Price, Risk, and Return Relations

[Solutions]

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1. Any 2 assets with identical risks and rewards must be priced equally.
    a. **True**
    b. False

    Solution:

    If not, the law of one price is violated, and an arbitrage opportunity emerges.

2. Which ONE of the following describes an “arbitrage” opportunity?
    a. A case where you can use funds attained from the sale of one stock to buy another stock.
    b. A scenario where you can bet on the price of any stock to go up, without any risk.
    c. **A case where 2 assets with identical risks and payoffs trade at considerably different prices.**
    d. A scenario where 2 assets with significantly different risks and rewards trade at significantly different prices.
    e. A case where one can earn money with very large investments albeit at a relatively low risk.

3. Knots & Bolts Plc’s stock has a 12% expected return with a 18% risk. The stock currently trades at £11.93. Nuts & Crosses Plc, a similar firm with identical risk and rewards should trade at
    a. £10.65
    b. £10.11
    c. **£11.93**
    d. £13.36
    e. £14.08

    Solution:

    Since the 2 stocks are identical, their prices must also be equal.

4. Watson Inc. and Sherstock Plc operate in similar industries with identical risks and rewards. If Sherstock Plc's stock trades at €100 and Watson Inc.,'s trades at €90, then an arbitrage opportunity is very likely to exist.
    a. **True**
    b. False

5. Moondog Inc.'s stock maintains a 16% annual expected return and 27% risk with a current price of $73.59. What is its competitor, Starcat Inc.'s expected return if its stock is priced similarly and its risk is identical to Moondog Inc.?
    a. **Approximately equal to 16%**
    b. Relatively more than 16%
    c. Relatively less than 16%
    d. Significantly more than 16%
    e. Significantly less than 16%

6. Which ONE of the following is FALSE?
    a. Generally speaking, safer assets are worth more than riskier assets.
    b. Generally speaking, riskier assets are worth less than safer assets.
    c. Generally speaking, the expected return on safer assets is lesser than the expected return on riskier assets.
    d. **Generally speaking, the expected return on safer assets is greater than the expected return on riskier assets.**
    e. Generally speaking, two assets trading at the same price will have identical risks and rewards.

7. The value of an asset...
    a. Increases as the risk increases and decreases as the expected return increases.
    b. Decreases as the risk increases and increases as the expected return increases.
    c. Increases as the risk decreases and decreases as the expected return increases.
    d. Decreases as the risk decreases and decreases as the expected return decreases.

8. Risk and expected return maintain a proportional relationship so that as risk increases, expected return increases.
    a. True
    b. False

9. Of the 3 stocks below, which one is likely overvalued?

	Bit Plc	Fit Plc	Watch Inc.
Expected Return	12%	12%	10%
Risk	19%	16%	23%
Price	$793.53	$742.97	$814.58

    a. Bit Plc
    b. Fit Plc
    c. Watch Inc.
    d. None of the above

Solution:

Watch Inc.'s expected return is lower than Bit Plc and Fit Plc, yet its risk is higher than both. Rationally, there is no reason for Watch Inc. to trade at a considerably greater price than the other 2 securities, meaning it is likely overvalued.

10. Of the 3 stocks below, which one is likely undervalued?

	Bit Plc	Fit Plc	Watch Inc.
Expected Return	12%	12%	10%
Risk	19%	16%	23%
Price	$793.53	$742.97	$814.58

a. Bit Plc
b. Fit Plc
c. Watch Inc.
d. None of the above

Solution:

Fit Plc offers the same expected returns as Bit Plc, yet is less risky.

It should therefore be worth more than Bit Plc.

A price of $742.97 < $793.53 might mean the stock is undervalued.