Homework for chapter 6 and 7

Finance

Homework for Chapter 6 and 7 Homework for Chapter 6 and 7 Chapter 6 Question B: If you were restricted to investing in publicly traded common stocks, yet you wanted to minimize the riskiness of your portfolio as measured by its beta, then according to the CAPM theory you should invest an equal amount of money in each stock in the market. That is, if there were 10, 000 traded stocks in the world, the least risky possible portfolio would include some shares of each one.

2

D: If the two portfolios have the same beta, their required returns will be the same, but Janes portfolio will have less market risk than Dicks.

3

B: The required return on Portfolio P is equal to the market risk premium (rM − rRF).

Beta

Stock X 0. 7

Stock Y1. 3

Average Beta(0. 7+1. 3)/2

Therefore, the return is equal to the risk premium based on the following

Return = Beta * (rM-rRF)

Return = 1 * (rM-rRF)

4

D: The SML relates a stocks required return to its market risk. The slope and intercept of this line cannot be controlled by the firms managers, but managers can influence their firms positions on the line by such actions as changing the firms capital structure or the type of assets it employs.

5

B: If investors become more risk averse but rRF does not change, then the required rate of return on high-beta stocks will rise and the required return on low-beta stocks will decline, but the required return on an average-risk stock will not change.

Chapter 7

Question

1

E: The price of a stock is the present value of all expected future dividends, discounted at the dividend growth rate.

2

A: Stock As expected dividend at t = 1 is only half that of Stock B.

Constant Growth (Gordon) Model Formula

Current Dividend = Current Price * (k-g)/(1+g)

Current Pricekg

Stock A2515%10%

Stock B2515%5%

Stock AStock B

Current Dividend = 1. 14 2. 38

3

C: The preemptive right is a provision in all corporate charters that gives preferred stockholders the right to purchase (on a pro rata basis) new issues of preferred stock.

4

C: $29. 05

d01. 25

g25%

k10%

D1 1. 56

D2 1. 95

D3 2. 44

D4 3. 05

D5 3. 05

Discount Factor

10. 912409

20. 83249

30. 759571

40. 693039

Price

P0 29. 05

5

D: 12. 97%

Estimated rs

12. 97%

Actual Market Price, P0:

15

Rapid Growth

Normal Growth

Year

0

1

2

3

4

5

Dividend Growth Rate

10%

10%

10%

5%

5%

Calculated Dividends (D0 had been Paid)

1

1. 1

1. 21

1. 331

1. 39755

1. 467428

TV3 = P3 = D4/(rs-g4)

17. 53513

Total CFs

1. 10

1. 21

18. 87

PVs of CFs when discounted at Estimated rs

0. 97

0. 95

13. 09

Calculated Price = P0 = Sum of PVs =

15