BEM 103 Introduction to Finance.

Homework 3: Markets and efficiency

Due Monday October 21 5pm (in TA or instructor boxes).

1. Financial Literacy: Answer these questions in 3 steps. (1) give an answer to the question, (2) look over the material assigned for class and find a definition (3) modify, if need be, your first answer. The goal is not for you to memorize a given answer but to be sure you can explain the concept to someone. If you can't, then you do not control that concept.
   a. Bid-ask spread
   b. Underwriting
   c. Value additivity
   d. Broker
   e. Managed fund
   f. Double auction

2. Closed end funds.

The Templeton Dragon fund is a closed end fund. Its last transaction was $26.7, its net asset value at the same time was 29.9. It has 38 million shares outstanding and the order book at 9:20 am is show in the table below. And the monthly volume of trade is 60K shares a day.

Bid		Ask	
Price	Size	Price	Size
25.71	100	26.85	100
24.65	100	26.88	100
23.85	100	26.95	100
19.12	200	26.98	100

2.A Does this empirical evidence suggest that following axiom fails?
(i) Value additivity, (ii) Financial markets are competitive, (iii) markets are efficient.
Explain your choice, you may argue for a combination of these answers.
2.B why would anyone want to invest in this fund? (if they do not what is their alternative?)
2.C suggest a way to extrapolate from the order book to compute the supply curve of shares and make a guess as to how many shares you could buy for a price less than the NAV. Would that allow you to gain control of the fund.

3. Taxes and Modigliani Miller

CITinc.com is a well established firm it has a market capitalization of 5 billion dollars, 1.2 billion dollars in debt outstanding, a line of credit at the Bank of Pasadena of 400 million dollars that it has not yet used, and a cash reserve of 150 million dollars. It pays 200 million dollars in dividends, the 1 year rate of interest is 4%. On January 1 the head of R&D comes to the CEO and announce that she has a terrific product that will cost 100 million to bring to market by Christmas season and expected profits before capital costs are 110 million dollars next Christmas season.

3.A should the CEO agree to undertake the project?

3.B The CEO can issue 100 million dollars in new stock, draw on the credit line, or from cash reserves. The interest at which the firm borrows is the same as what the firm receives for its reserves. What choice is best?
3.C. if it issues new stock it must do so all at once (on January 2), if it uses its cash reserves or draws on its credit line, the firm only starts to pay interest when it draws the money (in thirds on March 1 May 1 and September 1). Does that alter the choice above? why?
3.D Now consider the fact that if the firm does not pay taxes on interest but faces a 20% tax on dividends paid out. What is the best financial strategy for the firm to follow?

4 UPC

On 1/10/85, the following announcement was made: "Early today the Justice Department reached a decision in the UPC case. UPC has been found guilty of discriminatory practices in hiring. For the next five years, UPC must pay $2 million each year to a fund representing victims of UPC policies."

A. Should investors not buy UPC stock after the announcement because the litigation will cause an abnormally low rate of return over the next five years?
B. Would the amount of debt that the firm carries change your mind?

5 Efficient Markets Hypothesis

"The Japanese economy has deep structural problems, which the Japanese seem reluctant to overcome. We do not see any major change in this situation over the next two to three years. Hence, we advise against investing in the Tokyo stock market, because we expect returns to be below average for the next two to three years."

A. Does the statement above make sense in view of the Efficient Markets Hypothesis?

6 Facebook

Return to the slide for Class 4. Based on the data you see there and what you can glean from the web, was Facebook overpriced at $38 when it was first issued? Why?