



## FIN 366: INVESTMENTS CRITICAL THINKING & CONCEPTUAL QUESTIONS

### Chapter 6:

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1. What are some examples of market and firm-specific risk?
2. Can we eliminate all risk when we invest?
3. What does increasing the number of companies in our portfolio do to the systematic and unsystematic risk?
4. What is “diversification” and what can it achieve? Does it matter how we diversify so long as we just increase our number of stocks and/or bonds?
5. Your friend tells you “I think my financial advisor is trying to mislead me. He keeps telling me that I can lower my overall risk if I add some stocks to my bond portfolio. But stocks are riskier than bonds...there’s just no way that this is true!” What do you tell your friend?
6. Why is the risk of a portfolio not just a weighted average of the individual asset standard deviations?
7. Why are correlations important when considering diversification?
8. If you want to efficiently diversify, should you buy portfolios that are negatively correlated or highly correlated with what you already own?
9. Which portfolio is better? One with a 30% *expected* return or one with a 20% *expected* return?
10. Which portfolio is better? One with a 30% *expected* return with a standard deviation of 5% or one with a 20% *expected* return with a standard deviation of 8%?
11. Can you draw and label an investment opportunity set (IOS) of 2 risky securities?
12. Where is the minimum variance portfolio on the IOS?
13. Why shouldn’t we always hold the minimum variance portfolio if it has the lowest level of risk?
14. How does the IOS shape change as the correlation between assets increases and decreases?

15. What would be the shape of the IOS if two risky securities had a correlation coefficient of  $-0.9$ ? What if they had a correlation of  $+0.9$ ?
16. You compute that the optimal risky portfolio between a stock index fund and a bond index fund is 80% stock and 20% bond. Would this be appropriate for someone near retirement?
17. You compute that the Sharpe ratio for an optimal risky portfolio is 0.565. How would this compare to the Sharpe ratio of a complete portfolio that consists of 30% in this optimal risky portfolio and 70% in the risk-free asset?
18. What is the definition of the efficient frontier? Can you draw and label an efficient frontier?
19. Why wouldn't you choose some portfolio below the efficient frontier?
20. Do you have to choose to hold a portfolio that lies on the efficient frontier itself? What if the portfolio lies on a positive-sloping tangent line drawn from the risk-free rate to the efficient frontier?
21. How can you use the risk-free rate to find the optimal risky portfolio?
22. How do we interpret the point that lies on the CAL tangent to the efficient frontier?
23. What is the separation property, and what implication does it have for wealth management and portfolio management?
24. Why do we use the index model? How is it defined?
25. Can you draw and label the security characteristic line? How is it obtained?
26. What is the definition of beta, alpha, and R-squared? Which tells us (a) the stock's return when the market is flat, (b) the proportion of the stock's variance explained by the market, and (c) the stock's systematic risk?
27. In what situations would you want a stock to have a high beta? What about a high alpha?
28. The *ProShares Short S&P 500 ETF* (ticker = SH) is a fund that seeks to return the opposite (or inverse) of the S&P 500. That is, if the S&P 500 goes up 2% in one day, the ETF is designed to fall 2% on that day. Why (or when) would someone hold this ETF? Without looking up this stock's info on Yahoo Finance, what should its approximate beta be?

