

Question 1

L2PM-ITEMSET-PQ5404-1511

LOS: LOS-10770

Lesson Reference: Lesson 1: Active Management and Value Added, and Comparing Risk and Return

Difficulty: N/A

Use the following information to answer the next 2 questions:

Fund	Fund Return (%)	Benchmark Return (%)	Value Added (%)
MZ Equities	32.3	29.3	3.0
MZ Fixed Income	-4.8	-5.0	0.2

The investment policy statement calls for a strategic asset allocation of 60% equities and 40% bonds.

Over the relevant period, the active manager actually invested 70% of the portfolio in equities and 30% in bonds.

i.

The contribution to value added from the manager's skill in security selection is *closest to*:

- ☒ 2.16%
- ☐ 2.04%
- ☐ 1.88%

Rationale

✓ **This Answer is Correct**

First, we compute the value added from each asset class held in the portfolio:

MZ Equities added value of $RA = RP - RB = 32.3\% - 29.3\% = 3.0\%$

MZ Fixed Income added value of $RA = RP - RB = -4.8\% - (-5.0\%) = 0.2\%$

Value added from security selection = $(w_{P,Stocks} RA_{Stocks} + w_{P,Bonds} RA_{Bonds})$
 $0.70(3.0\%) + 0.30(0.2\%) = 2.16\%$

ii.

The contribution to value added from the manager's active allocation decisions is *closest to*:

- ☐ 2.16%
- ☒ 3.43%
- ☐ 3.71%

Rationale

✓ **This Answer is Correct**

The active allocation was $70\% - 60\% = +10\%$ for equities and $30\% - 40\% = -10\%$ for fixed income. Therefore the total value added from active allocation is computed as:

$$0.10(29.3\%) - 0.10(-5.0\%) = 3.43\%$$

Question 2

L2PM-PQ5413-1511

LOS: LOS-10790

LOS: LOS-10800

Lesson Reference: Lesson 2: The Fundamental Law

Difficulty: medium

The correlation between forecasted active returns and active weights *most likely* reflects:

- ☐ The information coefficient.
- ☒ The transfer coefficient.
- ☐ Value added.

Rationale

This Answer is Correct

The correlation between forecasted active returns and active weights represents the extent to which the investor's forecasts are translated into active weights in her portfolio, commonly referred to as the transfer coefficient (TC).

Question 3

L2R54TB-ITEMSET-AC004-1512

LOS: LOS-10790

LOS: LOS-10770

Lesson Reference: Lesson 1: Active Management and Value Added, and Comparing Risk and Return

Difficulty: N/A

Use the following information to answer the next 3 questions:

Quinn Flats, CFA, actively manages the Quartermaster Fund with average tolerance for risk. Flats attends seminars, explores new valuation models, and reads academic articles to improve his skill set.

Flats hires two interns from the local college to help him on a new research project aimed at improving his information ratio. The interns manage a hypothetical portfolio using a new model Flats developed and the results are quite promising. The hypothetical portfolio has identified a number of undervalued stocks and has beaten its benchmark over the past three months by 220 basis points.

Flats is excited about this new model and is ready to implement it with 10% of his fund. He meets with the interns and makes the following observation:

Flats' Observation: The key to successful active management is to understand the trade-off between increasing breadth and improving the information coefficient. I want to improve my information coefficient from its current level of 0.5 to 1.0.

After the meeting, the two interns meet privately and offer the following comments to each other:

Intern 1: Mr. Flats should focus his new skill on fewer stocks to improve the value added.

Intern 2: Mr. Flats should become a market timer as well. This would generally require a relatively low information coefficient.

i.

Flats will *most likely* find his level of aggressiveness:

- ☒ increasing.
- ☐ decreasing.
- ☐ remaining the same.

Rationale

This Answer is Correct

Flats is expecting to improve his forecasting ability, which will result in an increase in the optimal level of residual risk taken. Therefore, Flats can be more aggressive.

Rationale

✔ This Answer is Correct

Flats is expecting to improve his forecasting ability, which will result in an increase in the optimal level of residual risk taken. Therefore, Flats can be more aggressive.

Rationale

✔ This Answer is Correct

Flats is expecting to improve his forecasting ability, which will result in an increase in the optimal level of residual risk taken. Therefore, Flats can be more aggressive.

ii.

Are comments made by the interns accurate?

Intern 1 Intern 2

- A. Accurate Accurate
- B. Inaccurate Inaccurate
- C. Inaccurate Accurate

- ☐ ROW A
- ☒ ROW B
- ☐ ROW C

Rationale

✖ This Answer is Incorrect

Intern 1 is not accurate because focusing on fewer stocks will reduce the breadth of his investments. Value added tends to increase when the number of stocks being covered increases. Intern 2 is also inaccurate because market timing requires high information coefficients to offset the relatively few number of market timing forecasts that are possible each year.

Rationale

✖ This Answer is Incorrect

Intern 1 is not accurate because focusing on fewer stocks will reduce the breadth of his investments. Value added tends to increase when the number of stocks being covered increases. Intern 2 is also inaccurate because market timing requires high information coefficients to offset the relatively few number of market timing forecasts that are possible each year.

Rationale

✖ This Answer is Incorrect

Intern 1 is not accurate because focusing on fewer stocks will reduce the breadth of his investments. Value added tends to increase when the number of stocks being covered increases. Intern 2 is also inaccurate because market timing requires high information coefficients to offset the relatively few number of market timing forecasts that are possible each year.

iii.

Regarding Flats observation, he will *most likely* achieve his goal if he:

- ☒ doubles his skill set.
- ☐ doubles his breadth.
- ☐ halves his information coefficient.

Rationale

✖ This Answer is Incorrect

To increase the information ratio from 0.5 to 1.0, Flats will have to double his skills as measured by the information coefficient. This result can easily be seen in the following formula: $IR = IC \times (BR)^{1/2}$.

Rationale

✖ This Answer is Incorrect

To increase the information ratio from 0.5 to 1.0, Flats will have to double his skills as measured by the information coefficient. This result can easily be seen in the following formula: $IR = IC \times (BR)^{1/2}$.

Rationale

✖ This Answer is Incorrect

To increase the information ratio from 0.5 to 1.0, Flats will have to double his skills as measured by the information coefficient. This result can easily be seen in the following formula: $IR = IC \times (BR)^{1/2}$.

Question 4

L2R55TB-AC005-1512

LOS: LOS-10810

Lesson Reference: Lesson 3: Applications of the Fundamental Law and Practical Limitations

Difficulty: medium

An active manager considers an additional strategy to boost his information ratio. Which strategy would *most likely* require the highest information coefficient?

- ☐ Specialist.
- ☒ Market timer.
- ☐ Stock selector.

Rationale

Specialist.

A specialist and a stock selector are highly likely to increase breadth by following more companies or making more bets than a market timer, who might increase the number of forecasts for market returns infrequently. For example, a market timer might forecast quarterly or monthly, but specialists might revise estimates every few days or a stock selector who might follow hundreds of companies. Therefore, specialists and selectors will have a significant breadth advantage over the market timer and require lower information coefficients.

Rationale

Market timer.

A specialist and a stock selector are highly likely to increase breadth by following more companies or making more bets than a market timer, who might increase the number of forecasts for market returns infrequently. For example, a market timer might forecast quarterly or monthly, but specialists might revise estimates every few days or a stock selector who might follow hundreds of companies. Therefore, specialists and selectors will have a significant breadth advantage over the market timer and require lower information coefficients.

Rationale

Stock selector.

A specialist and a stock selector are highly likely to increase breadth by following more companies or making more bets than a market timer, who might increase the number of forecasts for market returns infrequently. For example, a market timer might forecast quarterly or monthly, but specialists might revise estimates every few days or a stock selector who might follow hundreds of companies. Therefore, specialists and selectors will have a significant breadth advantage over the market timer and require lower information coefficients.

Question 5

L2R55TB-AC004-1512

LOS: LOS-10790

Lesson Reference: Lesson 2: The Fundamental Law

Difficulty: medium

Lyle Brooks is a fund manager who uses an enhanced indexing strategy, but desires to improve his information ratio to 0.60. Brooks believes he can use market timing skills to make quarterly forecasts for one additional security not contained in the index. To accomplish this goal, Brooks would need an information coefficient *closest to*:

☐ 0.27

☒ 0.30

☐ 1.20

Rationale

 **0.27**

The equation for the information ratio is:

$$IR_P = IC \times \sqrt{BR}$$

To achieve an information ratio of 0.60, Brooks needs an information coefficient of:

$$\begin{aligned} 0.60 &= IC \times \sqrt{4} \\ IC &= 0.30 \end{aligned}$$

Rationale

 **0.30**

The equation for the information ratio is:

$$IR_P = IC \times \sqrt{BR}$$

To achieve an information ratio of 0.60, Brooks needs an information coefficient of:

$$\begin{aligned} 0.60 &= IC \times \sqrt{4} \\ IC &= 0.30 \end{aligned}$$

Rationale

 **1.20**

The equation for the information ratio is:

$$IR_P = IC \times \sqrt{BR}$$

To achieve an information ratio of 0.60, Brooks needs an information coefficient of:

$$0.60 = IC \times \sqrt{4}$$

$$IC = 0.30$$

Question 6

L2R54TB-AC008-1512

LOS: LOS-10770

Lesson Reference: Lesson 1: Active Management and Value Added, and Comparing Risk and Return

Difficulty: medium

Which of the following will *most likely* add value to an active manager's portfolio?

- ☐ A decrease in residual risk.
- ☐ An increase in residual risk aversion.
- ☒ An increase in the information ratio.

Rationale

✗ A decrease in residual risk.

Value added to the portfolio can be defined as:

$$VA[P] = \alpha_P - \lambda_R \omega_P^2$$
$$VA[\omega_P] = [IR(\omega_P)] - \lambda_R \omega_P^2$$

An increase in the information ratio will have a positive effect on value. Both a decrease in residual risk and an increase in residual risk aversion will reduce value.

Rationale

✗ An increase in residual risk aversion.

Value added to the portfolio can be defined as:

$$VA[P] = \alpha_P - \lambda_R \omega_P^2$$
$$VA[\omega_P] = [IR(\omega_P)] - \lambda_R \omega_P^2$$

An increase in the information ratio will have a positive effect on value. Both a decrease in residual risk and an increase in residual risk aversion will reduce value.

Rationale

✓ An increase in the information ratio.

Value added to the portfolio can be defined as:

$$VA[P] = \alpha_P - \lambda_R \omega_P^2$$
$$VA[\omega_P] = [IR(\omega_P)] - \lambda_R \omega_P^2$$

An increase in the information ratio will have a positive effect on value. Both a decrease in residual risk and an increase in residual risk aversion will reduce value.

Question 7

L2R55TB-AC003-1512

LOS: LOS-10820

Lesson Reference: Lesson 3: Applications of the Fundamental Law and Practical Limitations

Difficulty: medium

Which of the following comments regarding the fundamental law of active management is *least likely* to be accurate?

- ☐ The information coefficient measures the quality of the manager's prediction skills.
- ☒ A fund manager has different information coefficients for each forecast and decision made.
- ☐ Breadth strategy includes following more stocks or shortening the time horizon of forecasting.

Rationale

✗ The information coefficient measures the quality of the manager's prediction skills.

One of the simplifying assumptions of the fundamental law is that the manager's skill set as measured by the information coefficient is the same for all forecasts.

Rationale

✓ A fund manager has different information coefficients for each forecast and decision made.

One of the simplifying assumptions of the fundamental law is that the manager's skill set as measured by the information coefficient is the same for all forecasts.

Rationale

✗ Breadth strategy includes following more stocks or shortening the time horizon of forecasting.

One of the simplifying assumptions of the fundamental law is that the manager's skill set as measured by the information coefficient is the same for all forecasts.

Question 8

L2R54TB-AC006-1512

LOS: LOS-10800

Lesson Reference: Lesson 2: The Fundamental Law

Difficulty: medium

Earl Getty, CFA, interviews two fund managers; he gains enough information to estimate the ex-ante information ratio for each manager. Fund Manager 2 has a higher residual portfolio risk and an information ratio of 0.75; Manager 1 has an information ratio of 0.65. Which of the following conclusions could Getty *reasonably* make?

- ☒ Manager 2 expects to outperform Manager 1.
- ☐ Manager 1 most likely uses enhanced indexing strategy.
- ☐ Manager 2 has superior historical returns than Manager 1.

Rationale

☒ **Manager 2 expects to outperform Manager 1.**

A high information ratio implies a higher alpha for Manager 2, and since these are ex-ante returns, they reveal expectations for the future.

Rationale

☐ **Manager 1 most likely uses enhanced indexing strategy.**

A high information ratio implies a higher alpha for Manager 2, and since these are ex-ante returns, they reveal expectations for the future.

Rationale

☐ **Manager 2 has superior historical returns than Manager 1.**

A high information ratio implies a higher alpha for Manager 2, and since these are ex-ante returns, they reveal expectations for the future.

Question 9

L2PM-PQ5401-1511

LOS: LOS-10770

Lesson Reference: Lesson 1: Active Management and Value Added, and Comparing Risk and Return

Difficulty: medium

Which of the following is *least likely* a desirable characteristic of a benchmark?

- ☐ It should be representative of the assets that the investor will want to invest in.
- ☐ Investors should be able to replicate positions in the benchmark at a low cost.
- ☒ Benchmark weights should be verifiable ex post.

Rationale

 **This Answer is Correct**

Benchmark weights should be verifiable ex ante, and return data should be timely ex post.

Question 10

L2R54TB-ITEMSET-AC001-1512

LOS: LOS-10780

LOS: LOS-10800

Lesson Reference: Lesson 1: Active Management and Value Added, and Comparing Risk and Return

Difficulty: N/A

Use the following information to answer the next 3 questions:

Eric Evans, CFA, gathers information on three fund managers summarized in the following table:

Manager Alpha Residual Risk

1	-2.4%	3.9%
2	3.1%	4.2%
3	3.3%	4.1%

Evans has two clients: Edna Smith with low tolerance for risk and Chase Spitzer with high tolerance for risk. Both Smith and Spitzer are eager to invest in actively-managed funds with specific emphasis in defense and retail stocks. The two clients are new to the actively-managed fund universe. They have individual meetings with Evans and he makes the following comments to both of them:

Comment 1: I have met Manager 2; he tends to be over-weighted in defense stocks and under-weighted in retail stocks much more so than comparable active managers. This tends to reduce his opportunities for adding value.

Comment 2: Even though I have clients with various levels of risk tolerance, they are all identical in that they will seek the manager with the highest information ratio.

Evans believes the aversion to residual risk exhibited by Manager 3 is 0.10.

i.

Identify the manager with the highest information ratio.

- ☐ Manager 1
- ☐ Manager 2
- ☒ Manager 3

Rationale

✔ **This Answer is Correct**

Manager 3 has the highest information ratio. The information ratios for each manager are:

Manager Alpha Residual Risk $IR_P = \frac{\alpha_P}{\omega_P}$			
1	-2.4%	3.9%	0.62
2	3.1%	4.2%	0.74
3	3.3%	4.1%	0.80

Rationale

✔ This Answer is Correct

Manager 3 has the highest information ratio. The information ratios for each manager are:

$$\text{Manager Alpha Residual Risk } IR_P = \frac{\alpha_P}{\omega_P}$$

1	-2.4%	3.9%	0.62
2	3.1%	4.2%	0.74
3	3.3%	4.1%	0.80

Rationale

✔ This Answer is Correct

Manager 3 has the highest information ratio. The information ratios for each manager are:

$$\text{Manager Alpha Residual Risk } IR_P = \frac{\alpha_P}{\omega_P}$$

1	-2.4%	3.9%	0.62
2	3.1%	4.2%	0.74
3	3.3%	4.1%	0.80

ii.

Are comments 1 and 2 accurate?

Comment 1 Comment 2

- A. Accurate Accurate
- B. Inaccurate Inaccurate
- C. Inaccurate Accurate

- ☐ ROW A
- ☐ ROW B
- ☒ ROW C

Rationale

✘ This Answer is Incorrect

Comment 1 describes an aggressive fund manager who deviates more than other managers from the benchmark. The value added for aggressive fund managers is always greater than the value added for those more risk averse, in part, because there are more opportunities. Comment 1 is inaccurate. Comment 2, however, is accurate because investors seek managers with the highest information ratio (IR), regardless of their unique tolerance for risk. A manager's IR describes the ability to add value.

Rationale

✖ This Answer is Incorrect

Comment 1 describes an aggressive fund manager who deviates more than other managers from the benchmark. The value added for aggressive fund managers is always greater than the value added for those more risk averse, in part, because there are more opportunities. Comment 1 is inaccurate. Comment 2, however, is accurate because investors seek managers with the highest information ratio (IR), regardless of their unique tolerance for risk. A manager's IR describes the ability to add value.

Rationale

✖ This Answer is Incorrect

Comment 1 describes an aggressive fund manager who deviates more than other managers from the benchmark. The value added for aggressive fund managers is always greater than the value added for those more risk averse, in part, because there are more opportunities. Comment 1 is inaccurate. Comment 2, however, is accurate because investors seek managers with the highest information ratio (IR), regardless of their unique tolerance for risk. A manager's IR describes the ability to add value.

iii.

The optimal residual risk for Manager 3 is *closest to*:

- ☒ 4%
- ☐ 6%
- ☐ 8%

Rationale

✖ This Answer is Incorrect

The optimal level of residual risk is:

$$\omega^* = \frac{IR}{2\lambda_R} = \frac{0.80}{2(0.10)} = 4$$

Choice B calculates the information ratio incorrectly, reversing the numerator and denominator. Choice C omits the 2 in the denominator of the formula.

Rationale

✖ This Answer is Incorrect

The optimal level of residual risk is:

$$\omega^* = \frac{IR}{2\lambda_R} = \frac{0.80}{2(0.10)} = 4$$

Choice B calculates the information ratio incorrectly, reversing the numerator and denominator. Choice C omits the 2 in the denominator of the formula.

Rationale

 **This Answer is Incorrect**

The optimal level of residual risk is:

$$\omega^* = \frac{IR}{2\lambda_R} = \frac{0.80}{2(0.10)} = 4$$

Choice B calculates the information ratio incorrectly, reversing the numerator and denominator. Choice C omits the 2 in the denominator of the formula.

Question 11

L2PM-ITEMSET-PQ5407-1511

LOS: LOS-10780

Lesson Reference: Lesson 1: Active Management and Value Added, and Comparing Risk and Return

Difficulty: N/A

Use the following information to answer the next 3 questions:

An actively managed portfolio has an information ratio of 0.30 and an active risk of 12%. The benchmark portfolio has a Sharpe ratio of 0.40 and a total risk of 20%.

i.

The optimal amount of aggressiveness in the actively managed portfolio is *closest to*:

- ☐ 14%.
☒ 15%.
☐ 16%.

Rationale

✓ This Answer is Correct

The optimal amount of active risk for the portfolio is computed as:

$$\sigma^*(R_A) \frac{IR}{SR_B} \times \sigma(R_B)$$
$$\sigma^*(RA) = \frac{0.30}{0.40} \times 20\% = 15\%$$

ii.

The Sharpe ratio of a portfolio constructed with optimal active risk is *closest to*:

- ☐ 0.35
☒ 0.50
☐ 0.25

Rationale

✓ This Answer is Correct

$$\text{Highest Sharpe Ratio} = [SR_B^2 + IR^2]^{1/2} = [0.40^2 + 0.3^2]^{1/2} = 0.5$$

iii.

In order to increase active risk to the optimal level while preserving the information ratio, the investor would *most likely*:



Increase the size of the actively managed fund 1.25 times, while shorting the benchmark by 0.25 times.

- ☐ Increase the size of the actively managed fund 0.80 times, while shorting the benchmark by 0.20 times.
- ☐ Increase the size of the actively managed fund 1.33 times, while shorting the benchmark by 0.33 times.

Rationale

This Answer is Correct

In order to increase active risk to the optimal level while preserving the information ratio, the investor would need to increase the size of the actively managed fund $15/12 = 1.25$ times, while shorting the benchmark by 0.25 times to fund the increase.

Question 12

L2PM-PQ5412-1511

LOS: LOS-10790

LOS: LOS-10800

Lesson Reference: Lesson 2: The Fundamental Law

Difficulty: medium

The correlation between active weights and realized active returns *most likely* reflects:

- ☐ The information coefficient.
- ☐ The transfer coefficient.
- ☒ Value added.

Rationale

This Answer is Correct

The correlation between active weights and realized active returns reflects realized value added through active portfolio management. Value added is defined as the difference between realized returns on the actively managed portfolio and the benchmark portfolio.

Question 13

L2R54TB-AC007-1512

LOS: LOS-10780

Lesson Reference: Lesson 1: Active Management and Value Added, and Comparing Risk and Return

Difficulty: medium

Ron Vick, CFA, tests the hypothesis that fund manager alpha and tenure are related. As part of his research, Vick collects 16 years' worth of data on a specific fund manager, uses a regression equation with manager portfolio returns and benchmark returns as variables, and computes a t statistic of 1.24. The information ratio is *closest to*:

- ☐ 0.10
- ☐ 0.20
- ☒ 0.30

Rationale

 **0.10**

The information ratio can be approximated by:

$$IR_P \approx \frac{\text{Alpha } t \text{ stat}}{\sqrt{Y}} \approx \frac{1.24}{\sqrt{16}} \approx 0.31$$

Rationale

 **0.20**

The information ratio can be approximated by:

$$IR_P \approx \frac{\text{Alpha } t \text{ stat}}{\sqrt{Y}} \approx \frac{1.24}{\sqrt{16}} \approx 0.31$$

Rationale

 **0.30**

The information ratio can be approximated by:

$$IR_P \approx \frac{\text{Alpha } t \text{ stat}}{\sqrt{Y}} \approx \frac{1.24}{\sqrt{16}} \approx 0.31$$

Question 14

L2R54TB-AC010-1512

LOS: LOS-10800

Lesson Reference: Lesson 2: The Fundamental Law

Difficulty: medium

Brian Tank runs the Primary Fund and pursues growth-only strategies to outperform the relevant benchmark. To maximize value added, Tank's value added will be higher with:

Opportunities Residual Risk Aversion

- | | |
|----------|------|
| A. More | Low |
| B. More | High |
| C. Fewer | Low |

- ☒ Row A.
- ☐ Row B.
- ☐ Row C.

Rationale

Row A.

To maximize value added, the manager will find the optimal level of residual risk. Value added increases with the number of opportunities because the manager is more likely to find undervalued securities. When the universe of securities increases, however, so does the residual risk and the value added will be higher if Tank's residual risk aversion is low.

Rationale

Row B.

To maximize value added, the manager will find the optimal level of residual risk. Value added increases with the number of opportunities because the manager is more likely to find undervalued securities. When the universe of securities increases, however, so does the residual risk and the value added will be higher if Tank's residual risk aversion is low.

Rationale

Row C.

To maximize value added, the manager will find the optimal level of residual risk. Value added increases with the number of opportunities because the manager is more likely to find undervalued securities. When the universe of securities increases, however, so does the residual risk and the value added will be higher if Tank's residual risk aversion is low.

Question 15

L2R55TB-AC001-1512

LOS: LOS-10780

Lesson Reference: Lesson 1: Active Management and Value Added, and Comparing Risk and Return

Difficulty: medium

A fund manager with an information coefficient of 0.085 considers adding 20 equity securities from the Industrial Goods and Basic Materials sectors to his portfolio. The new research would increase his number of annual forecasts to 120. Which of the following statements is *most* accurate?

- ☒ The fund manager's information ratio will change.
- ☐ The addition of the new securities will necessarily reduce the optimal residual risk of the fund.
- ☐ The fund manager should only pursue the extra securities if the information coefficient for each exceeds his current portfolio.

Rationale

☒ **The fund manager's information ratio will change.**

The information ratio, according to the fundamental law of active management, is a function of the manager's skill and the breadth of the manager's forecasts. Breadth is the number of independent forecasts made per year and if the fund manager makes 20 more forecasts, then his information ratio will increase.

Rationale

☒ **The addition of the new securities will necessarily reduce the optimal residual risk of the fund.**

The information ratio, according to the fundamental law of active management, is a function of the manager's skill and the breadth of the manager's forecasts. Breadth is the number of independent forecasts made per year and if the fund manager makes 20 more forecasts, then his information ratio will increase.

Rationale

☒ **The fund manager should only pursue the extra securities if the information coefficient for each exceeds his current portfolio.**

The information ratio, according to the fundamental law of active management, is a function of the manager's skill and the breadth of the manager's forecasts. Breadth is the number of independent forecasts made per year and if the fund manager makes 20 more forecasts, then his information ratio will increase.

Question 16

L2PM-PQ5402-1511

LOS: LOS-10770

Lesson Reference: Lesson 1: Active Management and Value Added, and Comparing Risk and Return

Difficulty: medium

Consider the following statements:

Statement 1: Market capitalization-weighted indices are self-rebalancing.

Statement 2: When float-adjusted market capitalization-weighted indices are used as benchmarks, active management is a zero-sum game.

Which of the following is *most likely*?

- ☒ Only Statement 1 is correct.
- ☐ Only Statement 2 is correct.
- ☐ Both statements are incorrect.

Rationale

This Answer is Correct

When capitalization-weighted indices are used as benchmarks, value added from active management becomes a zero-sum game. This is because the market portfolio represents the average performance across all investors that own securities, and as a group, active investors cannot outperform the market. Outperformance by one group of investors must be offset by underperformance by the other.

On the other hand, when float-adjusted market capitalization-weighted indices are used as benchmarks, active management is not necessarily a zero-sum game with respect to the (relatively narrow) benchmark because investors may invest in securities outside the benchmark.

Question 17

L2R54TB-AC009-1512

LOS: LOS-10800

Lesson Reference: Lesson 2: The Fundamental Law

Difficulty: medium

An analyst estimates a manager's aversion to residual risk to be 0.08. The analyst computes the manager's information ratio as 0.64. The analyst will estimate the manager's optimal level of residual risk to be *closest to*:

☐ 2%

☒ 4%

☐ 8%

Rationale

☒ 2%

The optimal level of residual risk is defined as:

$$\omega^* = \frac{IR}{2\lambda_R} = \frac{0.64}{2(0.08)} = 4$$

Rationale

☒ 4%

The optimal level of residual risk is defined as:

$$\omega^* = \frac{IR}{2\lambda_R} = \frac{0.64}{2(0.08)} = 4$$

Rationale

☒ 8%

The optimal level of residual risk is defined as:

$$\omega^* = \frac{IR}{2\lambda_R} = \frac{0.64}{2(0.08)} = 4$$

Question 18

L2R55TB-AC002-1512

LOS: LOS-10790

Lesson Reference: Lesson 2: The Fundamental Law

Difficulty: medium

The optimal level of residual risk will *most likely* increase with skill and breadth according to:

Skill Breadth

A. Decrease Decrease

B. Decrease Increase

C. Increase Increase

☐ Row A.

☐ Row B.

☒ Row C.

Rationale

 **Row A.**

The equation for optimal residual risk is:

$$\omega^* = \frac{IC \times \sqrt{BR}}{2\lambda_R}$$

Therefore, the optimal residual risk will increase as both the information coefficient (skill) and the breadth increases.

Rationale

 **Row B.**

The equation for optimal residual risk is:

$$\omega^* = \frac{IC \times \sqrt{BR}}{2\lambda_R}$$

Therefore, the optimal residual risk will increase as both the information coefficient (skill) and the breadth increases.

Rationale

 **Row C.**

The equation for optimal residual risk is:

$$\omega^* = \frac{IC \times \sqrt{BR}}{2\lambda_R}$$

Therefore, the optimal residual risk will increase as both the information coefficient (skill) and the breadth increases.

Question 19

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LOS: LOS-10810

Lesson Reference: Lesson 3: Applications of the Fundamental Law and Practical Limitations

Difficulty: medium

Consider the following statements:

Statement 1: All other factors constant, if constraints are placed on portfolio construction, the transfer coefficient will fall, bringing down the expected active return and information ratio.

Statement 2: All other factors constant, the more ambitious the forecasts, the lower the value of the information coefficient in the fundamental law, as there is a lower chance of their being accurate.

Which of the following is *most likely*?

- ☒ Only Statement 1 is correct.
- ☐ Only Statement 2 is correct.
- ☐ Both statements are incorrect.

Rationale

This Answer is Correct

If constraints are placed in portfolio construction, there will be a reduction in the transfer of active return forecasts into active weights (i.e., the transfer coefficient [TC] will be lower). This reduction in the TC will lead to a decrease in the expected active return and in the information ratio. The more ambitious the forecasts, the greater the value of the information coefficient (IC) in the fundamental law.