**Seminar 2**

**Markets types**

**2.** **(57/2.)** Many assets trade in more than one type of market. In what types of markets do the following trade?

1. used cars
2. paintings
3. rare coins

Solution:

1. Used cars trade in dealer markets (used-car lots or auto dealerships) and in direct search markets when individuals advertise in local newspapers or internet listings.
2. Paintings trade in broker markets when clients commission brokers to buy or sell art for them, in dealer markets at art galleries, and in auction markets.
3. Rare coins trade in broker markets, for example, in coin shops or shows, but they also trade in auctions and direct search markets when individuals advertise they want to buy or sell coins.

**Market and limit orders**

**3. (79/19.)** Here is some price information on Fincorp stock. Suppose first 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 you trade be executed?

b) Suppose you have submitted an order to sell at market. At what price will your trade be executed?

c) Suppose an investor has submitted a limit order to sell at $55.62. What will happen?

d) Suppose another investor has submitted a limit order to buy at $55.37. What will happen?

Solution:

1. 55.50
2. 55.25
3. The trade will not be executed because the bid price is lower than the price specified in the limit sell order.
4. The trade will not be executed because the asked price is greater than the price specified in the limit buy order.

**4. (79/15.)** Consider the following limit-order book of a specialist. The last trade in the stock took place at a price of $50.

|  |  |  |  |
| --- | --- | --- | --- |
| Limit-Buy orders |  | Limit-Sell orders |  |
| Price | shares | price | shares |
| 49.75 | 500 | 50.25 | 100 |
| 49.50 | 800 | 51.50 | 100 |
| 49.25 | 500 | 54.75 | 300 |
| 49.00 | 200 | 58.25 | 100 |
| 48.50 | 600 |  |  |

1. If a market-buy order for 100 shares comes in, at what price will it be filled?
2. At what price would the next market-buy order be filled?
3. If you were the specialist, would you desire to increase or decrease your inventory of this stock?

Solution:

1. The buy order will be filled at the best limit-sell order price: $50.25
2. The next market buy order will be filled at the next-best limit-sell order price: $51.50
3. You would want to increase your inventory. There is considerable buying demand at prices just below $50, indicating that downside risk is limited. In contrast, limit sell orders are sparse, indicating that a moderate buy order could result in a substantial price increase.

**Stop orders**

**5. (80/1.)** If you place a stop-loss order to sell 100 shares of stock at $55 when the current price is $62, how much will you receive for each share if the price drops to $50?

1. $50.
2. $55.
3. $54.87.
4. Cannot tell from the information given.

Solution:

d - The broker will sell, at current market price, after the first transaction at $55 or less. So the exact price is currently unknown, but hopefully the next price will be close to the 55.

**6. (78/10.)** Suppose that you sell short 100 shares of IBM, now selling at $120 per share.

1. What is your maximum possible loss?
2. What happens to the maximum loss if you simultaneously place a stop-buy order at $128?

Solution:

1. In principle, potential losses are unbounded, growing directly with increases in the price of IBM.
2. If the stop-buy order can be filled at $128, the maximum possible loss per share is $8. If the price of IBM shares go above $128, then the stop-buy order would be executed, limiting the losses from the short sale.

**Margin account**

**7. (79/16.)** You are bullish on Telecom stock. The current market price is $50per share, and you have $5,000 of your own to invest. You borrowed an additional $5,000 from your broker at an interest rate of 8% per year and invest $10,000 in the stock.

1. What will be your rate of return if the price of Telecom stock goes up by 10% during the next year? (Ignore the expected dividend.)
2. How far does the price of Telecom stock have to fall for you to get a margin call if the maintenance margin is 30%? Assume the price fall happens immediately.

Solution:

1. You buy 200 shares of Telecom for $10,000. These shares increase in value by 10%, or $1,000. You pay interest of: 0.08 x 5,000 = $400

The rate of return will be:

 = 0.12 = 12%

1. The value of the 200 shares is 200P. Equity is (200P – $5,000). You will receive a margin call when:

= 0.30 when P = $35.71 or lower

**8. (78/13.)** Dée 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%.

1. What is the margin in Dée’s account when she first purchases the stock?
2. If the price falls to $30 per share by the end of the year, what is the remaining margin in her account?
3. If the maintenance margin requirement is 30%, will she receive a margin call?
4. What is the rate of return on her investment?

Solution:

1. The stock is purchased for: 300 x $40 = $12,000

The amount borrowed is $4,000. Therefore, the investor put up equity, or margin, of $8,000.

1. If the share price falls to $30, then the value of the stock falls to $9,000. By the end of the year, the amount of the loan owed to the broker grows to:

$4,000 x 1.08 = $4,320

Therefore, the remaining margin in the investor’s account is:

$9,000 - $4,320 = $4,680

1. The percentage margin is now: $4,680/$9,000 = 0.52 = 52%

Therefore, the investor will not receive a margin call.

1. The rate of return on the investment over the year is:

(Ending equity in the account - Initial equity)/Initial equity

= ($4,680 - $8,000)/$8,000 = - 0.415=-41.5%

**Short Selling**

**9. (80/2.)** You wish to sell short 100 shares of XYZ Corporation stock. If the last two transactions were at 34.12 followed by 34.25, you only can sell short on the next transaction at a price of

1. 34.12 or higher.
2. 34.25 or higher.
3. 34.25 or lower.
4. 34.12 or lower.