CHAPTER 41

TRADING COSTS AND ELECTRONIC MARKETS

1. (B) basket trading capabilities

Explanation

Basket trading is not a solution to market fragmentation, but rather is an algorithm used for statistical arbitrage. Algorithms can adapt to market fragmentation if the algorithm includes intelligent smart order routing capabilities and/or liquidity aggregation capabilities.

(Module 41.2, LOS 41.e)

Related Material

SchweserNotes - Book 5

2. (A) front running.

Explanation

Front running orders refers to a situation where a trader that has advance information about a large buy-side order, and trades ahead of that order in an attempt to profit from the large trade's market impact. Gunning the market is a strategy used by market manipulators to cause other traders to enter into disadvantageous trades. Quote stuffing refers to a trader distracting other algorithms by placing a great quantity of fictitious orders and then cancelling them almost immediately.

(Module 41.4, LOS 41.j)

Related Material

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Sunil Chabbria has just been hired by Noveau Investments as part of the firm's trading desk team. Chabbria had previously traded bonds for a large public pension plan. As part of Noveau's training program for new hires, Chabbria is reviewing the trading manual and protocols for trade evaluation at Noveau.

One of the learning assessments in the training manual asks to calculate the effective spread on shares of Amplicity purchased at $25.89. At the time of the transaction, the quoted bid-ask prices were $25.75 — $25.91.

Chabbria is concerned about the merits of using effective spread in evaluating trades, and is considering other alternatives. He makes a note to himself to consider the pros and cons of each of the metrics.

Chabbria reviews the section on electronic markets from the training manual and jots down the following:

(1) Due to ever-increasing computing power and communication speeds, quoted bid - ask spreads have increased in electronic markets.

(2) Unlike floor-based traders, electronic exchange systems do not inadvertently reveal clients' hidden orders.

Finally, Chabbria sees mention of flickering quotes in a description of a trading strategy that the firm uses, however he is unsure of what this term means. Chabbria sends an email to Suzanne Thomas, head trader for the firm, asking what is meant by flickering quotes.

3. (C) $0.12.

Explanation

Midquote = (25.75 + 25.91) / 2 = $25.83.

per-share effective spread transaction cost

= (side) x (transaction price — midquote price)

= (+1) x ($25.89 — $25.83) = $0.06

effective spread = 2 x per-share effective spread

= 2 x 0.06 = $0.12

(Module 41.1, LOS 41.b)

Related Material

SchweserNotes - Book 5

4. (C) does not account for slippage or delay costs when part of the order does not get filled at desired prices.

Explanation

When a large order is split into smaller orders, the effective spread is a poor indicator of trade performance because it does not take into account the price impact cost. Effective spread does not account for slippage or delay costs when part of the order does not get filled at desired prices.

Effective spread does not capture the opportunity cost of a trade — the cost of lost opportunities when an unfilled part of the order is canceled due to adverse price movements.

(Module 41.1, LOS 41.b)

Related Material

SchweserNotes - Book 5

5. (B) Statement 2 only.

Explanation

Electronic trading systems are cheaper to operate than floor-based trading, and the increased use by buy-side traders has led to a narrowing of quoted spreads. Unlike floor-based traders, electronic exchange systems do not reveal their clients' hidden orders.

(Module 41.2, LOS 41.d)

Related Material

SchweserNotes - Book 5

6. (A) are submitted and then cancelled immediately.

Explanation

Flickering quotes are exposed limit orders that are submitted and then canceled almost immediately. This technique is used by traders that do not wish to submit standing orders (which provide other traders a valuable option-to-trade). Other traders wanting to trade at the flickering quote can submit a hidden limit order that will execute upon the return of the flickering order.

(Module 41.3, LOS 41.g)

Related Material

SchweserNotes - Book 5

7. (A) quote matcher.

Explanation

Electronic quote matchers attempt to exploit the option values of standing orders (i.e. limit orders waiting to be filled.) Standing orders allow quote matchers to limit the losses on positions they take. If prices move in the quote matcher's favor, they profit. If prices move against the quote matcher, they can exit by trading using the standing orders.

(Module 41.3, LOS 41.f)

Related Material

SchweserNotes - Book 5

8. (C) leapfrogging.

Explanation

Quote leapfrogging occurs when a dealers quotes a wide spread, but then offers a better price in response to other traders offering better prices. Flickering quotes are exposed limit orders that electronic traders submit and then cancel shortly thereafter. Larger traders submit hidden orders when they do not want to reveal their standing orders to the markets.

(Module 41.3, LOS 41.g)

Related Material

SchweserNotes - Book 5

9. (A) Opportunity costs.

Explanation

Opportunity cost arises from unfilled orders or failed trading opportunities.

(Module 41.1, LOS 41.b)

Related Material

SchweserNotes - Book 5

10. (A) $0.04.

Explanation

If a trader placed a sell order, a dealer may offer a better bid price than the previous bid to earn the trader's business. The midquote of the quoted bid and ask prices is $16.05. The effective spread for this sell order would then be calculated as: 2 x ($16.05 – $16.03) = $0.04, which is 6 cents better than the quoted spread of $0.10 ($16.10 – $16.00).

(Module 41.1, LOS 41.b)

Related Material

SchweserNotes - Book 5

11. (A) layering.

Explanation

Layering (also known as spoofing) is a quote stuffing strategy intended to use sham orders to trick other market participants into trading with real orders on the other side of the market. Gunning the market is a strategy used by market manipulators to cause other traders to enter into disadvantageous trades. In wash trading, a trader will rapidly buy and sell the same security in an attempt to artificially inflate the demand for the security.

(Module 41.4, LOS 41.j)

Related Material.

SchweserNotes - Book 5

12. (A) when rebalancing a portfolio over the day with buy and sell orders.

Explanation

Portfolio managers who are rebalancing their portfolios over the day and have both buy and sell orders would likely select the VWAP as a price benchmark. In these situations, the preference is to participate with market volume.

Excluding potential trade outliers and used in market environments that are potentially volatile throughout the day would suggest that time-weighted average price (TWAP) would be applicable as opposed to VWAP.

(Module 41.1, LOS 41.b)

Related Material

SchweserNotes - Book 5

13. (B) The implicit costs are -$60

Explanation

Implicit costs are usually measured using some benchmark, such as the VWAP. VWAP is a weighted average of security prices during a day, where the weight applied is the proportion of the day's trading volume. If the VWAP during a day was $21 and 100 shares were bought at $20.40, then the estimate of the implicit cost would be 100 x ($20.40 - $21.00) = -$60. The explicit costs in a trade are the commissions, taxes, stamp duties, and fees.

(Module 41.1, LOS 41.b)

Related Material

SchweserNotes - Book 5

14. (A) $0.01.

Explanation

If a trader placed a buy order, a dealer may offer a better ask price than the previous ask to earn the trader's business. The midquote of the quoted bid and ask prices is $30.035. The effective spread for this buy order would then be calculated as: 2 x ($30.04 - $30.035) = $0.01, which is 6 cents better than the quoted spread of $0.07 ($30.07 - $30.00).

(Module 41.1, LOS 41.b)

Related Material

SchweserNotes - Book 5

15. (C) wash trading.

Explanation

Gunning the market is a strategy used by market manipulation to cause other traders to enter into disadvantageous trades. In wash trading, a trader will rapidly buy and sell the same security in an attempt to artificially inflate the demand for the security. Quote stuffing refers to a trader distracting and disadvantaging other algorithms by placing a great quantity of fictitious orders and then cancelling them almost immediately.

(Module 41.4, LOS 41.j)

Related Material

SchweserNotes - Book 5

16. (B) gunning.

Explanation

Gunning the market is a strategy where a manipulator tries to push prices down, in order to trigger stop-loss sell orders that will allow the manipulator to purchase

the security at lower prices. In a squeeze or corner, the manipulator obtains control over resources necessary to settle trading contracts, then unexpectedly withdraws those resources from the market.

(Module 41.1, LOS 41.j)

Related Material

SchweserNotes - Book 5

17. (A) **Market impact costs.**

Explanation

The explicit costs in a trade are readily discernable and include commissions, taxes, stamp duties, and fees. Implicit costs sometimes cannot be measured as easily but do exist. They include the bid-ask spread, market or price impact costs, opportunity costs, and delay costs (a.k.a. slippage costs).

(Module 41.1, LOS 41.a)

Related Material

SchweserNotes - Book 5

18. (B) **Explicit costs.**

Explanation

The realized profit and loss and missed trade opportunity cost are all affected by market movements that the manager should not be held accountable for. For example, if the security increases due to market-wide movements, the trader should not be held responsible for this non-security specific change in price. Market-wide movements can be adjusted for by the market.

(Module 41.1, LOS 41.c)

Related Material

SchweserNotes - Book 5

19. (B) **$0.050.**

Explanation

If a trader placed a buy order, a dealer may offer a better ask price than the previous ask to earn the trader's business. The midquote of the quoted bid and ask prices is $40.445. The effective spread for this buy order would then be calculated as: 2 x ($40.47 - $40.445) = $0.05, which is 4 cents better than the quoted spread of $0.09 ($40.40 - $40.49).

(Module 41.1, LOS 41.b)

Related Material

SchweserNotes - Book 5

20. (C) "super book".

Explanation

Liquidity aggregation refers to the process of monitoring a number of trading venues and then compiling the data into a "super book" that summarizes price and liquidity across these markets. This allows trades to be routed appropriately. A dark pool is a trading venue that is only open to certain clients, and that does not publish its liquidity. A parent order is a large order (e.g. buy 1 million shares of Facebook) that is divided up by an execution algorithm into smaller child orders that are less likely to move the market.

(Module 41.2, LOS 41.e)

Related Material

SchweserNotes - Book 5