Question #1 of 17

Algorithmic trading is *most accurately* defined as:

A) breaking down large orders and executing them over time.

B) tracking data feeds and capitalizing on profit opportunities.

C) using a computer to automate a trading strategy.

Explanation

Algorithmic trading simply refers to using computer algorithms to place and manage orders in the market. Breaking down large orders and executing them over time is specifically the goal of execution algorithms, which are a specific form of algorithmic trading. Tracking data feeds and capitalizing on profit opportunities are specifically the purpose of high-frequency trading algorithms, which are another specific application of algorithmic trading.

(Study Session 17, Module 51.1, LOS 51.a)

Related Material

SchweserNotes - Book 5

Question #2 of 17

One potential negative impact of algorithmic and high-frequency trading on securities markets is *most likely* to be:

A) increased complexity of regulatory oversight

B) decreased pricing efficiency

C) higher transaction costs

Explanation

Potential negative impacts of algorithmic trading include greater complexity of achieving regulatory oversight, algorithms' potential to speed and amplify market movements, the possibility of algorithms running out-of-control, the potential for market abuse through quote stuffing or other manipulation, and the potential negative impact of unequal access to information. Positive effects include narrower bid–ask spreads, increased pricing efficiency, lower transaction costs, and greater liquidity. The overall market impact of algorithmic trading has generally been found to be positive.

(Study Session 17, Module 51.1, LOS 51.f)

Related Material

SchweserNotes - Book 5

Question #3 of 17

A trading algorithm intended to minimize the market impact of large orders is *most likely* to be described as a(n):

A) execution algorithm. ✓

B) exchange response mitigation algorithm. ✗

C) high-frequency algorithm. ✗

Explanation

The two major categories of trading algorithms are execution algorithms, which are intended to decrease the negative market impact of large orders, and high-frequency algorithms, which seek out profitable trades by monitoring real-time market data.

(Study Session 17, Module 51.1, LOS 51.b)

Related Material

SchweserNotes - Book 5

Question #4 of 17

An execution algorithm that slices a large order into pieces sized proportionately to the security's historical trading distribution over the course of a day is *most likely* to be categorized as a(n):

A) market participation algorithm. ✗

B) implementation shortfall algorithm. ✗

C) VWAP algorithm. ✓

Explanation

Volume-weighted average price (VWAP) algorithms chop an order into slices sized proportionally to the security's historical daily trading volume. An implementation shortfall algorithm attempts to minimize the difference between the decision price and the execution price by automatically changing the schedule of the trade according to market conditions. Market participation algorithms break an order into pieces and then execute these smaller pieces pro-rata with trading volume over the allotted execution period.

(Study Session 17, Module 51.1, LOS 51.c)

Related Material

SchweserNotes - Book 5

Question #5 of 17

A trading strategy designed to profit from breaks in the correlation between instruments that historically have been correlated is *most likely* to be referred to as:

A) statistical arbitrage.

B) basket trading.

C) market fragmentation.

Explanation

Statistical arbitrage (also called "stat arb") is a trading strategy where securities that have been in the past statistically correlated are monitored to identify deviations from this correlation. Basket trading refers to the simultaneous trading of a number ("basket") of securities, rather than the trading of individual instruments. Market fragmentation is a situation where the same instrument is traded in a number of financial markets simultaneously, such as S&P 500 and the Nasdaq.

(Study Session 17, Module 51.1, LOS 51.c)

Related Material

SchweserNotes - Book 5

Question #6 of 17

Algorithms are *least likely* to adapt to market fragmentation by incorporating:

A) intelligent smart order routing capabilities

B) basket trading capabilities

C) liquidity aggregation 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.

(Study Session 17, Module 51.1, LOS 51.d)

Related Material

SchweserNotes - Book 5

Question #7 of 17

One positive impact of algorithmic and high-frequency trading on securities markets is *most likely* to be:

A) damping of market movements.

B) decreased complexity of regulatory oversight.

C) increased pricing efficiency.

Explanation

Positive effects of algorithmic trading include increased pricing efficiency, narrower bid–ask spreads, lower transaction costs, and greater liquidity. The market impact of algorithmic trading has generally been found to be positive. Potential negative impacts of algorithmic trading include algorithms' potential to speed and amplify market movements, greater complexity of achieving regulatory oversight, the possibility of algorithms running out-of-control, the potential for market abuse through quote stuffing or other manipulation, and the potential negative impact of unequal access to information.

(Study Session 17, Module 51.1, LOS 51.f)

Related Material

SchweserNotes - Book 5

Question #8 of 17

The results of liquidity aggregation are *most likely* to be referred to as a:

A) “parent order”.

B) “super book”.

C) “dark pool”.

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.

(Study Session 17, Module 51.1, LOS 51.d)

Related Material

SchweserNotes - Book 5

Question #9 of 17

Algorithmic trading is *best described* as a computer operating to place orders in the market:

A) autonomously of a human trader.

B) either autonomously, or on behalf of a human trader.

C) on behalf of a human trader.

Explanation

Some algorithms operate completely autonomously, while others place orders on behalf of a human trader. Algorithmic trading is simply the use of computer instructions to place or manage financial market orders.

(Study Session 17, Module 51.1, LOS 51.a)

Related Material

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Question #10 of 17

An execution algorithm that chops an order into pieces and then uses those pieces to join in trading pro-rata with trading volume over the execution period is *most likely* to be categorized as a(n):

A) implementation shortfall algorithm.

B) VWAP algorithm.

C) market participation algorithm.

Explanation

Market participation algorithms break an order into pieces and then execute these smaller orders pro-rata with trading volume over the allotted execution period. Volume-weighted average price (VWAP) algorithms chop an order up into slices sized proportionally to the security's historical daily trading volume. An implementation shortfall algorithm attempts to minimize the difference between the decision price and the execution price by automatically changing the schedule of the trade according to market conditions.

(Study Session 17, Module 51.1, LOS 51.c)

Related Material

SchweserNotes - Book 5

Question #11 of 17

A trading algorithm that constantly monitors market data in search of patterns that can be traded profitably is *most likely* to be described as a(n):

A) sequential exchange algorithm.

B) execution algorithm.

C) high-frequency algorithm.

Explanation

The two major categories of trading algorithms are execution algorithms which are intended to decrease the negative market impact of large orders, and high-frequency algorithms which seek out profitable trades by monitoring real-time market data.

(Study Session 17, Module 51.1, LOS 51.b)

Related Material

SchweserNotes - Book 5

Question #12 of 17

A trader that has advance information about a large buy-side order is *most likely* to attempt to profit from the large trade's market impact through the market manipulation known as:

A) front running.

B) quote stuffing.

C) painting the tape.

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. Painting the tape is a manipulation where a market participant trades with the top of the order book in order to move the market price in one direction, and then places a larger opposite trade at the new more-favorable price. Quote stuffing refers to a trader distracting other algorithms by placing a great quantity of fictitious orders and then cancelling them almost immediately.

(Study Session 17, Module 51.1, LOS 51.e)

Related Material

SchweserNotes - Book 5

Question #13 of 17

A trader that places numerous false orders on one side of the market in order to incite other market participants into trading with a real order on the other side of the market is *most likely* to be accused of:

A) layering.

B) painting the tape.

C) wash trading.

Explanation

Layering 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. Painting the tape is a manipulation where a market participant trades with the top of the order book in order to move the market price in one direction, and then places a larger trade on the opposite side of the market at the new more-favorable price. In wash trading, a trader will rapidly buy and sell the same security in an attempt to artificially inflate the demand for the security.

(Study Session 17, Module 51.1, LOS 51.e)

Related Material

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Question #14 of 17

An execution algorithm that dynamically adjusts the schedule of a trade in reaction to current market conditions is *most likely* to be categorized as a(n):

A) implementation shortfall algorithm.

B) market participation algorithm.

C) VWAP algorithm.

Explanation

Implementation shortfall algorithms attempt to minimize the difference between a trade's decision price and the execution price by automatically changing the schedule of the trade according to market conditions. Volume-weighted average price (VWAP) algorithms chop an order up into slices sized proportionally to the security's historical daily trading volume. Market participation algorithms break an order into pieces and then execute these smaller orders pro-rata with trading volume over the allotted execution period.

(Study Session 17, Module 51.1, LOS 51.c)

Related Material

SchweserNotes - Book 5

Question #15 of 17

Execution algorithms are *least likely* to be intended to ensure that a trade:

A) transacts at a fair price.

B) minimizes market impact.

C) earns a profit.

Explanation

The primary goals of execution algorithms are to ensure a fair price and to minimize market impact. High-frequency trading algorithms (not execution algorithms) are designed to earn a profit.

(Study Session 17, Module 51.1, LOS 51.b)

Related Material

SchweserNotes - Book 5

Question #16 of 17

A trader that repeatedly buys small quantities of a security in order to drive the market price up, before selling a large quantity of that same security at the inflated price, is *most likely* to be accused of:

A) wash trading.

B) painting the tape.

C) quote stuffing.

Explanation

Painting the tape is a manipulation where a market participant trades with the top of the order book in order to move the market price in one direction, and then places a larger opposite trade at the new more-favorable price. 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.

(Study Session 17, Module 51.1, LOS 51.e)

Related Material

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Question #17 of 17

When a buy-side firm such as a hedge funds trades using a sell-side firm's exchange membership, this arrangement is most likely to be described as:

A) co-location ("co- lo").

B) child orders.

C) direct market access.

Explanation

Direct market access (DMA) is an arrangement that allows buy side firms (investment companies) to make use of the technology infrastructure and market access of a sell side firm. This allows the buy-side firm to retain control over their orders and use their own proprietary algorithms. Co-location (co-lo) refers to physically placing trading equipment or algorithms onsite at a trading venue in order to reduce latency. A child order is a small order that is created by a trading algorithm and placed in the market as a piece of a larger parent order.

(Study Session 17, Module 51.1, LOS 51.e)

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