LO.a: Describe market efficiency and related concepts, including their importance to investment practitioners.

1. The type of efficiency that exists when any new information about a given firm is known with certainty, and is immediately priced into that company's stock, is *best* known as:
   A. informational efficiency.
   B. operational efficiency.
   C. allocational efficiency.

2. Which of the following is *most likely* the cause of change in a company's share price?
   A. Number of trades executed in the past few days.
   B. Current information in the market.
   C. New information coming into the market.

3. For the efficient market hypothesis to hold:
   A. only the market needs to be rational.
   B. individuals participating in the market need to be rational.
   C. markets need to be irrational.

4. Analyst 1: In an efficient market, security market prices fully reflect their fundamental values.
   Analyst 2: In an efficient market, active strategies will lead to excess risk adjusted portfolio returns.
   Which analyst's statement is *most likely* correct?
   A. Analyst 1.
   B. Analyst 2.
   C. Both.

LO.b: Distinguish between market value and intrinsic value.

5. Active investors seek to profit by selling assets when the market price is:
   A. greater than the intrinsic value.
   B. equal to the intrinsic value.
   C. less than the intrinsic value.

6. According to the value effect, high value stocks that outperform growth stocks have higher:
   A. dividend yields.
   B. price-to-earnings ratios.
   C. market-to-book ratios.

7. The fundamental value of an overvalued asset is:
   A. greater than the price at which it can be bought or sold.
   B. less than the price at which it can be bought or sold.
   C. it is the value at which it can currently be bought or sold.

8. An asset's intrinsic value:

A. can be calculated precisely.
B. is determined using financial models like dividend discount model.
C. is equal to its market value.

LO.c: Explain factors that affect a market's efficiency.

9. Which of the following will *most likely* impede market efficiency?
   A. Putting restriction on short selling.
   B. Encouraging arbitrage transactions.
   C. Increasing transparency in market prices.

10. Consider a regulation that restricts some investors from participating in a market. What is the *most likely* of this regulation on market efficiency? It:
   A. hinders efficiency.
   B. has no effect on efficiency.
   C. increases efficiency.

11. According to efficient market theory, what affect does a restriction on short selling have on market efficiency?
   A. Increase market efficiency.
   B. Decrease market efficiency.
   C. No affect market efficiency.

12. Market efficiency will *most likely* increase by:
   A. selling riskier securities.
   B. restricting arbitrage.
   C. increasing the number of financial market participants.

LO.d: Contrast weak-form, semi-strong-form, and strong-form market efficiency.

13. The weak form market efficiency *most likely* assumes that current security prices:
   A. fully reflect all information from public and private sources.
   B. adjust rapidly to the release of all public information.
   C. fully reflect all price and trading volume information.

14. Security markets are not strong-form efficient because:
   A. change in price cannot be linked to current or new information in the market.
   B. price adjusts quickly to new information.
   C. regulations try to prevent insider trading.

15. Tim observed that company XYZ's share price reacts gradually to the public release of its annual report. With respect to efficient markets, which of the following *most likely* indicates the market where company XYZ trades?
   A. The market is weak-form efficient.
   B. The market is strong-form efficient.
   C. The market is waiting for new information to be released.

16. If the market price of a security reflects past prices and both public and private information, then market is:
    A. weak-form efficient.
    B. semi-strong-form efficient.
    C. strong-form efficient.

17. Which of the following *best* describe weak-form market efficient?
    A. Technical analysis can be used to make abnormal profits.
    B. Security prices reflect all publicly known and available information.
    C. There is no serial correlation in security returns.

18. If markets are weak-form efficient, the abnormal trading profits of technical analysis will *most likely* be:
    A. negative.
    B. zero.
    C. positive.

19. If investors are able to earn abnormal returns by trading on non-public information, markets are *least likely* to be:
    A. weak-form efficient but not semi-strong-form efficient.
    B. semi-strong-form efficient but not strong-form efficient.
    C. strong-form efficient.

20. An observation that the stocks with above average price-to-book ratio have consistently underperformed those with below average price-to-book ratio *least likely* contradicts:
    A. weak form market efficiency.
    B. semi-strong form market efficiency.
    C. strong form market efficiency.

21. After the public announcement of higher than expected earnings, an investor makes abnormal returns by going long on the firm. This *most likely* violates which form of market efficiency?
    A. Semi-strong form only.
    B. Semi-strong and strong forms.
    C. Weak and semi-strong forms.

LO.e: Explain the implications of each form of market efficiency for fundamental analysis, technical analysis, and the choice between active and passive portfolio management.

22. Which of the following is *most likely* to be a characteristic of an efficient security market?
    A. Arbitrageurs would have more chances to earn profits.
    B. Active investment strategies would be preferred over passive strategies.
    C. Security prices would react only to the “unexpected” elements of information.

23. Dean Jones is using trading rules to generate abnormal profits. He is *most likely* acting on the assumption that the market is:

A. weak form inefficient.
B. semi-strong form efficient.
C. strong form efficient.

24. Considering markets are inefficient, which one of the following is *most likely* correct about passive portfolio management strategies?
    A. They underperform active trading strategies.
    B. They outperform active trading strategies.
    C. They consistently achieve superior abnormal returns.

25. If a market is weak-form efficient, then the return of a passively managed portfolio is likely to be:
    A. higher than the return on an actively managed portfolio.
    B. lower than the return on an actively managed portfolio.
    C. the same as the return on an actively managed portfolio.

26. Taylor observes that stock X's price is on an upward trend. He expects this upward trend to continue and decides to buy the stock. Taylor assumes that the market is:
    A. weak-form efficient.
    B. strong-form inefficient.
    C. weak-form inefficient.

27. Jacob is interested in buying shares of GSK. He, therefore, does a thorough research on pharma sector and studies GSK in depth. His analysis involves the estimation of an asset's value using earnings and sales forecasts, and risk estimates as well as economic growth, inflation and interest rates prevailing. In such a scenario, Jacob's analysis for investment in GSK assumes markets are:
    A. strong-form inefficient.
    B. strong-form efficient.
    C. semi-strong-form inefficient.

28. In an inefficient market, investors will *most likely* benefit from a(n):
    A. passive investment strategy.
    B. active investment strategy.
    C. active or passive investment strategy.

LO.f: Describe selected market anomalies.

29. Which of the following is the *least accurate* characterization of momentum anomalies? Momentum anomalies:
    A. relate to short-term price patterns.
    B. are caused by investor overreaction.
    C. are consistent with weak-form market efficiency.

30. The stock of company XYZ is trading at $120 prior to the announcement. After the announcement, the stock price should fall to $115; instead it decreases to $113. This anomaly

is known as:
A. overreaction effect.
B. earnings surprise.
C. predictability of return based on prior information.

31. Which of the following is *least likely* to explain the January effect anomaly?
A. Tax selling.
B. Most companies perform poorly in January.
C. Window dressing of portfolio holdings.

32. A market anomaly which is inconsistent with weak-form market efficiency is:
A. distressed securities effect.
B. momentum pattern.
C. value line enigma.

33. Some observed anomalies that are not violations of market efficiency could rather be:
A. result of statistical methodology that could be corrected.
B. a technique to produce future abnormal returns.
C. drivers of economic growth.

LO.g: Describe behavioral finance and its potential relevance to understanding market anomalies.

34. The tendency of people to dislike losses more than they like comparable gains is *most likely* referred to as:
A. loss aversion.
B. risk aversion.
C. the disposition effect.

35. According to behavioral finance, the investor bias in which investors assess new information and probabilities of outcomes based on similarity to the current state is *best* described as:
A. representativeness.
B. conservatism.
C. narrow framing.

36. Lin Xiu, a well-respected financial analyst, buys a stock after utilizing her analytical experience and up-to-date information. Her friends imitate Lin's actions and also buy the same stock. Which of the following statements is *most accurate*?
A. The behavior of Lin's friends improves market efficiency.
B. The behavior of Lin's friends is irrational.
C. The behavior of Lin's friends reflects a representativeness bias.

37. You are well respected financial and a charterholder. You continuously use your skills and analytical expertise along with up-to-date information to make investment decisions. Your close friends imitate your decision and buy or sell in accordance with your investment

decisions. Which of the following statements is *least likely* accurate with regards to the behavioral exhibited by your close friends?

A. The behavior improves market efficiency.
B. The behavior is an example of an information cascade.
C. The behavior is irrational.

38. The behavioral finance theory which explains how investors can be slow to react to new information and continue to maintain their prior views or forecasts is *most accurately* described as:

A. narrow framing.
B. conservatism.
C. representativeness.

Solutions

1. A is correct. The theory of informationally efficient markets states that new information about any given firm is known with certainty, and is immediately priced into that company's stock.

2. C is correct. In an efficient market, a change in the company’s share price is most likely the result of new information coming into the market. Investors will react to new, independent information as it is made public.

3. A is correct. Market efficiency and asset-pricing models do not require that each individual is rational- rather, only that the market is rational.

4. A is correct. In an efficient market price fully reflect their fundamental values and active strategies cannot generate excess risk-adjusted returns.

5. A is correct. When a security’s market value is greater than its intrinsic value, active investors seek to profit by selling the asset.

6. A is correct. The value effect suggests that high value stocks (i.e. with relatively low P/E, P/B ratios, or high dividend yield) outperform growth stocks.

7. B is correct. The intrinsic value (or fundamental value) of an overvalued asset is less than the market value of the asset, where the market value is the transaction price at which an asset can be currently bought or sold.

8. B is correct. An asset’s intrinsic value is calculated using financial models such as the dividend discount model (DDM). The intrinsic value can be different from market value, especially if the market is not efficient.

9. A is correct. Putting restrictions on short selling will reduce arbitrage trading which will impede market efficiency. Arbitrage results in higher market efficiency as price differences quickly disappear. Increasing transparency in the market also helps enhance market efficiency.

10. A is correct. Market efficiency can be impeded by reduction in number of market participants which also leads to market imperfections.

11. B is correct. Restrictions on short selling in some markets impede efficiency. Reducing the restrictions on short selling will allow for more arbitrage trading. Arbitrage results in higher efficiency as price differences quickly disappear.

12. C is correct. If the number of financial market participants increase, markets become more efficient.

13. C is correct. In the weak form efficient market hypothesis, security prices fully reflect all price and trading volume information.

14. C is correct. Securities markets are not strong-form market efficient as regulations try to prevent insider trading.

15. C is correct. Based on the convention used in the curriculum, the term ‘with respect to efficient markets’ implies that the markets are efficient. If the market is efficient, the most likely reason for the stock price to ‘react gradually’ is that the market is waiting for additional information.

16. C is correct. The strong-form efficient market hypothesis is defined as a market where security prices fully reflect all market data, which refers to all past price and both public and private information available.

17. C is correct. In weak-form efficient markets, historical market information (price and volume data) is already reflected in security prices hence there is no serial correlation in security returns.

18. B is correct. If markets are weak-form efficient, then technical analysts cannot make abnormal returns on a consistent basis.

19. C is correct. In both weak-form and semi-strong-form efficient markets, investors are able to earn abnormal returns by trading on private information.

20. A is correct. This observation contradicts semi-strong and strong form market efficiency. Semi-strong-form efficient markets reflect all publically available information which includes financial statement data (including book value of a company) and financial market data (market price of a security). A strong-form efficient market is, by definition, also semi-strong and weak form efficient. This observation is not a contradiction to weak-form market efficiency as financial statement data is not reflected in a security’s price in such markets.

21. B is correct. In semi-strong efficient market, prices adjust quickly and accurately to new information and investors cannot earn abnormal profits on public announcements. Thus, the market is not semi-strong efficient. A market that is not semi-strong efficient is also not strong form efficient. However, the market could still be weak form efficient because past prices are not being used to make abnormal profits.

22. C is correct. In an efficient market, prices should be expected to react only to the “unexpected” or “surprise” element of information releases. Investors process the unexpected information and revise expectations accordingly.

23. A is correct. Trading rules that consistently generate abnormal risk-adjusted returns after trading costs contradict the weak form of market efficiency. Under weak form of market efficiency, securities fully reflect all past market data. This refers to all historical price and trading volume information forming the basis of technical analysis. Hence, past trading data

is already reflected in current prices and returns cannot be generated by extrapolating price trends to forecast future price movements.

24. A is correct. In an inefficient market, an active investment strategy outperforms passive investment strategy as several opportunities may exist to earn superior returns.

25. B is correct. In a weak-form efficient market, active portfolio strategies based on fundamental analysis can be used to outperform passive portfolio strategies.

26. C is correct. Taylor is acting as a technical analyst. He is using past prices and volume to predict future prices, which contradicts weak-form market efficiency.

27. C is correct. Jacob is acting as a fundamental analyst by using publicly available information to estimate a security's intrinsic value to determine if the security is mispriced, which contradicts semi-strong form of market efficiency.

28. B is correct. In an inefficient market, investors might be able to earn superior risk adjusted returns since opportunities for it exist in the market e.g. due to mispricing. However, in an efficient market a passive investment strategy would be preferred to an active strategy for its lower costs and because opportunities for earning superior risk adjusted returns in an efficient market are negligible.

29. C is correct. The first two statements are correct as momentum anomalies relate to short-term price patterns, typically resulting from investor overreaction in response to the release of unexpected public information.

30. A is correct. This anomaly is known as overreaction effect.

31. B is correct. Tax-selling and window dressing are two reasons generally given for the January effect.

32. B is correct. A contradiction to weak-form efficiency occurs when securities that have experienced high returns in the short term tend to continue to generate higher returns in subsequent periods. If investors can trade on the basis of momentum and earn abnormal profits, then this anomaly contradicts the weak form of the efficient market hypothesis because it represents a pattern in prices that can be exploited by simply using historical price information.

33. A is correct. Some observed anomalies are not violations of market efficiency, but rather are the result of statistical methodologies used to detect the anomalies. As a result, if the methodologies are corrected, most of these anomalies disappear.

34. A is correct. According to the loss aversion arguments, investors dislike losses more than they like comparable gains.

35. A is correct. Representativeness is where investors assess new information and probabilities of outcomes based on similarity to the current state or to a familiar classification.

36. A is correct. This behavioral bias is an example of an information cascade wherein the transmission of information is from those participants who act first and whose decisions influence the decisions of others. The behavior of informed traders acting first and uninformed traders imitating the informed traders is consistent with rationality. The imitation trading by the uninformed traders helps the market incorporate relevant information and improves market efficiency.

37. C is correct. This behavioral bias is an example of an information cascade wherein the transmission of information is from those participants who act first (i.e. you) and whose decisions influence the decisions of others (your friends). The behavior of informed traders acting first and uninformed traders imitating the informed traders is consistent with rationality. The imitation trading by the uninformed traders helps the market incorporate relevant information and improves market efficiency.

38. B is correct. Conservatism is the behavioral finance theory in which investors tend to be slow to react to new information and continue to maintain their prior views and forecasts. Narrow framing involves investors focusing on issues in isolation while representativeness involves investors assessing probabilities of outcomes depending on how similar they are to the current state.