Economics 252 – Financial Markets

Spring 2011

Lecture 4: Portfolio Diversification and Supporting Financial Institutions

January 24, 2011

Multiple Choice Questions

Question 4.1

Reconsider the example from class, in which an investor borrows at the risk-free rate to invest in VOC. Assume that the risk-free rate is 5%, and that VOC has 20% expected return and 40% return standard deviation. How much leverage would an investor have to choose in order to attain 27.5% expected return and 60% return standard deviation?

(a) 2-for-1 leverage.
(b) 3-for-1 leverage.
(c) 1.5-for-1 leverage.
(d) 2.5-for-1 leverage.

Question 4.2

Consider the Efficient Portfolio Frontier that arises for a given set of risky assets, and suppose that all portfolios on this frontier have strictly positive return standard deviation. Moreover, assume that there is a given risk-free rate. What is the Tangency Portfolio?

(a) The Tangency Portfolio is exactly equal to the risk-free asset.
(b) The Tangency Portfolio is the portfolio on the Efficient Portfolio Frontier that has the minimum standard deviation.
(c) The Tangency Portfolio is the asset out of the original set of risky assets that has the highest expected return.
(d) Out of all straight lines that connect the riskless asset with any portfolio along the Efficient Portfolio Frontier, the line that runs through the Tangency Portfolio has the highest expected return for a given level of standard deviation.

Question 4.3

Within the framework of the Capital Asset Pricing Model, consider stocks A and B. Asset A's β is strictly bigger than asset B's β. Moreover, the expected market return exceeds the risk-free rate. Which of the two assets has a higher expected return?

(a) The expected return for both assets is the same.
(b) Asset A.
(c) Asset B.
(d) More information is needed to answer this question.

Question 4.4

Consider an Efficient Portfolio Frontier that arises for a given set of risky assets, and assume that there is a given risk-free rate. How does the Sharpe-ratio change along the tangency line?

(a) The Sharpe-ratio does not change along the tangency line, but is constant.
(b) The Sharpe-ratio increases for higher expected returns.
(c) The Sharpe-ratio decreases for higher expected returns.
(d) The Sharpe-ratio is between 0 and 1 for the section of the tangency line between the risk-free asset and the tangency portfolio, and is strictly bigger than 1 beyond the tangency portfolio.

Question 4.5

What ban has been introduced on the Amsterdam Stock Exchange from 1609 until 1611, and whose actions are considered responsible for this ban?

(a) John Lintner traded too many shares on one day at the Amsterdam Stock Exchange, leading to a ban on big-sized trades (buying or selling more than 1000 shares a day).
(b) Harry Markowitz purchased all shares of VOC, and was planning to shut down the company, leading to a ban for majority ownership (>50% of the shares) for any company on the Amsterdam Stock Exchange.
(c) Isaac La Maire built massive short-interest in VOC, forcing down its price, which led to a ban of short-selling on the Amsterdam Stock Exchange from 1609 until 1611.
(d) The Pope banned any trading on the Amsterdam Stock Exchange from 1609 until 1611, because he ruled that trading of stocks was un-Christian.

Correct Answers

4.1: (c)
4.2: (d)
4.3: (b)
4.4: (a)
4.5: (c)