Session 7

Market Efficiency I: Laying the Groundwork

Test

1. If you are an active investor, which of the following propositions about market efficiency would you need to subscribe to?
    a. Markets are always efficient
    b. Markets are inefficient and stay inefficient in the long term
    c. Markets are for the most part efficient, but have periods and pockets of inefficiency
    d. Markets are for the most part inefficient, but have periods and pockets of efficiency
    e. None of the above
2. If markets are efficient, which of the following would you never expect to see?
    a. An asset or stock that is mispriced
    b. An investor who beats the market in any period
    c. A large number of investors beating the market in any period
    d. A small number of investors beating the market over long time periods
    e. A small number of investors with common characteristics beating the market over long time periods.
3. If you actively seek bargains in an efficient market, what would you expect see as the returns on your portfolio, relative to the market, over long periods?
    a. You should earn a higher risk-adjusted return than the market
    b. You should earn the same risk-adjusted return as the market before transactions costs
    c. You should earn higher risk-adjusted return than the market before transactions costs, but your extra costs will offset these returns.
    d. You should earn lower risk-adjusted return than the market before transactions costs; after transactions costs, your portfolio will do worse.
4. In which of the following markets are you most likely to see inefficiencies?
    a. A liquid market with low transactions costs and lots of profit-seeking investors who think that they can beat the market.
    b. An illiquid market with high transactions costs and lots of profit-seeking investors who think that they can beat the market.
    c. A liquid market with low transactions costs and very few profit-seeking investors who think that they can beat the market.
    d. An illiquid market with high transactions costs and very few profit-seeking investors who think that they can beat the market.
5. Assume that you find an inefficiency in the market and a strategy to exploit it to make "excess" returns for yourself. Under which of the following conditions is that inefficiency likely to generate long standing profits?
    a. If the inefficiency is difficult to spot and the trading strategy you use is transparent

b. If the inefficiency is difficult to spot and the trading strategy you use is complex
c. If the inefficiency is easy to spot and the trading strategy you use is transparent.
d. If the inefficiency is easy to spot and the trading strategy you use is complex.

Solutions

1. If you are an active investor, which of the following propositions about market efficiency would you need to subscribe to?
    a. Markets are always efficient
    b. Markets are inefficient and stay inefficient in the long term
    c. Markets are for the most part efficient, but have periods and pockets of inefficiency
    d. Markets are for the most part inefficient, but have periods and pockets of efficiency
    e. None of the above

Explanation: To find bargains, you have to assume that markets have inefficiencies, but to make money on your investments, you have to assume that they become efficient over time. So, the choices boil down to (c) and (d). Since all you need is a few inefficiencies in the market to create a portfolio, I think you are better off with the former.

2. If markets are efficient, which of the following would you never expect to see?
    a. An asset or stock that is mispriced
    b. An investor who beats the market in any period
    c. A large number of investors beating the market in any period
    d. A small number of investors beating the market over long time periods
    e. A small number of investors with common characteristics beating the market over long time periods.

Explanation: Even in an efficient market, you should expect to see stocks be mispriced (randomly), about half of all investors to beat the market in any given time period, a small number to do so over the long term (from pure chance). It is only if they share a common characteristic (work at the same firm, learned from the same person, use the same approach) that you have the potential for inefficiency.

3. If you actively seek bargains in an efficient market, what would you expect see as the returns on your portfolio, relative to the market, over long periods?
    a. You should earn a higher risk-adjusted return than the market
    b. You should earn the same risk-adjusted return as the market before transactions costs.
    c. **You should earn higher risk-adjusted return than the market before transactions costs, but your extra costs will offset these returns**.
    d. You should earn lower risk-adjusted return than the market before transactions costs; after transactions costs, your portfolio will do worse.

Explanation: If you assume magically efficient markets (that become efficient on their own), the answer would be (d). However, it takes bargain-seeking investors to make markets efficient and for that process to continue, at least on average, you have to cover the costs of seeking out and exploiting mispricing.

4. In which of the following markets are you most likely to see inefficiencies?

a. A liquid market with low transactions costs and lots of profit-seeking investors who think that they can beat the market.
b. An illiquid market with high transactions costs and lots of profit-seeking investors who think that they can beat the market.
c. A liquid market with low transactions costs and very few profit-seeking investors who think that they can beat the market.
d. An illiquid market with high transactions costs and very few profit-seeking investors who think that they can beat the market.

Explanation: You are most likely to see inefficiencies in markets where it is difficult to exploit these inefficiencies (high transactions costs) and relatively few people trying to find them.

5. Assume that you find an inefficiency in the market and a strategy to exploit it to make "excess" returns for yourself. Under which of the following conditions is that inefficiency likely to generate long standing profits?
   a. The inefficiency is difficult to spot and the trading strategy you use is transparent
   b. The inefficiency is difficult to spot and the trading strategy you use is complex
   c. The inefficiency is easy to spot and the trading strategy you use is transparent.
   d. The inefficiency is easy to spot and the trading strategy you use is complex.

   Explanation: You want to make imitation difficult. That is far more likely if you are exploiting an esoteric, difficult to find inefficiency and if you have a complex trading strategy that others will not easily spot or replicate.