

**Quiz 1: Corporate Finance**

Answer all questions and show necessary work. Please be brief. This is an open books, open notes exam.

1. Respond to the following questions. (Each question is worth 1/2 a point)
  - a. Which of the following is a clear and unambiguous example of managers putting their interests over stockholder interests? (Pick only one)
    - i. Negotiating for a large compensation contract
    - ii. Focusing on increasing the market share of the company
    - iii. Paying greenmail to a bidder to avoid being taken over (in a hostile bid)
    - iv. Acquiring another company
    - v. Paying a large dividend
  - b. If you were a bondholder lending to a firm and you were worried that stockholders would take advantage of you, which of the following actions would concern you the most? (Pick only one)
    - i. A cut in the dividends paid to stockholders
    - ii. A reduction in debt
    - iii. Expansion into a risky new business
    - iv. A new stock issue
    - v. Accumulation of cash in the company
  - c. The stock prices of companies often jump when they report their earnings. In an efficient market, you would expect stock prices to increase when companies report an increase in earnings and to drop when they report lower earnings.
    - i. True
    - ii. False
  - d. If we choose firm value maximization as our objective in decision making, we do not need to assume that markets are efficient.
    - i. True
    - ii. False

2. You have been asked to estimate the cost of equity of TeleSoft Inc., an Israeli software firm that gets all of its revenues in the United States. The company is listed on both the Tel Aviv Exchange and has an ADR<sup>1</sup> listed on the NASDAQ. While the largest investor in the company is its Israeli founder/CEO, the next 14 largest investors are all diversified mutual funds in the United States. You have run four regressions, using the last 5 years of returns for each:

$$\text{Return}_{\text{TeleSoft}} = 0.15\% + 0.80 \text{Return}_{\text{Tel Aviv Exchange}}$$

$$\text{Return}_{\text{TeleSoft ADR}} = -0.12\% + 1.20 \text{Return}_{\text{NASDAQ}}$$

$$\text{Return}_{\text{TeleSoft ADR}} = -0.06\% + 1.60 \text{Return}_{\text{S\&P 500}}$$

$$\text{Return}_{\text{TeleSoft ADR}} = 0.04\% + 1.00 \text{Return}_{\text{Computer software index}}$$

The current U.S. treasury bond rate is 4.25% and the Israeli Government has ten-year shekel denominated bonds with an interest rate of 8%. Over the last 5 years, stocks have earned 8% more than bonds in Israel and 3% more than bonds in the United States. Over the last 80 years, the equity risk premium has been 4.75% in the United States and is unavailable for Israel. Estimate the U.S. \$ cost of equity for Telesoft. (2 points)

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<sup>1</sup> An ADR is a foreign stock that trades on a US exchange. Its price is denominated in dollars and investors in the US can buy and sell the stock like any other US stock.

3. Arios Software is a small software company with 60 million shares outstanding, trading at \$ 10 a share, and \$ 400 million in debt. You have estimated a regression beta of 1.82 for the firm using the last 5 years of data, during which period the firm had an average debt to equity ratio of 50%. The tax rate for the company is 40%.
  - a. Assuming that the regression beta is correct, estimate the correct levered beta today, given the firm's current debt to equity ratio. (2 points)

- b. Now assume that Arios Software is awarded a court judgment of \$ 1 billion from Microsoft for violation of software copyrights. Arios plans to use this money to pay a dividend of \$250 million, pay off \$ 250 million of debt and use the balance to invest in the computer hardware business. If the unlevered beta for computer hardware companies is 1.10, estimate the levered beta for Arios after these transactions. (4 points)