1. **Question:** Historically, over long horizons, investments in stocks is expected to outperform investments in bonds. **Answer:** T **Feedback:** The sentence is TRUE. This is a foundational concept in finance, where the higher risk associated with stocks is compensated by higher expected returns over long investment horizons compared to less risky assets like bonds.
2. **Question:** The expected, or mean, return is the return we expect to earn on average. **Answer:** T **Feedback:** The sentence is TRUE. It correctly defines the expected return as the statistical average of an investment's potential returns.
3. **Question:** The realized or total return for an investment is the total return of the dividend yield and the capital gain rate. **Answer:** T **Feedback:** The sentence is TRUE. Total return is calculated by summing the income from dividends (dividend yield) and the appreciation in the asset's price (capital gain).
4. **Question:** The market risk premium is the expected average return of the market portfolio. **Answer:** F **Feedback:** The sentence is FALSE. The market risk premium is the excess return of the market portfolio over the risk-free rate, not the total expected return of the market itself.
5. **Question:** The total risk of a security represents only its systematic risk. **Answer:** F **Feedback:** The sentence is FALSE. Total risk is composed of both systematic (market) risk and unsystematic (firm-specific) risk.
6. **Question:** Because investors can eliminate idiosyncratic risk, they do not require a risk premium for taking it on. **Answer:** T **Feedback:** The sentence is TRUE. Rational investors can diversify away idiosyncratic (firm-specific) risk, so the market does not offer a risk premium for it.
7. **Question:** Investors typically demand a higher return for investments with higher levels of risk. **Answer:** T **Feedback:** The sentence is TRUE. This describes the fundamental risk-return tradeoff, where compensation (higher return) is required for taking on more uncertainty (higher risk).
8. **Question:** Systematic risk can be diversified away by holding a well-diversified portfolio of assets. **Answer:** F **Feedback:** The sentence is FALSE. Systematic risk (or market risk) affects the entire market and cannot be eliminated through diversification. It is unsystematic risk that can be diversified away.
9. **Question:** Diversification involves spreading investment across different assets to reduce risk. **Answer:** T **Feedback:** The sentence is TRUE. This is the correct definition of diversification, which aims to reduce unsystematic risk.
10. **Question:** Systematic risk is specific to individual assets and can be diversified away by holding a diversified portfolio. **Answer:** F **Feedback:** The sentence is FALSE. This statement describes unsystematic (or firm-specific) risk, not systematic risk. Systematic risk is market-wide.
11. **Question:** Investors always prefer investments with lower risk, even if it means sacrificing potential returns. **Answer:** F **Feedback:** The sentence is FALSE. Investor preference depends on their individual risk aversion. While many are risk-averse, they will accept higher risk if they are sufficiently compensated with higher potential returns.
12. **Question:** In finance, risk refers to the uncertainty that an investment's actual return will differ from its expected return. **Answer:** T **Feedback:** The sentence is TRUE. This is a core definition of financial risk, often measured by variance or standard deviation.
13. **Question:** The market risk premium represents the excess return that investors expect to earn from investing in the market over the risk-free rate. **Answer:** T **Feedback:** The sentence is TRUE. This is the precise definition of the market risk premium, a key component of the CAPM.
14. **Question:** Systematic risk cannot be eliminated through diversification because it affects the entire market. **Answer:** T **Feedback:** The sentence is TRUE. Because systematic factors (like interest rates or recessions) affect all assets, holding a variety of them cannot eliminate this type of risk.
15. **Question:** Systematic risk is specific to individual assets and can be diversified away by holding a diversified portfolio. **Answer:** F **Feedback:** The sentence is FALSE. This incorrectly describes systematic risk. This definition applies to unsystematic risk.
16. **Question:** The following risk is an example of firm-specific risk: The risk that the founder and CEO retires. **Answer:** T **Feedback:** The sentence is TRUE. The retirement of a key executive is a risk unique to that specific firm, making it an idiosyncratic or firm-specific risk.
17. **Question:** The following risk is an example of firm-specific risk: The risk that oil prices rise, increasing production costs. **Answer:** F **Feedback:** The sentence is FALSE. A rise in oil prices is a macroeconomic factor that affects many companies across the market, making it a systematic risk, not a firm-specific one.
18. **Question:** The following risk is an example of firm-specific risk: The risk that a product design is faulty and the product must be recalled. **Answer:** T **Feedback:** The sentence is TRUE. A product recall is a problem specific to one company and is a classic example of unsystematic (firm-specific) risk.
19. **Question:** The following risk is an example of firm-specific risk: The risk that the economy slows, reducing demand for the firm’s products. **Answer:** F **Feedback:** The sentence is FALSE. An economic slowdown is a market-wide event that affects nearly all firms. Therefore, it is a source of systematic risk.
20. **Question:** A value-weighted portfolio is an equal-ownership portfolio: the investors holds an equal fraction of the total number of shares outstanding of each security in the portfolio. **Answer:** T **Feedback:** The sentence is TRUE. This correctly defines a value-weighted portfolio. Holding the same fraction of the total shares of every company means the investment's value is proportional to the company's market capitalization.
21. **Question:** A stock with a beta of zero has the same expected return as the market portfolio. **Answer:** F **Feedback:** The sentence is FALSE. According to the CAPM, a stock with a beta of zero has an expected return equal to the risk-free rate, not the market portfolio.
22. **Question:** A stock with a beta greater than 1 is considered more volatile than the market. **Answer:** T **Feedback:** The sentence is TRUE. A beta greater than 1 indicates that the stock tends to amplify the market's movements, making it more volatile in a systematic sense.
23. **Question:** Systematic risk affects the entire market and cannot be eliminated through diversification. **Answer:** T **Feedback:** The sentence is TRUE. This is a core concept of portfolio theory, restating that market-wide risks are undiversifiable.
24. **Question:** Events like recessions, inflation, and interest rate changes are sources of systematic risk. **Answer:** T **Feedback:** The sentence is TRUE. These are all examples of macroeconomic factors that impact the value of all assets in the market.
25. **Question:** Government policies, wars, and natural disasters can contribute to systematic risk. **Answer:** T **Feedback:** The sentence is TRUE. These are large-scale events that have broad impacts across the entire economy and financial markets, thus representing systematic risk.
26. **Question:** Systematic risk impacts all securities in the market, though to varying degrees. **Answer:** T **Feedback:** The sentence is TRUE. While all securities are exposed to systematic risk, the extent of the impact (measured by beta) varies from one security to another.
27. **Question:** Systematic risk refers only to the risk associated with large-cap stocks. **Answer:** F **Feedback:** The sentence is FALSE. Systematic risk affects stocks of all sizes—large-cap, mid-cap, and small-cap—as well as other asset classes.
28. **Question:** Unsystematic risk is also known as firm-specific or idiosyncratic risk. **Answer:** T **Feedback:** The sentence is TRUE. These three terms are synonyms for the type of risk that is unique to a specific company or industry.
29. **Question:** Unsystematic risk affects all companies in the market equally. **Answer:** F **Feedback:** The sentence is FALSE. Unsystematic risk is, by definition, specific to individual companies or a small group of them; it does not affect all companies.
30. **Question:** Unsystematic risk can be reduced or eliminated through portfolio diversification. **Answer:** T **Feedback:** The sentence is TRUE. This is the primary benefit of diversification—spreading investments cancels out the unique, random risks of individual firms.
31. **Question:** Examples of unsystematic risk include management decisions, product recalls, and labor strikes. **Answer:** T **Feedback:** The sentence is TRUE. These are all classic examples of events that are specific to a single company and represent unsystematic risk.
32. **Question:** Even a well-diversified portfolio cannot reduce unsystematic risk. **Answer:** F **Feedback:** The sentence is FALSE. A well-diversified portfolio is specifically designed to reduce or even eliminate unsystematic risk.
33. **Question:** Unlike systematic risk, unsystematic risk is unique to a specific company or industry. **Answer:** T **Feedback:** The sentence is TRUE. This correctly highlights the key distinction between unsystematic (specific) and systematic (market-wide) risk.
34. **Question:** Investors holding a single stock are more exposed to unsystematic risk compared to those holding a diversified portfolio. **Answer:** T **Feedback:** The sentence is TRUE. A single stock carries the full weight of its own unsystematic risk, which is diluted in a diversified portfolio.
35. **Question:** A company’s bankruptcy due to poor financial management is an example of unsystematic risk. **Answer:** T **Feedback:** The sentence is TRUE. Poor management is a firm-specific issue, and bankruptcy resulting from it is the ultimate expression of that risk.
36. **Question:** Unsystematic risk includes risks from changes in interest rates and inflation. **Answer:** F **Feedback:** The sentence is FALSE. Changes in interest rates and inflation are macroeconomic factors that represent systematic risk, not unsystematic risk.
37. **Question:** According to the CAPM, the only risk that investors are compensated for is systematic risk. **Answer:** T **Feedback:** The sentence is TRUE. Since unsystematic risk can be diversified away, investors do not receive a risk premium for bearing it. Compensation is only for bearing undiversifiable, systematic risk.
38. **Question:** Beta is a measure of total risk of a security. **Answer:** F **Feedback:** The sentence is FALSE. Beta measures only systematic risk. Total risk is measured by standard deviation or variance.
39. **Question:** If a security has a negative beta, its return tends to increase when the market declines. **Answer:** T **Feedback:** The sentence is TRUE. A negative beta indicates an inverse relationship with the market, making it a hedge in a downturn (e.g., gold often exhibits this property).
40. **Question:** The risk-free rate is typically approximated using long-term corporate bond yields. **Answer:** F **Feedback:** The sentence is FALSE. The risk-free rate is approximated using the yield on government securities (like U.S. Treasury bills or Brazil Selic rate), not corporate bonds, as corporations have default risk.
41. **Question:** The equity risk premium is the difference between the expected return on the market and the risk-free rate. **Answer:** T **Feedback:** The sentence is TRUE. This correctly defines the equity risk premium (also called the market risk premium).
42. **Question:** According to CAPM, all investors will hold the market portfolio in equilibrium. **Answer:** T **Feedback:** The sentence is TRUE. In the CAPM world, the market portfolio is the optimal risky portfolio, which all rational investors combine with the risk-free asset to match their risk tolerance.
43. **Question:** The expected return of a zero-beta asset equals the risk-free rate. **Answer:** T **Feedback:** The sentence is TRUE. According to the CAPM formula, if beta is zero, the term for the risk premium becomes zero, and the expected return is simply the risk-free rate.
44. **Question:** Investors with different risk preferences will choose different combinations of the market portfolio and the risk-free asset. **Answer:** T **Feedback:** The sentence is TRUE. This is how investors tailor their overall portfolio risk: more risk-averse investors hold more of the risk-free asset, while less risk-averse investors may even borrow at the risk-free rate to invest more in the market portfolio.
45. **Question:** A diversified portfolio has no unsystematic risk. **Answer:** T **Feedback:** The sentence is TRUE. In theory, a perfectly diversified portfolio has eliminated all unsystematic (firm-specific) risk, leaving only systematic (market) risk.
46. **Question:** Adding more stocks to a portfolio always reduces total risk. **Answer:** F **Feedback:** The sentence is FALSE. While adding stocks generally reduces risk (especially when the number is small), the benefit diminishes. Furthermore, if the added stock is highly correlated with the existing portfolio, it may not reduce risk and could even slightly increase it in some scenarios.
47. **Question:** In a well-diversified portfolio, the variance of returns is primarily due to systematic risk. **Answer:** T **Feedback:** The sentence is TRUE. As unsystematic risk is diversified away, the remaining variance in the portfolio is almost entirely attributable to its exposure to market-wide systematic risk.
48. **Question:** Covariance measures the strength and direction of the linear relationship between two asset returns. **Answer:** T **Feedback:** The sentence is TRUE. A positive covariance means assets move together; a negative covariance means they move in opposite directions.
49. **Question:** Two assets with zero correlation provide no diversification benefits. **Answer:** F **Feedback:** The sentence is FALSE. Combining two assets with zero correlation still provides significant diversification benefits by reducing portfolio variance. The only case with no benefit is a perfect positive correlation of +1.
50. **Question:** The variance of a portfolio depends on the variances of individual assets and their correlations. **Answer:** T **Feedback:** The sentence is TRUE. The formula for portfolio variance includes the variance (or standard deviation) of each asset and the covariance (or correlation) between each pair of assets.
51. **Question:** A portfolio of two stocks with a large positive covariance will have lower risk than a portfolio of two stocks with a covariance near zero. **Answer:** F **Feedback:** The sentence is FALSE. A large positive covariance indicates that the two stocks tend to move strongly in the same direction, which reduces the benefits of diversification. A covariance near zero (or negative) is more effective at reducing portfolio risk, as the stocks' movements are less related.
52. **Question:** Investors are risk-neutral when they care only about expected returns. **Answer:** T **Feedback:** The sentence is TRUE. A risk-neutral investor is indifferent to risk and makes decisions based solely on maximizing expected returns.
53. **Question:** Risk-seeking investors prefer portfolios with higher risk, all else equal. **Answer:** T **Feedback:** The sentence is TRUE. A risk-seeking (or risk-loving) investor enjoys risk and may even accept a lower expected return to take on a riskier investment.
54. **Question:** Systematic risk is priced, while idiosyncratic risk is not. **Answer:** T **Feedback:** The sentence is TRUE. This is a central tenet of modern finance. The market only rewards investors for bearing risk that cannot be diversified away (systematic risk).
55. **Question:** The expected return on a risk-free asset is always positive. **Answer:** F **Feedback:** The sentence is FALSE. While highly unusual, in certain economic environments with strong deflationary pressures or central bank policies, nominal risk-free rates can be zero or even slightly negative.
56. **Question:** Standard deviation is a measure of only the systematic risk of an investment. **Answer:** F **Feedback:** The sentence is FALSE. Standard deviation measures the total risk of an investment, which includes both systematic (market) risk and unsystematic (firm-specific) risk.
57. **Question:** The risk-return tradeoff suggests that higher returns are always guaranteed for investments with higher levels of risk. **Answer:** F **Feedback:** The sentence is FALSE. The tradeoff suggests that there is a higher *potential* or *expected* return for taking on more risk, but it does not *guarantee* higher returns. High-risk investments can also lead to significant losses.
58. **Question:** Systematic risk, also known as market risk, is the risk that is inherent to a specific industry. **Answer:** F **Feedback:** The sentence is FALSE. Systematic risk is inherent to the entire market or economy, not just a specific industry. Risk confined to a single industry would be a component of unsystematic risk.
59. **Question:** Beta measures a stock’s total volatility, including firm-specific news. **Answer:** F **Feedback:** The sentence is FALSE. Beta measures a stock's sensitivity only to market movements (systematic risk), not its total volatility.
60. **Question:** The risk-free rate is the return of an investment with very low, but not zero, risk. **Answer:** F **Feedback:** The sentence is FALSE. The risk-free rate is the theoretical return of an investment with absolutely zero risk.
61. **Question:** Systematic risk is measured using standard deviation, which indicates how a stock moves relative to the market. **Answer:** F **Feedback:** The sentence is FALSE. Systematic risk is measured using beta.
62. **Question:** The Capital Asset Pricing Model (CAPM) states that the expected return of a security is inversely related to its beta. **Answer:** F **Feedback:** The sentence is FALSE. The CAPM states that the expected return is linearly and positively related to its beta. A higher beta (more systematic risk) leads to a higher expected return.
63. **Question:** The market portfolio includes all risky assets weighted equally. **Answer:** F **Feedback:** The sentence is FALSE. The market portfolio is weighted by market capitalization (value-weighted), not equally.
64. **Question:** The standard deviation of a portfolio is always the weighted average of the standard deviations of each asset in it. **Answer:** F **Feedback:** The sentence is FALSE. This would only be true if all assets were perfectly correlated (+1). Because of the benefits of diversification (correlation less than 1), the standard deviation of a portfolio is almost always lower than the weighted average of the individual standard deviations.
65. **Question:** A correlation coefficient of -1 implies that there is no relationship between the two assets. **Answer:** F **Feedback:** The sentence is FALSE. A correlation of -1 implies a perfect negative relationship (they move in opposite directions). A correlation of 0 implies no relationship.
66. **Question:** Diversification benefits are greater when asset returns are more positively correlated. **Answer:** F **Feedback:** The sentence is FALSE. Diversification benefits are greater when asset returns are less correlated (ideally, negatively correlated). High positive correlation means the assets tend to move together, which reduces the benefits of diversification.
67. **Question:** Risk-averse investors are indifferent to risk when choosing between investments. **Answer:** F **Feedback:** The sentence is FALSE. Risk-averse investors specifically dislike risk and require higher expected returns as compensation for taking it on. An investor who is indifferent to risk is defined as risk-neutral.
68. **Question:** Standard deviation is a measure of the total risk of an investment. **Answer:** T **Feedback:** The sentence is TRUE. Standard deviation quantifies the total volatility or dispersion of an investment's returns around its average, capturing both systematic and unsystematic risk.
69. **Question:** As per the examples in the slides, during certain periods in Brazil (such as 2010-2018), the cumulative return of the SELIC rate (a lower-risk asset) surpassed that of the Ibovespa, demonstrating that higher risk does not always guarantee higher returns over shorter time horizons. **Answer:** T **Feedback:** The sentence is TRUE. The graphs in the slides clearly show periods where the SELIC rate, a safer investment, had a superior cumulative performance compared to the more volatile Ibovespa.
70. **Question:** The volatility of a market index, such as the IBOV, tends to remain constant over time. **Answer:** F **Feedback:** The sentence is FALSE. The "Standard deviation through time" chart in the slides explicitly shows that the volatility (measured by the rolling standard deviation) of the IBOV varies considerably, with peaks and troughs over time.
71. **Question:** The variance of a financial asset is easier to interpret directly than the standard deviation because it is in the same units as the returns. **Answer:** F **Feedback:** The sentence is FALSE. The **standard deviation** is in the same units as the returns (e.g., %), making it easier to interpret. The variance is in squared units (e.g., %²).
72. **Question:** An investment's geometric average return (CAGR) will always be equal to or greater than its arithmetic average return. **Answer:** F **Feedback:** The sentence is FALSE. The geometric average return is almost always **lower** than the arithmetic average, and the difference between the two increases with the volatility of the returns.
73. **Question:** When calculating the variance from a sample of historical returns, we use (T-1) in the denominator to obtain an unbiased estimate of the population variance. **Answer:** T **Feedback:** The sentence is TRUE. The slides mention the use of (T-1) in the variance formula for historical data samples, which is the standard statistical practice to correct for bias.
74. **Question:** The standard error of the average return increases as the number of observations (years) in the sample increases. **Answer:** F **Feedback:** The sentence is FALSE. The standard error (SE=SD/T​) **decreases** as the number of observations (T) increases, which means our estimate of the mean becomes more precise.
75. **Question:** Diversifiable risk is also known as market risk or systematic risk. **Answer:** F **Feedback:** The sentence is FALSE. Diversifiable risk is firm-specific risk, also called idiosyncratic or unsystematic risk. Market risk is systematic.
76. **Question:** According to portfolio theory, a rational investor should not expect a risk premium for holding a risk that can be eliminated for free through diversification. **Answer:** T **Feedback:** The sentence is TRUE. The market does not reward investors for taking on unsystematic (firm-specific) risk, as it can be eliminated with a diversified portfolio.
77. **Question:** Standard deviation is the most appropriate measure for evaluating the risk of a single stock that will be added to an already well-diversified portfolio. **Answer:** F **Feedback:** The sentence is FALSE. The slides explain that for a diversified portfolio, **beta** is the most appropriate risk measure as it captures systematic risk. Standard deviation measures total risk (systematic + unsystematic).
78. **Question:** The standard deviation of a portfolio is simply the weighted average of the standard deviations of the individual assets within it. **Answer:** F **Feedback:** The sentence is FALSE. Due to the benefits of diversification (correlation less than 1), the standard deviation of a portfolio is almost always **lower** than the weighted average of the individual standard deviations.
79. **Question:** If a stock has a beta of 1.5, its excess return is expected to vary, on average, by 1.5% for every 1% change in the market's excess return. **Answer:** T **Feedback:** The sentence is TRUE. This correctly defines beta as a measure of the asset's sensitivity to market movements.
80. **Question:** A stock with a beta of 1.0 has only systematic risk. **Answer:** F **Feedback:** The sentence is FALSE. A beta of 1.0 means the stock's systematic risk is equal to that of the market. The stock still has its own unsystematic (firm-specific) risk.
81. **Question:** A security with a negative beta will tend to increase in value when the overall market is declining. **Answer:** T **Feedback:** The sentence is TRUE. A negative beta indicates an inverse correlation with the market, acting as a hedge in downturn scenarios.
82. **Question:** The main lesson of diversification is that the total risk of a portfolio can be completely eliminated if we include a sufficient number of stocks. **Answer:** F **Feedback:** The sentence is FALSE. Diversification eliminates unsystematic (firm-specific) risk, but systematic (market) risk will always remain, no matter how many stocks are added.
83. **Question:** A change in the economy's benchmark interest rate is an example of unsystematic (idiosyncratic) risk. **Answer:** F **Feedback:** The sentence is FALSE. A change in interest rates is a macroeconomic factor that affects all companies, making it a classic example of systematic risk.
84. **Question:** The "capital gain rate" is calculated as the dividend paid divided by the initial stock price. **Answer:** F **Feedback:** The sentence is FALSE. This defines the "dividend yield." The "capital gain rate" is the change in the stock's price divided by the initial price.
85. **Question:** To calculate the annual realized return of a stock that pays quarterly dividends, one must simply add the realized returns from each quarter. **Answer:** F **Feedback:** The sentence is FALSE. The returns must be compounded. The correct formula is (1+Rannual​)=(1+RQ1​)×(1+RQ2​)×(1+RQ3​)×(1+RQ4​).
86. **Question:** If a stock pays no dividends, its total realized return over a period is equal to its capital gain rate. **Answer:** T **Feedback:** The sentence is TRUE. Without dividends, the return formula R=(Divt+1​+Pt+1​)/Pt​−1 simplifies to R=Pt+1​/Pt​−1, which is the capital gain rate.
87. **Question:** A risk-averse investor will never invest in an asset with volatility. **Answer:** F **Feedback:** The sentence is FALSE. A risk-averse investor is willing to invest in volatile assets, provided they expect to be compensated with a risk premium (a higher expected return).
88. **Question:** A stock with a beta of 0.5 is considered riskier than the market. **Answer:** F **Feedback:** The sentence is FALSE. A beta of less than 1 indicates that the asset is less volatile (in terms of systematic risk) than the market.
89. **Question:** The analysis of historical return and risk data assumes that the future will behave similarly to the past. **Answer:** T **Feedback:** The sentence is TRUE. The slides highlight the assumption that "the past is good enough to teach us about the future" when using historical data to estimate expected returns and risks.
90. **Question:** Diversification is most effective when the assets in a portfolio are perfectly positively correlated. **Answer:** F **Feedback:** The sentence is FALSE. Diversification is most effective when correlations are low or negative. If the correlation is +1, there is no risk reduction benefit from diversification.
91. **Question:** A utility company stock, which tends to have stable revenues, will likely have a lower beta than the stock of a cyclical technology company. **Answer:** T **Feedback:** The sentence is TRUE. Companies that are less sensitive to economic cycles (like utilities) tend to have lower betas, as their performance fluctuates less with the market.
92. **Question:** The concept of "heavier tails" in an asset's return distribution means that extreme return events (very positive or very negative) are more likely than in a normal distribution. **Answer:** T **Feedback:** The sentence is TRUE. The slides use this concept to illustrate that some stocks are riskier because they have a higher probability of experiencing large price swings.
93. **Question:** The sole purpose of diversification is to increase the expected return of a portfolio. **Answer:** F **Feedback:** The sentence is FALSE. The primary purpose of diversification is to **reduce risk** (specifically unsystematic risk) for a given level of expected return.
94. **Question**: According to historical data, small stocks not only provided the highest average returns but also the lowest fluctuations in price. **Answer**: F **Feedback**: The sentence is FALSE. While **small stocks** had the **highest long-term return**, they also had the **largest fluctuations** in price, not the lowest.
95. **Question**: In finance, the term "volatility" is commonly used to refer to the variance of a return. **Answer**: F **Feedback**: The sentence is FALSE. The provided text clarifies that in finance, the **standard deviation** of a return, not the variance, is also referred to as its volatility.
96. **Question**: The risk premium for holding unsystematic (firm-specific) risk is zero. **Answer**: T **Feedback**: The sentence is TRUE. Because investors can eliminate unsystematic risk for free by diversifying their portfolios, the market does not offer a risk premium to compensate for holding it.
97. **Question**: If the market portfolio's return increases by 10% and a specific security's return increases by 10% in response, the beta of that security is 1.0. **Answer**: T **Feedback**: The sentence is TRUE. **Beta** measures the sensitivity of a security's return to the market's return. A beta of 1.0 indicates that the security moves, on average, in lockstep with the market.
98. **Question**: The 'realized return' is the average return an investor anticipates earning based on a probability distribution of possible outcomes. **Answer**: F **Feedback**: The sentence is FALSE. The 'realized return' is the return that actually occurs over a specific past period, whereas the 'expected return' is the anticipated return based on probabilities.
99. **Question**: A key reason to calculate the standard error of a historical average return is to get an indication of how far that sample average might deviate from the true expected return. **Answer**: T **Feedback**: The sentence is TRUE. The standard error measures the degree of estimation error, showing how reliable the historical average is as a predictor of the true, underlying expected return.
100. **Question**: A sudden, unexpected change in corporate tax law that affects all public companies is an example of a diversifiable, firm-specific risk. **Answer**: F **Feedback**: The sentence is FALSE. A change in corporate tax law is a market-wide event that impacts all firms, making it a classic example of systematic (undiversifiable) risk.

**Tópico: Fronteira Eficiente, CML, SML e Ratios de Desempenho**

**21) Question:** If investors have homogeneous expectations, then each investor will identify the same portfolio as having the highest Sharpe ratio in the economy. **Answer:** T **Feedback:** The sentence is TRUE. Homogeneous expectations is a key assumption in CAPM, implying that all investors use the same inputs and will therefore identify the same optimal risky portfolio (the tangency portfolio).

**22) Question:** An assumption of the CAPM is that investors are rational and will always prefer a higher over a lower Sharpe ratio. **Answer:** T **Feedback:** The sentence is TRUE. Rational, risk-averse investors seeking to maximize return for a given level of risk will naturally gravitate toward portfolios with the highest Sharpe ratio.

**23) Question:** An assumption of the CAPM is that only informed investors are allowed to borrow or lend at the risk-free rate. **Answer:** F **Feedback:** The sentence is FALSE. The CAPM assumes that all investors can borrow and lend at the same risk-free rate, without restriction.

**43) Question:** If a security lies above the SML, it is considered overvalued. **Answer:** F **Feedback:** The sentence is FALSE. A security lying above the SML offers a higher return than predicted by its beta, meaning it is considered undervalued.

**48) Question:** The capital market line (CML) applies to all individual assets. **Answer:** F **Feedback:** The sentence is FALSE. The CML applies only to efficient portfolios that are combinations of the risk-free asset and the market portfolio. Individual assets fall below the CML.

**49) Question:** The CML shows the highest possible Sharpe ratio attainable by any investor. **Answer:** T **Feedback:** The sentence is TRUE. The slope of the CML is the Sharpe ratio of the market portfolio, which is the highest possible Sharpe ratio for any portfolio in the CAPM framework.

**50) Question:** All securities should lie on the CML according to the CAPM. **Answer:** F **Feedback:** The sentence is FALSE. Only efficient portfolios lie on the CML. Individual securities and inefficient portfolios lie below it.

**58) Question:** The efficient frontier represents all portfolios that minimize risk for a given return. **Answer:** T **Feedback:** The sentence is TRUE. It is the set of optimal portfolios, and any portfolio not on the frontier is considered suboptimal.

**59) Question:** The tangency portfolio is the optimal risky portfolio that lies on the efficient frontier. **Answer:** T **Feedback:** The sentence is TRUE. It is the specific portfolio on the efficient frontier that, when combined with the risk-free asset, creates the Capital Market Line and offers the highest Sharpe ratio.

**60) Question:** A portfolio on the efficient frontier is always superior to one below it. **Answer:** T **Feedback:** The sentence is TRUE. For any portfolio below the frontier, there is a portfolio on the frontier that has a higher return for the same risk, or lower risk for the same return.

**62) Question:** The minimum-variance portfolio has the lowest possible variance among all portfolios. **Answer:** T **Feedback:** The sentence is TRUE. This is the portfolio on the far left of the minimum-variance frontier, representing the lowest possible risk achievable by combining the given assets.

**63) Question:** The minimum-variance frontier includes both efficient and inefficient portfolios. **Answer:** T **Feedback:** The sentence is TRUE. The upper part of the frontier is the "efficient frontier," while the lower part is inefficient because for any portfolio on the lower half, there is one on the upper half with the same risk but higher return.

**64) Question:** The Sharpe ratio is calculated as excess return divided by standard deviation. **Answer:** T **Feedback:** The sentence is TRUE. The formula is (Portfolio Return - Risk-Free Rate) / Portfolio Standard Deviation, measuring risk-adjusted return.

**65) Question:** A higher Sharpe ratio implies better risk-adjusted performance. **Answer:** T **Feedback:** The sentence is TRUE. It indicates that an investment is generating more return for each unit of total risk taken.

**66) Question:** The Treynor Ratio is a risk-adjusted performance measure that uses beta as its measure of risk, making it suitable for evaluating individual stocks within a diversified portfolio. **Answer:** T **Feedback:** The sentence is TRUE. Unlike the Sharpe Ratio, which uses standard deviation (total risk), the Treynor Ratio uses beta (systematic risk) as the denominator. This makes it particularly useful for assessing how much excess return was generated for each unit of market risk taken on.

**70) Question:** In equilibrium, all assets should offer the same Sharpe ratio. **Answer:** F **Feedback:** The sentence is FALSE. In equilibrium (according to CAPM), individual assets do not have the same Sharpe ratio. It is the efficient portfolios on the Capital Market Line that share the same (maximum) Sharpe ratio.

**88) Question:** The security market line (SML) plots the relationship between standard deviation and expected return. **Answer:** F **Feedback:** The sentence is FALSE. The SML plots expected return against beta (systematic risk). The sentence refers to the Capital Market Line (CML).

**93) Question:** Efficient portfolios offer the highest expected return regardless of the level of risk. **Answer:** F **Feedback:** The sentence is FALSE. Efficient portfolios offer the highest expected return for a *given level of risk*. It is not possible to maximize return without considering the associated risk.

**Tópico: Hipótese de Mercado Eficiente (HME)**

**73) Question:** Under the strong form of market efficiency, even insider information is reflected in prices. **Answer:** T **Feedback:** The sentence is TRUE. The strong form of the EMH posits that all information, public and private, is fully incorporated into stock prices, making it impossible to gain an edge.

**74) Question:** If markets are weak-form efficient, technical analysis cannot consistently produce excess returns. **Answer:** T **Feedback:** The sentence is TRUE. Weak-form efficiency states that all past price and volume data is already reflected in the current price, rendering technical analysis (which relies on this data) ineffective for earning abnormal returns.

**75) Question:** If markets are semi-strong efficient, fundamental analysis is useless. **Answer:** F **Feedback:** The sentence is FALSE. Semi-strong efficiency implies that all publicly available information is reflected in prices. While this makes it very difficult, it doesn't render fundamental analysis completely useless; it might help identify the rare mispricing or understand the risks of a security.

**76) Question:** Market anomalies contradict the Efficient Market Hypothesis. **Answer:** T **Feedback:** The sentence is TRUE. Anomalies are persistent patterns of returns that seem to defy the logic of the EMH, such as the "January effect" or the "small-firm effect."

**96) Question:** Market efficiency implies that only information from past prices is reflected in stock prices. **Answer:** F **Feedback:** The sentence is FALSE. This statement describes only the weak form of market efficiency. The concept in general implies that all publicly available information is reflected in stock prices.

**Tópico: Finanças Comportamentais**

**77) Question:** Behavioral finance challenges the assumption of investor rationality. **Answer:** T **Feedback:** The sentence is TRUE. Behavioral finance is a field that uses insights from psychology to explain why investors might not always act rationally, as assumed in traditional finance models.

**78) Question:** Overconfidence and herd behavior are examples of behavioral biases. **Answer:** T **Feedback:** The sentence is TRUE. These are two well-documented psychological biases that can lead investors to make systematic errors in their financial decisions.

**79) Question:** According to behavioral finance, investors may make systematic errors. **Answer:** T **Feedback:** The sentence is TRUE. Unlike the random errors assumed in efficient markets, behavioral finance suggests that psychological biases can cause investors to make predictable, systematic mistakes.

**80) Question:** Availability bias leads investors to overestimate the probability of events that are easily recalled. **Answer:** T **Feedback:** The sentence is TRUE. Investors might overreact to recent news or dramatic events simply because those events are more "available" in their memory, leading to skewed probability assessments.

**97) Question:** The disposition effect refers to investors' tendency to seek out information that confirms their existing beliefs. **Answer:** F **Feedback:** The sentence is FALSE. This describes confirmation bias. The disposition effect is the tendency to sell winning stocks too early and hold on to losing stocks for too long.

**98) Question:** Loss aversion suggests that investors feel the pain of a loss equally to the pleasure of a gain of the same size. **Answer:** F **Feedback:** The sentence is FALSE. The core principle of loss aversion is that investors are more sensitive to losses than to equivalent gains.

**99) Question:** Confirmation bias leads investors to sell winning stocks too early and hold losers too long. **Answer:** F **Feedback:** The sentence is FALSE. This describes the disposition effect. Confirmation bias is the tendency for people to favor information that confirms their preexisting beliefs or hypotheses.

**Tópico: Alpha de Jensen**

**46) Question:** A positive alpha indicates underperformance relative to the CAPM benchmark. **Answer:** F **Feedback:** The sentence is FALSE. A positive alpha indicates outperformance, meaning the asset generated a higher return than expected for its level of systematic risk.

**89) Question:** The alpha of a stock measures the total return of the investment over a period. **Answer:** F **Feedback:** The sentence is FALSE. Alpha measures the return in excess of what is predicted by a pricing model like the CAPM. It represents the risk-adjusted outperformance, not the total return itself.

1. **Question:** Historically, over long horizons, investments in stocks is expected to outperform investments in bonds. **Answer:** T **Feedback:** The sentence is TRUE. This is a foundational concept in finance, where the higher risk associated with stocks is compensated by higher expected returns over long investment horizons compared to less risky assets like bonds.
2. **Question:** The expected, or mean, return is the return we expect to earn on average. **Answer:** T **Feedback:** The sentence is TRUE. It correctly defines the expected return as the statistical average of an investment's potential returns.
3. **Question:** The realized or total return for an investment is the total return of the dividend yield and the capital gain rate. **Answer:** T **Feedback:** The sentence is TRUE. Total return is calculated by summing the income from dividends (dividend yield) and the appreciation in the asset's price (capital gain).
4. **Question:** The market risk premium is the expected average return of the market portfolio. **Answer:** F **Feedback:** The sentence is FALSE. The market risk premium is the *excess return* of the market portfolio over the risk-free rate, not the total expected return of the market itself.
5. **Question:** The total risk of a security represents only its systematic risk. **Answer:** F **Feedback:** The sentence is FALSE. Total risk is composed of *both* systematic (market) risk and unsystematic (firm-specific) risk.
6. **Question:** Because investors can eliminate idiosyncratic risk, they do not require a risk premium for taking it on. **Answer:** T **Feedback:** The sentence is TRUE. Rational investors can diversify away idiosyncratic (firm-specific) risk, so the market does not offer a risk premium for it.
7. **Question:** Investors typically demand a higher return for investments with higher levels of risk. **Answer:** T **Feedback:** The sentence is TRUE. This describes the fundamental risk-return tradeoff, where compensation (higher return) is required for taking on more uncertainty (higher risk).
8. **Question:** Systematic risk can be diversified away by holding a well-diversified portfolio of assets. **Answer:** F **Feedback:** The sentence is FALSE. Systematic risk (or market risk) affects the entire market and cannot be eliminated through diversification. It is *unsystematic* risk that can be diversified away.
9. **Question:** Diversification involves spreading investment across different assets to reduce risk. **Answer:** T **Feedback:** The sentence is TRUE. This is the correct definition of diversification, which aims to reduce unsystematic risk.
10. **Question:** Systematic risk is specific to individual assets and can be diversified away by holding a diversified portfolio. **Answer:** F **Feedback:** The sentence is FALSE. This statement describes unsystematic (or firm-specific) risk, not systematic risk. Systematic risk is market-wide.
11. **Question:** Investors always prefer investments with lower risk, even if it means sacrificing potential returns. **Answer:** F **Feedback:** The sentence is FALSE. Investor preference depends on their individual risk aversion. While many are risk-averse, they will accept higher risk if they are sufficiently compensated with higher potential returns.
12. **Question:** In finance, risk refers to the uncertainty that an investment's actual return will differ from its expected return. **Answer:** T **Feedback:** The sentence is TRUE. This is a core definition of financial risk, often measured by variance or standard deviation.
13. **Question:** The market risk premium represents the excess return that investors expect to earn from investing in the market over the risk-free rate. **Answer:** T **Feedback:** The sentence is TRUE. This is the precise definition of the market risk premium, a key component of the CAPM.
14. **Question:** Systematic risk cannot be eliminated through diversification because it affects the entire market. **Answer:** T **Feedback:** The sentence is TRUE. Because systematic factors (like interest rates or recessions) affect all assets, holding a variety of them cannot eliminate this type of risk.
15. **Question:** Systematic risk is specific to individual assets and can be diversified away by holding a diversified portfolio. **Answer:** F **Feedback:** The sentence is FALSE. This incorrectly describes systematic risk. This definition applies to unsystematic risk.
16. **Question:** The following risk is an example of firm-specific risk: The risk that the founder and CEO retires. **Answer:** T **Feedback:** The sentence is TRUE. The retirement of a key executive is a risk unique to that specific firm, making it an idiosyncratic or firm-specific risk.
17. **Question:** The following risk is an example of firm-specific risk: The risk that oil prices rise, increasing production costs. **Answer:** F **Feedback:** The sentence is FALSE. A rise in oil prices is a macroeconomic factor that affects many companies across the market, making it a systematic risk, not a firm-specific one.
18. **Question:** The following risk is an example of firm-specific risk: The risk that a product design is faulty and the product must be recalled. **Answer:** T **Feedback:** The sentence is TRUE. A product recall is a problem specific to one company and is a classic example of unsystematic (firm-specific) risk.
19. **Question:** The following risk is an example of firm-specific risk: The risk that the economy slows, reducing demand for the firm’s products. **Answer:** F **Feedback:** The sentence is FALSE. An economic slowdown is a market-wide event that affects nearly all firms. Therefore, it is a source of systematic risk.
20. **Question:** A value-weighted portfolio is an equal-ownership portfolio: the investors holds an equal fraction of the total number of shares outstanding of each security in the portfolio. **Answer:** T **Feedback:** The sentence is TRUE. This correctly defines a value-weighted portfolio. Holding the same *fraction of the total shares* of every company means the investment's value is proportional to the company's market capitalization.
21. **Question:** If investors have homogeneous expectations, then each investor will identify the same portfolio as having the highest Sharpe ratio in the economy. **Answer:** T **Feedback:** The sentence is TRUE. Homogeneous expectations is a key assumption in CAPM, implying that all investors use the same inputs and will therefore identify the same optimal risky portfolio (the tangency portfolio).
22. **Question:** An assumption of the CAPM is that investors are rational and will always prefer a higher over a lower Sharpe ratio. **Answer:** T **Feedback:** The sentence is TRUE. Rational, risk-averse investors seeking to maximize return for a given level of risk will naturally gravitate toward portfolios with the highest Sharpe ratio.
23. **Question:** An assumption of the CAPM is that only informed investors are allowed to borrow or lend at the risk-free rate. **Answer:** F **Feedback:** The sentence is FALSE. The CAPM assumes that *all* investors can borrow and lend at the same risk-free rate, without restriction.
24. **Question:** A stock with a beta of zero has the same expected return as the market portfolio. **Answer:** F **Feedback:** The sentence is FALSE. According to the CAPM, a stock with a beta of zero has an expected return equal to the *risk-free rate*, not the market portfolio.
25. **Question:** A stock with a beta greater than 1 is considered more volatile than the market. **Answer:** T **Feedback:** The sentence is TRUE. A beta greater than 1 indicates that the stock tends to amplify the market's movements, making it more volatile in a systematic sense.
26. **Question:** Systematic risk affects the entire market and cannot be eliminated through diversification. **Answer:** T **Feedback:** The sentence is TRUE. This is a core concept of portfolio theory, restating that market-wide risks are undiversifiable.
27. **Question:** Events like recessions, inflation, and interest rate changes are sources of systematic risk. **Answer:** T **Feedback:** The sentence is TRUE. These are all examples of macroeconomic factors that impact the value of all assets in the market.
28. **Question:** Government policies, wars, and natural disasters can contribute to systematic risk. **Answer:** T **Feedback:** The sentence is TRUE. These are large-scale events that have broad impacts across the entire economy and financial markets, thus representing systematic risk.
29. **Question:** Systematic risk impacts all securities in the market, though to varying degrees. **Answer:** T **Feedback:** The sentence is TRUE. While all securities are exposed to systematic risk, the extent of the impact (measured by beta) varies from one security to another.
30. **Question:** Systematic risk refers only to the risk associated with large-cap stocks. **Answer:** F **Feedback:** The sentence is FALSE. Systematic risk affects stocks of all sizes—large-cap, mid-cap, and small-cap—as well as other asset classes.
31. **Question:** Unsystematic risk is also known as firm-specific or idiosyncratic risk. **Answer:** T **Feedback:** The sentence is TRUE. These three terms are synonyms for the type of risk that is unique to a specific company or industry.
32. **Question:** Unsystematic risk affects all companies in the market equally. **Answer:** F **Feedback:** The sentence is FALSE. Unsystematic risk is, by definition, specific to individual companies or a small group of them; it does not affect all companies.
33. **Question:** Unsystematic risk can be reduced or eliminated through portfolio diversification. **Answer:** T **Feedback:** The sentence is TRUE. This is the primary benefit of diversification—spreading investments cancels out the unique, random risks of individual firms.
34. **Question:** Examples of unsystematic risk include management decisions, product recalls, and labor strikes. **Answer:** T **Feedback:** The sentence is TRUE. These are all classic examples of events that are specific to a single company and represent unsystematic risk.
35. **Question:** Even a well-diversified portfolio cannot reduce unsystematic risk. **Answer:** F **Feedback:** The sentence is FALSE. A well-diversified portfolio is specifically designed to reduce or even eliminate unsystematic risk.
36. **Question:** Unlike systematic risk, unsystematic risk is unique to a specific company or industry. **Answer:** T **Feedback:** The sentence is TRUE. This correctly highlights the key distinction between unsystematic (specific) and systematic (market-wide) risk.
37. **Question:** Investors holding a single stock are more exposed to unsystematic risk compared to those holding a diversified portfolio. **Answer:** T **Feedback:** The sentence is TRUE. A single stock carries the full weight of its own unsystematic risk, which is diluted in a diversified portfolio.
38. **Question:** A company’s bankruptcy due to poor financial management is an example of unsystematic risk. **Answer:** T **Feedback:** The sentence is TRUE. Poor management is a firm-specific issue, and bankruptcy resulting from it is the ultimate expression of that risk.
39. **Question:** Unsystematic risk includes risks from changes in interest rates and inflation. **Answer:** F **Feedback:** The sentence is FALSE. Changes in interest rates and inflation are macroeconomic factors that represent systematic risk, not unsystematic risk.
40. **Question:** According to the CAPM, the only risk that investors are compensated for is systematic risk. **Answer:** T **Feedback:** The sentence is TRUE. Since unsystematic risk can be diversified away, investors do not receive a risk premium for bearing it. Compensation is only for bearing undiversifiable, systematic risk.
41. **Question:** Beta is a measure of total risk of a security. **Answer:** F **Feedback:** The sentence is FALSE. Beta measures only systematic risk. Total risk is measured by standard deviation or variance.
42. **Question:** If a security has a negative beta, its return tends to increase when the market declines. **Answer:** T **Feedback:** The sentence is TRUE. A negative beta indicates an inverse relationship with the market, making it a hedge in a downturn (e.g., gold often exhibits this property).
43. **Question:** If a security lies above the SML, it is considered overvalued. **Answer:** F **Feedback:** The sentence is FALSE. A security lying above the SML offers a higher return than predicted by its beta, meaning it is considered *undervalued*.
44. **Question:** The risk-free rate is typically approximated using long-term corporate bond yields. **Answer:** F **Feedback:** The sentence is FALSE. The risk-free rate is approximated using the yield on government securities (like U.S. Treasury bills or Brazil Selic rate), not corporate bonds, as corporations have default risk.
45. **Question:** The equity risk premium is the difference between the expected return on the market and the risk-free rate. **Answer:** T **Feedback:** The sentence is TRUE. This correctly defines the equity risk premium (also called the market risk premium).
46. **Question:** A positive alpha indicates underperformance relative to the CAPM benchmark. **Answer:** F **Feedback:** The sentence is FALSE. A positive alpha indicates *outperformance*, meaning the asset generated a higher return than expected for its level of systematic risk.
47. **Question:** According to CAPM, all investors will hold the market portfolio in equilibrium. **Answer:** T **Feedback:** The sentence is TRUE. In the CAPM world, the market portfolio is the optimal risky portfolio, which all rational investors combine with the risk-free asset to match their risk tolerance.
48. **Question:** The capital market line (CML) applies to all individual assets. **Answer:** F **Feedback:** The sentence is FALSE. The CML applies only to *efficient portfolios* that are combinations of the risk-free asset and the market portfolio. Individual assets fall below the CML.
49. **Question:** The CML shows the highest possible Sharpe ratio attainable by any investor. **Answer:** T **Feedback:** The sentence is TRUE. The slope of the CML is the Sharpe ratio of the market portfolio, which is the highest possible Sharpe ratio for any portfolio in the CAPM framework.
50. **Question:** All securities should lie on the CML according to the CAPM. **Answer:** F **Feedback:** The sentence is FALSE. Only efficient portfolios lie on the CML. Individual securities and inefficient portfolios lie below it.
51. **Question:** The expected return of a zero-beta asset equals the risk-free rate. **Answer:** T **Feedback:** The sentence is TRUE. According to the CAPM formula, if beta is zero, the term for the risk premium becomes zero, and the expected return is simply the risk-free rate.
52. **Question:** Investors with different risk preferences will choose different combinations of the market portfolio and the risk-free asset. **Answer:** T **Feedback:** The sentence is TRUE. This is how investors tailor their overall portfolio risk: more risk-averse investors hold more of the risk-free asset, while less risk-averse investors may even borrow at the risk-free rate to invest more in the market portfolio.
53. **Question:** A diversified portfolio has no unsystematic risk. **Answer:** T **Feedback:** The sentence is TRUE. In theory, a perfectly diversified portfolio has eliminated all unsystematic (firm-specific) risk, leaving only systematic (market) risk.
54. **Question:** Adding more stocks to a portfolio always reduces total risk. **Answer:** F **Feedback:** The sentence is FALSE. While adding stocks generally reduces risk (especially when the number is small), the benefit diminishes. Furthermore, if the added stock is highly correlated with the existing portfolio, it may not reduce risk and could even slightly increase it in some scenarios.
55. **Question:** In a well-diversified portfolio, the variance of returns is primarily due to systematic risk. **Answer:** T **Feedback:** The sentence is TRUE. As unsystematic risk is diversified away, the remaining variance in the portfolio is almost entirely attributable to its exposure to market-wide systematic risk.
56. **Question:** Covariance measures the strength and direction of the linear relationship between two asset returns. **Answer:** T **Feedback:** The sentence is TRUE. A positive covariance means assets move together; a negative covariance means they move in opposite directions.
57. **Question:** Two assets with zero correlation provide no diversification benefits. **Answer:** F **Feedback:** The sentence is FALSE. Combining two assets with zero correlation still provides significant diversification benefits by reducing portfolio variance. The only case with no benefit is a perfect positive correlation of +1.
58. **Question:** The efficient frontier represents all portfolios that minimize risk for a given return. **Answer:** T **Feedback:** The sentence is TRUE. It is the set of optimal portfolios, and any portfolio not on the frontier is considered suboptimal.
59. **Question:** The tangency portfolio is the optimal risky portfolio that lies on the efficient frontier. **Answer:** T **Feedback:** The sentence is TRUE. It is the specific portfolio on the efficient frontier that, when combined with the risk-free asset, creates the Capital Market Line and offers the highest Sharpe ratio.
60. **Question:** A portfolio on the efficient frontier is always superior to one below it. **Answer:** T **Feedback:** The sentence is TRUE. For any portfolio below the frontier, there is a portfolio on the frontier that has a higher return for the same risk, or lower risk for the same return.
61. **Question:** The variance of a portfolio depends on the variances of individual assets and their correlations. **Answer:** T **Feedback:** The sentence is TRUE. The formula for portfolio variance includes the variance (or standard deviation) of each asset and the covariance (or correlation) between each pair of assets.
62. **Question:** The minimum-variance portfolio has the lowest possible variance among all portfolios. **Answer:** T **Feedback:** The sentence is TRUE. This is the portfolio on the far left of the minimum-variance frontier, representing the lowest possible risk achievable by combining the given assets.
63. **Question:** The minimum-variance frontier includes both efficient and inefficient portfolios. **Answer:** T **Feedback:** The sentence is TRUE. The upper part of the frontier is the "efficient frontier," while the lower part is inefficient because for any portfolio on the lower half, there is one on the upper half with the same risk but higher return.
64. **Question:** The Sharpe ratio is calculated as excess return divided by standard deviation. **Answer:** T **Feedback:** The sentence is TRUE. The formula is (Portfolio Return - Risk-Free Rate) / Portfolio Standard Deviation, measuring risk-adjusted return.
65. **Question:** A higher Sharpe ratio implies better risk-adjusted performance. **Answer:** T **Feedback:** The sentence is TRUE. It indicates that an investment is generating more return for each unit of total risk taken.
66. **Question:** The Treynor Ratio is a risk-adjusted performance measure that uses beta as its measure of risk, making it suitable for evaluating individual stocks within a diversified portfolio. **Answer:** T **Feedback:** The sentence is TRUE. Unlike the Sharpe Ratio, which uses standard deviation (total risk), the Treynor Ratio uses beta (systematic risk) as the denominator. This makes it particularly useful for assessing how much excess return was generated for each unit of market risk taken on.
67. **Question:** A portfolio of two stocks with a large positive covariance will have lower risk than a portfolio of two stocks with a covariance near zero. **Answer:** F **Feedback:** The sentence is FALSE. A large positive covariance indicates that the two stocks tend to move strongly in the same direction, which *reduces* the benefits of diversification. A covariance near zero (or negative) is more effective at reducing portfolio risk, as the stocks' movements are less related.
68. **Question:** Investors are risk-neutral when they care only about expected returns. **Answer:** T **Feedback:** The sentence is TRUE. A risk-neutral investor is indifferent to risk and makes decisions based solely on maximizing expected returns.
69. **Question:** Risk-seeking investors prefer portfolios with higher risk, all else equal. **Answer:** T **Feedback:** The sentence is TRUE. A risk-seeking (or risk-loving) investor enjoys risk and may even accept a lower expected return to take on a riskier investment.
70. **Question:** In equilibrium, all assets should offer the same Sharpe ratio. **Answer:** F **Feedback:** The sentence is FALSE. In equilibrium (according to CAPM), individual assets do *not* have the same Sharpe ratio. It is the efficient *portfolios* on the Capital Market Line that share the same (maximum) Sharpe ratio.
71. **Question:** Systematic risk is priced, while idiosyncratic risk is not. **Answer:** T **Feedback:** The sentence is TRUE. This is a central tenet of modern finance. The market only rewards investors for bearing risk that cannot be diversified away (systematic risk).
72. **Question:** The expected return on a risk-free asset is always positive. **Answer:** F **Feedback:** The sentence is FALSE. While highly unusual, in certain economic environments with strong deflationary pressures or central bank policies, nominal risk-free rates can be zero or even slightly negative.
73. **Question:** Under the strong form of market efficiency, even insider information is reflected in prices. **Answer:** T **Feedback:** The sentence is TRUE. The strong form of the EMH posits that all information, public and private, is fully incorporated into stock prices, making it impossible to gain an edge.
74. **Question:** If markets are weak-form efficient, technical analysis cannot consistently produce excess returns. **Answer:** T **Feedback:** The sentence is TRUE. Weak-form efficiency states that all past price and volume data is already reflected in the current price, rendering technical analysis (which relies on this data) ineffective for earning abnormal returns.
75. **Question:** If markets are semi-strong efficient, fundamental analysis is useless. **Answer:** F **Feedback:** The sentence is FALSE. Semi-strong efficiency implies that all *publicly available* information is reflected in prices. While this makes it very difficult, it doesn't render fundamental analysis completely useless; it might help identify the rare mispricing or understand the risks of a security.
76. **Question:** Market anomalies contradict the Efficient Market Hypothesis. **Answer:** T **Feedback:** The sentence is TRUE. Anomalies are persistent patterns of returns that seem to defy the logic of the EMH, such as the "January effect" or the "small-firm effect."
77. **Question:** Behavioral finance challenges the assumption of investor rationality. **Answer:** T **Feedback:** The sentence is TRUE. Behavioral finance is a field that uses insights from psychology to explain why investors might not always act rationally, as assumed in traditional finance models.
78. **Question:** Overconfidence and herd behavior are examples of behavioral biases. **Answer:** T **Feedback:** The sentence is TRUE. These are two well-documented psychological biases that can lead investors to make systematic errors in their financial decisions.
79. **Question:** According to behavioral finance, investors may make systematic errors. **Answer:** T **Feedback:** The sentence is TRUE. Unlike the random errors assumed in efficient markets, behavioral finance suggests that psychological biases can cause investors to make predictable, systematic mistakes.
80. **Question:** Availability bias leads investors to overestimate the probability of events that are easily recalled. **Answer:** T **Feedback:** The sentence is TRUE. Investors might overreact to recent news or dramatic events simply because those events are more "available" in their memory, leading to skewed probability assessments.
81. **Question:** Standard deviation is a measure of only the systematic risk of an investment. **Answer:** F **Feedback:** The sentence is FALSE. Standard deviation measures the *total risk* of an investment, which includes both systematic (market) risk and unsystematic (firm-specific) risk.
82. **Question:** The risk-return tradeoff suggests that higher returns are always guaranteed for investments with higher levels of risk. **Answer:** F **Feedback:** The sentence is FALSE. The tradeoff suggests that there is a higher *potential* or *expected* return for taking on more risk, but it does not guarantee higher returns. High-risk investments can also lead to significant losses.
83. **Question:** Systematic risk, also known as market risk, is the risk that is inherent to a specific industry. **Answer:** F **Feedback:** The sentence is FALSE. Systematic risk is inherent to the *entire market* or economy, not just a specific industry. Risk confined to a single industry would be a component of unsystematic risk.
84. **Question:** Beta measures a stock’s total volatility, including firm-specific news. **Answer:** F **Feedback:** The sentence is FALSE. Beta measures a stock's sensitivity *only* to market movements (systematic risk), not its total volatility.
85. **Question:** The risk-free rate is the return of an investment with very low, but not zero, risk. **Answer:** F **Feedback:** The sentence is FALSE. The risk-free rate is the *theoretical* return of an investment with absolutely zero risk.
86. **Question:** Systematic risk is measured using standard deviation, which indicates how a stock moves relative to the market. **Answer:** F **Feedback:** The sentence is FALSE. Systematic risk is measured using *beta*.
87. **Question:** The Capital Asset Pricing Model (CAPM) states that the expected return of a security is inversely related to its beta. **Answer:** F **Feedback:** The sentence is FALSE. The CAPM states that the expected return is *linearly and positively* related to its beta. A higher beta (more systematic risk) leads to a higher expected return.
88. **Question:** The security market line (SML) plots the relationship between standard deviation and expected return. **Answer:** F **Feedback:** The sentence is FALSE. The SML plots expected return against *beta* (systematic risk). The sentence refers to the Capital Market Line (CML).
89. **Question:** The alpha of a stock measures the total return of the investment over a period. **Answer:** F **Feedback:** The sentence is FALSE. Alpha measures the return *in excess* of what is predicted by a pricing model like the CAPM. It represents the risk-adjusted outperformance, not the total return itself.
90. **Question:** The market portfolio includes all risky assets weighted equally. **Answer:** F **Feedback:** The sentence is FALSE. The market portfolio is weighted by *market capitalization* (value-weighted), not equally.
91. **Question:** The standard deviation of a portfolio is always the weighted average of the standard deviations of each asset in it. **Answer:** F **Feedback:** The sentence is FALSE. This would only be true if all assets were perfectly correlated (+1). Because of the benefits of diversification (correlation less than 1), the standard deviation of a portfolio is almost always lower than the weighted average of the individual standard deviations.
92. **Question:** A correlation coefficient of -1 implies that there is no relationship between the two assets. **Answer:** F **Feedback:** The sentence is FALSE. A correlation of -1 implies a *perfect negative* relationship (they move in opposite directions). A correlation of 0 implies a no relationship
93. **Question:** Efficient portfolios offer the highest expected return regardless of the level of risk. **Answer:** F **Feedback:** The sentence is FALSE. Efficient portfolios offer the highest expected return *for a given level of risk*. It is not possible to maximize return without considering the associated risk.
94. **Question:** Diversification benefits are greater when asset returns are more positively correlated. **Answer:** F **Feedback:** The sentence is FALSE. Diversification benefits are greater when asset returns are *less* correlated (ideally, negatively correlated). High positive correlation means the assets tend to move together, which reduces the benefits of diversification.
95. **Question:** Risk-averse investors are indifferent to risk when choosing between investments. **Answer:** F **Feedback:** The sentence is FALSE. Risk-averse investors specifically *dislike* risk and require higher expected returns as compensation for taking it on. An investor who is indifferent to risk is defined as risk-neutral.
96. **Question:** Market efficiency implies that only information from past prices is reflected in stock prices. **Answer:** F **Feedback:** The sentence is FALSE. This statement describes only the *weak form* of market efficiency. The concept in general implies that all *publicly available* information is reflected in stock prices.
97. **Question:** The disposition effect refers to investors' tendency to seek out information that confirms their existing beliefs. **Answer:** F **Feedback:** The sentence is FALSE. This describes *confirmation bias*. The disposition effect is the tendency to sell winning stocks too early and hold on to losing stocks for too long.
98. **Question:** Loss aversion suggests that investors feel the pain of a loss equally to the pleasure of a gain of the same size. **Answer:** F **Feedback:** The sentence is FALSE. The core principle of loss aversion is that investors are *more sensitive* to losses than to equivalent gains.
99. **Question:** Confirmation bias leads investors to sell winning stocks too early and hold losers too long. **Answer:** F **Feedback:** The sentence is FALSE. This describes the *disposition effect*. Confirmation bias is the tendency for people to favor information that confirms their preexisting beliefs or hypotheses.
100. **Question:** Standard deviation is a measure of the total risk of an investment. **Answer:** T **Feedback:** The sentence is TRUE. Standard deviation quantifies the total volatility or dispersion of an investment's returns around its average, capturing both systematic and unsystematic risk.