Recitation 4

Last one! Problems on EMH and Capital Structure

Question 1 [EMH]

“HP and 3Com have entered into a definitive agreement under which HP will purchase 3Com, a provider of networking, switching, routing and security solutions. Under the terms of the merger agreement (approved by the HP and 3Com boards of directors), 3Com stockholders will receive $7.90 (cash) for each share of 3Com common stock that they hold at the closing of the merger. The acquisition is subject to customary closing conditions, including the receipt of domestic and foreign regulatory approvals and the approval of 3Com's stockholders. The transaction is expected to close in the first half of calendar 2010. HP anticipates that the transaction will be slightly dilutive to fiscal 2010 non-GAAP earnings”

3COM’s share price around November 11, 2009

[I am looking for a clear, concise, on-point, and convincing discussion. No need to be long-winded.]
(a) 3 points
Use the share-price graph to evaluate how this situation is consistent and/or inconsistent with “Efficient Markets.”

(b) 3 points
3Comm share price at the end of 11.19.2009 is $7.44 per share? Is this consistent / inconsistent with “Efficient Markets”?

Question 2 [ EMH ]

Netflix Inc. is a movie subscription service. Originally, they delivered DVDs via the mail. More recently they added direct streaming. On Friday, September 2, 2011 (early in the morning), Netflix announced that they failed to negotiate a deal with Starz. This removed a large amount of content from Netflix’s on-demand streaming library.

a. Evaluate the comment:
“Anyone familiar with the home entertainment market is not surprised by this outcome. It has been clear for several days that Starz would abandon Netflix.”
A few weeks after the Starz announcement, Netflix announced an organizational change that would split the company into two autonomous units, one for streaming and one for DVD-by-mail.

b. Evaluate: “It is now a virtual certainty that this company is doomed. Clearly, everyone agrees that in two years, the customer base will dwindle to zero. And there is nothing but huge losses along the way.”

**Question 3 [ Capital Structure – NPV of issuing a bond ]**

Z Limited, a Canadian company (which is of no importance except when you pronounce it), is looking to issue a one-year bond. The company is already highly levered and there is a significant chance of bankruptcy. The bond has one cash-flow at maturity of $100 plus a coupon of $10. However, if the company is bankrupt, the bondholders will recover only $95. The chance of bankruptcy is 20%. However, this chance is completely idiosyncratic (beta=0). The risk-free rate is 2% and the equity risk-premium (E[rm-rf]) is 6%.

(a) What is the current price of the bond?

(b) What is the yield to maturity of the bond? (For this calculation, calculate the rate of return if the $110 cash flow is received as promised – that is no bankruptcy.)

(c) What is the expected rate of return a bondholder earns?

(d) Is this debt “cheap” or “expensive”?
Question 4 [Capital Structure]

Virtucon is a conglomerate that has two main business divisions. The Chemicals Division has a business (or asset) beta of 0.8. The Steel Division has a beta of 1.0. What is the beta of:

(a) The businesses combined
(b) A portfolio of all the debt and equity of the company
(c) The equity.

[For these calculations assume (quite reasonably) that the beta of the debt and the beta of the “cash” are zero.]

Market Values:

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<tr>
<th></th>
<th>Market Value</th>
<th>Beta</th>
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<tbody>
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<td>Debt</td>
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<td>Equity</td>
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Question 5 [Capital Structure]

Our Wealthy Shareholders Inc, or OWS Inc. for short, is a giant diversified industrial company with interests in mining, oil and gas, and nuclear power. They own assets throughout the United States and Canada. Their founder and long-term CEO, Montgomery Burns, was a firm believer in frugality. The company ruthlessly cuts costs (people have been fired for having distributed a memo photocopied using single-sided paper). Mr. Burns had a dim view of debt and high regard for simplicity, so the company had maintained a simple all-equity (no debt) capital structure. But Mr. Burns has retired. The new CEO is pondering a capital structure change. She is thinking of issuing debt and paying out the proceeds as a dividend as a permanent change to the capital structure. She has in mind a debt issue of $75 million.

Presently, the 10 million shares of OWS Inc. trade at $47.00. The company’s marginal tax rate is 40%.

a.
What is the effect on the value of the company, the debt, the equity, and the share-price after the transaction is announced? And after it is completed?
[Use the table format we used in class. Ignore any transaction costs.]
You are attending the board meeting discussing the proposed debt transaction. Various board members are asking questions and making comments. For each, offer your comments [concise and to the point].

b. “We will have the same assets generating the same cash flows. The risk to our shareholders is unchanged.”

c. “The large increase in net income from the tax shields will draw public criticism – we will be making even more money and that will cause us some public relations problems.”

d. “Our company is in industries with relatively low betas (about 0.3 to 0.4). As a result, under the proposed transaction, the likelihood of bankruptcy will be small.”