TRADING MECHANICS: TYPES OF ORDERS

WHAT WILL YOU LEARN?

- What are the different types of orders an investor can place in trading securities in secondary markets?

TYPES OF ORDERS

- Market orders
- Limit orders
- Stop orders
- Short sales

MARKET ORDERS

- A **market order** is an order to buy or sell to be executed at the best price currently available.
- Suppose you call your broker to ask for the market price of Apple stock.

	BID	ASK
AAPL	$96	$96.06

- It ensures execution at the expense of uncertainty over price.

LIMIT ORDERS

- A **limit order** is an order to buy or sell at a maximum or minimum price.
- Suppose you put an a limit order to sell 100 shares of IBM for $125.
- This guarantees that the sale would be at a minimum of $125.
- **Limit order book** is the collection of limit orders waiting to be executed.
- So limit orders control the price but do not guarantee that the order will be filled.

STOP ORDER

- **Stop orders** are activated only when stock price reaches or passes through some predetermined level.
- A **stop loss** is an order to sell when price falls below a certain level.
- A **stop buy order** specifies to buy when the price rises above a certain limit. (There are usually used together with short sales to limit potential losses from short positions)(.

SUMMARY

- You learned the definitions of and the differences among the three main types of orders in trading securities.
- We next look at short-selling and margin buying.

TRADING MECHANICS: MARGIN TRANSACTIONS

WHAT WILL YOU LEARN?

- What is a margin account?
- What are the mechanics of margin transactions?
- What is buying on margin?
- What is the initial margin requirement?
- What is maintenance margin?

BUYING ON MARGIN

- Investors can buy securities either with cash or with part cash and part borrowing.
- **Buying securities on margin** means that the investors borrows part of the purchase price from the broker.
- **Margin** is the amount contributed by the investor.
- The securities serve as collateral for the loan.
- In this way, the investor creates **financial leverage**.

MARGIN TRANSACTION EXAMPLE

- Suppose you have $10,000 to invest and you are considering Fast Cars, Inc. which is selling $20 a share.
- With your $10,000, you can buy 500 shares.
- The broker can arranges for you to borrow another $10,000, so that you buy additional 500 shares.
- So now you can buy 1000 shares for your $10,000.
- The 1000 shares of Fast Cars serve as collateral, and you will have to pay interest on the amount borrowed.

MARGIN TRANSACTIONS EXAMPLE

INITIAL MARGIN REQUIREMENT

- The minimum amount of margin that must be in the account when the purchase is made is called the **initial margin requirement**.
- Consider a 50% initial margin requirement.
- In the previous example your $10,000 met the initial margin requirement for buying 1000 shares at $20 a share.

MARGIN TRANSACTIONS EXAMPLE

- Suppose the price went up to $30 per share.
- Suppose you are also interested in shares of New Toys which are selling for $10 a share. You can buy 500 shares of New Toys only by borrowing.

MAINTENANCE MARGIN

- The minimum amount the margin can decline to without an investor having to take any action is called the **maintenance margin**.
- If your margin in the account drops below this threshold level, you will receive a **margin call** – essentially to add more cash.

MARGIN TRANSACTIONS EXAMPLE

- Suppose that the maintenance margin requirement is 30%, and instead of going up if Fast Cars share price drops down to $14.

CREATING LEVERAGE

- Suppose the expected rate of return on Fast Cars was 30%. And let's suppose that the interest rate on the margin loan was 10% per year.

SUMMARY

- You learned the mechanics of margin transactions.
- Definition of initial margin requirement and maintenance margin.
- We looked an example of buying on margin to illustrate how a margin transaction works.

TRADING MECHANICS: SHORT SALES

WHAT WILL YOU LEARN?

- What is the definition of short sales?
- What is involved in short sales?
- Why do we need short sales?

SHORT SALES

- Selling securities that are not owned at the time of sale is called **short selling**.
- The investor borrows the security to sell it short.
- Later, the short seller needs to repurchase the security to replace it. This is called **covering the short**.

SHORT SALES EXAMPLE

- Suppose you are bearish about the BubbleNet stock.
- Its current market price is $50.
- You tell your broker to sell short 1000 shares.
- The broker borrows 1000 shares from another client or another broker.
- The proceeds from the short sale $50,000 is credited into your account.

SHORT SALES EXAMPLE

- Short-sellers are required to post margin with the broker to cover potential losses in case the price increases.
- Suppose there is a 50% margin requirement.
- That means you must have other cash or securities worth at least $25,000 in your account.

SHORT SALES EXAMPLE

- Now let's suppose you were right, and price of BubbleNet drops to $30 per share.
- You can now close out your position:
  - Buy 1000 shares to replace the ones you borrowed.

MARGIN REQUIREMENT ON SHORT SALES

- Just like investors who buy on margin, a short-seller may receive margin calls.
- Suppose instead the price of BubbleNet goes up from \$50 to \$90 a share. And also suppose that maintenance margin is 30%.

DO WE NEED SHORT SALES?

- Short-selling often comes under fire!
- In September 2008, SEC temporarily banned short-selling on nearly 1000 firms.

SUMMARY

- You learned the definition of short sales.
- You learned the mechanics of a short-sales transaction.
- Short-sales contribute to efficient price discovery.

NEW TRENDS IN SECURITIES TRADING

WHAT WILL YOU LEARN?

- What is algorithmic trading?
- What is high frequency trading?
- Flash crash of May 2010

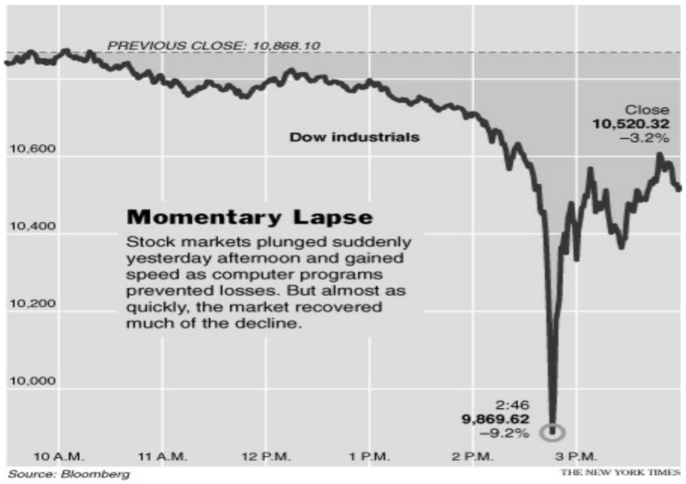
ALGORITHMIC TRADING

- **Algorithmic trading** is the use of computer programs to make trading decisions.
- These trades exploit very small price discrepancies across securities or even sometimes markets.
- Order-handling algorithms, statistical arbitrage, pairs trading…

HIGH FREQUENCY TRADING (HFT)

- **High frequency trading** is a type of algorithmic trading that relies on super-fast computers for extremely rapid trades.
- These trades exploit very small price discrepancies across securities or even sometimes markets.
- Typically, HFTs compete for very small profits that can accumulate to large sums.
- Location counts... Co-locating servers to a trading venue can shave millisecond of the timing of a trade.

2:42 PM FLASH CRASH OF MAY 6, 2010



WHAT CAUSED THE FLASH CRASH?

- $4 billion sell order of market index futures contracts by a mutual fund – automated algorithmic trade
- HFTs initially helped absorb the sell pressure buying the contracts
- Within minutes, heavily selling to reduce their long position
- Leading to faster execution of the algorithm
- Feedback loop!

SUMMARY

- Algorithmic and high-frequency trading relies on high-speed super-computers to detect and exploit market movements.
- Controversy over their impact on financial markets
- Flash crash of May 2010