Midterm Talk

11 October 2018

Q1

- For economists, what is money? How can money improve welfare of people in the society?

Meaning of Money (1)

- ***Money*** is anything generally accepted in payments for goods or services or in the repayment of debts.

Functions of Money (1)

- **Medium of Exchange**
  - Money is used to pay for goods and services.
  - This promotes economic efficiency as:
    - It reduces transaction costs
    - It also allows specializations.
  - To perform this effectively, money must be (1) standardized (2) widely accepted (3) divisible (4) easy to carry (5) not deteriorate quickly.

Functions of Money (2)

- **Unit of Account**
  - Money is used to measure value in the economy.
  - It reduces transaction costs by reducing the number of prices that need to be considered.

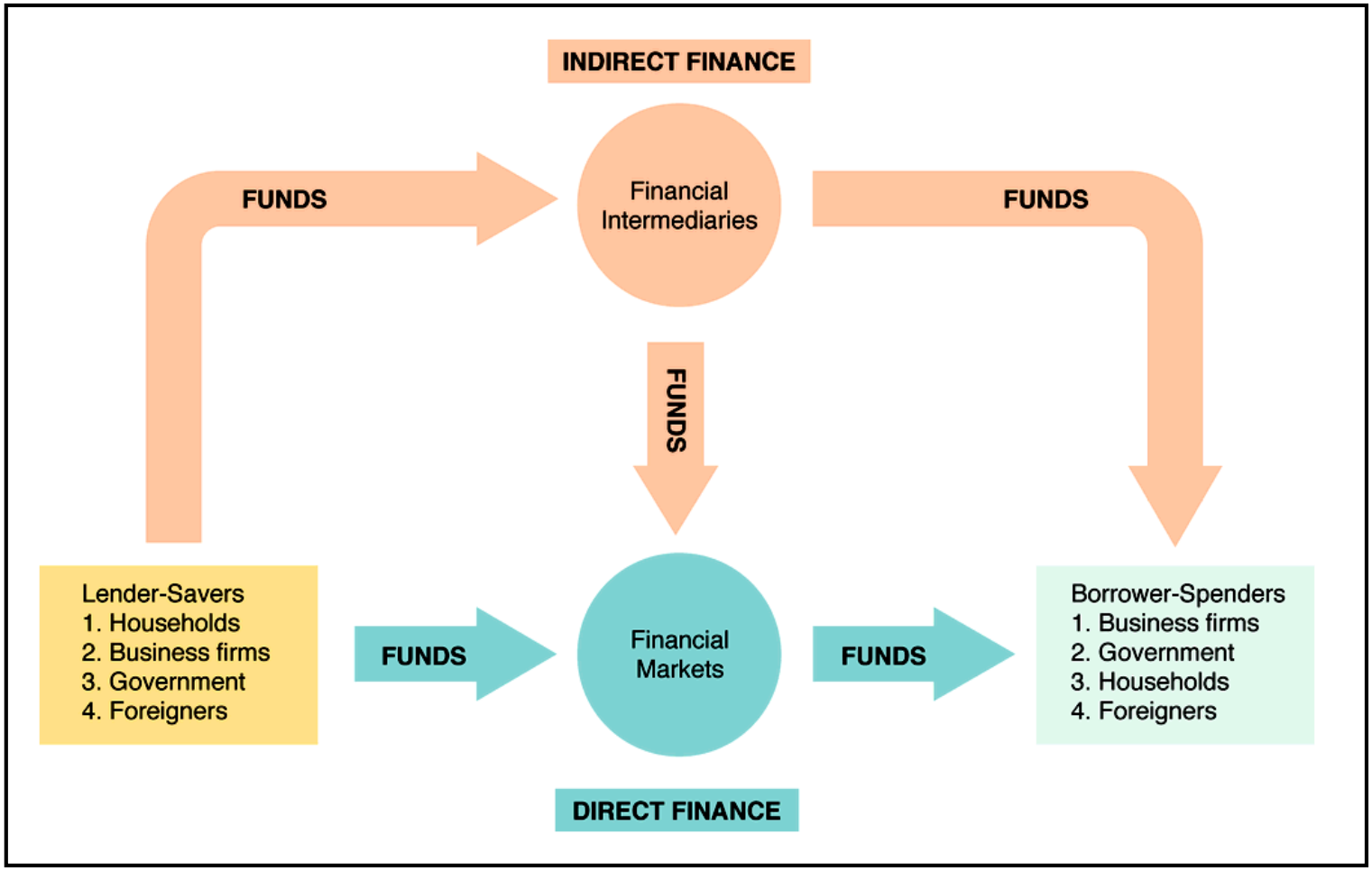
Functions of Money (3)

- **Store of Value**
  - Money is used as a way to store purchasing power over time.
  - This function is useful as we do not always want to spend our income immediately upon receiving it.
  - It provides more ***liquidity*** (the relative ease with which an asset can be converted into a medium of exchange) than other assets.

Q2

- Explain the main function of financial system. How can an under-developed financial system affect the economic performance of a country?

Flows of Funds Through the ***Financial System***



Financial System

- The main function of financial system is to transfer funds from people who have excess to people who have shortage.
- Financial sector relates with big asymmetric information problem.
- There are at least 3 aspects:
  - Quick
  - Cheap
  - Correct

Q3

- Assume that currently your best return for a 3-year investment is 4 percent/year. Will you apply for the following insurance policy for investment? Show your calculation to support your decision?

Policy A

- term-to-maturity: 3 years
- premium payment: 800 baht/year for 2 years
- the sum assured: 1,000 baht
- cash return: 4 percent of the sum assured at the end of each year for 3 years
- the extra cash return on the maturity date is 160 percent of the sum assured.

Policy A

- Try using 4% to calculate for PV, we see the below result.
- We should expect the return (yield-to-maturity) of this policy to be lower than 4%.

Year	Premium payments	Cash returns	(1+r)^n	PV of premium pmt	PV of cash returns
0	800		1.00	800.00	0.00
1	800	40	1.04	769.23	38.46
2		40	1.08		36.98
3		1,640	1.12		1,457.95
			Total	1,569.23	1,533.40

Q4

- Will there be an effect on interest rates if brokerage commissions on stocks fall? Explain your answer.

Factors that Shift the Bond Demand Curve

1. Wealth

A. Economy grows, wealth ↑, B^d ↑, B^d shifts out to right

2. Expected Return

A. i ↓ in future, R^e for long-term bonds ↑, B^d shifts out to right

B. π^e ↓, Relative R^e ↑, B^d shifts out to right

C. Expected return of other assets ↓, B^d ↑, B^d shifts out to right

3. Risk

A. Risk of bonds ↓, B^d ↑, B^d shifts out to right

B. Risk of other assets ↑, B^d ↑, B^d shifts out to right

4. Liquidity

A. Liquidity of Bonds ↑, B^d ↑, B^d shifts out to right

B. Liquidity of other assets ↓, B^d ↑, B^d shifts out to right

Brokerage commissions fall

- Should affect expected returns and liquidity of the stocks positively.
- We should expect demand for bonds to fall.
- Price of bonds should fall and interest rate should increase, as they are negatively related.

Q5

- If the yield curve suddenly becomes flatter, how would you revise your predictions of interest rates in the future?

Liquidity Premium Theories (1)

Key Assumption: Bonds of different maturities are substitutes, but are not perfect substitutes

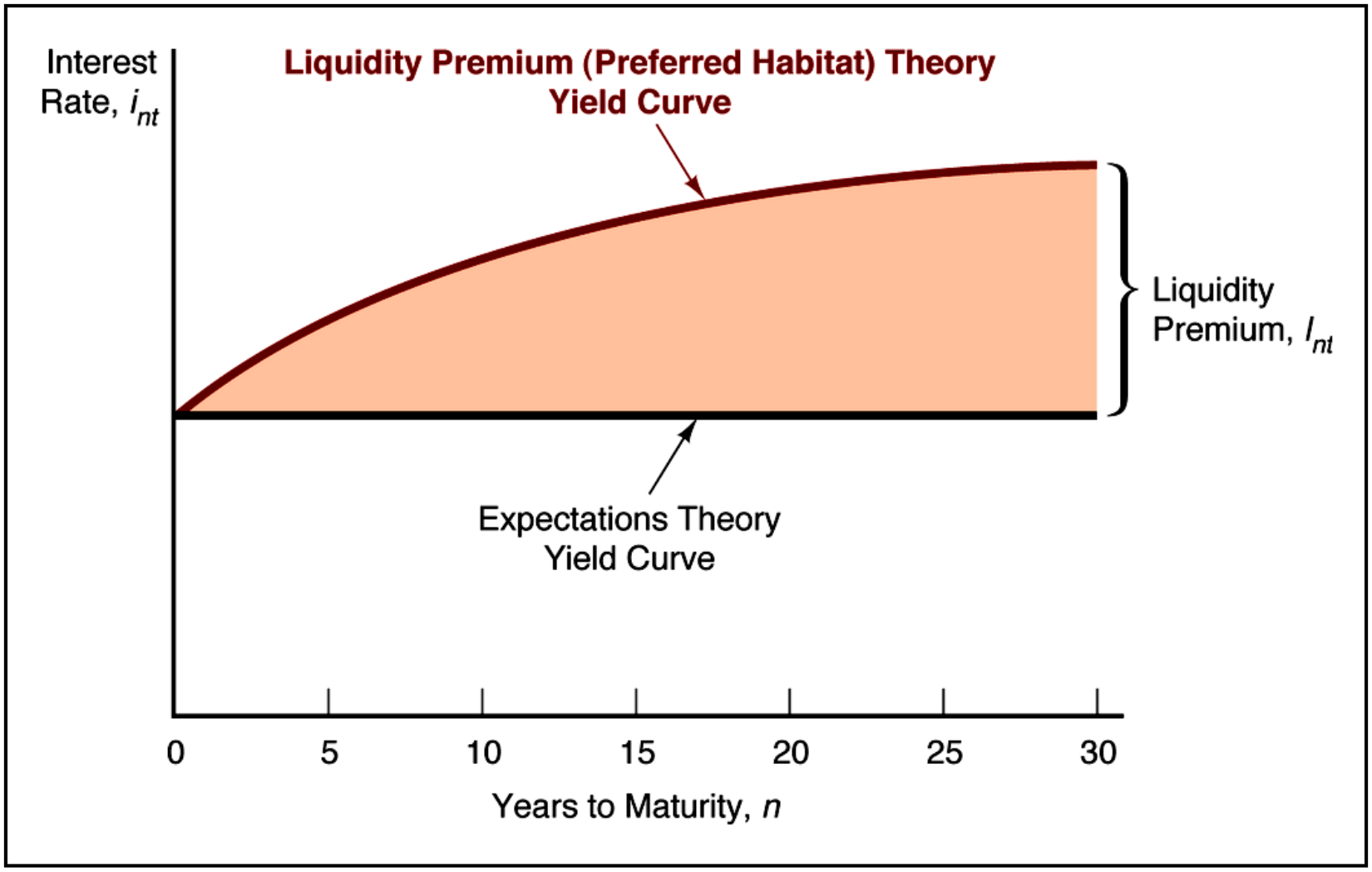
Implication: Modifies Expectations Theory with features of Segmented Markets Theory

Investors prefer short rather than long bonds $\Rightarrow$ must be paid positive liquidity (term) premium, l_{nt}, to hold long-term bonds

Results in following modification of Expectations Theory

$$i_{nt} = \frac{i_t + i^e_{t+1} + i^e_{t+2} + \ldots + i^e_{t+(n-1)}}{n} + l_{nt}$$

Liquidity Premium Theories (2)



The yield curve becomes flatter

- This should be the change in the first component of the Liquidity Premium theory.
- People expect future short-term interest rates to fall down, then the long-term rates fall consistently.
- We should revise our prediction downward.

Q6

- Recall that, for the main part, stock market is a secondary market. Explain how the stock market helps improve welfare of people in the society.

Financial Markets: Classification 2 (1)

- Primary Market

  New security issues (either debt or equity securities) sold to initial buyers (e.g. IPO of common stocks).

- Secondary Market

  Securities previously issued are bought and sold (e.g. daily trading in stock markets).

- When a person buys a security in the secondary market, the person who has sold the security receives money in exchange for the security, but the corporation that issued the security acquires no new funds.

Financial Markets: Classification 2 (2)

- A corporation acquires new funds only when its securities are first sold in the primary market.
- Hence, secondary market may not perform the task of transferring funds from the people who have an excess to ones who have a shortage.
- However, secondary markets serve 2 important functions:
  - They make it easier and quicker to sell these instruments (more liquid).
  - They determine price of the security that the issuing firm sells in the primary market.

Q7

- What is the Efficient Market Hypothesis (EMH)? Explain a challenge of EMH from behavioral economists?

Efficient Markets Hypothesis

- The efficient markets hypothesis (EMH) maintains that market prices fully reflect all available information.

- The most enduring critique of EMH comes from psychological and behavioral economists who argue that the EMH is based on counterfactual assumptions regarding human behavior, that is, rationality.

Anomaly 1: Lagged Reactions to Earnings Announcements

- Recall that excess returns are above what needs to be earned in compensation for the risk borne.
- If markets are efficient, we should expect to see a positive/negative reaction to good/bad news over the window that includes the announcement, but no further reaction on days after that, to eliminate excess returns.
- Many studies found the tendency to be a continued drift in prices, which is sufficiently large and persistent. This is inconsistent with EMH.

Anomaly 2: Value s Growth

- **Value stocks** are defined to be stocks with prices that are low relative to such accounting magnitudes as earnings, cash flows, and book value.
- **Value investing** is the tendency to overweight value stocks in one's portfolio.
- As an example, this is from a journal article

	Quintile A	Quintile B	Quintile C	Quintile D	Quintile E
	High P/E				Low P/E
Median P/E	35.8	19.1	15.0	12.8	9.8
Average return	9.3%	9.3%	11.7%	13.6%	16.3%
Estimated beta	1.11	1.04	0.97	0.94	0.99

Anomaly 3: Momentum and Reversal

- According to weak form of EMH, returns should not be predictable by conditioning on lagged returns. There is abundant evidence that this does not always hold in practice.
- **Momentum** exists when returns are positively correlated with past returns.
- **Reversal** exists when returns are negatively correlated with past returns.
- For medium-term intervals (3 – 12 months), there is well-documented momentum. For long-term intervals (3 – 5 years), reversal is typical.

Shiller (2003)

- The 1980s and Excess Volatility
  - The anomaly represented by the notion of excess volatility seems to be much more troubling for efficient market theory than some other financial anomalies
  - The efficient market hypothesis can be stated as:

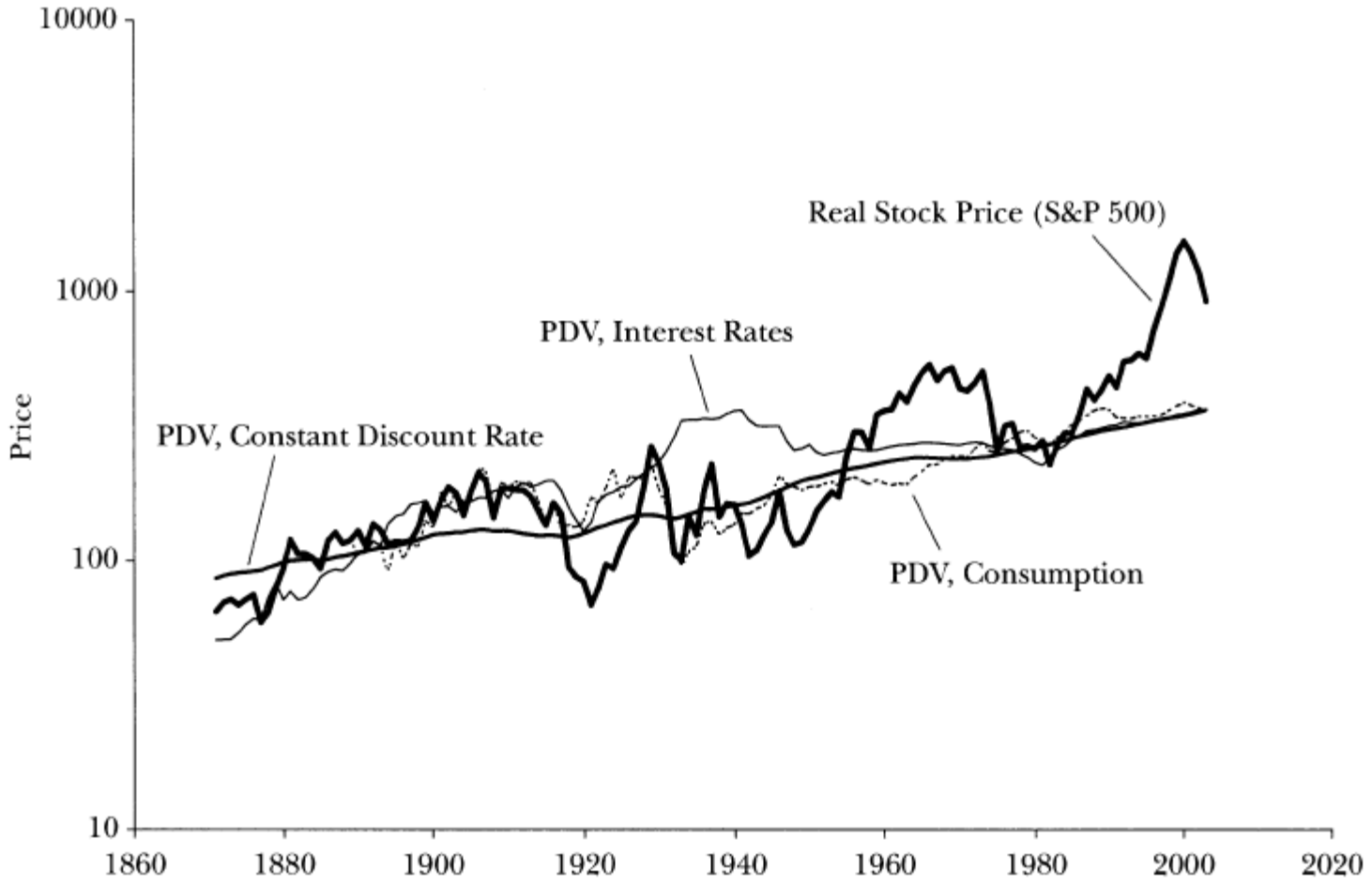
$$P_t^* = P_t + U_t$$

  - Forecast must be less variable than the variable forecasted

Figure 1

Real Stock Prices and Present Values of Subsequent Real Dividends

(*annual data*)

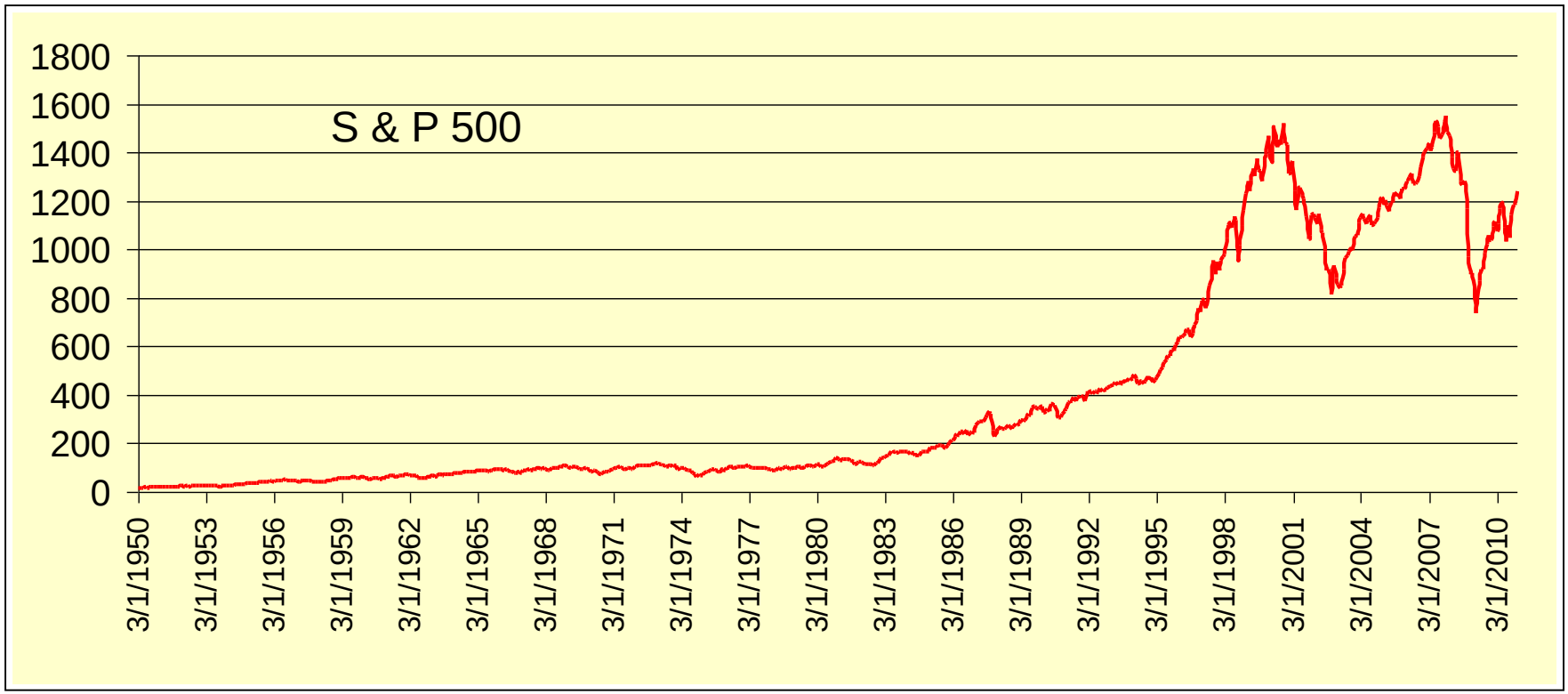


Q8

- What is the equity premium puzzle? How can this become an anomaly in financial economics?

Introduction

- $1,000 in 1925 would become
  - $12,720 at the end of 1995 with Treasury bills
  - $842,000 at the end of 1995 with a (value-weighted) portfolio of stocks



The Puzzle (1)

- The difference in returns, 3.7 percent vs. 10.1 percent, is strikingly large
- Let *A* be the "coefficient of relative risk aversion"
  - It measures the degree people are scarce of risks: The higher value indicates people are more risk-averse
- Mehra and Prescott (1985) obtained the value of *A* to be between 30 – 40, which they concluded was much too high

The Puzzle (2)

- With *A* at 30,
  - Suppose you own $100
  - If you face a gamble with 50% chance to make you wealth $200 (+$100) and 50% to get $50 (-$50)
  - You would be willing to pay $49 to avoid this gamble
  - This means you prefer $51 with certainty than the gamble, which seems absurd