Financial Economics

The Weakness of the Efficient-Market Theory

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### **News**

According to the efficient-market theory, news is what causes an asset price to change. If there is no news, the rate of return is the market interest rate. Good news makes the asset price and the rate of return higher, and bad news has the reverse effect.

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when there is no news.

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## **Excessive Asset-Price Fluctuation**

This situation means that the asset price fluctuates more than economic fundamentals (dividends, earnings, sales, etc.) suggest.

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## **Negative Autocorrelation**

Excessive price fluctuation implies that stock price changes have a *negative autocorrelation*: rising prices are followed in the long run by falling prices, and falling prices are followed by rising prices.

Consequently one should buy after a fall in the stock price, and sell after a rise.

## **Stock Prices and Dividends**

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What News?

The weakness of the efficient-market theory is that more often

price to change. The price seems to fluctuate up or down even

than not one cannot identify what news has caused the asset

Shiller [1] observes that aggregate stock dividends are quite stable, and yet stock prices fluctuate enormously.

Since excessive price fluctuation contradicts market efficiency, it must imply an opportunity for economic profit. If the stock price fluctuates too much relative to dividends, then one should buy when the dividend yield is high, and sell when it is low.

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#### **Short-Run Random Walk**

That in the short run stock prices approximately follow a random walk is an established fact. This behavior does *not* contradict the claim that stock-price fluctuation is excessive.

On a day-to-day basis, the expected price change is *almost* zero. The price either rises or falls nearly half the time, and the change cannot be forecasted.

Nevertheless, when the price is low relative to the fundamentals, the expected price change is *slightly* positive. For the long run, one expects a higher price, and there is an opportunity for economic profit.

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# References

[1] Robert J. Shiller. Do stock prices move too much to be justified by subsequent changes in dividends? *American Economic Review*, 71(3):421–436, June 1981. HB1E26.

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