

Question #1 of 14

Question ID: 464580

Rajesh Murtani is comparing three active managers, Roobini, Durse and Lurten. He has gathered the following data from the previous period:

Manager	Residual Risk Aversion	Information Ratio
Roobini	0.05	0.52
Durse	0.10	0.60
Lurten	0.15	0.78

The manager with the highest optimal level of residual risk is *most likely*:

- ☒ A) Durse.
- ☐ B) Lurten.
- ☒ C) Roobini.

Explanation

The optimal level of residual risk is calculated as $IR / (2 \times \text{risk aversion})$

Roobini $0.52 / (2 \times 0.05) = 5.2\%$
 Durse $0.60 / (2 \times 0.10) = 3.0\%$
 Lurten $0.78 / (2 \times 0.15) = 2.6\%$

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Question ID: 464573

Younis Kabul is analyzing the performance of two active managers. Manager A has an ex-post alpha of 1.2% with a t statistic 2.15 using 10 years of data. Manager B has an ex-post alpha of 1.2% with a t statistic of 2.15 based on 20 years of data. Which of the following statements about the managers' information ratios is *most* accurate?

- ☒ A) Both managers will have the same information ratio.
- ☒ B) Manager A will have the higher information ratio.
- ☐ C) Manager B will have the higher information ratio.

Explanation

The information ratio is calculated as the alpha's t-statistic divided by the square root of the number of years.

Given identical t-statistics, manager A will have the higher information ratio.

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Question ID: 464576

Two active managers achieve the following results during a 5 year period:

	Manager A	Manager B
Realized Alpha	3.2	5.5
Investor Risk Aversion	0.1	0.2
Realized residual risk	3	4

Which of the following statements regarding the two managers' value added is *most* accurate?

- ☒ A) Both managers have the same value added.
- ☐ B) Manager A has the higher value added.
- ☐ C) Manager B has the higher value added.

Explanation

Value added = residual return – (risk aversion × residual risk²)

Manager A = $3.2 - (0.1 \times 3^2) = 2.3$

Manager B = $5.5 - (0.2 \times 4^2) = 2.3$

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If the information ratio is held constant, which of the following statements regarding the optimal level of residual risk is *most* accurate?

- ☐ A) If the level of risk aversion is doubled, the optimal level of residual risk will double.
- ☐ B) If the level of risk aversion is halved, the optimal level of residual risk will more than double.
- ☒ C) If the level of risk aversion is doubled, the optimal level of residual risk will be halved.

Explanation

The optimal level of residual risk is the information ratio divided by (risk aversion × 2). To double the risk aversion, we are multiplying both sides by $\frac{1}{2}$.

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Jon Germen runs a regression to calculate the realized alpha of his portfolio over the past 15 years. The regression results indicate an alpha of 1.5% with a t-statistic of 2.21. Which of the following is *closest* to the value of Germen's information ratio?

- ☐ A) 0.10.
- ☒ B) 0.57.
- ☐ C) 0.39.

Explanation

The IR is equal to the alpha's t-statistic divided by the square root of the number of years in the regression.

$$IR = 2.21 / 15^{\frac{1}{2}} = 0.57$$

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Hal calculates the ex-post alpha of his portfolio as 0.45% with a *t*-statistic of 2.26. Hal calculates that this gives him an information ratio of 0.32. Which of the following is *closest* to the number of years of data Hal used in his analysis?

- ☐ A) 7.
- ☒ B) 50.
- ☐ C) 20.

Explanation

The information ratio is calculated as the alpha's *t*-statistic divided by the square root of the number of years of data.

$$0.32 = 2.26 / \# \text{ years}^{\frac{1}{2}}$$

$$\# \text{ years}^{\frac{1}{2}} = 2.26 / 0.32 = 7.06$$

$$\# \text{ years} = 7.06^2 = 49.8$$

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Which of the following statements regarding active management is *least accurate*? The objective of active management:

- ☐ A) is to minimize residual risk.
- ☐ B) can be expressed as a function of residual return, residual risk and risk aversion.
- ☒ C) is to maximize the value added from residual return.

Explanation

The objective is to maximize value added which is a function of residual risk, residual return, and risk aversion.

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Question ID: 464569

Which of the following statements regarding the information ratio is *least accurate*?

- ☐ A) The information ratio can be negative.
- ☒ B) The information ratio for the benchmark is equal to one.
- ☐ C) The information ratio is a ratio of residual return to residual risk.

Explanation

Information ratio is the ratio of residual return to residual risk. The information ratio for the benchmark is equal to zero. Ex-post information ratio can be negative (if the ex-post alpha is negative).

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Question ID: 464582

Which of the following statements regarding the choice of a particular active strategy is *most* accurate?

- ☐ A) Investors who are more risk averse will choose managers who have historically displayed a low level of risk aversion.
- ☒ B) Investors who are more risk averse will not consider a manager's historic level of risk aversion.
- ☐ C) Investors who are more risk averse will choose managers who have historically displayed a high level of risk aversion.

Explanation

Investors seek to maximize value added, and the decision is independent of the level of risk aversion the manager has displayed. Investors will simply choose a manager with the highest information ratio. The risk aversion of the investor will simply determine how aggressively (or conservatively) the investor will implement the manager's strategy.

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Which of the following statements is *most* accurate?

- ☐ A) A negative ex ante information ratio means that the portfolio manager underperformed the benchmark for the year
- ☐ B) The ex ante information ratio is the ratio of realized residual return to realized residual risk for a period.
- ☒ C) The ex post alpha is the average of the realized residual returns.

Explanation

The ex post alpha measures realized residual returns. The ex ante information ratio uses expected residual returns and risk. The ex post information ratio measures realized residual returns and risk. A negative *ex-post* information ratio means that the portfolio manager underperformed the benchmark for the year.

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Question ID: 464581

When choosing an active manager, an investor with a high level of risk aversion:

- ☐ A) will choose a manager with the lowest history of residual risk exposure.
- ☒ B) will choose the manager with the highest information ratio.
- ☐ C) will choose the manager with the highest history of residual return.

Explanation

Value added is independent of the level of risk aversion. All investors will choose the manager with the highest information ratio. Those with higher levels of risk aversion will implement the strategy less aggressively.

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Question ID: 464575

Which of the following statements regarding value added is *most* accurate? For active managers with the same residual return and residual risk:

- ☐ A) the value added will be higher for the manager operating a portfolio for a client with a higher risk aversion.
- ☐ B) the value added will be equal.
- ☒ C) the value added will be higher for the manager operating a portfolio for a client with a lower risk aversion.

Explanation

Value added is calculated as residual return less the penalty for residual risk. The penalty for residual risk is proportional to the risk aversion. If residual return and risk are identical for two managers, the manager with the lower risk aversion has the lower penalty and consequently, a higher value added.

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In response to a risk aversion level of 0.15 for his client, an active manager sets his optimal level of residual risk exposure to 3.2%. Which of the following is *closest to* the information ratio that the manager has assumed?

- ☒ A) 0.96.
- ☐ B) 0.05.
- ☐ C) 0.48.

Explanation

The optimal level of risk aversion is calculated as the information ratio divided by $(2 \times \text{risk aversion})$.

$$3.2 = \text{IR} / (2 \times 0.15)$$

$$\text{IR} = 3.2 \times 0.3 = 0.96$$

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Question ID: 464570

Which of the following statements is most *likely* correct? The ex-post alpha:

- ☐ A) is the average of a stock's realized returns.
- ☐ B) is the average of a stock's realized excess return over the risk free rate.
- ☒ C) is the average of a stock's realized residual returns.

Explanation

The ex-post alpha reflects the average of realized residual returns. Realized residual returns on a portfolio are returns in excess of the benchmark after adjusting for any risk differences between the portfolio and the benchmark.