**Lesson # 5**

# MARKET MECHANICS

## TYPES OF ACCOUNTS:

People who buy or sell stock through a brokerage firm have an individual account in which they make their trades. While a single account number is associated with each investor, these accounts have important subsidiary accounts. Two such accounts are cash account and margin account.

### 1. Cash Account:

Every investor with a brokerage account automatically has a cash account. In a cash account, an investor must come up with cash equal to the full value of the securities purchased, unless sufficient funds are already in the accounts. Dividends and interest accumulate in the cash account as they are earned. The investor did not borrow to buy the stock, so the equity on the balance sheet equals the total assets; there are no liabilities.

### 2. Margin Account:

Margin account are extremely useful, but, like most investment, need respect. A margin account permits on investor to borrow part of the cost of investment firm a brokerage firm. This account allows an investor to round up and buy a round lot, or to add leverage to investments the same way a real state speculator gets leverage by purchasing land with borrowing funds.

### Buying Power:

Buying power is a measure of how much more can be spent for securities without having to put up any additional cash. One of the most common question brokers get from clients is, "What's my buying power?" The software running on a broker's desktop monitor may have a menu item enabling the broker to quickly bring up the buying power figure when a customer asks. Brokers and investors both probably should know how to compute this statistic; fortunately, it is not difficult. Regulation T currently provides an initial margin requirement of 50 percent. Therefore, an investor can borrow money from the broker up to the point at which the debt balance equals the account equity. When these two figures are equal the margin loan amounts to 50 percent of the portfolio total assets. At this point the buying power is zero. Buying power can be calculated by solving this equation;

$$B = [{}^{1}/_{m} - 1]\, E - D$$

Where B = buying power
M = initial margin requirement
D = debt
E = equity

With the current 50 percent initial requirement, the formula for determining buying power is simply the account equity minus the debt balance.

***With a 50% initial margin, buying power = equity – debt balance.***

### Withdrawing Cash:

Buying power can also be used to withdraw cash from the account. Taking cash out reduces the total assets and the account equity; buying power is doubly reduced by a cash

withdrawal. To determine how much can be withdrawn in cash, subtract the margin balance from the account equity and divide by two.

**Margin Calls:**

What happens if the market moves the other way? The maintenance margin enters the picture in this scenario. If equity declines too far, the investor must deposit more assets (usually cash and cash equivalents) into the account, or some security position must be involuntarily closed out to reduce the amount of margin debt. Such a requirement is a margin call. The minimum portfolio value can be determined by dividing the debit balance by the quantity one minus the maintenance margin

$$\textbf{Minimum portfolio value} = \frac{\textbf{debit balance}}{\textbf{1- Maintenance margin}}$$

Once an investor receives a margin call, most brokerage firms require the investor to deposit sufficient funds to return the portfolio to the full initial margin condition of 50 percent equity. This investor is likely to receive a telephone call indicating that margin call is on the way. A paper notice will arrive in the mail with in a day or so. An investor who is unable to deposit sufficient funds to meet the margin calls must sell stock to get the balance sheet in order. Selling stock produces cash that immediately used to pay down the margin loan. Meeting the margin call this way requires the sale of sufficient shares to meet the dollar amount of the margin call. A margin call is inevitable if the securities in the portfolio do not appreciate or generate income. As time passes, interest accrues on the margin loan, so equity will progressively decreases. Eventually equity will decline to the 30 percent make if the investment is all dogs. Notice also that if securities must be sold because of margin call, the sale occurs when the market is down the worst possible time.

***Once an investor receives a margin call, funds must usually be added to return to the 50 percent equity percent equity position.***

**Variations on the Margin Account:**

Some brokerage firms offer products that are similar to a traditional margin account but offer additional flexibility to the customer. PaineWebber, for instance, offers a “Personal Security Loan Account” that allows customers to borrow against the securities in their accounts. This account is set up independently of the regular investment account with the loan proceeds used for education, home improvement, car payments, or other similar uses. Because the loan is not being used to purchase additional securities, the Federal Board considers such a loan to be less risky and therefore permits borrowing a great percentage of the portfolio value. An investor can borrow up to 70 percent of the value of the stocks and corporate bonds (compared to only 50 percent in a regular margin account), and up to 90 percent of the value of government securities.

**Margin and Speculation:**

Some market observers view the level of margin debt as a precursor of things to come with the market averages. Margin buying has historically moved in tandem with popular averages like the Dow Jones Industrial Average and the S&P 500. As margin debt has increased, so has the level of stoke prices, and vice-versa. It is always dangerous to assume the past will repeat itself, but you should not ignore past patterns, either.

According to The Wall Street Journal, in February 2000 total margin debt equaled 1.57% of overall market value. This is approximately where the percentage stood just before the October 1987 market crash. In early 2000 total margin debt exceeded $240 billion, up over one third in three months. Someone could argue that if margin debt has never been higher and the market typical follow level of margin, the market is headed down before long.

**Other Types of Accounts:**

Cash and margin accounts are the two most important types. Many investors will have one or more of the other types of accounts. Bonds and income-producing securities can be in a separate account called an *income account.* Convertible bonds may be segregated into their own account, as many government bonds or short positions.

**Selling Short:**

A short sale involves borrowing securities, selling them to someone else, eventually purchasing similar shares from someone else, and delivering these substitute shares to the original lender. The notion that you can profitably and legitimately sell something you do not own has troubled market observers since the early 1600s, when Dutch authorities attempted to outlaw short selling. While this procedure may be conceptually awkward, it need not be viewed as an antisocial act.

***Short selling involves selling borrowed shares.***

**Rationale:**

Most short sellers are bearish toward a particular stock. If the short seller is able to borrow shares and sell them at $25, the purchase of thee share a few months later at $ 19 results in a $6 profit. Instead of buying at a low prices and selling at a higher prices, the short seller simply revered the order of the two transactions.

The actual lender of the shares is normally an unknowing participant in the entire matter. For instance, investors with margin accounts at their brokerage house may be involved in the process. When an investor opens a margin account, he or she signs a hypothecation agreement giving the brokerage firm the right to lend the shares to someone else. This arrangement is of no real concern to the investor because the investor can still trade the shares and continued to earn dividend.

***Short sellers sell first and buy later.***

**Criticisms:**

Over the year many discussions have focused on the merits of short selling; these conversations occur on the floor of the Congress and in the smallest boardrooms. Those in favor of short selling point out that margin trading actually encompass two activities: buying on margin and selling short. The sticking point is the leveraged purchase of shares; why find fault with a related procedure on the other side of the market? Short –selling gurus will quickly assert that margin buyers were largely responsible for the events leading to the Great Crash of 1929, and those speculative buying forces prices up, so margin buying is inflationary. Short selling helps this influence.

The opposition will point out short selling has a checkered heritage and has, on occasion, been destabilizing to the market. Traders have a long memory for manipulation, corners,

and short squeezes, such as the 1862 Harlem Railroad incident starring Cornelius Vanderbilt and Boss Tweed. Also, people traditionally want the market to advance; few actively root for a price decline. Because the downward pressure induced by short selling runs counter to public interest, they argue, short selling is evil.

**Mechanics of a Short Sale:**

Regardless of where your opinion lies, short selling is a fact of life worth understanding. Figure 6-16 outline the steps of a simple short sale with common stock. Short sellers recognize that because they are selling on margin, a margin requirement must be met. An investor who buys on margin pays interest, but not when selling short because no money is borrowed. In fact, an investor actually has to deposit money.

Suppose an investor dealing through Merrill Lynch buys 100 shares of XYZ in a margin account, and Merrill subsequently lends these shares to another of its clients who wants to sell them short. The short seller then might sell these shares to an account at Kidder Peabody.

An important point here is that Merrill Lynch does not care who bought the shares, nor is Merrill Lynch informed. The short seller simply has an obligation to return what has been borrowed sometime in the future.

At this point, two investors believe thy own shares in XYZ: the lender (who bought the shares in a margin account) and the person who bought the shares from the short seller. Dividends are not a problem because the short seller, by industry practice, must pay them to the lender. The short seller is not hurt by this, because the stock price tends to fall on the ex-dividend day anyway.

At some point in the future, the short seller covers the short position by purchasing shares (it does not matter from whom) to replace the certificates borrowed earlier. Buying the shares at a price lower then that at which they were sold results in a profit to the short seller. Of course, if the shares must be purchases at a higher price, the short seller suffers a loss.

Note that while selling short is a legitimate investment activity, it is not always the best way to accomplish the purpose of making profit. On a single security, for instance, the purchase of a put option is often preferable to selling short. (This important activity will be discussed later in the book). A short sale involve losses that are potentially unlimited, because the stock prices could rise astronomically yet shares must still be repurchased.

On most exchanges there is a special trading restriction on short sales. They can only be executed on an uptick. An uptick means the last change in the stock price was up. A downtick, not surprisingly, means the last stock price change was down. The tick is based on minute-by –minute price changes; it is not relative to the previous day's closing price.

The rationale for the uptick rule is that selling short tends to put downward pressure on a stock price, and so could accelerate the decline of a stock that is in a free fall. The rule, in essence, keeps short sales from fanning the flames.

***The short seller has an eventual obligation to replace the borrowed shares.***
***Short sellers must pay any dividends to the person from whom the stock was borrowed.***

**Selling Short Against the Box:**

A variant of the short sale is against the box. In such a trade, the investor sells short shares that are simultaneously owned. In this phrase, the term box refers to the safe deposit box where the share certificate might be held. Selling short against the box is a riskless strategy designed to shift a tax liability into the future.

A person who sells short against the box creates a perfect hedge. What ever gain or loss occurs with the stock will be exactly off set by a loss or gain in the short position. The reason someone might engage in such a trade is almost always tax related. Suppose an investor bought XYZ at $45 years ago and, in late November, would like to sell the stock at its current market price of $ 100. Selling the shares results in a capital gain with tax implications in the current tax year. The investor could wait until after the first of the year to sell, but then faces the risk that share prices might fall. Instead, the investor sells XYZ short at $ 100. The obligation is eventually to replace the borrowed shares. In January, the investor can cover the short by delivering the shares from the safe deposit box. Regardless of the shares price in January, the investor has locked in the $ 55 per share profit, and the tax liability is pushed back another year. If the share price had fallen to $90, the investor would make$ 10 per share on the short sale, which exactly cancels the opportunity loss on the long stock position. If the share price instead rose to $110, the gain in the stock offset the loss on the short position.

**Trading Fees:**

In order to make a trade, an investor needs access to the marketplace. Typically that access comes through an agent called a broker who makes the trade. As mentioned in the previous chapter, only members of the exchange may trade there, so most people need someone to make the trade for them. As a fee for their services, brokerage firms charge a commission. Perhaps no part of the investment business gets as much discussion or is potentially as awkward a topic to discuss with your broker as commission. The commission cost is important, but there are other costs to trading, too.

**The Cost of Trading:**

While commissions are the most obvious costs of trading, there are other very important costs as well. These falls into two groups: explicit costs and implicit costs.

Explicit costs are the direct cost of trading and include brokerage fees and taxes. Taxes, in fact are the largest of these. When your tax bracket is such that you lose over a fourth of your capital gains to the tax collector, you need to consider this before deciding to take a profit. Individual investors often think much more about commission than they do about tax consequences.

Implicit costs are especially important to institutional traders because of the size of the trades they typically make. The most important implicit costs relate to the size of the bid-ask spread, the price impact of the trade, and the opportunity cost of being unable to execute the trade when you want to.

Suppose a stock routinely trades at a spread of 1/8 of a point and that its true value is the midpoint of the spread. When you buy it you pay a bit more than the true value, and when you get a bit less. Regardless of whether the stock goes up or down in the future, when you sell it you will probably do so at a price 1/8 less than the corresponding ask price. On a block trade of 10,000 shares, this spread to $1,259 and is a cost to the trader.

Price impact refers to the fact that a large trade will clear out the bids or offer prices t a particular level and cause the market price to move. A large market order to buy, for instance, will almost certainly cause the stock price to rise. You might place the order when the stock was at $ 45, but find that you purchased shares at prices ranging from $45 to $46; the very fact that you placed the trade caused you to pay more. The same thing happens when a quantity of shares is dumped all at once. Institutional investors know that they have to be careful when trading large blocks.

The opportunity cost relates to this last point. You may decide to make a trade based on your expert analysis, but discover that by the time you can actually execute the trade the other people have come to the same conclusion about the stock and its price has already moved. Your profit would have been greater had you been able to execute the trade quickly.

***There are both implicit and explicit costs of trading.***

**The Commission Structure:**

**Commission Schedules:**

Commission schedule vary widely among broker firms. In general, though, the size of the commission charged is a function of two things: the dollar amount of the trade and the number of shares involved. It is also common to face a minimum commission, ranging from $30 to $40 at most retail brokerage firms.

Commissions occur when a trade is actually executed; there is no charge, for instance, to raise the stop price on a stop order or to submit a limit order to buy. Only when a trade occurs is a commission paid.

***Commissions are usually a function of the dollar amount involved and the number of shares in the trade.***

**Commission and Limit Orders:**

Limit orders are useful, and many investors routinely use them to control the price at which they make their trades. Limit order user should be familiar with one particular commission issue, however.

Suppose an investor placed an order to buy 1,000 shares of Community West Bancshares (CWBC, NASDAQ) at $5 ½, good till canceled. CWBC is a thinly traded stock. Thin trading is an inexact term referring to a general lack of trading activity. Shares that are thinly traded often have a wider bid ask spread and fewer standing. Limit orders on the specialist's book. Assume the stock is trading t 5 3/8 to 5 ½ at the time the limit order is placed. Even though the CWBC ask price is $5 ½ 1,000 shares are not likely to be available at that price. Perhaps only four lots are offered at 5 ½, and once these are sold the ask price jumps to 5 5/8.

If the specialist is unwilling to enter the sell side of the market for his or her own account, the floor broker would instruct the specialist to put the other 600 in the book. The investor would then get confirmation that "you bought 400 CWBC at 5 ½ ". It would be logical for the investor to question this action, saying, "Wait a minute, I wanted 1,000". As it happened, 1.000 was not available at the specified price.

A few days later CWBC might again become available at 5 ½, and the rest of the investors order would be filled. A second confirmation would be received, indicating a purchase of

600 CWBC at $5 ½. The second confirmation would also show a second commission even though the investor placed a single order.

The policy is as follows: an order filled at various prices on a single day is charged one commission, but an order filled over several days is charged separate commissions for each day on which a trade was made. Many brokers can tell a tale of one of their clients who was unhappy upon first discovering this convention within the brokerage industry. With a thinly traded stock, the extra commission (or two) might mean an investor would have been better off buying the shares with a market order and not ‘Trying to get the last eighth”.

**Commission Discounts:**

At most brokerage firms, the broker who deals with the public personally keeps between 25 percent and 45 percent of the actual commission charged. Especially productive brokers with a large number of active clients command the highest rate. Some brokers are willing to discount their commissions with active clients. Such a discount comes from the broker’s share of the commission.

Suppose a commission is $100 and the broker earns $35 from this trade. If the broker wished, he or she could reduce the commission to $65 and earn nothing on the trade. It is a broker’s advantage to be good citizen, respected in the community, and active in the affairs. For this reason, many brokers reduce their commissions as much as possible for work they do for local nonprofit organizations such as YWCA endowment or a hospital building fund.

**Full-Service Brokers:**

Some firms are full-service brokers. A few well-known examples are Merrill Lynch, PaineWebber, Kidder Peabody, and Smith Barney/Shearson. At a full-service firm, individual brokers provide personalized service to their clients. Brokers are expected to be a familiar with their clients, their needs, and their individual circumstances. Extensive research is available, and accounts holders can ask for and receive free of charge an enormous quantity of market commentary and specific opinion regarding security issues.

A full service firm also performs a function commonly called handholding. Some people absolutely require the reassurance they get from face-to-face meeting with their financial advisor. There is nothing wrong with handholding, and a good broker understands this type of customer service is part of the job. Some investors, of the game; and they do their own research. Such investors may choose to reduce their commission burden and trade through a discount brokerage firm.

**Discount Brokers:**

A discount broker works for an organization that executes traders for its clients, but does little else. Account holders will receive trade confirmations and monthly accounts statements, but research will generally not be available for the asking and handholding will be limited.

In fact, most client of a discount broker never meets a broker face to face. Rather, they call a toll free telephone number and place their order with whoever answers the phone. Brokers at a discount firm are largely order takers, meaning they do what the client direct and do not question the wisdom of the trade. (They will ask for clarification of the trade or point out an invalid request.) Broker at a discount firm are salaried; they have no particular incentive to encourage trades.

An ongoing debate continues to rage within the investment community about the use of discount brokers. Some full-service brokers will claim that an investor gets better order execution at a full-service firm. Sometimes this claim is true, but it is not a general rule. Discount brokerage firms (and some financial planning people) believe that people who make their own decision are foolish to pay more than necessary in trading fees.

The difference in commission rates between a full-service house and a discount house can be significant. For example with one particular it was possible to buy 1,000 shares of a $ 5 stock, sell them at $ 5 1/8, and make a profit after the two commissions. The wall Street journal has advertisements from discount brokerage firms virtually every day in which the discounted commissions are compared with a sampling from major full-service houses. Discounts as high as 75 percent are possible.

About dozen firms, including Exxon, Ker-McGee, Texaco, and Mobil, permit individuals to buy shares of stock directly from the company. In some instances this may be done at no cost to the shareholder, while in other cases a modest commission of perhaps seven cents per share is charged. For the investor interested in one of these firms, the trading fees approach the ultimate discount: zero.

**Electronic Brokers:**

The advent and of online trading along with the growth of the Internet will be a significant event in the stock market history book discussion of the late 1990s. firms such as E*TRADE, Datek, Ameritrade, DLJ direct, TD Waterhouse, and numerous others make it easy for investors who know what they want to do to trade inexpensively, reliably, and quickly from their personal computer. A trade that would cost several hundred dollars on a full-service commission schedule might cost only $ 12 via one of these firms. Some pundits, in fact predict that online trading will be free in a few years. It is logical to ask how these firms make a profit with such low rates.

The typical online brokerage firm probably makes only about half its revenue from brokerage commissions. The remainder comes largely from interest charged on margin account and from payment for order flow. This latter source is extremely important, long established, and perfectly legal despite appearances of being a kick-back. When someone places an order to buy 500 shares of General Electronic this order is likely sent to a stock trading firm in exchange for a “referral fee.” Even if the customer pays no commission at all, the online brokerage will still get payment order flow. In essence, the stock trading firm is returning part of the spread to the online broker, as the volume of trades directed to a particular trading house increase, the percentage paid to the referring broker typically increases, too.

**Current Event:**

**Broker Compensation:**

There are approximately 91,000 stockbrokers in the United States. The Securities Industry association reports that in 1993, the median annual compensation for a retail stockbroker was $90,000. This figure is nearly double the amount earned a decade earlier. Broker compensation statistics frequently appear in the financial press, but they must be taken with a grain of salt. The superstar brokers can make well over $ 1 million per year. These curve busters naturally pull up the arithmetic average, making it appear that the typical broker is doing better than he or she actually is.

**NASDAQ Commission:**

There may be an incentive for some brokers to trade via the NASDAQ system rather than on the exchange. Most firms pay their brokers 40 percent of the gross commission charged on NASDAQ stocks for which the brokerage firm is a market maker. This rate compares to an average of about 33 percent for listed shares.

Also, spreads are sometimes wider on the over-the counter market. From the customer's perspective, the spread contributes to the cost of trading. According to an article in Forbes in May 1993, the average spread on NASDAQ National Market System firms was 59 cents, an increase from 43 cents in May1989. In contrast, the average NYSE spread remained constant at 21 cents over this period. In Forbes' words, "No question where investors get the better deal." By 1999, though, NASDAQ spread had narrowed considerably.

**Forthcoming Changes in the Reward System:**

The SEC is applying increase pressure on brokerage firms to alter the manner in which brokers earn commissions. The official SEC position seems to be that a commission structure in which "more trades mean more commissions" tends to encourage active trading and may lead to account churning.

Some firms are experimenting with a compensation structure based on the dollar value the broker brings into the firm rather than the level of activity within the broker's accounts. This type of structure might encourage a portfolio approach to investing rather than a stock-picking attitude. At least brokerage firm offers investors virtually unlimited trading for a flat annual fee.

A precise protocol should be followed when placing order with a broker. This protocol helps eliminate uncertainty about the investor's exact wishes. The most common types of orders are the market orders, the limit order, and the stop order. Stop orders are especially useful in protecting profits, but can also be used to minimize losses. Unfortunately, investors seldom use them.

The stock exchange specialist helps maintain a fair and orderly market in his or her assigned securities. They maintain an inventory of shares for sale and are willing to be buyers for those who wish to sell. If the spread gets too wide, the specialist may enter the market on both sides to provide better price for customers.
The ticker tape provides a chronological listing of trades at the exchange. No longer on paper, this electronic displays stock symbols, volume, and the price at which trades occurred. On busy days the tape may run late.

The two main types of accounts are the cash account in which the investor pays for the share in full, and the margin account, where a portion of the share cost can be borrowed from the brokerage firm. If the account equity deteriorates too far, the investor may get a margin call under the rules of Federal Reserve Board Regulation T, requiring the deposit of additional funds or the sale of some securities position.

Selling short involves the sale of borrowed securities in anticipation of a decline in security prices. Shares sold short must eventually be covered (brought back). Brokers receive a commission for executing customer trades. Some firms are full-service firms, providing extensive research and advice. Other are discount firms, executing orders but providing few other services. Many firms also provide for making trades via a home computer.

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