CHAPTER 3. HOW SECURITIES ARE TRADED

When firms need to raise capital, they may issue securities to the public by investment bankers.

*Primary market* is a market for new securities.

*Secondary market* is a market for already-existing securities.

There are two types of primary market issues of *common stock*:

1. **Initial Public Offerings (IPOs):**
   These are stocks issued by a formerly privately owned company that is going public, that is, selling stocks to the public for the first time.

2. **Seasoned New Issues:**
   These are offered by companies that already have floated equity.
   Ex. A sale by IBM of new shares of stock would constitute a seasoned new issue.

There are also two types of primary market issues in the case of *bonds*:

1. **Public Offering**
   This refers to an issue of bonds sold to the general investing public that can then be traded on the secondary market.

2. **Private Placement**
   This refers to an issue that usually is sold to one or a few institutional investors and is generally held to maturity.

**HOW SECURITIES ARE TRADED:**

**A. INVESTMENT BANKING**

Two concerns in Investment Banking:
CHAPTER 3. HOW SECURITIES ARE TRADED

1. Public offerings of both stocks and bonds typically are marketed by investment bankers who in this role are called underwriters. Therefore, underwriters purchase securities from the issuing company and resell them. Investment bankers advise the firm regarding the terms on which it should attempt to sell the securities.

A preliminary registration statement must be filed with the Securities and Exchange Commission (SEC), describing the issue and the prospects of the company. This preliminary prospectus is known as a red herring because it includes a statement printed in red, stating that the company is not attempting to sell the security before the registration is approved.

When the statement is in final form, and approved by the SEC, it is called the Prospectus. At this point, the price at which the securities will be offered to the public is announced.

A firm commitment:

In a typical underwriting arrangement, the investment bankers purchase the securities from the issuing company and then resell them to the public. The issuing firm sells the securities to the underwriting syndicate for the public offering price less a spread that serves as compensation to the underwriters. This procedure is called a firm commitment.

2. Best Efforts Agreement:

This is an alternative to the firm commitment. Here, the investment banker does not actually purchase the securities but agrees to help the firm sell the issue to the public. They simply act as intermediary.

B. SHELF REGISTRATION

Here are the securities on the shelf which are ready to be issued. This is an important innovation in the issuing of securities introduced in 1982 when the SEC approved Rule 415. This rule allows firms to register securities and gradually sell them to the public for two years following the initial registration.

- Because the securities are already registered, they can be sold on short notice, with little additional paperwork.
- Moreover, they can be sold in small amounts without incurring substantial flotation costs.
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C. PRIVATE PLACEMENTS

Primary offerings also can be sold in a private placement rather than a public offering.

- In this case, the firm (using an investment banker) sells shares directly to a small group of institutional or wealthy investors.

- Private placements can be far cheaper than public offerings.

- This is because Rule 144A of the SEC allows corporations to make these placements without preparing the extensive and costly registration statements required of a public offering.

- Because private placements are not made available to the general public, they generally will be less suited for very large offerings.

- Private placements do not trade in secondary markets like foreign exchanges.

- This greatly reduces their liquidity and presumably reduces the prices that investors will pay for the issue.

D. INITIAL PUBLIC OFFERINGS (IPO)

- Investment bankers manage the issuance of new securities to the public.

- Once the SEC has commented on the registration statement and a preliminary prospectus has been distributed to interested investors, the investment bankers organize **road shows** in which they travel around the country to publicize the imminent offering.

- These road shows serve two purposes:
  - First, they generate interest among potential investors and provide information about the offering.
  - Second, they provide information to the issuing firm and its underwriters about the price at which they will be able to market the securities.
  - Large investors communicate their interest in purchasing shares of the IPO to the underwriters; these indications of interest are called a **book** and the process of polling potential investors is called **bookbuilding**.
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WHERE SECURITIES ARE TRADED

Once securities are issued to the public, investors may trade them among themselves. Purchase and sale of already-issued securities occur in the secondary markets.

The Secondary Markets

1. National and local securities exchanges
2. The over-the-counter market
3. Direct trading between two parties

1. Stock exchanges are secondary markets where already issued securities are bought and sold by members.

2. The over-the-counter market is an informal network of brokers and dealers who negotiate sale of securities.
   a. There are no membership requirements for trading or listing requirements for securities in the OTC market.
   b. But there are requirements to be listed on Nasdaq, which is a computer-linked price quotation system for the OTC market.

Bid price: the price at which a dealer is willing to purchase a security.
Ask price: the price at which a dealer is willing to sell a security.

Spread: Ask – Bid (profit of a dealer)

The Third and Fourth Markets:

- The third market refers to trading of Exchange listed securities on the OTC market.
- The fourth market refers to direct trading between investors in Exchange listed securities without the benefit of a broker. The direct trading among investors has exploded in recent years due to the advent of electronic communication Networks, ECNs.
Trading on Exchanges

The participants

When an investor instructs a broker to buy or sell securities, a number of players must act to consummate the deal.

- The investor places an order with a broker
- The brokerage firm for which the broker works, and which owns a seat on the Exchange, contacts its commission broker, who is on the floor of the Exchange, to execute the order.
- If commission broker is too busy with the other orders, then they will use the services of floor brokers, who are independent members of the Exchange to execute orders.
- The specialist is central to the trading process. All trading in a given stock takes place at one location on the floor of the Exchange called the specialist’s post.
  - At the specialist’s post is a monitor called the Display Book that presents all the current offers from interested traders to buy or sell shares at various prices as well as the number of shares these quotes are good for.

Types of Orders

Market Orders are simply buy or sell orders that are to be executed immediately at current market prices.

For example, an investor might call his broker and ask for the market price of IBM. The retail broker will wire this request to the commission broker on the floor of Exchange, who will approach the specialist’s post and ask the specialist for the best current quotes.

Limit orders are the ones where investors specify prices at which they are willing to buy or sell a security.

For example, if IBM is selling at 98$ bid, 98.10$ asked, a limit buy order may instruct the broker to buy the sock if and when the share price falls below 97$. And a limit sell order instructs the broker to sell as soon as the stock price goes above the specified limit.

Stop Loss Orders are similar to limit orders in that the trade is not to be executed unless the stock hits a price limit. However, in stop loss orders, the stock is to be sold if its price falls below a stipulated level.
CHAPTER 3. HOW SECURITIES ARE TRADED

As the name suggests, the order lets the stock be sold to stop further losses from accumulating.

*Stop buy orders,* similarly, specify that a stock should be bought when its price rises above a limit.

Orders can be also limited by a time period. Day orders, for example, expire at the close of the trading day. If it is not executed on that day, the order is canceled.

**Specialists and the Execution of Trades**

A specialist is a trader who makes a market in the shares of one or more firms and who maintains a “fair and orderly market” by dealing personally in the market.

Therefore, a specialist may also act as a broker or dealer in the market.

They mainly regulate and control the market of stocks and securities.

The specialist’s role as a broker is simply to execute the orders of other brokers. A specialist may buy or sell shares of stock for their own portfolios.

When no other broker can be found to take the other side of a trade, specialists will do so even if it means that they must buy or sell from their own accounts.

**Block Sales**

Block transactions are *large transactions* in which at least 10,000 shares of stocks are bought or sold. Institutional investors frequently trade blocks of tens of thousands of shares stock.

The larger block transactions are often too large for specialists to handle, as they do not wish to hold such large blocks of stock in their inventory.

Therefore, ‘*Block houses*’ have evolved to aid in the placement of larger block trades. Block houses are brokerage firms that specialize in matching block buyers and sellers.

**The SuperDOT System**

SuperDot enables exchange members to send orders directly to the Specialist’s Display Book over computer lines. The largest market order that can be handled is 30,099 shares.

- In 2000, SuperDot processed an average of 1.5 million orders per day;
CHAPTER 3. HOW SECURITIES ARE TRADED

- The average time to execute market orders submitted through SuperDot was 15 seconds.

- SuperDot is especially useful to program traders who are a coordinated purchase or sale of an entire portfolio of stocks.

Major Security Markets

IN USA:

- NASDAQ
- NY STOCK EXCHANGE
- AMERICAN STOCK EXCHANGE
- ELECTRONIC COMMUNICATION NETWORKS (ECNs)
- NATIONAL MARKET SYSTEM

In other countries:

- LONDON
- EURONEXT
- TOKYO

Trading Costs

1. Part of the cost of trading a security is obvious and explicit: Your broker must be paid a commission.

Individuals may choose from two kinds of brokers:

1. Full Service, or
2. Discount Brokers

**Full service brokers** provide a variety of services and are referred to as account executives or financial consultants. These brokers routinely provide information and advice relating to investment alternatives.

**Discount brokers** provide “no-frills” services. They buy and sell securities, hold them for safekeeping, offer margin loans, and facilitate short sales, and that is all. The only information they provide about securities they handle is price quotations.
CHAPTER 3. HOW SECURITIES ARE TRADED

The commission schedule of a discount broker:

<table>
<thead>
<tr>
<th>Transaction Method</th>
<th>Commission</th>
</tr>
</thead>
<tbody>
<tr>
<td>Online Trading</td>
<td>$20 or $0.02 per share, whichever is greater</td>
</tr>
<tr>
<td>Automated telephone trading</td>
<td>$40 or $0.02 per share, whichever is greater</td>
</tr>
<tr>
<td>Orders desk (through an associate)</td>
<td>$45 + $0.03 per share</td>
</tr>
</tbody>
</table>

2. In addition to the explicit part of trading costs—the broker’s commission—there is an implicit part—the dealer’s bid-ask spread.

Sometimes the broker is a dealer in the security being traded and charges no commission but instead collects the fee entirely in the form of the bid-ask spread.

Margin Trading

Margin is the net worth of the investor’s account and describes securities purchased with money borrowed in part from a broker.

When purchasing securities, investors have easy access to a source of debt financing called broker’s call loans. Thus, this process is called buying on margin.

In the sense of buying on margin, margin in the account is the portion of the purchase price contributed by the investor; the remainder is borrowed from the broker.

The broker in turn borrow money from banks at the call money rate to finance these purchases. Then, they charge their clients that rate plus a service charge for the loan.

According to Federal Reserve System in USA, the current initial margin requirement is 50%, meaning that at least 50% of the purchase price must be paid in cash, with the rest borrowed.

Example:

If an investor initially pays 6,000 USD toward the purchase of 10,000 USD worth of stock (100 shares at 100 USD each). Then, the remaining 4,000 USD can be borrowed from the broker. That is:

<table>
<thead>
<tr>
<th>Assets</th>
<th>Liabilities and Owners’ Equity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Value of Stock</td>
<td>$10,000</td>
</tr>
<tr>
<td>Loan from broker</td>
<td>$4,000</td>
</tr>
<tr>
<td>Equity</td>
<td>$6,000</td>
</tr>
</tbody>
</table>
Then, the initial percentage margin is:

\[ M_{\text{arg in}} = \frac{\text{Equity in account}}{\text{Value of Stock}} = \frac{\$6,000}{\$10,000} = 0.60 = 60\% \]

If the stock price declines to 70USD per share, then;

<table>
<thead>
<tr>
<th>Assets</th>
<th>Liabilities and Owners` Equity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Value of Stock</td>
<td>Loan from broker</td>
</tr>
<tr>
<td>$7,000</td>
<td>$4,000</td>
</tr>
<tr>
<td></td>
<td>Equity</td>
</tr>
<tr>
<td></td>
<td>$3,000</td>
</tr>
</tbody>
</table>

\[ M_{\text{arg in}} = \frac{\text{Equity in account}}{\text{Value of Stock}} = \frac{\$3,000}{\$7,000} = 0.43 = 43\% \]

If stock value falls below 4,000USD, then, the equity is negative; meaning that the value of the stock is no longer sufficient collateral to cover the loan from the broker.

To guard against this possibility, the broker sets a maintenance margin:

If the percentage margin falls below the maintenance level, the broker will issue a margin call, which requires the investor to add new cash or securities to the margin account. If the investor does not act, the broker may sell securities from the account to pay off enough of the loan to restore the percentage margin to an acceptable level.

**Example:**

Maintenance margin = 30%

\[ P = \text{price of the stock} \]

Total value of 100 shares = 100P

The, equity in account:

\[ 100P - \$4,000 \]

The percentage margin = \[ \frac{100P - 4000\$}{100P} \]

Then, the price at which the percentage margin equals the maintenance margin will be:
$\frac{100P - 4000}{100P} = 0.30$

$P = $57.14 per share

So, if the price of the stock falls below $57.14, then the investor would get a margin call.

**Example: Please refer to Excel application 1.**

**Short Sales**

Short sale is the sale of shares not owned by the investor but borrowed through a broker and later purchased to replace the loan.

- This is especially used to profit from a decline in a security’s price.
- An investor borrows a share of stock from a broker and sells it. Later, the short seller must purchase a share of the same stock in the market in order to replace the share that was borrowed.
- This is called “Covering the Short Position”.

**Example:**

Assume that we estimate that Dot Bomb stock prices will fall. Current market price is 100$. We tell our broker to sell short 1,000 shares to us. The broker borrows 1,000 shares either from another customer’s account or from another broker. Then, 100,000$ will be credited to our account.

<table>
<thead>
<tr>
<th>Assets</th>
<th>Liabilities and Owners` Equity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cash</td>
<td>$100,000</td>
</tr>
<tr>
<td>Short position in Dot Bomb stock (1,000 shares owed)</td>
<td>$100,000</td>
</tr>
<tr>
<td>T-Bills</td>
<td>$50,000</td>
</tr>
<tr>
<td>Equity</td>
<td>$50,000</td>
</tr>
</tbody>
</table>

We have also T-bills of $50,000 by assumption.

Then, percentage margin will be $\frac{Equity}{Value \ of \ stock \ owed} = \frac{$50,000}{$100,000} = 0.50$
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If we are right and stock price falls to 70$ per share, we buy 1,000 shares, to cover the short sale, to replace the ones we borrowed for only 70,000$. So, our profit will be 30,000$.

Example: Please refer to Excel application 2.