Efficiency of capital markets

1) What has been the overall track record for Mutual Fund Managers? While the question of overall track record must be determined by how the questionand data set are framed, Malkiel finds that, when accounting for survivorship bias. Mutual fund managers have tended to underperform the market (p. 571). This includes performance once expenses are accounted for.

2) What is survivorship bias and how does it impact interpretation of the data? Survivorship bias is the condition of counting only those mutual funds that have done well enough to succeed in the marketplace. Funds that have bet against the market and performed poorly have been closed or folded into other funds, because their performance is not strong enough to attract new buyers. When one counts fund performance over two different periods of time, if one does not allow for survivorship bias, the data can be biased in favors of those funds that have done well, and can make the overall market's fund performance seem better than it is.

3) What is the relationship between risk and return? How do we normally calibrate returns for risk? In a classic model, the higher the risk, the greater the return should be. Risk is the potential for loss weighed against return, the actuality of gain. With survivorship bias and fund piloting (where a group of funds begin at the same time with the notion that only the successful will ultimately survive), risk tends to be hidden by the mutual fund industry, making it seem like returns are higher than they are, and safer.

4) What is alpha and what does it measure? Alpha is a risk-adjusted statistical measure that weighs the return that is afforded in excess of the risk borne. It can usually be determined by subtracting funding performing from a relevant benchmark index. If one bets on the fund manager, one

expects the fund to outperformance the basket of stocks bought in an index.

5) What is a t test and what does it measure? The t-test is a statistical measure used to weigh the significance of two different sample means, through a comparison of the variance between the means. In the case of the Malkiel study (p. 554) it indicates that there is a fairly strong difference between the mean performance rating of surviving funds and non-surviving funds, supporting the notion that survivorship bias must be account for to get a true picture of mutual fund records over time.

6) What conclusions can you reach about " the hot hand" investor? Who are the notable exceptions to this observation? The idea of a “ hot hand” manager is debunked by Malkiel, who shows that in most cases during the period studies, 1971-1991, there was no such effect found to be statistically significant. There is evidence that through the 1970s, a persistence effect was in play, but the effect disappeared during the 1980s, Further, Malkiel lists only the Magellen Fund as being among the top 10 performers in both decades. The analysis suggests that there “ winners tend to repeat” just over half of the time during the latter period studied (p. 560).

7) What is a mutual fund expense ratio? What has been the track record of funds with high expense ratios vs low. What does that tell you about market efficiency? Expense ratios are calculated by dividing total expenses by average assets in a fund, to measure the costs associated with investing. When expense ratios are weighed into performance, fund performance drops even further below the market indices. Malkiel points out, further, that there seems to be no relationship between expenses and performance. Both high and low expense funds perform poorly. This suggests that the costs of gathering data (as these relate to expenses) are not worth it, because

market efficiency prohibits any managers from getting advantageous information to act on. Malkiel asks whether investors ultimately get their money’s worth for betting on mutual funds (p. 570).

8) What do the Ball Brown studies say conclude about returns in anticipation of earnings announcements? Why do you think this is? Is this inconsistent with the concept of market efficiency? Brown and Ball show that the market had already anticipated the news of earnings reports and had priced in the value, either higher or lower (at least up to 80% of the value). The reasons for this is the fact that market watchers spot trends and make use of information, and markets tend to move toward a stable level, even in the absence of expected information. This suggests that the concept of market efficiency does in fact work to essentially negate all but the most extreme examples of market surprises.

9) What is a stock split and why does price rise in anticipation of a split? Is this inconsistent with the concept of market efficiency? A stock split is characterized by the splitting of a stock (e. g., 2 for 1) to keep its price at a certain level. Research has shown that 30 months prior to splits, in anticipation of a split based on stock price, the price rises and then plateaus at a new normal. This suggests that information about the company that propels the stock price to rise drives up the price until the split occurs. It indicates that markets are efficient even in the face of companies themselves not yet realizing the proper value of their stock.

10) What does Ball cite as limitations of the theory of efficient markets? Be prepared to discuss each. The number of limitations to efficient market theories are listed beginning on page 6 of 14, and include empirical data anomalies (such as price overreactions and underreactions, excess volatility,

expense factors, and seasonal patterns), and defects in efficiency itself (such as failure to consider transactional costs and microstructural effects.)