Fin 585

Diether

**Questions**

1. **Suppose the long-run mean of the return on the value-weight portfolio of NYSE stocks is 12% per year. Suppose there is statistically reliable evidence that a group of analysts can predict when the return will be above or below its long-run mean; that is, they can identify periods when the expected return is not 12 percent. Does their forecast power imply that the market is inefficient. Explain.**

Yes, as there are potential gains that are unrealized, implying opportunity for arbitrage. Furthermore, the fact that it can be ascertained where a stock is relative to its mean, or where it “should” be, is evidence that the price does not reflect all relevant information.

1. **“At each time 𝑡 we get a drawing from the joint distribution of prices assessed by the market in setting prices at the beginning of time 𝑡−1. Thus, with long time series on prices, it is easy to test whether the market uses all information about next period’s prices in setting this period’s prices. No model of market equilibrium is required.” Do you agree?**

I disagree, as this assumes an efficient market where prices reflect all information, and seeks to interpret data in the place of economic theory. This risks overemphasizing temporary distortions (e.g., a pandemic) that may unduly influence the data, while fundamental principles of economic growth and shrinkage could be underrepresented or overlooked in certain periods.

1. **Suppose the market is trying to price security j so that its expected return is 𝐾𝑡. Suppose you are given the times series of 𝑟𝑗𝑡 and 𝐾𝑡 and you are able to use past GDP growth rates to predict 𝑟𝑗𝑡. Suppose you are able to use past GDP growth rates to predict 𝑟𝑗𝑡−𝐾𝑡. Does this imply that the market is not using all available information in pricing the security?**

Yes. If the market is attempting to set prices based upon expected returns but does not incorporate the known relationship between the returns of security j and GDP growth, then not all information is being used.

1. **Firm A’s managers are lazy and a bit crooked. They forego investment projects that would add value to the firm, and they give high-paying jobs to their incompetent children and friends. In contrast, the managers of firm B always act to maximize the value of the firm. It is clear, then, that even though we all agree that the common stocks of the two firms have the same risk, the stock of firm B has a higher expected return. Do you agree? Explain briefly**

Making returns requires individuals who can accurately discover and act upon market inefficiencies, and thus a more competent individual is expected to make greater returns. Ultimately, while the risk is equal, I expect that educated individuals will take calculated risk, or that they will get the reward from making risks, much more often than their uneducated counterparts.