Irrational markets, rational fiduciaries

A prelude, courtesy of Irving Fisher

"If we take the history of the prices of stocks and bonds, we shall find it chiefly to consist of a record of changing estimates of futurity, due to what is **called chance**."

Irving Fisher, 1906

“The more risky the investment would be to the lone individual playing the game, the safer it is if, by pooling in an investment trust, with

wide diversification

in investment, the individual risk is is absorbed.”

Irving Fisher, 1928

“This enlightened process has created a tremendous new market for securities that in times past would have gone begging. It constitutes a permanent reason why this plateau [of stock prices] will not sink again to the level of former years except for extraordinary cause.”

Irving Fisher, 1928

Stock prices have reached "what looks like a **permanently high plateau**."

Irving Fisher,
Oct. 15, 1929

The
finance
revolution

All thanks to a stockbroker he met in a waiting room in 1950

Markowitz's world

Von Neumann

Cowles

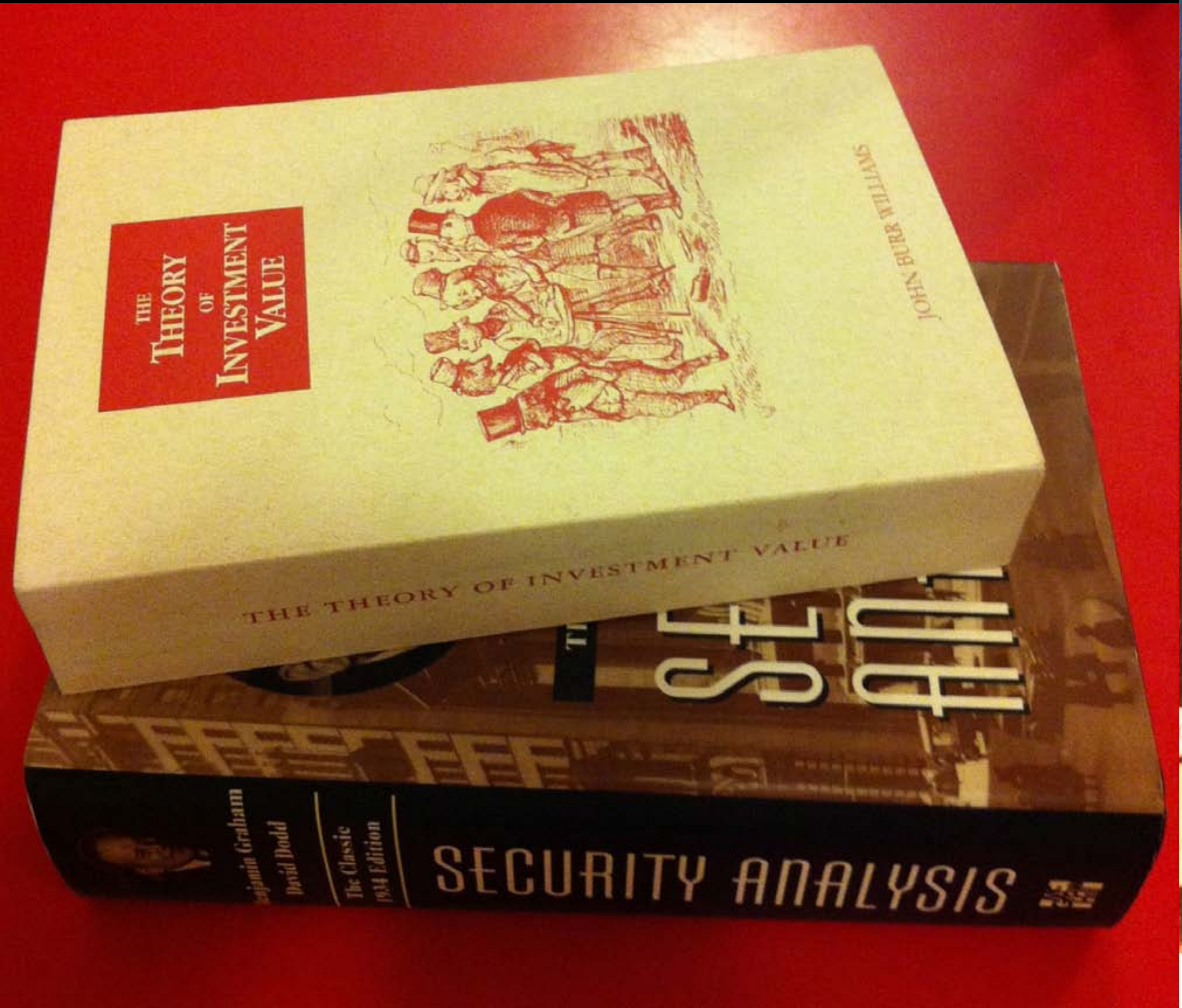
Savage

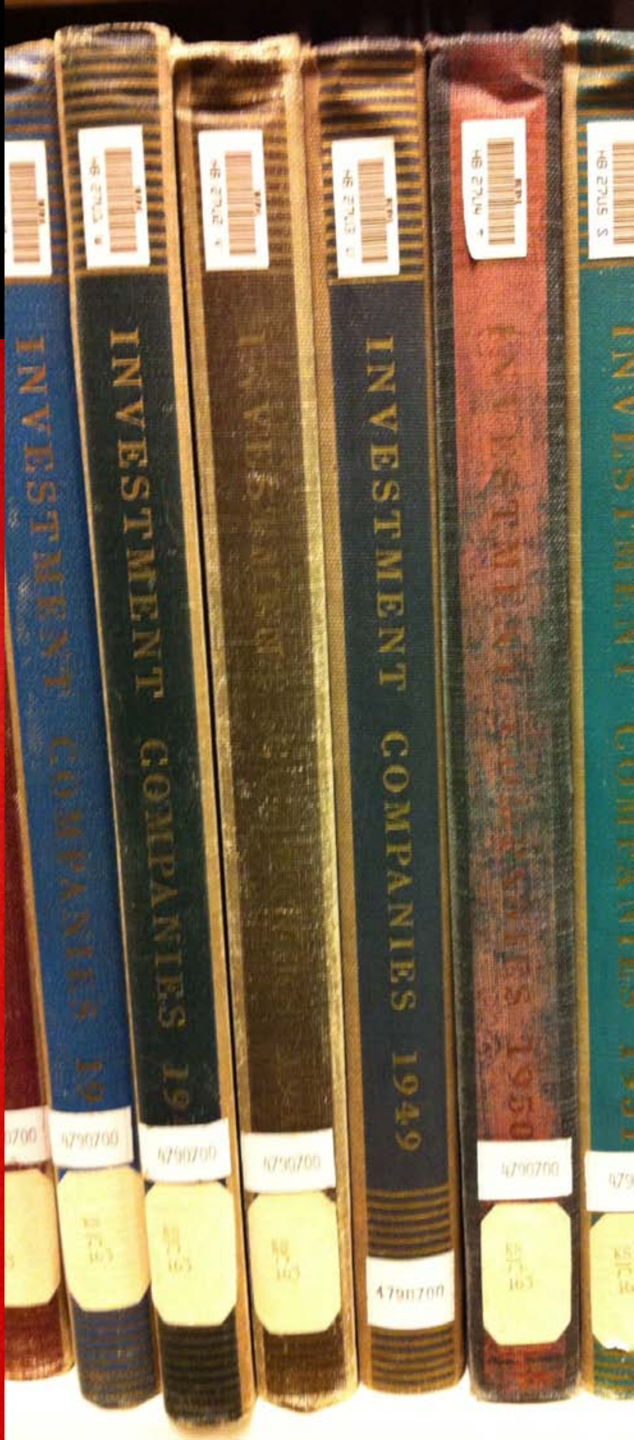
Marschak

Koopmans

Friedman

Markowitz's reading list





The efficient frontier

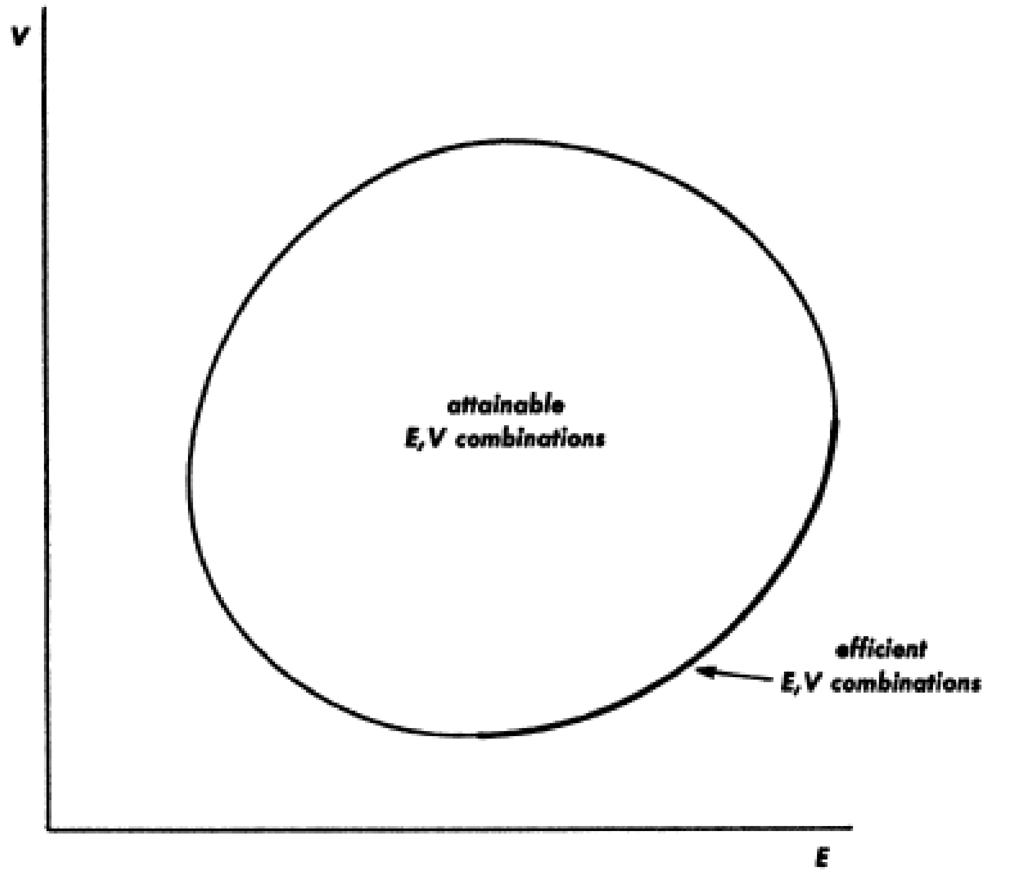


FIG. 1

The Journal of Finance, March 1952

"The calculation of efficient surfaces might possibly be of practical use. Perhaps there are ways, by combining statistical techniques and the judgment of experts, to form **reasonable probability beliefs**."

Harry Markowitz, 1952

"I still say, my job as an **operations research** guy is, you give me the estimates, I'll compute the portfolios faster than the next guy."

Harry Markowitz, 2004

"I said, well, what if
everyone does
what Markowitz says they
should do. What does that
tell us about equilibrium?"

Bill Sharpe, 2004

“Speculative bubbles

have actually arisen in the past.” But they “do not seem to us to be a dominant, or even a fundamental, feature of actual market behavior under uncertainty.”

Franco Modigliani and Merton Miller, 1961

The evidence

1. The random walk

"It was a game of
competitive gambling.
In it some were smart and some were not so smart, and the players changed sides so often that it was a picture of financial chaos or bedlam."

M.F.M. Osborne, 1959

2. Event studies

"Most of the **information** contained in reported income is anticipated by the market before the annual report is released."

Ray Ball and Philip Brown, 1968

3. Fund Performance

"… the fact that they are apparently **unable to forecast** returns accurately enough to recover their research and transactions costs is a striking piece of evidence in favor of the strong form of the hypothesis."

Michael Jensen, 1969

The
efficient
market

"The ideal is a market in which prices provide **accurate signals** for resource allocation: that is, a market in which … security prices at any time 'fully reflect' all available information. A market in which prices always 'fully reflect' available information is called 'efficient.'"

Eugene Fama, 1969

"I believe there is no other proposition in economics which has more solid **empirical evidence** supporting it than the Efficient Market Hypothesis."

Michael Jensen, 1978

“The price is **right!** The price is right!”

Cliff Smith, late 1970s

The new finance

index funds

Black-Scholes

Sharpe ratio

alpha

asset allocation

benchmarking

cost-of-capital

shareholder value

risk-free interest rate

modern portfolio theory

The backlash

The efficient market hypothesis is "one of the most

remarkable errors

in the history of economic thought. It is remarkable in the immediacy of its logical error and the sweep and implications of its conclusion."

Robert Shiller, 1984

"It would surely come as a surprise to the layman to learn that virtually no

mainstream research

in the field of finance in the last decade has attempted to account for the stock market boom of the 1960s or the spectacular decline in real stock prices during the mid-1970s."

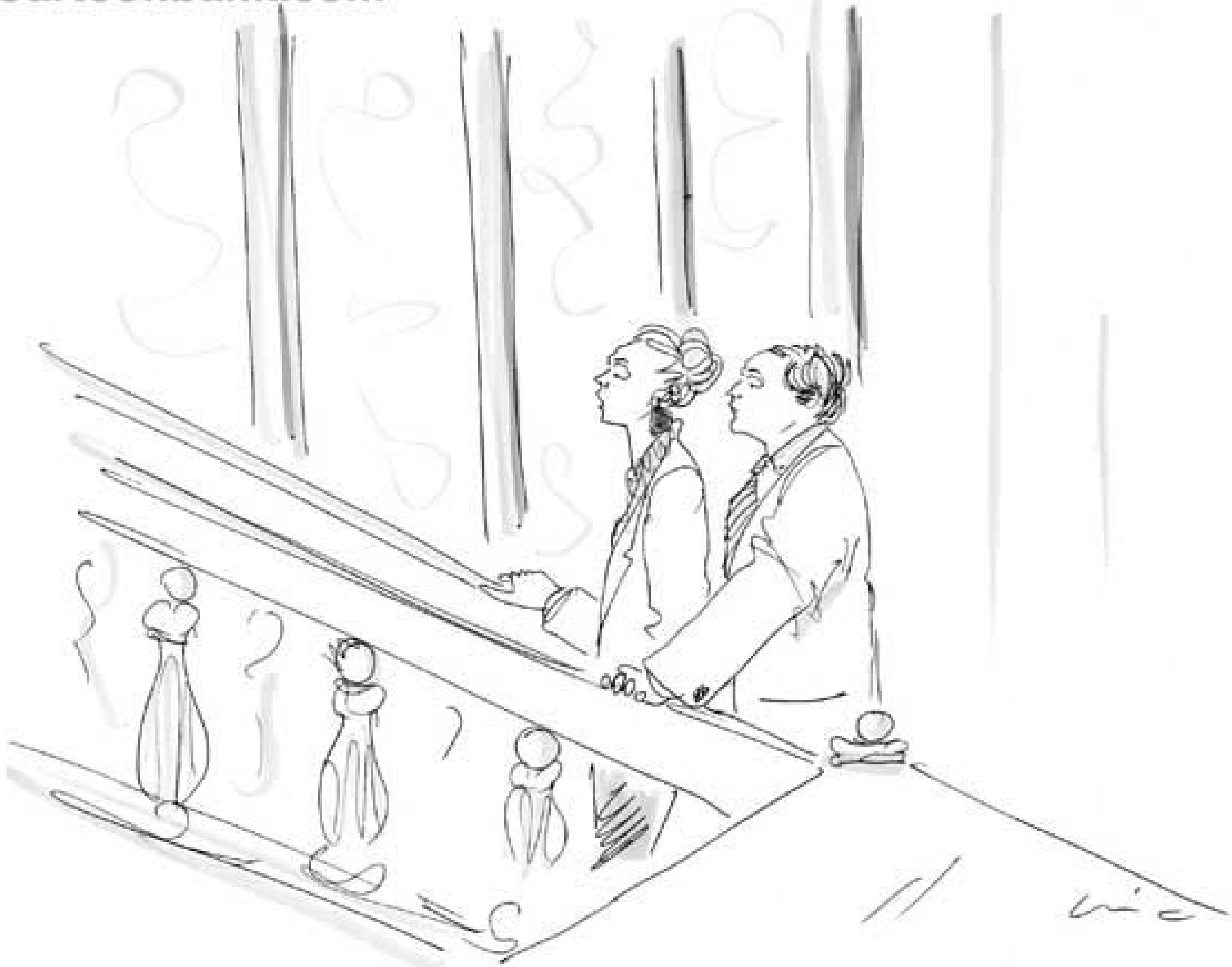
Larry Summers, 1984

“Arbitrage may not be

fully effective

in bringing security prices to fundamental values, especially in extreme circumstances.”

Andrei Shleifer and
Robert Vishny, 1997



"I don't buy stocks simply because others are buying them. I buy them because many, many others are buying them."

The great backtrack

"We might **define an efficient market** as one in which price is within a factor of 2 of value, i.e., the price is more than half of value and less than twice value … By this definition, I think almost all markets are efficient almost all of the time. 'Almost all' means at least 90%."

Fischer Black, 1985

"It's conceivable that a change in the **well-informed** forecast of future economic events moved the market as it did. On the other hand, it's pretty weird."

Bill Sharpe, October 1987

"Fifteen years of **education**, three advanced degrees, and all you can say is 'it's weird?'"

Bill Sharpe's mother, October 1987

"The use of a growing array of **derivatives** and the related application of more-sophisticated methods for measuring and managing risk are key factors underpinning the enhanced resilience of our largest financial intermediaries."

Alan Greenspan, 2003

“The whole

intellectual edifice

collapsed in the summer of last year.”

Alan Greenspan, 2008

The
ideas
that
have
held up

1. It’s really hard to beat the market

2. There is a tradeoff between risk and return

3. There’s merit in diversification

The ones
that haven’t

1. The price is right

1a. Corporations should do what financial markets tell them

2. Financial markets are inherently stable

3. Risk can always be quantified

3a. Risk is equivalent to historical volatility

3b. Being a "prudent man" means following a few simple rules

Thinking for ourselves vs. outsourcing judgment

1. Index funds work because the fees are low

2. Diversification works when there’s a good reason why it should work

3. Investing is always predicting

3a. So understand just what it is that you’re predicting

The fiduciary's dilemma

"It is the long-term investor, he who most promotes the public interest, who will in practice come in for most criticism, wherever investment funds are managed by committees or boards or banks. For it is in the essence of his behaviour that he should be eccentric, **unconventional** and rash in the eyes of average opinion."

John Maynard Keynes, 1936