Chapter 13: Investor Behavior and Capital Market Efficiency

Note: Only responsible for sections 13.1 through 13.6

Fundamental question:

13.1 Competition and Capital Markets

A. Identifying a Stock's Alpha

=>

=> difference between expected return and required return (from SML) equals:

$$\alpha_s = E[R_s] - r_s \hspace{4cm} (13.2)$$

where:
r_s = required return on s
$$= r_f + \beta_s \times \left(E(R_{Mkt}) - r_f \right) \hspace{2cm} (13.1)$$
Note: This is same as 12.1 and 10.11.

B. Profiting from Non-Zero Alpha Stocks

=> investors rushing to buy positive alpha stocks and sell negative alpha stocks will drive the alphas to zero

1)

=>

2)

=>

Note: It is possible that prices will correct before trading occurs
=> no one will be willing to sell positive alpha stocks or buy negative alpha stocks.

Key question:

13.2 Information and Rational Expectations

    A. Informed vs. Uninformed Investors

       =>

    B. Rational Expectations

       Rational expectations: all investors correctly interpret and use their own information as well as information that can be inferred from market prices or the trades of others.

       => for any investors to earn positive alphas, other investors must:

          1.

          2.

13.3 The Behavior of Individual Investors

    A. Underdiversification and Portfolio Biases

       => evidence suggests that households are not well diversified:

          1.

          2.

          3.

    B. Excessive Trading and Overconfidence

       => the market portfolio is passive and requires little rebalancing
       => stocks trade more often than CAPM suggests and individuals are particularly prone to active trading

       Note: returns reduced by transaction costs

Reasons:

1. overconfidence bias:

=>

=>

2. sensation seeking:

=> such risk-seeking individuals tend to trade more

C. Individual Behavior and Market Prices

=> to make market inefficient, behavior of uninformed investors must be correlated

=> otherwise cancel out

13.4 Systematic Trading Biases

A. Hanging on to Losers and the Disposition Effect

Disposition effect:

Possible explanations:

=> investors seem to take more risk in face of possible loss
=> investors reluctant to admit a mistake by taking a loss

Downside of behavior:

=> higher taxes:

=>

B. Investor Attention, Mood, and Experience

   1.

      => advertising, high trading volume, extreme (positive or negative) returns

   2.

      => stock returns higher when sunny in New York City
      => stock returns worse in countries that lose world cup

   3.

      => people who grew up when stock returns high tend to invest more in stocks

C. Herd Behavior

   Herd behavior:

      => leads to correlation between trading behavior by investors

         Reasons:

         1. trying to follow lead of better-informed investors
         2. individuals don't want to underperform peers
         3. professionals don't want to stray too far from peers

D. Implications of Behavioral Biases

   => might be possible for sophisticated investors to profit from these biases

13.5 The Efficiency of the Market Portfolio

Conditions for sophisticated investors to profit from mistakes by biases:

1.

2. limited competition to exploit mispricing

A. Trading on News or Recommendations

1. Takeovers:

2. Stock Recommendations:

=> no overreaction if news at same time

B. The Performance of Fund Managers

=> on average, fund managers earn positive alphas before transaction costs

=>

=>

Reason: investors flock to good managers, but the more money a manager has to manage, the harder it is to find good opportunities

C. The Winners and Losers

=>

=>

13.6 Style-Based Techniques and the Market Efficiency Debate

A. Size Effects

1. Excess Return and Market Capitalization

=>

=> alphas for individual portfolios insignificantly different from zero
=> joint test of whether all 10 portfolios have zero alphas rejected

2. Excess Return and Book-to-Market Ratio

   Growth stocks:

   Value stocks:

   =>

   => alphas of individual portfolios insignificantly different from zero
   => joint test of whether all 10 portfolios have zero alphas rejected

3. Size effects and Empirical Evidence

   Basic idea:

       =>

B. Momentum

   =>

C. Implications of Positive-Alpha Trading Strategies

   Two possibilities:

1. CAPM correct, but investors ignoring opportunities to earn extra return without extra
   risk
   => unaware of opportunities or costs exceed benefits

2. Market portfolio is not efficient so that beta with respect to market does not capture
   risk

   a. Proxy error:

   b. Behavioral biases:

   c. Alternative Risk Preferences and Non-tradable Wealth:

       => for example, the risks associated with human capital are not tradeable
       Note: Section 13.7 (which we are skipping) derives models with more than one
           source of risk