News and efficient market theory
Attention cascades: sequence of public attentions set in motion

p.82 Impact of Joe Granville's forecasts on market price similar to Cramer effect?

p.90 Role of investor psychology in October 19, 1987 crash

p.92 Portfolio insurance strategy (systematic selling when prices decline)

p.95 "...the media can sometimes foster stronger feedback from past price changes to further price changes, and they can also foster another sequence of events, referred to here as an attention cascade."
How the news propagates speculative bubbles: "...the news media are fundamental propagators of speculative price movements through their efforts to make news interesting to their audience."

New Era Economic Thinking

p.98 "Whenever the market reaches a new high, public speakers, writers, and other prominent people suddenly appear, armed with explanations for the apparent optimism seen in the market. Reporters may not always get the timing right, and they may suggest that it was the words spoken by these great men and women that caused the market shifts. Although prominent people can certainly move markets, often their wisdom merely tags along with market moves. Nevertheless, the new era thinking they promote is part of the process by which a boom may be sustained and amplified--part of the feedback mechanism that, as we have seen, can create speculative bubbles."

p.99 "Conventional wisdom interprets the stock market as reacting to new era theories. In fact, it appears that the stock market often creates new era theories, as reporters scramble to justify stock market price moves."

p.102 Historic US corporate tax rates as a response to rising corporate profits?

Psychological Anchors for the Market

p.135 Market anchors: limitations on the feedback mechanism of price changes

p.136 two psychological anchors:
1) quantitative: provide indications of appropriate levels for the market
2) moral: help determine the strength of the reason for which stocks are purchased (weighed against the other uses of their money)

p.137 Decisions made in ambiguous situations are based on whatever number is before you (Kahneman & Tversky)

p.139 Moral anchoring: "The stock market can reach fantastic levels only if people think that they have good reasons not to test it by trying to enjoy their newfound wealth."
"Underlying this notion of moral anchors is the psychological principle that much of the human thinking that results in action is not quantitative, but instead takes the form of storytelling and justification. That is why, in the case of moral anchors, people are weighing a story, which has no quantitative dimension, against the observed quantity of financial wealth that they have available for consumption."

p.140 narratives fit with a basic human interest for gambling

p.141 Reference to "Millionaire Next Door" and implication that average frugal folks are "morally superior"

p.142 Human tendency towards overconfidence: "People think they know more than they do. They like to express opinions on matters they know little about, and they often act on these opinions. We have all observed at one time or another that there are a lot of know-it-alls out there. But psychologists have described the tendency toward overconfidence with some care and indications of its generality."

p.145 "Without such overconfidence, one would think that there would be little trading in financial markets. If people were completely rational, then half the investors should think that they are below average in their trading ability and should therefore be unwilling to do speculative trades with the other half, who they think will probably dominate them in trading. Thus the above-average half would have no one to trade with, and there should ideally be no trading for speculative reasons."

p.147 "...the effects of news stories on the stock market sometimes have more to do with discovery of how we feel about the news than with any logical reaction to the news. We can make decisions then that would have been impossible before the news was known. It is partly for this reason that the breaking off of a psychological anchor can be so unpredictable: people discover things about themselves, about their own emotions and inclinations, only after price changes occur."

Herd Behavior and Epidemics

p.148 "A fundamental observation about human society is that people who communicate regularly with one another think similarly."

p.149 Solomon Asch experiment on conformity

p.151 "...the Asch and Milgram experiments give us a different perspective on the overconfidence phenomenon: people are respectful of authorities in formulating the opinions about which they will later be so overconfident, transferring their confidence in authorities to their own judgments based upon them."

p.152 "Ultimately, all such information cascade theories are theories of the failure of information about true fundamental value to be disseminated and evaluated."

p.153 fundamental component of information processing ability is effective communication of important facts from one to another

p.162 "One explanation for the fact that people are able to hold such conflicting views simultaneously is that they think they have heard both views endorsed by experts. The culture transmits a number of supposed facts, often attributed only to "them," as in "They say that..." When stories are casually accepted on some imagined authority, conflicts are likely."

Efficient Markets, Random Walks, and Bubbles

p.171 EMH: prices accurately reflect all public information at all times
Using EMH, stock prices are a random walk since future information is unknown and unpredictable

p.173 "smart money" argument against EMH: according to EMH the effect of smart money buying low and selling high would drive asset prices to their true value, make those doing wealthier, and increasingly allow them to influence prices towards the correct price--unfortunately markets still go through extended periods of significant mispricing

p.181 Changes in market prices are not necessarily justified by changes in earnings

p.185 Dividend present value fails to explain market price

Investor Learning--and Unlearning

p.194 Flat Returns for 20 year periods following high market valuations
Jun 1901 - Jun 1921 (-0.2% per year)
Sep 1929 - Sep 1949 (0.4% per year)
Jan 1966 - Jan 1986 (1.9% per year)

p.195 Stocks DO NOT always outperform bonds

p.195 stocks: residual claims on corporate cash flow, available to stock holders only after everyone else has been paid

p.200 "The public is said to have learned that stocks always go right back up after they go down. We have seen evidence that they do largely think this, but that they have gotten their facts wrong. Stocks can go down, and stay down for many years. They can become overpriced and underperform for many years. The public is said to have learned that stocks must always outperform other investments, such as bonds, over the long run, and so long-run investors will always do better in stocks. We have seen evidence that they do largely think this. But again they have gotten their facts wrong. Stocks have not always outperformed other investments over decades-long intervals, and there is certainly no reason to think they must in the future. And the public is said to have learned about the wisdom of investing in stocks via mutual funds whose management teams have proven track records. We find that they do largely think this, and once more they are wrong. Picking mutual funds that have done well has much smaller benefits than investors imagine. When the facts are wrong, it can't be called learning. Someday, investors will "unlearn" these "facts.""

Speculative Volatility in a Free Society

p.203 "The market is high because of the combined effect of indifferent thinking by millions of people, very few of whom feel the need to perform careful research on the long-term investment value of the aggregate stock market, and who are motivated substantially by their own emotions, random attentions, and perceptions of conventional wisdom."

p.204 "...although the market appears to have substantial long-term forecast ability when it is very overpriced (as it appears to be, based on recent data) or, alternatively, when it is very underpriced, there is always considerable uncertainty about its outlook."

p.214 "The "amazing power" of compound returns that has become such an article of faith among so many people does not apply if the returns are not there in the first place."

p.217 While the move to defined contribution plans has potentially eliminated the lack of inflation protection of defined benefit plans, it may have lost the collective sense of responsibility for the standard of living of pensioners