

Old Exam Questions  
Performance Measures

**READ FIRST:** The following questions are reproduced from my previous exams. Exam formats have differed over time, so you may notice some differences in formatting or question style. The intent is that these questions will help you to practice, but it is **NOT** intended to replace your own study habits.

1. Your portfolio earned an 8% return last year. If the risk free rate was 2% and your standard deviation was 15%, what would you estimate your Sharpe ratio was?
  - A. 0.33
  - B. 0.4
  - C. 0.53
  - D. 0.67
  
2. You are attempting to calculate the Treynor measure for the market portfolio. You know that its expected return is 12%, the risk free rate is 3%, and its standard deviation is 30%. What is your estimate of the Treynor measure?
  - A. 9
  - B. 12
  - C. 18
  - D. 24
  - E. 30
  
3. You are attempting to evaluate your portfolio's performance. Your portfolio consistently earns an 8% return, while T-bills hover around 2%. Your portfolio's variance is 36%. What is the Sharpe ratio of your portfolio?
  - A. 0.06
  - B. 0.08
  - C. 0.1
  - D. 0.1667
  - E. A different value

4. You are analyzing the risk-taking of your portfolio. You know that your portfolio's standard deviation was 20%, and you know that your portfolio's beta was 1.5. You expect that your portfolio will yield a 20% return, and you figure that the T-bill rate will be 5%. What is your portfolio's Treynor measure?
- A. 10
  - B. 15
  - C. 40
  - D. 75
  - E. A different value
5. You want to figure out how efficient your portfolio is. Your portfolio's return over the last 5 years has averaged 15%, while the T-bill rate over the same period was 1%. Your portfolio's variance was .04, while its beta was 1.4. What is your portfolio's Sharpe ratio?
- A. 0.1
  - B. 0.35
  - C. 0.7
  - D. 3.5
  - E. A different value

Use the following information for the next two questions:

You are tracking the performance of your portfolio relative to your benchmark portfolio. You invest in a set of 4 industries. The data on weightings and returns is presented in the following table:

Asset	Fund Weight	Fund Return	Benchmark Weight	Benchmark Return
Technology	20%	10%	25%	8%
Consumer Discretionary	30%	12%	25%	16%
Hospitality	30%	14%	25%	9%
Healthcare	20%	6%	25%	11%
Total	100%	11%	100%	11%

Your value added from asset allocation is 0.3%.

6. How much value are you adding from security selection?
  - A. -0.5%
  - B. 0%
  - C. 0.5%
  - D. 1%
  - E. A different value
  
7. How much value are you adding but unable to attribute to a cause?
  - A. -0.2%
  - B. 0%
  - C. 0.2%
  - D. 0.8%
  - E. A different value
  
8. You want to compare the Treynor measure of your portfolio to that of the market portfolio over the past year. Your portfolio's beta is 1.25, while its standard deviation is 30%. The market's standard deviation was 20% over the same time period. The return on the market last year was 12%, while the return on T-bills was 2%. What is the Treynor measure of the market portfolio?
  - A. 8
  - B. 10
  - C. 12.5
  - D. 50
  - E. A different value

9. Your company only allows you to invest your 401(K) in a single actively managed mutual fund that invests in T-bills and corporate bonds. You're curious how the fund is performing, so you found an index to benchmark it against. You observe the following performance for the past year:

Asset	Fund Weight	Fund Return	Benchmark Weight	Benchmark Return
T-bills	75%	5%	50%	4%
Corporate Bonds	25%	9%	50%	10%
Total	100%	6%	100%	7%

How much value is the fund adding for you through asset allocation?

- A. -1.5%
  - B. 0%
  - C. 0.5%
  - D. 1%
  - E. A different value
10. You can use the Sharpe ratio to compare portfolios based on reward to \_\_\_\_\_ risk or you can use the Treynor measure to compare portfolios based on reward to \_\_\_\_\_ risk.
- A. Firm-specific; Market
  - B. Firm-specific; Total
  - C. Market; Firm-specific
  - D. Market; Total
  - E. Total; Firm-specific
  - F. Total; Market

Use the following information for the next two questions:

You are investigating the performance of your portfolio over the last year. You invested in a combination of stocks and T-bills. Your portfolio's performance and your benchmark's performance are listed below:

Asset	Your Weight	Your Return	Benchmark Weight	Benchmark Return
T-bills	50%	2%	25%	2%
Stocks	50%	12%	75%	10%
Total	100%	7%	100%	8%

You know that your value added from asset allocation was -2%.

11. Using the information above, what value did you add via security selection?
  - A. -0.5%
  - B. 0.5%
  - C. 1%
  - D. 1.5%
  - E. A different value
  
12. Using the information above, what value did you add but you were unable to attribute to a cause?
  - A. -0.5%
  - B. 0.5%
  - C. 1%
  - D. 1.5%
  - E. A different value
  
13. You are attempting to calculate the Sharpe ratio for the market portfolio. You know that the current T-bill rate is 2%, and that historically the market has averaged 10%. You also know that its standard deviation last year was 20%. What is the Sharpe ratio for the market portfolio?
  - A. 0.06
  - B. 0.3
  - C. 0.5
  - D. 0.6
  - E. A different value

14. You are reviewing the performance of your portfolio over the past year. You have summarized your findings in the following table:

	Your Portfolio		Benchmark Portfolio	
	Weight	Return	Weight	Return
Domestic	30%	14%	40%	12%
International	70%	12%	60%	13%
	Total	12.6%	Total	12.6%

How much value do you believe you've added through asset allocation?

- A. -0.1%
  - B. 0%
  - C. 0.1%
  - D. 0.2%
  - E. A different value
15. Using the Treynor measure to evaluate investments implies that we accept which asset pricing model? Choose the best answer.
- A. Arbitrage Pricing Theory
  - B. Capital Asset Pricing Model
  - C. Fama French 3 Factor Model
  - D. Mean-Variance Optimization
16. You are interested in calculating the Sharpe ratio of the market portfolio. You know that the market has averaged returns of 12% with a 20% standard deviation. Further, you know that its beta is equal to 1. If the T-bill rate over this time was 3%, what was the Sharpe ratio of the market portfolio?
- A. 0.45
  - B. 0.6
  - C. 9
  - D. 17
  - E. A different value

Use the following information for the next two questions:

You are comparing your portfolio's performance to your benchmark's performance. You focus on three particular industries, and the performance break-down for last year is presented in the following table:

Industry	Portfolio		Benchmark	
	Weight	Return	Weight	Return
Defense	30%	3%	25%	8%
Healthcare	30%	10%	50%	4%
Technology	40%	9%	25%	10%
Total	100%	7.5%	100%	6.5%

You know that you can't assign -1.6% of the difference in performance to a particular cause.

17. How much value did you add via asset allocation?

- A. 1%
- B. 1.1%
- C. 1.5%
- D. 1.6%
- E. A different value

18. How much value did you add via security selection?

- A. 1.1%
- B. 1.25%
- C. 1.5%
- D. 1.6%
- E. A different value

19. You are comparing your portfolio's performance to your benchmark's performance. Your strategy focuses on strategically switching between equity and bonds, and the performance break-down for last year is presented in the following table:

Industry	Portfolio		Benchmark	
	Weight	Return	Weight	Return
Equity	60%	8%	50%	7%
Debt	40%	14%	50%	12%
Total	100%	10.4%	100%	9.5%

What portion of the difference in returns can you not assign to a cause?

- A. -0.5%
- B. -0.2%
- C. -0.1%
- D. 1.5%
- E. A different value

20. You are analyzing the returns on your portfolio. You have gathered the following data:

Asset Class	Portfolio		Benchmark	
	Weight	Return	Weight	Return
Equity	70%	15%	50%	12%
Bonds	30%	5%	50%	8%
Total	100%	12%	100%	10%

What value did you add via asset allocation?

- A. 0.8%
- B. 1%
- C. 1.2%
- D. 1.4%
- E. A different value



21. You are analyzing the returns on your portfolio. You have gathered the following data:

Industry	Portfolio		Benchmark	
	Weight	Return	Weight	Return
Technology	30%	10%	20%	15%
Healthcare	30%	15%	50%	8%
Financial	40%	12%	30%	10%
Total	100%	12.3%	100%	10%

What value did you add via security selection?

- A. -1.7%
  - B. 0.9%
  - C. 2.3%
  - D. 3.1%
  - E. A different value
22. FishyGold Cracker Industries typically earns a 12% return, and its standard deviation is 33%. If the current T-bill rate is 1%, what is the Sharpe ratio of this security?
- A. 0.3333
  - B. 0.5
  - C. 0.6667
  - D. 3
  - E. A different value
23. You are analyzing Varth Management. You know that the firm's historical return is 16%, while the average T-bill rate has been approximately 2%. If you estimate the firm's beta to be 1, what is the firm's Treynor measure?
- A. 12.5%
  - B. 14%
  - C. 16%
  - D. 18%
  - E. A different value

24. [Quantitative] You are evaluating your investments over the past year. You divided your portfolio across 3 industries. You have aggregated the following data on your portfolio's performance:

Industry	Your Portfolio		Benchmark	
	Weight	Return	Weight	Return
Financials	50%	15%	30%	12%
Technology	40%	2%	40%	8%
Utilities	10%	7%	30%	6%
	Overall	9%	Overall	8.6%

Given this information, what value did you add from security selection?

- A. -1.2%
- B. -0.3%
- C. 0.4%
- D. 1.2%
- E. A different value

25. [Quantitative] You are evaluating your investments over the past year. You divided your portfolio across 3 industries. You have aggregated the following data on your portfolio's performance:

Industry	Your Portfolio		Benchmark	
	Weight	Return	Weight	Return
Consumer Staples	30%	10%	20%	11%
Defense	30%	14%	50%	10%
Healthcare	40%	2%	30%	6%
	Overall	8%	Overall	9%

Given this information, what value did you add from asset allocation?

- A. -1.3%
- B. -1%
- C. -0.3%
- D. 0.6%
- E. A different value

26. [Conceptual] The Treynor measure is used to calculate reward per unit of \_\_\_\_\_ risk.

- A. Firm-specific
- B. Market
- C. Total
- D. Unique
- E. A different type of risk

27. [Quantitative] You are analyzing Tempur Industries. The firm's returns have averaged 18% over the last few years. Over the same time, the T-bill rate has stayed around 2%. You have estimated the firm's standard deviation at 28% and its beta at 1.4. What is the Treynor measure of this stock?

- A. 0.57
- B. 4.87
- C. 8.29
- D. 11.43
- E. A different value

28. [Quantitative] You are evaluating your investments over the past year. You divided your portfolio across 3 asset classes. You have aggregated the following data on your portfolio's performance:

Industry	Your Portfolio		Benchmark	
	Weight	Return	Weight	Return
Equity	25%	15%	35%	14%
Bonds	25%	8%	30%	6%
Futures	50%	1%	35%	3%
	Overall	6.25%	Overall	7.75%

Given this information, what value did you add but can't attribute to a cause?

- A. -1.5%
- B. -1.25%
- C. -0.5%
- D. 0.25%
- E. A different value

29. [Quantitative] Your portfolio earned a return of 14% last period versus a benchmark return of 16%. You're using performance attribution to explain the difference. You find that you added 1% from your asset allocation decisions and 2% from your security selection decisions. What was your interaction value added?

- A. -5%
- B. -2%
- C. 1.5%
- D. 3%
- E. A different value

30. [Quantitative] You expect a 13% return and a variance of 400 on your portfolio. At the same time, you figure the T-bill rate will be 1%. What is the Sharpe ratio of your portfolio?

- A. 0.03
- B. 0.04
- C. 0.6
- D. 0.65
- E. A different value