

FINM3093 Investments

Lecture 1 Exercises

1. Lanni Products is a start-up computer software development firm. It currently owns computer equipment worth \$30,000 and has cash on hand of \$20,000 contributed by Lanni's owners. For each of the following transactions, identify the real and/or financial assets that trade hands. Are any financial assets created or destroyed in the transaction?
 - a. Lanni takes out a bank loan. It receives \$50,000 in cash and signs a note promising to pay back the loan over 3 years.
 - b. Lanni uses the cash from the bank plus \$20,000 of its own funds to finance the development of new financial planning software.
 - c. Lanni sells the software product to Microsoft, which will market it to the public under the Microsoft name. Lanni accepts payment in the form of 1,250 shares of Microsoft stock.
 - d. Lanni sells the shares of stock for \$100 per share and uses part of the proceeds to pay off the bank loan.
2. Dee Trader opens a brokerage account and purchases 300 shares of Internet Dreams at \$40 per share. She borrows \$4,000 from her broker to help pay for the purchase. The interest rate on the loan is 8%.
 - a. What is the margin in Dee's account when she first purchases the stock?
 - b. If the share price falls to \$30 per share by the end of the year, what is the remaining margin in her account?
 - c. If the maintenance margin requirement is 30%, will she receive a margin call?
 - d. What is the rate of return on her investment?
3. Old Economy Traders opened an account to short-sell 1,000 shares of Internet Dreams from the previous problem. The initial margin requirement was 50%. (The margin account pays no interest.) A year later, the price of Internet Dreams has risen from \$40 to \$50, and the stock has paid a dividend of \$2 per share.
 - a. What is the remaining margin in the account?
 - b. If the maintenance margin requirement is 30%, will Old Economy receive a margin call?
 - c. What is the rate of return on the investment?

4. You are bearish on Telecom and decide to sell short 100 shares at the current market price of \$50 per share.
 - a. How much in cash or securities must you put into your brokerage account if the broker's initial margin requirement is 50% of the value of the short position?
 - b. How high can the price of the stock go before you get a margin call if the maintenance margin is 30% of the value of the short position?

5. Here is some price information on Marabel, Inc.:

	Bid	Ask
Marabel	69.95	70.05

You have placed a stop-loss order to sell at \$70. What are you telling your broker? Given market prices, will your order be executed?

6. Here is some price information on FinCorp stock. Suppose that FinCorp trades in a dealer market.

	Bid	Ask
	55.25	55.50

- a. Suppose you have submitted an order to your broker to buy at market. At what price will your trade be executed?
 - b. Suppose you have submitted an order to sell at market. At what price will your trade be executed?
 - c. Suppose you have submitted a limit order to sell at \$55.62. What will happen?
 - d. Suppose you have submitted a limit order to buy at \$55.37. What will happen?
7. An open-end fund has a net asset value of \$10.70 per share. It is sold with a front-end load of 6%. What is the offering price?
8. A closed-end fund starts the year with a net asset value of \$12.00. By year-end, NAV equaled \$12.10. At the beginning of the year, the fund was selling at a 2% premium to NAV. By the end of the year, the fund is selling at a 7% discount to NAV. The fund paid year-end distributions of income and capital gains of \$1.50.
 - a. What is the rate of return to an investor in the fund during the year?

- b. What would have been the rate of return to an investor who held the same securities as the fund manager during the year?
- 9. You purchased 1,000 shares of the New Fund at a price of \$20 per share at the beginning of the year. You paid a front-end load of 4%. The securities in which the fund invests increase in value by 12% during the year. The fund's expense ratio is 1.2%. What is your rate of return on the fund if you sell your shares at the end of the year?