Behavioral Finance- FIN 645

Midterm Exam

Caution:

Please note this is an *individual* exam only- and not a team or group effort. All relevant UMUC policies- and especially those related to Academic Honesty- will be in full force. So please keep that in mind at all times.

INSTRUCTIONS:

1. Please answer all the following three (3) questions. If you are not using Excel files for any reasons if and where calculations are involved, make sure to show your work for all the problems; otherwise, you may lose all the scores set aside for the affected questions/problems. For Excel files, assuming you set up your formulas correctly, I can always trace your work.
2. For each question that requires calculations, you need to clearly state and reference your assumptions; or the source for any data/info used in your solutions. You may do this in a number of ways, including entering explanations right on your Excel sheets, or using a separate sheet for each problem; whichever is convenient to you. I need such info to be able to verify your calculations for accuracy, evaluation and partial grading where applicable. Needless to say you can not make assumptions that go against the facts and realities surrounding each question. Sizeable points will be taken off for providing unexplained numbers, calculations and responses.
3. At submission time, you can ONLY submit a maximum of two (2) files for the entire exam- one Excel file (if you use Excel at all for this test) and one Word file.
4. There is a maximum of 100 points for this test. Scores for each question are shown in the parentheses at the end of each question. For qualitative questions, maximum allowed pages are also given at the end of each question.
5. As stated in the syllabus, you will have until *11:59 PM EST on Sunday, March 18th*, to submit your answers via the related file in your assignment folder. This gives ample time for the exam.

I wish all of you the very best.

QUESTION 1.

Consider a person with the following value function under prospect theory:

$v(w) = w^{.5}$ if $w \geq 0$

$= -2(-w)^{.5}$ if $w < 0$

a. Is this individual loss averse? Explain
b. Assume that this individual weights values by probabilities, instead of using prospect theory weighting function. Which of the following prospects would be preferred?

P1(.8, 1000, -800)
P2(.7, 1200, -600)
P3(.5, 2000,-1000)

Note: Points will be taken off for responses that lack organization and order.
Grade: 35

QUESTION 2.

Details

Between March and July 2000, Intel's stock price rose rapidly, to the point where in July Intel's market capitalization was above $500 billion, making it the largest firm in the world. Then on Thursday, September 21, 2000, Intel issued a press release indicating that its revenue for the third quarter would grow between 3 percent and 5 percent, not the 8 to 12 percent that analysts had been forecasting.

In response to this news, Intel's stock price dropped by 30 percent over the next five days. Intel's chairman, Craig Barrett, commented on the reaction, stating: "I don't know what you call it but an overreaction and the market feeding on itself." An academic study found that at the time, virtually none of the analysts following Intel used discounted cash flow analysis to estimate the fundamental value of Intel's stock. Instead, the study points out that analysts react to bad news in the same way that a bond-rating agency reacts to bad news. Just as a bond-rating agency would downgrade the firm's debt, analysts downgrade their stock recommendations. After Intel's press release, approximately one-third of the analysts following the firm downgraded their recommendations. Some of the recommendation changes were extreme. Notably, the cumulative return to Intel's stock, relative to the S&P 500, displayed a negative trend for the period September 2000 through September 2002.

In what some might see as a replay of history, consider an event that took place at the online firm eBay during January 2005. Between the end of 2002 and the end of 2004, eBay's shares increased by over 200 percent. During December 2004, eBay's stock price peaked at $118, and its forward P/E ratio was 73. At the time, the firm's market value was $81.7 billion. Fourth-quarter earnings for eBay grew by 44 percent to $205.4 million, or 30 cents a share.

Just as Intel had announced that its earnings growth would be lower than forecast, eBay's actual earnings for the fourth quarter of 2004 fell a penny below analysts' consensus forecasts. Meg Whitman, eBay's CEO, stated that future earnings would be lower because of higher advertising costs and reinvestment.

In response, eBay's stock price fell from $103 to $81 per share. The firm's market value fell to $56 billion. Many analysts immediately downgraded eBay's stock. Rajiv Dutta, eBay's CFO, issued a public statement to say that his concern was managing eBay's long-run prospects, not its stock price.

On January 26, 2005, James Stewart wrote about eBay in his *Wall Street Journal* column "Common Sense." Stewart indicated that he would consider purchasing eBay stock in the wake of its decline. While acknowledging that eBay could not grow at a stratospheric rate forever, Stewart noted that eBay is in the process of transforming world commerce and has a natural monopoly. Were he to own just one Internet stock, Stewart said, eBay would be that stock.

Questions

1. Discuss whether the analysts following Intel appear to have been influenced by any psychological phenomena, both generally and in their reaction to Intel's announcement in September 2000.
2. Discuss whether James Stewart's assessment of eBay reflects any psychological phenomena.
3. In what ways are the events described at Intel and eBay similar and in what ways are they different?

Note: Points will be taken off for write-ups that lack organization and order.
Maximum pages: 4 pages, double-space, size 12;
Grade: 35

QUESTION 3.

Historically high return stocks have exhibited lower risk than low return stocks….just the opposite what the SML (Security Market Line) predicts. Wall Street (and unsuspecting financial planners) has been very successful in selling main street the story that higher risk = higher reward, while the smart money knows this and is able to effectively arbitrage excess returns from low risk stocks? To what extent does this make sense? Discuss and elaborate your response.

Note: Points will be taken off for write-ups that lack organization and order.

Maximum pages: 1-2 pages, double-space, size 12.
Grade: 30

End!