

Concepts of Institutional Investing

Do you believe in magic?

Modern Portfolio Theory

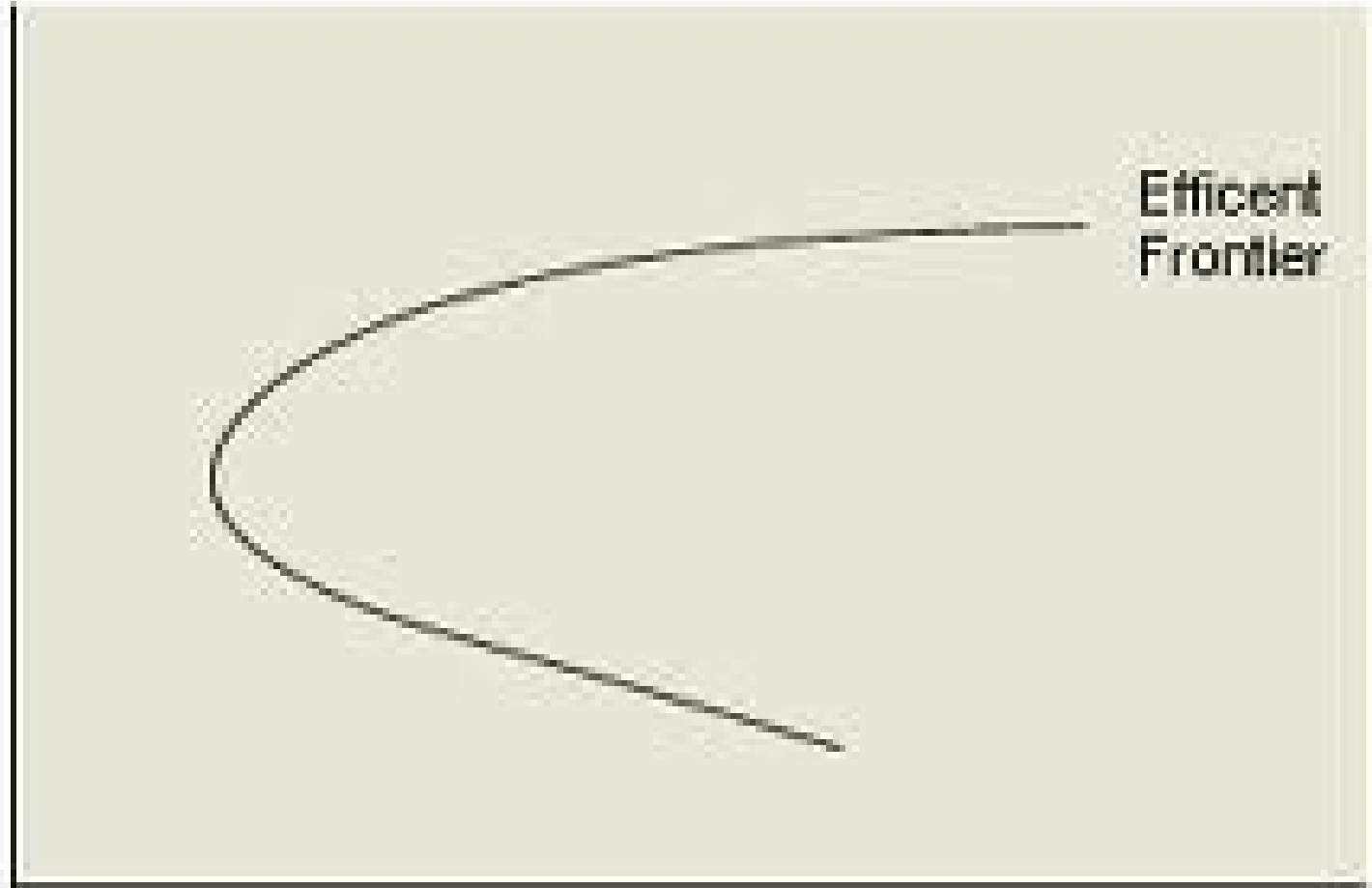
- Harry Markowitz
 - Ph.D thesis in the mid 1950's
 - Wanted to add risk analysis to understanding of stock prices
 - Won the Nobel Prize in Economics in 1990

Modern Portfolio Theory

- Markowitz developed MPT
- Also called mean variance analysis
- Based upon expected “mean” (average) returns
- Defines risk as “variance” or variability

The Efficient Frontier

Expected
Return



Efficient
Frontier

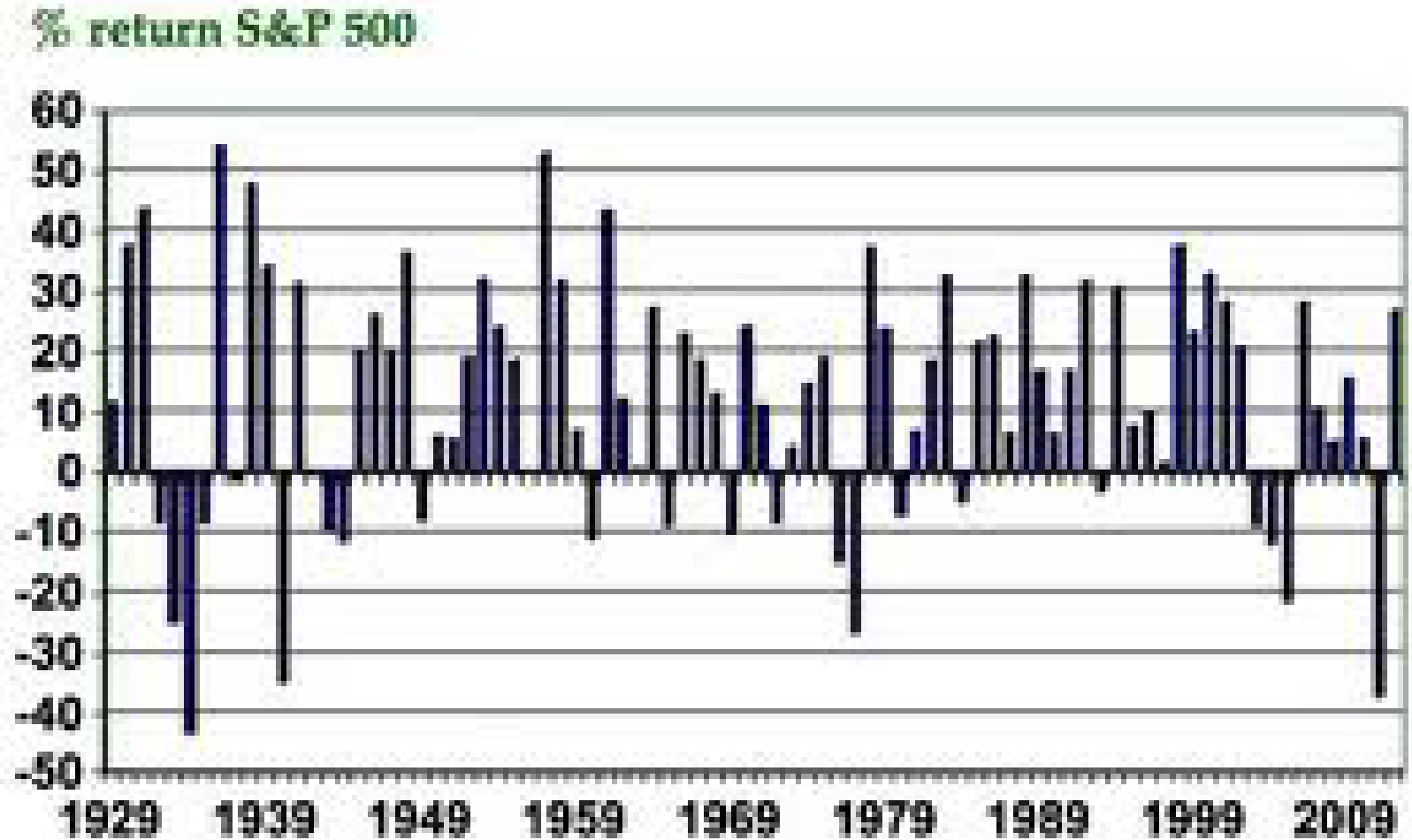
Risk-standard deviation

- Adding riskier assets can increase return
- But they can also reduce risk
- It depends on “correlation”
- But they KEY requirement is time

Long term returns

- Stocks---9.9%
- Bonds----5.5%
- Treasury Bills----3.6%

Stock market returns



All of this and Funding

- Asset allocation based on “mean” or average
- Any short term time period can be very different than the “mean”
- No one knows the future
- The last period effect and the “time fallacy”

So what rate do we use?

- Historic or predicted rate
- “Economic” rate
- Tremendous difference in funded status

Some more recent developments

- Active vs Passive in MPT context
- Alternative Assets
- A “low return” world?

And about those correlations

- Efficient frontier depends on stable correlations
- Assets without long history may or may not have stable correlations
- Only bonds maintained historical correlation in recent downturn

Alternative Assets

- What are they?
 - Asset classes
 - Manager skill
- Why are they attractive?
- How do they fit into MPT?