Reading 30: Execution of Portfolio Decisions

近年考題重點：

Execution of portfolio decisions:

Market Quality: 2012-Q3

Trading Costs: 2006-Q11、2010-Q8(D)、2014(D)

Order Type & Trading Strategies: 2008-Q8 、2010-Q8(C) 2012-Q3 、2014(C)

Corridor: 2009-Q10(A)、2010-Q8(A and B)、2014(B)

Rebalancing Strategies: 2009-Q10(B)、2008-Q9、2012-Q3、2014(A)

Market Microstructure

a. compare market orders with limit orders, including the price and execution uncertainty of each;

- Market order vs. Limit order

Order Type	Market Order	Limit Order
Definition	An order to execute trade immediately at the best price available.	Execution of the order must satisfy the limit price.
Emphasize	Certainty of execution	Price of execution
Weakness	Execution Price Uncertainty.	Execution Uncertainty.

A few additional important order types are as follows: (2008)

- Market-not-held order: "Not held" means that the broker is not required to trade at any specific price or in any specific time interval. Discretion is placed in the hands of a representative of the broker (such as a floor broker).
- Participate (do not initiate) order: The broker is to be deliberately low-key and wait for and respond to initiatives of more active traders. Buy-side traders who sue this type of order hope to capture a better price in exchange for letting the other side determine the timing of the trade.
- Best efforts order: This type of order gives the trader's agent even more discretion to work the order only when the agent judges market conditions to be favorable. Some degree of immediacy is implied.
- Iceberg order (Reserve, Hidden order): This is a limit order that includes

an instruction not to show more than some maximum quantity of the unfilled order.

- Market on open order(Market on close order): This is a market order to be executed at the opening(closing) of the market.

The following describe special types of trades:

- Principal trade: A principal trade is a trade with a broker in which the broker commits capital to facilitate the prompt execution of the trader's order to buy or sell, used most frequently when the order is larger and/or more urgent than can be accommodated within the normal trading volume of exchange.
- Portfolio trade (program trade; basket trade): An order that requires the execution of purchase (or sales) in a specified basket of securities at as close to the same time as possible. Portfolio trades are often relatively low cost because the diversification implied by multiple
  security issues reduces the risk to the other side of the trade.

b. calculate and interpret the effective spread of a market order and contrast it to the quoted bid-ask spread as a measure of trading cost;

Midquote = 1/2 × (Market Bid + Market Ask)

- Quote-Spread vs. Effective Spread

	Quote-Spread	Effective Spread
Definition	Ask price — Bid price	2 × (Execution Price — Midquote)…buy 2 × (Midquote — Execution Price) …Sell
Characteristics	Simplest measurement of transaction cost	Better representation of true cost. Capture both price improvement and the market impact cost.

- Price Improvement: Effective Spread < Quoted Spread
- Market Impact: Effective Spread > Quoted Spread (Large Order causes the stock price to move in the opposite way)
- Average Effective Spread: The mean effective spread over all transactions in the stock during the period.

Text book Example 1 (p13).

Practice Problem 1:

An analyst is estimating various measures of spread for Airnet Systems, Inc. (NYSE: ANS). The following is a sample of quotes in ANS on the NYSE on 10 March 2004 between 10:49:00 and 10:57:00.

Time	Bid Price ($)	Ask Price ($)
10:49:44	4.69	4.74
10:50:06	4.69	4.75
10:50:11	4.69	4.76
10:50:14	4.70	4.76
10:54:57	4.70	4.75
10:56:32	4.70	4.75

A buyer-initiated trade in ANS was entered at 10:50:06 and was executed at 10:50:07 at a price of $4.74. For this trade, answer the following:

A. What is the quoted spread?

B. What is the effective spread?

C. What is the effective and quoted spreads be equal?

c. compare alternative market structures and their relative advantages;

Markets are organized to provide: Liquidity, Transparency, Assurity of completion (trade settlement).

- Two phenomenon: Market Fragmentation and automated trading. In what follows, we describe 3 chief ways trading is organized: (1) Quote-driven markets (2) Order-driven markets (3)Brokered markets.
- Quote-driven market (Dealer market):
  - ✓ Definition : Investor trades "with dealers" who post buy and sell prices. Dealers (market makers) maintain securities inventories for which they post buy and sell quotes.
  - ✓ Advantages: Dealers passively provide immediacy or bridge liquidity in return for earning the bid-ask spread. (ask price is greater than the bid price).
  - ✓ Disadvantage: The cost of dealer service.
  - ✓ Characteristics:
    - a. Many illiquid securities (lack of natural liquidity), such as bond, are traded in quote-driven market as dealer can provide immediacy liquidity when none would otherwise exist.
    - b. NASDAQ is a dealer market, but it is not a "pure" dealer market because traders also post prices to compete with dealers' bids and

asks.

c. Even in the relatively frequently traded issues, an opportunity is thus created for an entity- the dealer- to make the market (create liquidity when no natural liquidity exists).

d. London Stock Exchange has a quote-driven, competing dealer market called SEAQ for infrequently traded shares..

✓ Some key terms you should know in Quote-driven market:

a. Bid (Ask) size: The quantity of the bid (ask) price.

b. Inside Bid (market bid) and Inside Ask (Market Ask)： The highest (lowest) and the best bid (ask).

c. Closed-book market: The limit order book is not visible in real time to the public.

- Order-driven market:

✓ Definition: Investors trades “with each other” without the use of intermediaries, transaction prices are established by public limit order to buy or sell a security at specified prices. Order drives the market and traders’ activities determine securities liquidity.

✓ Advantage: Price may be competitive, as traders transact with many potential traders, and are not limited to trading with dealers. A trader cannot choose with whom he or she trades because a prespecified set of rules mechanically governs the execution of orders submitted to the market.

✓ Disadvantage: Liquidity may be poor, as there may be no intermediary dealers willing to maintain securities inventories.

✓ Three main types of order-driven market:

a. Electronic crossing networks

Electronic crossing networks (e.g. POSIT) allow institution investors to trade large blocks of stock anonymously. Orders are batched(accumulated) and crossed(matched) at a specific time during the day, and trades are executed at price taken from other markets (e.g. average of bid and ask prices from other market). Crossing networks serve mainly institutional investors. Advantages: (a)Trading costs are low as commissions are low, and traders do not pay dealer’s bid-ask spread. (b) Crossing networks avoid market impact costs because orders are crossed at the existing market price determined elsewhere. (c) Can trade faster and larger. (d) Crossing networks maintain complete confidentiality not only in regard to the size of the orders and the names of the investors placing the orders, but also in regard to the unmatched quantities.

Disadvantage: Order may not be filled or may be partially filled, if there have no sufficient traders on opposite side. In addition, there is no "price discovery" function (i.e. prices adjust to supply/demand conditions), because the trader usually does not know the identity of its counterparties or their trade sizes.

b. Auction markets

Traders put forth their orders to compete against other order for execution. Auction can be periodic market (where trading occurs at a single price at a single time) or continuous market (where trading takes place throughout the day).

Advantage: Provide "price discovery", resulting in less frequent partial filling of orders than electronic crossing networks.

Example: The open and close of some equity markets.

c. Automated auction (Electronic limit order market)

A computerized auction market, with trades taking place throughout the day and being executed based on a set of rules.

Advantage: Like crossing networks, ECNs provide anonymity and are computer-based. ECNs operate continuously and provide "price discovery".

- Brokered market:
  - ✓ Definition: Investor use brokers to locate the counterparty to trade, and pay commissions to brokers. Typically, the markets are small or where it is difficult to find liquidity in size. Consequently, brokered markets are mostly used for block transactions. Occasionally broker takes a position with its own capital.
  - ✓ Advantage: Brokerage service is considered valuable when trader has large block to sell, or when trader wants to remain anonymous, or when market for the securities is small or illiquid. (Emerging market stock)
- Hybrid market:
  - ✓ Definition: Combined features of quote-driven, order-driven, and brokered markets.
  - ✓ Example: NYSE (NYSE Euronext) has features of both quote-driven and order-driven markets. It has specialist dealers and trades as a quote-driven market. It also trades through the day as in continuous auction market and trades as a batch auction market at market open.